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LANDSCAPE MAINTENANCE AND MANAGEMENT PLAN
BATTERY ENERGY STORAGE SYSTEM

CELLARHEAD SUBSTATION | WETLEY ROCKS

PREPARED BY

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1. INTRODUCTION

1.1 INTRODUCTION

Aims and Objectives

1.1.1 The following Landscape Maintenance and Management Plan (LMMP) has been prepared by Sirius Planning on behalf of Cellarhead BESS Limited to discharge Condition 14 of planning consent: SMD/2022/0548, issued 27 June 2023.

1.1.2 Reference should also be made to the Landscape Planting Plans, Planting Details, and Planting Schedules (Drawing Ref: SRE1164 07 01 and SRE1164 07 02) which provide the relevant planting layout, planting details, and planting schedules. These drawing are submitted in accordance with Condition 12, 'Detailed Hard and Soft Landscape Mitigation Scheme'.

1.1.3 A detailed NBS planting specification document is also provided (See Appendix A). The Biodiversity Impact Assessment (January 2022) by FPCR Environment and Design Ltd provides further details of all existing and proposed habitats.

1.1.4 Condition 14 of planning permission SMD/2022/0548 states:

Condition 14

"No development including site clearance and site stripping shall take place until such time that a Landscape Maintenance and Management Plan (LMMP) has been submitted to and approved in writing by the Local Planning Authority including measures for its operation for the life of the development. The LMMP shall include for the replacement of failed stock for the first 10 years after planting. The development shall be carried out strictly in accordance with the approved LMMP".

Condition 21

1.1.5 This LMMP should be read in conjunction with the Ecological Management Plan (EMP) produced in accordance with Condition 21. Note that where there are some duplicate elements and requirements within Condition 21 that reference landscape specific operations, these will be addressed within this document. Although Condition 21 mention 'landscape' operations, these are all addressed within this LMMP, Condition 21 will deal with ecological management only.

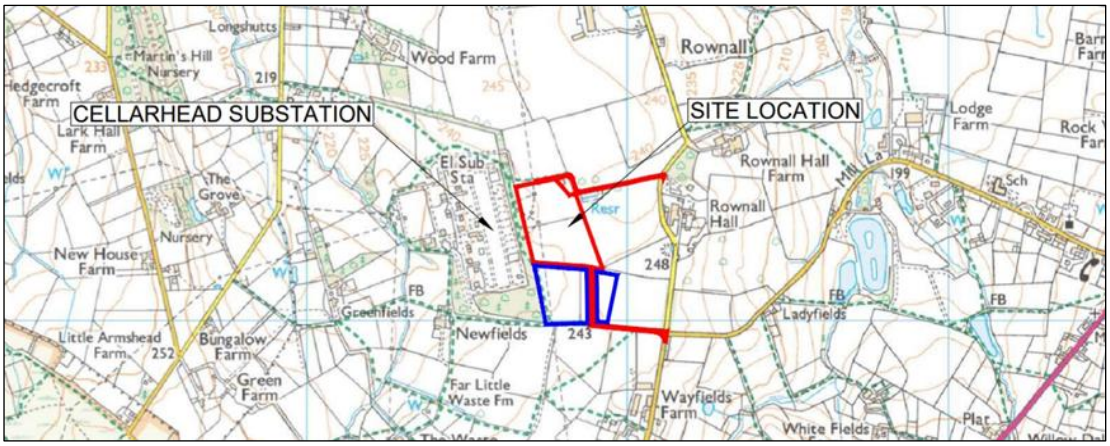
Notwithstanding the submitted detail, no development including site stripping and site clearance shall commence until such time that a Landscape and Ecology Management Plan (LEMP) has been submitted to and approved in writing by the Local Planning Authority. The LEMP shall be based on the Biodiversity Impact Assessment January 2022, the Ecological Appraisal dated December 2021 and the Landscape Mitigation Plan 10541-L-01G. The LEMP shall amongst other matters provide:

Site Location

1.1.6 The site location is illustrated on approved Drawing No. **SRE1144/03/01 R2**.

1.1.7 The site is located adjacent to the Cellarhead Substation off Rownall Road, Wetley Rocks. The site is located approximately 1.5km to the west of the village Wetley Rocks and approximately 1.2km north of the village of Werrington. The site comprises an area of relatively flat agricultural fields totalling circa 5.4Ha immediately to the east of and adjacent to the Western Power Distribution and National Grid Cellarhead Sub-Station which itself extends to c.10ha. Additional off-site land is to be utilised to the south west of the proposal site to deliver biodiversity gains.

Figure 1.1: Site Location



1.1.8 The document has been submitted to provide the information required under planning condition 14 in order for the local planning authority to discharge the planning condition. It is noted the operations outlined within this LMMP will include for the replacement of failed planting stock for a period of 10 years post planting.

1.1.9 The NBS Specification and 10 year Maintenance Schedule presented in this LMMP is provided for planning purposes only to indicate the level of input required. The document should not be relied upon as the basis of a construction tender and contract; detailed documents should be produced at that stage. This LMMP is to be used by the Local Planning Authority as the basis of managing the construction stage and the setting of the agreed structure and standards.

1.2 RESPONSIBILITY FOR IMPLEMENTATION

1.2.1 Responsibility for implementation of the LMMP will fall into two parts:

- Management required during the construction stage, which will be the responsibility of the developer (supervised by a competent landscape architect and/or ecologist); and
- Post-development, management will be the responsibility of an appointed landscape management company (by the developer / site operator) to comply with the approved plans and documents developer (supervised by a competent landscape architect and/or ecologist).

1.2.2 The maintenance operations outlined in this LMMP are to be carried out for a period of 10 years from the date of completion by the BESS developer and any plants that are removed, die or become seriously damaged or diseased during the 10-year period will be removed and planted anew by the landscape contractor during the next suitable planting season.

1.2.3 At the end of an initial 10-year period, the LMMP is to be reviewed and updated to reflect any revised management objectives, any changes that may have occurred within the development, and to update the planned maintenance operations.

1.2.4 To maintain the ongoing visual amenity, health and longevity of the LMMP the management and maintenance shall then be carried out for the lifetime of the development with the plan to be updated every 5 years as required. The proposed management works programme at section 4.12 and within appendix A, provide details of the required activities and their timing which should form the basis of a monitoring report to be submitted after the first year following the completion of the development to ensure the successful establishment of proposed planting and habitats. This monitoring report should then be updated every 5 years thereafter to ensure the long-term health of onsite habitats and that the stated aims of the management plan are being achieved. If this is found not to be the case, suitable additional enhancement measures shall be provided in a further monitoring update to be implemented

within one year of their agreement.

1.3 LANDSCAPE DESIGN MITIGATION FEATURES

1.3.1 The landscape and hard works design, mitigation and enhancement features at the site are detailed within Drawing Ref: SRE1164 07 01 and SRE1164 07 02.

1.3.2 The development proposals are described in the Design and Access Statement, Landscape and Visual Impact Assessment and other information accompanying the planning application. The existing landscape resource and the visual receptors and amenity of the site were considered as part of the planning and design process. The landscape components of the scheme are an important integral part of the proposals.

1.3.3 The landscape and GI proposals for the scheme are detailed in the landscape and visual impact assessment accompanying the planning application focused upon the provision of approximately 2.18 hectares of land dedicated to green infrastructure. In summary these proposals include:

- Retain existing landscape elements where possible including trees, hedgerows and grasslands;
- Enhance the deteriorating landscape elements such as the traditional native hedgerows along field boundaries, infilling areas and adding hedge trees to sections which have become gappy, or where boundaries have been replaced by post and wire fencing;
- Enhance opportunities for biodiversity;
- Improve the ecological diversity and value of the existing grassland which is currently low through an area of grassland beneath the existing pylons to be harrowed and re-seeded with green hay methods, if possible, intended to remain as grazing land following completion, improving the ecological value of the grassland;
- Manage surface water runoff on-site through SUDS features including an infiltration basin in the north western corner and two drainage swales adjacent to the proposed vehicular access, planted with an appropriate wetland seed mixture;
- Retained trees and hedgerows, with gaps filled in with a suitable mixture of native species reflective of those found on site;
- Proposed individual and groups of native tree planting with trees within sections of new hedgerows to reflect those existing on site;
- The provision of topsoil screening bunds, 3m and 4 m tall, to screen the development from the local public rights of way and the planting of native woodland and scrub planting upon the outer slopes.
- Soften views and integrate the development into its setting, with additional native planting reflective of the surrounding landscape context including native scrub planting along the proposed bund to the north, east and south.

1.3.4 A further 3.84 hectares of land south of the site also under control of the applicant is to be enhanced and planted with additional native hedgerows and trees. The grassland will be managed and improved to enhance its ecological value. The successful establishment of this land as highlighted in the Ecological Assessment provides a net gain to biodiversity.

1.3.5 The landscape design mitigation and green infrastructure proposals will establish a network of native planting appropriate to the rural setting. Once mature, they will create a connective habitat for wildlife and assimilate the proposed built form into the receiving landscape context. New native hedgerow planting, new hedge trees and the infilling of gaps in the existing hedgerows will restore the original traditional field boundaries which are in decline and offer new opportunities for biodiversity.

1.3.6 The 3m and 4m tall earth screening bund will be constructed along the southern, western and northern boundaries. The proposed native woodland scrub planting along the outer face of the bund will include some evergreen species within the mix to reflect the existing woodland elements in the surrounding

context, whilst also softening existing views of the pylons within the site and the adjacent substation. Climbing and trailing planting will also be added to the inner section of the gabion wall to soften the appearance and also provide enhanced landscape habitat.

1.3.7 The existing grassland will be enhanced by suitable treatments to topsoil and seeding methods appropriate for continued grazing and creating a more valuable ecological resource.

1.3.8 The new wetland areas will create opportunities to enhance biodiversity.

1.3.9 It is proposed that the BESS will be in operation for 40 years, after which the structures will be removed, and the site returned to agricultural use. The associated mitigation planting will however be retained in perpetuity.

Figure 1.2: Image extract from the approved landscape masterplan, 1054-L-01(G). Scheme to be developed in accordance within Condition 12, Hard and Soft Landscape Mitigation Scheme

1.4 RESPONSIBILITY FOR IMPLEMENTATION

1.4.1 All relevant EU and UK nature conservation law will be adhered to in relation to the protection of ecological features and landscape and ecological enhancement/management. This includes (although not relevant to this site) the protection afforded to great crested newts (GCN) under the Conservation of Habitats and Species Regulations 2017 (as amended), and the protection afforded to reptiles and nesting birds under the Wildlife and Countryside Act 1981 (as amended).

1.4.2 The LMMP and its subsequent landscape management prescriptions will ensure compliance with the Staffordshire Moorlands Local Plan (2020) 2014-2033. The Staffordshire Moorlands Local Plan was adopted on 9th September 2020 and provides a framework for development within the district between 2014-2033.

1.4.3 The LMMP will seek to comply with the following LP Policies:

- Policy SS10: Other Rural Areas Strategy
- Policy DC3 Landscape and Settlement Setting
- Policy NE2 Trees, Woodland and Hedgerows

1.4.4 Other Relevant Strategies, Guidelines or Documents

- Staffordshire Moorlands Design Guide SPD (2018)
- Staffordshire Moorlands District Council, Churnet Valley Masterplan SPD (2014)

1.4.5 The presence of Habitats of Principal Importance, Local Biodiversity Action Plan habitats, and non-statutory designated Local Wildlife Sites (LWS) is also considered (including hedgerows and adjacent woodland).

2. LANDSCAPE DESIGN AND MANAGEMENT OBJECTIVES

2.1 KEY OBJECTIVES

2.1.1 The primary design objectives for the proposed landscape planting is to provide mitigation to screen the development from sensitive visual receptors, whilst also enhancing the nature conservation value of the site to achieve benefit for biodiversity and improve local green infrastructure networks.

2.1.2 Note: management of specific ecological elements is considered within the separate Ecological Management Plan, produced in response to Condition 21.

2.2 MANAGEMENT AND MAINTENANCE OBJECTIVES

2.2.1 The establishment and future success of the soft landscape works is largely dependent upon the quality of the initial planting works, and the standards and frequency of the subsequent management and maintenance it receives. Key objectives include:

- Ensure the landscape develops in a manner commensurate of the design intentions.
- Secure a long-term future for existing trees and hedgerows that provide amenity and ecological value.
- Deliver and maintain a functional, safe environment for all site users.
- The establishment and continued growth to maturity of the trees and other planting proposals.
- Define planned maintenance operations to ensure the health and survival of plants during the operational period.
- Ensure the ongoing landscape management and maintenance regimes throughout the lifetime of the development.

2.3 SOFT LANDSCAPE MANAGEMENT REGIMES

2.3.1 The key principles for the Soft Landscape Management Regimes are;

- Apply good practice to all horticultural operations.
- Promote healthy growth and establishment of all plants, shrubs and trees.
- Ensure control of invasive weeds.
- Ensure the development of prime plant, shrub and tree form, shape, density and display.
- Provide protection against pests and diseases.
- Promote amenity and wildlife value.
- Replacement of plants, shrubs and trees in line with the design proposals during the 10-year Plan period.

2.3.2 Reference should be made to the Landscape Specifications within Appendix A

3. MANAGEMENT PRESCRIPTIONS

3.1 INTRODUCTION

3.1.1 The current site baseline was established following site appraisal work and informed by specific landscape, ecological and arboricultural surveys, as discussed within the application documents. This information has been used to inform the future baseline, as well as to inform revised landscape proposals.

3.1.2 The site comprises grass pasture grazing fields bounded by an operational substation, existing woodland, hedgerows with some intermittent trees and field tree groupings. Excluding a small section of hedgerow by the new site access, all existing boundary vegetation will be fully retained and protected throughout the enabling and construction phases of the BESS.

3.1.3 The approved Landscape Masterplan and this LMMP will ensure that existing boundary habitats are retained and enhanced with additional planting (woodland scrub, hedgerows and hedgerow trees) to encourage the establishment and movement of wildlife. The site's perimeter will see the establishment of embankment grassland, woodland scrub and tussock grassland habitat with perennial wildflower grassland areas to the larger north western clear zone and ecological offsetting BNG field to the south.

3.1.4 The following section outlines the aims and objectives of the planting and design proposals. Management options/regimes will be set out at Section 4 to provide further detail for how these can be achieved.

3.2 GENERAL STANDARDS FOR LANDSCAPE SPECIFICATION

3.2.1 Refer to Appendix A, NBS Planting Specifications Document: Q31 External Planting for full details of planting specification.

3.2.2 All works are to be carried out in accordance with the correct Health and Safety Legislation, British Standard and Horticultural Practices.

3.2.3 The appointed Landscape Contractor will provide Method Statements that will include health and safety arrangements, details of the intended frequency and timing of operations, details of the type of machinery to be used and detail mitigation for environmental aspects such as pollution and habitat loss.

3.2.4 The following prescriptions are to be followed by the appointed contractor. These are to be reviewed at the end of each 5-year plan period.

3.2.5 Tree, scrub and hedgerow planting are to be delivered and planted in accordance with to CPSE 'Handling and establishing landscape plants' alongside BS3998 and BS5837 standards and the planting specification (Appendix A). Refer to Drawing No's SRE1164 07 01 and SRE1164 07 02. All plants should be stored only, when necessary, in accordance with the above CPSE guidance.

3.2.6 Planting is to remain materially undamaged, sturdy, healthy and vigorous, planted upright or well balanced with best side to outer edge. Trees and shrubs are to be of good shape and without elongated shoots, grown in a suitable environment and hardened off before being delivered to the site. All planting is to be true to name, of UK provenance and free from pests, diseases, discoloration, weeds, fungus and physiological disorders. No substitutes in size or species shall be made without the written consent of the Landscape Architect and the LPA.

3.2.7 All planting works are to be undertaken with due diligence, being sure to leave the works in a clean and tidy condition at completion and after any maintenance operations.

3.2.8 Bare root deciduous planting shall be carried out in autumn only, from late October onwards and no later than the end of February; conifers and evergreens planted either in September/October or April/May. Container grown plants can be planted at any time of year if ground and weather conditions

are favourable. Bare root deciduous planting to be carried out only during suitable ground and weather conditions. Planting shall not be carried out in waterlogged or frozen ground. All planting is to be caned and guarded.

3.2.9 Measures specific to the protection and management of wildlife species / habitat areas found on the wider site are provided in the Ecological Management Plan (EMP) produced to address the requirements of Condition 21. This includes ongoing and proposed maintenance practices and protection measures during the enabling and construction phases to ensure existing habitats are protected and details for the design and implementation of any new proposed habitats created to enhance the biodiversity value of the site.

4. LANDSCAPE MANAGEMENT

4.1 GENERAL MANAGEMENT PRINCIPLES

4.1.1 In general, it is common practice for maintenance regimes to be for a period of 10 years after which members of staff involved in site management would review these before commencing further maintenance works.

4.1.2 It is noted that the site planting will be subject to an initial 10-year management and maintenance regime to then be reviewed before the next plan period commences, but management of the BESS, and associated mitigation around the site perimeter will continue for the full duration of operation, 40 years. It is though expected that management requirements will tail off in intensity in the longer term as woodland, native scrub and hedgerow boundaries around the site establish.

4.1.3 General maintenance shall include weeding (docks/brambles/thistles etc), pruning (as required), firming in after frost/human damage/high winds etc, control of pests and diseases, adjusting/ repairing tree ties/ shelters as required and litter and debris removal.

4.1.4 Any substantial plant losses that fail or die over the initial 10-year defects period following site handover are to be replaced with the same or similar species (to approval) within the next suitable planting season (mid Oct – end of February). Management and maintenance operations will continue after this time, but it is considered that the initial period is a long enough period for planting to become established.

4.2 EXISTING AND PROPOSED HABITATS

4.2.1 The BESS development area will be entirely 'hard' surfaced; the planting proposals developed as part of this landscape maintenance and management plan encompass the peripheral areas from the bunds outwards. This area will comprise, tree and shrub planting, hedgerow planting, tree planting and grassland enhancement. This area is also surrounded by areas of existing woodland, tree and hedgerow planting within the ownership boundary, which will be required to be protected during construction of the BESS and maintained as part of the long-term management commitments for the site.

4.2.2 Drawing No's. SRE1164 07 01 and SRE1164 07 02 illustrate the proposed planting (tree, hedgerow and grass/wildflower seeding operations) to be implemented to provide enhancement of the development site. Detailed specifications are provided in a separate NBS Landscape Planting Specification document (see Appendix A) to be submitted with the proposed planting drawings.

4.3 PROPOSED TUSSOCK GRASSLAND

4.3.1 The limited outer areas between the bund toe and the outer hedgerow will be seeded with a low maintenance Tussock Grassland mix (or similar approved) if damaged during the construction process. It is noted that substantial areas of this fringe zone will be protected by tree protection fencing so the area of seeding is likely to be limited.

4.3.2 A typical species list for establishment of grassland is as follows (Tussock Grass Mixture), or similar approved.

Table 4.1: Emorsgate EG10 Tussock Grassland Mixture (or similar approved) Species Composition

Mix %	Species	Common Name
45	*Cynosurus cristatus*	Crested Dogstail
10	*Dactylis glomerata*	Cocksfoot
5	*Deschampsia cespitosa*	Tufted Hair-grass (w)
10	*Festuca rubra*	Red Fescue
20	*Schedonorus arundinaceus*	Tall Fescue (w)
10	*Schedonorus pratensis*	Meadow Fescue

4.3.3 This mixture will create tussocky grassland that, once established, require little or no maintenance. The habitat is suitable for insects, small mammals, birds, amphibians and reptiles, providing nesting sites during spring, food during summer and autumn, and shelter during winter.

4.3.4 Areas to be sown should first be rotovated and raked or harrowed to produce a medium fine, firm tilth. Fertiliser should not be applied at any point as this will lead to dominance of nutrient loving species such as broad-leaved grasses, nettles and docks. The seed mix should be sown at 5g/m2 as per the general manufacturer's recommendation to allow space for each species to establish and to produce good ground cover.

4.3.5 The first year's growth and establishment of wild grasses will likely be slow initially, especially at low sowing rates (2-5g/m2). There will often be a flush of annual weeds from the soil in the first growing season. Control weed growth by topping or mowing. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm throughout the first growing season to prevent weeds smothering the slower-growing grasses.

4.3.6 Once established, tussocky grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) may need control by occasional spot treatment with an herbicide. To control scrub and bramble development, tussocky areas may need cutting every 2-3 years, between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

4.4 PROPOSED EMBANKEMENT GRASSLAND UPON THE BUNDS

4.4.1 Upon the outer slops of the bunds a low maintenance grass mix will be sown around the tree and shrub planting in tubes to act as a pioneer species. The grassland will aid slope stability during the initial years of operation before the main planting develops to provide full coverage over the area. It is anticipated that this grass will only need to be maintained for the first 5 years before the shading of the trees and scrub will negate the growth of the grass.

4.4.2 The grassland mix will be used but left to grow longer and subject to 2 annual cuts to provide additional cover and wildlife habitat adjacent to hedgerow corridors.

4.4.3 Sourced from; Germinal Seeds, A3 Embankments & Drought (or similar approved). This is a specially selected blend of species and varieties that will aid in the stabilisation of banks and tolerate dry soils.

Mix %	Species	Common Name
Product Name	**A3 Embankments & Drought**	
30	Festuca rubra rubra	CORAIL STRONG CREEPING RED FESCUE
30	Lolium Perenne	ZURICH CREEPING PERENNIAL RYEGRASS
25	Festuca arundinacea	DEBUSSY 1 TALL FESCUE
10	Festuca longifolia	SWORD HARD FESCUE
5	Agrostis castellana	HIGHLAND BROWNTOP BENTGRASS

- Sowing Rate 50 g/m2 (500 kg/ha)
- Sowing Time March - October
- Sowing Depth 10 mm

Sowing Instructions

4.4.4 Create a fine friable seedbed down to 150 mm in depth. Carry out two equal sowings at right angles to each other and diagonally to main axis. Broadcast manually or use seed drill, rake level and roll. Ensure good seed to soil contact.

- Cutting Height, down to 40-60 mm (First year)
- Minimum cuts per first year: 2
- Overseeding Rate: 20 g/m2 (200 kg/ha)

4.4.5 The first year's growth and establishment of wild grasses will likely be slow initially, and there will often be a flush of annual weeds from the soil in the first growing season. This is to be controlled by topping or mowing. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm throughout the first growing season to prevent weeds smothering the slower-growing grasses.

4.4.6 Once established, the embankment grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) may need control by occasional spot treatment with an herbicide. To control scrub and bramble development, tussocky areas may need cutting every 2 years, between October and February before tree and scrub planting grows to out compete. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

4.5 PROPOSED GENERAL PURPOSE MEADOW – NORTH WESTERN INTERNAL AREA AND SOUTHERN FIELDS

4.5.1 These areas will be enhanced with green hay/seed as set out on the approved Landscape Mitigation Plan, and Landscape Planting Plans ref: SRE1164 07 01 and SRE1164 07 02.

4.5.2 It is intended to create an herb rich neutral grassland community, through chain and harrow soil preparation and seeding with an appropriate species rich seed mix as set out in the following table (or similar approved).

4.5.3 The General Meadow Mix (**Table 4.2**) will be sown at 4 grams per m2 (40kg/ha) as per the general manufacturer's recommendation to allow space for each species to establish and to produce good ground cover. The general meadow mix used will left to grow longer and subject to 2 annual cuts to provide additional cover and wildlife habitat adjacent to hedgerow corridors.

Table 4.2: Emorsgate EM2 Standard General-Purpose Meadow Mixture (or similar approved) Species Composition

Mix %	Species	Common Name
Wildflowers – 15%		
0.9	Achillea millefolium	Yarrow
1.2	Centurea nigra	Common Knapweed
0.75	Cruciata laevipes	Crosswort
0.15	Daucus carota	Wild Carrot
0.3	Knautia arvensis	Field Scabious
0.75	Leucanthemum vulgare	Oxeye Daisy
2.1	Malva moschata	Musk Mallow
3.0	Plantago lanceolata	Ribwort Plantain
2.25	Poterium sanguisorba ssp sanguisorba	Salad Burnet
0.15	Primula veris	Cowslip
0.6	Ranunculus acris	Meadow Buttercup
2.25	Silene dioica	Red Campion
0.075	Silene vulgaris	Bladder Campion
1.2	Galium verum	Lady's Bedstraw
Grasses – 85%		
8.5	Agrostis capillaris	Common Bent (w)
29.75	Cynosurus cristatus	Crested Dogstail
25.5	Festuca rubra	Red Fescue
4.25	Phleum bertolonii	Smaller Cat's-tail (w)
17.0	Poa pratensis	Smooth-stalked Meadowgrass

General Sowing Instructions

4.5.4 The remaining areas that are to be sown will be removed of weeds using cultivation, then shallow ploughed to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll to produce a firm surface.

4.5.5 Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact.

4.5.6 In the first year the sown meadow species are perennial are slow to establish. The first flush of annual weeds, arising from the soil seed bank may look unsightly, but they will offer shelter to the sown seedlings and will die before the year is out. Therefore, the cutting the annual weeds should be left until mid to late summer, then cut, remove and compost in August. 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. Grazing will only be considered as an option within the southern field, outside of the main BESS site area, not within the north western zone of grassland. Note this will also only be possible in areas where hedges and trees are protected by stock fencing. During the initial establishment phase the contractor to also dig out any residual perennial weeds such as docks.

4.5.7 In the second and subsequent years sowings are best managed by traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring mowing or

grazing (southern field only). Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site or compost within the site area.

4.5.8 Mow or graze (southern area only) the re-growth through to late autumn/winter to c 50mm and again in spring if needed.

4.6 WETLAND GRASSLAND

4.6.1 The area around the new surface water pond /swales will be seeded with a wet grassland seed mix, 'Emorsgate EM8 Meadow Grass Mixture for Wet Soils' seed mix (or similar approved). EM8 is a complete mix composed of 20% native wild flowers and 80% slow growing grasses (by weight).

4.6.2 EM8 contains species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain and water meadows. The soils in wet meadows may flood for short periods in winter, but are usually well drained in summer.

4.6.3 Ground preparation and sowing to be the same as the general meadow areas, sown at a rate of 4 g/m2. Management to undertaken as per the main meadow areas. Meadow grassland is not cut or grazed from spring through to July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut' areas to cut back to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed.

4.6.4 Wetland habitats are characteristically quite variable in composition, reflecting local drainage and management. Conditions can vary, for instance, between the highs and lows in ridge and furrow grassland. Localised differences may require a targeted approach. For example, boggy areas which remain waterlogged for much of the year may be best sown with pond edge mixture EP1, ongoing management will review the need for this.

4.7 PROPOSED HEDGEROW PLANTING

4.7.1 Hedgerows are identified as a Habitat of Principal Importance (HPI) as listed within Section 41 of the NERC Act 2006.

4.7.2 Hedgerow works will include the planting of new hedgerows as described in the Mitigation Features section of this report. Existing hedgerows will also be gapped up and enhanced, improving connectivity around the site. This will involve randomly placed native species groups along the length of the existing hedgerow using the same species mix as for the proposed hedgerows, which is to be undertaken during the planting season (October to March inclusive). Refer to **Table 4.3** below for species composition.

4.7.3 Proposed planting areas are to have existing grass and vegetation sprayed off or cut to a height of c.75mm or less, a minimum of 3 weeks prior to planting.

4.7.4 Hedgerow plants (**Table 4.3**) are to be planted at 6 plants per linear metre in a double staggered row in groups of approximately 5-9 as per the planting schedule on Drawing No Drawing Ref: SRE1164 07 01 and SRE1164 07 02. Planting trenches should be large enough to take the full spread of the roots with plants set out evenly as shown in the specification drawing.

4.7.5 Immediately after planting, plants should be watered thoroughly with 20L of water per m^2, and without damaging or displacing plants or soil. Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.

4.7.6 Young hedgerow plants should be watered in dry weather for the first 3 years to ensure successful establishment and the long-term health of the hedgerow.

4.7.7 Individual biodegradable spiral guards and bamboo canes will be required to prevent damage to saplings by browsing rabbits.

Table 4.3: Species Rich Hedge Mix planted @ 6/m in a double staggered row

Mix %	Species	Common Name
15	*Acer campsetre*	Field Maple
5	*Cornus sanguinea*	Dogwood
15	*Corylus avellana*	Hazel
30	*Crataegus monogyna*	Hawthorn
5	*Ilex aquifolium*	Holly
20	*Prunus spinosa*	Blackthorn
5	*Rosa canina*	Dog Rose
5	*Viburnum opulus*	Guelder Rose

4.8 PROPOSED TREE PLANTING

4.8.1 The tree species as set out in the following table will be planted at locations as detailed on the planting plan, Drawing Ref: SRE1164 07 01 and SRE1164 07 02 and in accordance with the NBS Landscape Specification.

Table 4.4: Individual Trees

Species	Common Name
Acer campestre	Field Maple
Betula pendula	Silver Birch
Crataegus monogyna	Hawthorn
Malus sylverstris	Crab Apple
Quercus robur	Holly
Sorbus acuparia	Rowan

4.9 HEDGEROW SPECIFIC MANAGEMENT (OVERVIEW)

4.9.1 All hedges are to be retained around the site, with infilling of the gaps of missing sections undertaken. In addition to benefiting landscape and screening any visual issues, the retention of hedges will ensure that foraging, refuge and hibernation opportunities, protection from predators, and connectivity between habitats for wildlife within the local area is maintained and enhanced.

4.9.2 Infilling will be targeted to include berry and nut rich species of benefit to birds and dormice in line with species rich mix proposed for new hedgerows on site. Each hedgerow must have at least 5 of these species present to meet monitoring targets for hedgerow management.

4.9.3 Retained hedgerows will undergo sympathetic hedgerow management throughout the life of the scheme, thus providing landscape and ecological benefits. Outline hedgerow management recommendations include:

- Hedges will be trimmed at three-year intervals at the most and maintained at a height of at least 2.5m with sections extending up 4m;
- Minimum width of hedges to be 2m to 3m and then maintained;
- At least 30% of site hedges will be left to grow for at least seven to ten years (most likely on the northern boundary of the site to avoid shading;

- Ensure rotationally only 30% of hedges are cut in any one year, to allow hedge trees to fruit heavily;
- Laying will be used to manage hedgerows that become 'gappy' or lack dense branches at their base; and
- If hedgerow size needs to be restricted, hedges will be cut on one side and not the top (but within a maximum height of ~3m – 4m).
- Hedgerows will have strong tree candidates identified in year one of the management regime and these individuals will be clearly marked for managing to establish standard trees. Marking to be undertaken by arborist with marking posts installed on management corridors either side.

4.9.4 An overview plan of the planting proposals is provided at **Figure 1.2** which illustrates the existing and proposed habitats and proposed layout.

4.10 VEGETATION REMOVAL

4.10.1 All hedgerow removal will be supervised by an Ecological Clerk of Works (ECoW). To avoid illegal disturbance of nesting bird species, removal of hedges and scrub should be undertaken outside the bird breeding season (March to September, inclusive). If not possible then a suitably qualified ecologist should survey the hedgerow in advance of any works taking place.

4.10.2 Any loss of hedgerow lengths will be compensated by planting new hedgerows and infilling existing hedgerows on site, as set out in this LMMP.

4.10.3 All operatives undertaking works on site are to be briefed prior to the works commencing on the locations, status and protection requirements for all retained hedgerows.

4.11 PATH MAINTENANCE

4.11.1 The BESS access track and gravel tracks should simply be kept clear of litter and debris and any weeds will be removed as necessary. Any depressions or bare areas should be refilled and levelled as necessary.

4.12 LANDSCAPE MANAGEMENT WORKS

4.12.1 The following section outlines the works programme and management regime for retained and newly created habitats present on site.

4.12.2 Maintenance shall include weeding (docks/ brambles/ thistles etc), pruning (as required), firming in after frost/human damage/high winds etc, control of pests and diseases, adjusting/ repairing tree ties/ shelters as required and litter and debris removal.

4.12.3 All plants must also receive adequate watering to ensure their health and survival.

4.12.4 Any plant losses that fail or die over a five-year period following practical completion are to be replaced with the same or similar species (to approval) within the next suitable growing season (mid Oct – mid March).

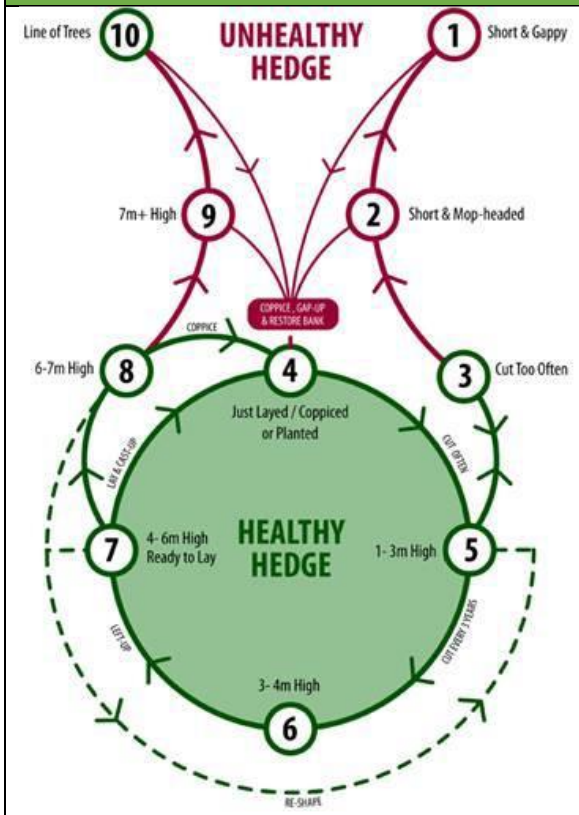
Table 4.5: Ten Year Management Works Programme

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
Landscape management works to be read in conjunction with the NBS Landscape Specification Appendix A										
Annual Review										
Monitoring by Landscape Architect and feedback from Landscape Contractor and Site manager	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
General										
Tidy up areas clear rubbish, litter etc. from woodland scrub plantation areas, grass and hard surface areas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Existing Trees										
Tree works will follow best practice procedures as set out in BS 3998:2010. No removal of woody vegetation will take place during the bird nesting season unless checked by a qualified Ecologist. Existing retained trees will be left unmanaged unless otherwise dictated for reasons of public safety.	✓		✓							
Retained trees will be protected from damage and from soil **compaction** during construction where construction works are to be undertaken in the vicinity, in accordance with guidance in British Standard 5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations.	✓		✓							
Proposed Trees and Scrub - Woodland Plantation Blocks										

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
Trees will be monitored and dead or dying species only will be thinned or removed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Remove weed growth from shelter guards	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monitor and adjust guards if needed, firm or re stake / remove if not needed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Perennial weeds, particularly Thistle, Dock and Ragweed to be treated with herbicide / dug up and removed as required.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replacement of failed planting within the next planting season, to discuss substitute species if particular species fail.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Maintain embankment grassland in accordance with specification	✓		✓		✓		✓			
New standard and feathered trees										
1m weed free area to be maintained around base of tree	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Check stakes and ties for support, then remove when no longer needed c3 – 5 years	✓	✓	✓	✓	✓					
Existing Hedgerows										
Hedges will be trimmed at three-year intervals at the most and maintained at a height of at least 2.5m with sections extending up 4m; Minimum width of hedges to be 2m to 3m and the maintained; At least 30% of site hedges will be left to grow for at least seven to ten years (most likely on the northern boundary of the site to avoid shading. Ensure rotationally only 30% of hedges are cut in any one year, to allow hedge trees to fruit heavily. Laying will be used to manage hedgerows that become 'gappy' or lack dense branches at their base; and If hedgerow size needs to be restricted, hedges will be cut on one side and not the top (but within a maximum height of ~3m – 4m). Hedgerows will have strong tree candidates identified in year one of the management regime and these individuals will be clearly marked for managing to establish standard trees. Marking to be undertaken by arborist with marking posts installed on management corridors either side.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New Hedgerows										

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
Keep a check on pernicious/rank weed growth, docs, thistles, brambles etc. and aim to keep new planting free of such weeds. Allow new planting to grow for the first 5 years with minimal intervention for cutting, except for cutting back lead shoots once they reach a height of 1m to encourage dense growth and side branching	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Remove weed growth from spiral guards and hedge base area	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monitor and adjust guards if needed, firm or re stake / remove if not needed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Perennial weeds, particularly Thistle, Dock and Ragweed to be treated with herbicide / dug up and removed as required.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replacement of failed planting within the next planting season, to discuss substitute species if particular species fail.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trimming of hedgerow to maintain form (See Appendix A)			✓	✓	✓	✓	✓	✓	✓	✓
In the long term, hedgerows will be taken through a Hedgerow Management Cycle (HMC)[1]. The ten steps of the HMC are shown below. The cycle shows a healthy green core and two unhealthy red offshoots. The aim should be to keep the hedge in the green part (steps 3 to 8), periodically laying or coppicing it, with trimming at appropriate intervals in between. If the hedgerow is not permitted to go through this cycle, it will either, if cut too often, become short and gappy (steps 1 – 3) or, if neglected, develop into a line of trees (steps 8 – 10). In general, existing and proposed hedgerows are to grown/establish to 3m tall to assist with screening of the arrays from the immediate surroundings.	As required									

[1] The Hedge Management Cycle (HMC). Artwork by Will Field. Management Cycle concept developed by Nigel Adams. Hedgelink UK.

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
	As required									

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
Bund and Tussock Grassland										
In the first-year growth and establishment of wild grasses may be slow initially, especially at low sowing rates (2-5g/m2). There will often be a flush of annual weeds from the soil in the first growing season. This weed growth is easily controlled by topping or mowing. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm throughout the first growing season to prevent weeds smothering the slower-growing grasses. Remove cuttings. Mowing frequency then reduced to approx. every 2 years (depending on growth of perennial weeds initially)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bi annual inspection for dominant weed species, and spot herbicide / hand treatment as necessary	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Re sow areas that have failed to establish with grass species	✓	✓								
Perennial Wildflower Meadow Grassland										
Following establishment, grassland will be allowed to flower and set seed between spring and July/August. A cut will be taken after flowering, with material left for up to seven days to allow seeds to set before cuttings removed. Regrowth will be mown to c.50mm through to late autumn/winter and again in spring if necessary.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bi annual inspection for dominant weed species, and spot herbicide / hand treatment as necessary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Re sow areas that have failed to establish with grass species	✓	✓								
Gabion Baskets										
Inspect ground cover ivy and ensure growth is directed over the baskets, once over full area, trim as required to prevent further encroachment.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Annual visual inspection to check condition of baskets and stability of earth screening bund	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fences and Gates										
Fencing and gates shall have a twice annual inspection in spring and autumn.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Access Roads/Paths										

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
Ensure access paths are free from weeds, trip hazards or other obstructions. This includes a once annual spray of weeds and any depressions / pits to be filled.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

4.13 LONG TERM MAINTENANCE OF HEDGEROWS

4.13.1 Beyond the 5-year initial planting maintenance period the following maintenance operations are to be carried out:

Hedgerow Planting – Years 0-5

- Planting will be watered regularly in years 1-3 during hot weather and periods of extended drought. If any plants die, these must be replaced like for like.
- The base of the planted hedgerows must be kept free from weeds and shrubs until the hedgerow has established. Basal mulching will prevent competitor growth, but mechanical weeding should be used where necessary.
- Cutting is unlikely to be necessary in years 1-5, however, where any standard planting is utilised, these should be pruned to encourage bushy growth of the canopy.

Years 5 to 10+

- Hedges will be trimmed at three-year intervals at the most and maintained at a height of at least 2.5m with sections extending up 4m.
- Minimum width of hedges to be 2m to 3m.
- At least 30% of site hedges will be left to grow for at least seven to ten years (most likely on the northern boundary of the site to avoid shading.
- Ensure rotationally only 30% of hedges are cut in any one year, to allow hedge trees to fruit heavily.
- Laying will be used to manage hedgerows that become 'gappy' or lack dense branches at their base; and
- If hedgerow size needs to be restricted, hedges will be cut on one side (maintaining a minimum width of 2m to 3m) and not the top (but within a maximum height of ~3m – 4m).
- Hedgerows will have strong tree candidates identified in year one of the management regime and these individuals will be clearly marked for managing to establish standard trees. Marking to be undertaken by arborist with marking posts installed on management corridors either side.

4.14 MONITORING AND REVIEW

4.14.1 To ensure that the landscape planting and habitats created within the site reach and maintain their maximum value, all habitats should be monitored. Monitoring is an essential part of any management plan to:

- Ensure that the proposed management is being implemented.
- Respond to unexpected outcomes from management; and
- Determine if objectives are being achieved.

4.14.2 Site meetings should have the appointed landscape contractor in attendance to ensure landscape works are carried out in accordance with the landscape specification and schedules. Monitoring will also assess whether any changes are needed to the specified management regimes.

4.14.3 Landscape mitigation and management works are carried out in accordance with the specification. Monitoring will also assess whether any changes are needed to the specified regimes. This will ensure the landscape and ecological specification has been fulfilled and to provide baseline data for future surveys to be monitored against.

4.14.4 A site wide landscape inspection should also be carried out by a suitably experienced Landscape Architect to ensure that the landscape works are undertaken in accordance with the landscape specification and schedules. Monitoring will also assess whether any changes are needed to the

specified management regimes.

4.14.5 Monitoring results will be used to inform changes to the LMMP, and 10-year landscape works programme. The prescriptions provided will not be set in stone and should be altered if required in agreement with the Local Planning Authority (LPA). Should monitoring indicate landscape structure of conservation aims are not being met, appropriate remedial measures should be taken.

4.14.6 Monitoring will be undertaken at 1-year intervals with the first visit following initial planting and seeding works. Monitoring of the ecological elements of the LMMP will be undertaken by an ecologist, mainly detailed within the separate Ecological Management Plan. Monitoring will be undertaken in late summer following a maintenance visit and submitted as a written summary note to the LPA in November of each relevant monitoring year.

APPENDIX A

SRE1164

Sirius Planning Ltd

Sirius Renewable Energy Limited

Cellarhead BESS

Landscape Planting Works

08-10-2025

Contents

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Q30
Seeding/ turfing

General information/requirements

115 Seeded areas

1. Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
2. Appearance: A closely knit, continuous ground cover of even density, height and colour.

120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable.

146 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without displacing seed, seedlings or soil.
3. Frequency: As required to ensure establishment

150 Water restrictions

1. Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

160 Notice

1. Give notice before
   - 1.1. Setting out.
   - 1.2. Applying herbicide.
   - 1.3. Applying fertilizer.
   - 1.4. Preparing seed bed.
   - 1.5. Seeding or turfing.
   - 1.6. Visiting site during maintenance period.
2. Period of notice: 1 week

170 Setting out

1. Boundaries: Mark clearly.
2. Delineation: In straight lines or smoothly flowing curves as shown on drawings.

Preparation

210 Herbicide

1. Description: For all areas to be seeded
2. Type: Suitable for suppressing perennial weeds.
3. Timing: Allow fallow period before cultivation.
   - 3.1. Duration: As the manufacturer's recommendation

290 Preparation for hydraulic seeding

1. Clearance: remove rubbish, and stones with any dimension exceeding: 50 mm.
2. Herbicide
   2.1. General weeds: Selective contact herbicide.
   2.2. Pernicious weeds: Selective hormone herbicide.
3. Grading: Smooth, flowing levels.
   3.1. Cultivation: Ensure that grass roots can penetrate the substrate.
4. Finished surface: Ribbed or rough-textured.
5. Reinforcement: contractor to confirm
   5.1. Fixing: As the specialist contractor's recommendation

Seeding

311 Grass seed - BUNDS

1. Description: Bund grass seed, between planting tubes of shrubs / trees
2. Supplier: Germinal Seeds, A3 Embankments & Drought
   2.1. Mixture reference: A3
3. Application rate: 50 g/m²

311 Grass seed - BASE of BUNDS A

1. Description: For areas between the base of the bunds and site boundary hedges
2. Supplier: Emorsgate EG10 Tussock Grass Mix
   2.1. Mixture reference: EG10
3. Application rate: 5 g/m²

312 Wildflower seed mixture - general

1. Description: General purpose meadow to north western internal field and southern fields
2. Supplier: Emorsgate
   2.1. Mixture reference: EM2 Standard General-Purpose Meadow Mixture
3. Origin of each species: UK origin
4. Application rate: 4 g/m²

319 Quality of seed

1. Description: All areas
2. Freshness: Produced for the current growing season.
3. Certification: Blue label-certified varieties.
   3.1. Standard: EC purity and germination regulations.
   3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
4. Samples of mixtures: Submit when requested.

330 Sowing

1. General: Establish good seed contact with the root zone.
2. Method: To suit soil type, proposed usage, location and weather conditions during and after sowing
   2.1. Distribution: Two equal sowings at right angles to each other

335 Grass sowing season

1. Grass seed generally: April to June or August to October

336 Wildflower sowing season

1. Wildflower seed generally: March to May or August to October

340 Pre-emergent herbicide

1. Description: For all areas to be seeded - if area cannot be left fallow / treated prior to seeding
2. Standard: Pesticide Safety Directorate and seed supplier approved
3. Application rate: In accordance with the manufacturer's written recommendation.
   3.1. Timing: Immediately after sowing. Immediately after sowing.

370 Hydraulic seeding - Bunds

1. Description: for bund slopes if desired by contractor
2. Proposed land use: Bunds - areas between tubes of shrub and tree planting
3. Existing substrate: Site won topsoil, no import allowed
4. Stabilization: Not required
5. Slurry application: Suitable for soil type, proposed use, location and weather conditions, during and after application.
   5.1. Slurry constituents: Submit proposed constituents and application rates.

Protecting/cutting

540 First cut of grassed areas

1. Description: Bunds
2. Height of initial growth: 75 mm
3. Preparation:
4. Debris and litter: Remove.
   4.1. Stones and earth clods larger than 25 mm in any dimension: Remove
5. Height of first cut: 40 - 60mm
6. Mower type: Contractor's choice
7. Arisings: Spread evenly over cut areas

540 First cut of grassed areas Type A

1. Description: Tussock Grassland
2. Height of initial growth: 75 mm
3. Debris and litter: Remove.
   3.1. Stones and earth clods larger than 25 mm in any dimension: Remove
4. Height of first cut: 40 - 60mm
5. Mower type: Contractor's choice
6. Arisings: Spread evenly over cut areas

540 First cut of grassed areas Type B

1. Description: Tussock Grassland
2. Height of initial growth: 75 mm
3. Debris and litter: Remove.

3.1. Stones and earth clods larger than 25 mm in any dimension: Remove

4. Height of first cut: 40 - 60mm
5. Mower type: Contractor's choice
6. Arisings: Spread evenly over cut areas

590 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.

Maintenance

610 Failures of seeding

1. Duration: carry out the following operations from completion of seeding/ turfing until: The end of the rectification period.
2. Defective materials or workmanship: Areas that have failed to thrive.
   2.1. Exclusions: Theft or malicious damage.
3. Method of making good: Recultivation and reseeding/ returfing.
4. Timing of making good: The next suitable planting season

620 Maintaining

1. Description: Bund and bund base areas
2. Duration: carry out the following operations from completion of seeding/ turfing until: The end of the rectification period.
3. Maximum height of growth at any time: See LMMP
4. Preparation: Before each cut, remove all litter and debris.
5. Weed control: Substantially free of broad-leaved weeds.
   5.1. Method: Application of a suitable selective herbicide.
6. Stones brought to the surface: Remove regularly.
   6.1. Size: Exceeding 40 mm in any dimension.
7. Areas of settlement: Make good.

650 Maintaining grassed areas with perennial wildflowers

1. Duration: carry out the following operations from completion of seeding/ turfing until: The end of the rectification period.
2. Preparation: Before each cut, remove all litter and debris.
3. Height and frequency of cut in the first growing season
   3.1. Time of first cut: See LMMP
   3.2. Height of first cut: See LMMP
   3.3. Frequency of subsequent cutting (minimum): twice annually
   3.4. Height of growth permitted (maximum): See LMMP
4. Height and frequency of cut in the second growing season
   4.1. Time of cut: October, March and August
   4.2. Height of cut: 50 mm
5. Trimming: All edges.
   5.1. Arisings: Remove - after allowing to dry for 7 days. compost on site in suitable areas

Ω End of Section

Q31
External planting

General information/ requirements

118 Soil conditions

1. Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged
2. Frozen or snow-covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing

120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable
   1.1. Strong winds: Do not plant

125 Times of year for planting

1. Deciduous trees and shrubs: Late October to late March
2. Conifers and evergreens: September/ October or April/ May
3. Container-grown plants: Late October to late March
   3.1. Watering and weed control: Provide as necessary

130 Mechanical tools

1. Restrictions: Do not use within 100 mm of tree and plant stems

160 Notice

1. Give notice before
   1.1. Setting out.
   1.2. Applying herbicide.
   1.3. Applying fertilizer.
   1.4. Delivery of plants/ trees.
   1.5. Planting shrubs.
   1.6. Planting trees into previously dug pits.
   1.7. Watering.
   1.8. Visiting site during maintenance period.
2. Period of notice: One week

170 Soil requirements

1. Type
   1.1. Tree pits, shrub pits and other backfilling: Existing topsoil

200 Plants/ trees – general

1. Standard: To BS 3936-1 'Trees and shrubs'
2. Condition: Materially undamaged, sturdy, healthy and vigorous
3. Appearance: Of good shape and without elongated shoots
4. Hardiness: Grown in a suitable environment and hardened off
5. Health: Free from pests, diseases, discoloration, weeds and physiological disorders

6. Root system and condition: Balanced with branch system
7. Species: True to name
8. Origin/ provenance: British provenance
9. Definition: Origin and provenance have the meaning given in the National Plant Specification

260 Plant/ tree substitution

1. Plants/ trees unobtainable, or likely to be unobtainable at time of ordering. Submit alternatives, stating:
   1.1. Difference from specified plants/ trees:
2. Approval: Obtain before making any substitution

265 Plant handling, storage, transport and planting

1. Standard: To Committee of Plant Supply and Establishment (CPSE) Recommendations for Plant Handling.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect them from mechanical damage and do not subject them to shock, e.g. by dropping them from a vehicle.
4. Plant packaging: Coextruded polyethylene bags with black interior and white exterior
5. Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink-wrapped
6. Planting: Upright or well balanced, with best side to front.

285 Protection of existing grass

1. General: Protect areas affected by planting operations using boards/ tarpaulins.
   1.1. Excavated or imported material: Do not place directly on grass.
   1.2. Timing: October to March
   1.3. Duration: Minimum period.

Planting shrubs/ herbaceous plants/ bulbs

400 Random plant layout

1. Description: within bund planting areas
2. Spacing: Random groups of three to 11 plants of the same species.
3. Density: At two plants per m² on lower bund and at one plant per m² on upper southern bund only

435 Climbing plants used as cover to trail down the inner gabion basket walls

1. Description: Ivy (Hedera sp.) to be planted along the upper edge of the new bunds and directed to trail down the inner faces of the gabion basket walls
2. Planting
   2.1. Canes or other supports: not required. Note - no shrub shelters to be used for the Ivy (Hedera sp.)
   2.2. Arrangement: Aligned to promote growth towards inner faces
3. Fixing: Initial shoots to be loose tied (biodegradable string) on upper edges of baskets and down faces

471 Naturalized hedges

1. Description: Native hedgerow planting around site perimeter and access track
2. Trees and shrubs for hedges: Native species, with diversity in height, growth habit and seasonal interest to enhance biodiversity. See Planting plan and schedule.

3. Planting: In trenches large enough to take the full spread of roots. Set plants out evenly. See planting detail.

486 Bunds - tree and shrub protection

1. Description: Shrub and tree planting upon the bunds
2. Manufacturer: Tubex (or similar approved)
   2.1. Product reference: Tubex Nature Standard Tree Shelter, code 160PS1205
3. Type: Biodegradable tree shelter
4. Size: 60cm x 73 - 105cm
5. Support: A single timber stake
6. General: Ensure that protection methods do not impede natural movement of shrubs or restrict growth. Note - no shrub shelters to be used for the Ivy (Hedera sp.)

486 Hedgerows - shrub protection Type A

1. Description: New hedgerow planting
2. Manufacturer: Tubex (or similar approved)
   2.1. Product reference: Rainbow Bio Spiral Guard
   Product Code: 160PS1030_0.0045
3. Type: Biodegradable spiral guard
4. Size: 60cm x 38 cm
5. Support: A single cane stake
6. General: Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

Planting trees

500 Tree planting

1. Standard: Prepare trees and transplant in accordance with BS 4428

505 Tree pits

1. Description: For all Standard Sized Trees
2. Sizes: As drawing ???
3. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout
4. Excavated material: Separate topsoil and subsoil material and stockpile for backfilling
5. Pit bottoms: excavate with slightly raised centre: Break up base to a depth of 150 mm
6. Backfilling material: Excavated material from tree pit, installed to original soil profiles in accordance with BS 8545

546 Single vertical staking

1. Description: All standard trees, as per detail on Drawing...
2. Staking
   2.1. Position: Close to tree position on windward side
   2.2. Driving: Vertically at least 300 mm into bottom of pit before planting
   2.3. Backfilling: Consolidate material around stake
   2.4. Firming: Sufficiently firm to prevent movement of the root ball/ rootstock
3. Height of stakes: Cut off to approximately 500 mm above ground level

4. Ties: Adjustable and cushioned
   4.1. Number of ties: One
5. Tying: Secure tree firmly but not rigidly to stake with ties. Prevent tree from touching stake using spacer blocks or cushions if required
   5.1. Position: Top tie within 25 mm of top of stake
6. Nails: To BS 1202-1, galvanized; a minimum of 25 mm long and with 10 mm diameter heads.

576 Tree pit surfacing – loose-fill

1. Description: Mulch to tree pit surfaces
2. Surfacing material: Submit proposals
3. Area: 600 mm radius circle
4. Depth: 75 mm
5. Watering: Water soil thoroughly before laying

Protecting/ maintaining/ making good defects

710 Maintenance

1. Duration: Carry out the operations in the following clauses from completion of planting until The end of the rectification period.
2. Frequency of maintenance visits: In accordance with the agreed maintenance schedule

720 Failures of planting

1. Defects due to materials or workmanship not in accordance with the contract: Site subject to 10 year defects period for plants/ trees/ shrubs that have failed to thrive
   1.1. Exclusions: Theft or malicious damage after completion.
   1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.
2. Replacements: To match size of adjacent or nearby plants of the same species or to match the original specification: whichever is the greater
3. Timing of making good: During the next suitable planting season

760 Planting maintenance – pruning

1. General: Prune to promote healthy growth and natural shape
   1.1. Dead, dying, diseased wood and suckers: Remove.
   1.2. Timing: In accordance with the agreed maintenance schedule
   1.3. Trees: allow to grow as feathered specimens upon bund
2. Arisings: Remove.

770 Woodland planting maintenance

1. Watering: Only as necessary to prevent plants wilting
2. Loose plants: Re-firm surrounding soil, without compacting
3. Vegetation except trees and coppice shoots to be retained: Cut within the plantation area - as per grass cutting schedule.
   3.1. Arisings: Leave between rows.

995 Verification on completion

1. Requirement: Verify that all planting areas have been planted / then maintenance operations undertaken.

Ensure that all maintenance and monitoring plans are in place and operational. feedback on any issues / suggested improvements

Ω End of Section

Q35
Landscape maintenance

Generally

105 Maintenance objectives

1. Location: Cellarhead BESS Site
   1.1. Duration: Ten years (defects period) then ongoing for remaining 30 year operational period
2. Aims: Improved landscape visual amenity and ecological enhancement
3. Restrictions: As described in the landscape maintenance manual

110 Notice

1. Give notice before
   1.1. Each site maintenance visit.
2. Period of notice: Seven days

130 Reinstatement

1. Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.

170 Disposal of arisings

1. General: Unless specified otherwise, dispose of arisings as follows:
   1.1. Grass cuttings: Compost on site. Wildflower areas to be left for 7 days post cutting
   1.2. Litter and nonbiodegradable arisings: Remove from site

Grassed areas

211 Maintenance of grassed areas

1. Standard: To BS 7370-3. Carry out maintenance appropriate to each category of grass (Bund / Tussock / Wildflower), as set out in LMMP

220 Grass cutting generally

1. Before mowing: Remove litter, rubbish and debris.
2. Finish: Neat and even, without surface rutting, compaction or damage to grass.
3. Edges: Leave neat and well defined. Neatly trim around obstructions.
4. Adjoining hard areas: Sweep clear and remove arisings.
5. Drought or wet conditions: Obtain instructions.

270 Mowing rough-grassed areas - Bunds

1. Grass height: 40 - 60mm in the first season, then cut every 2 years down to 60mm until surrounding shrub and tree growth establishes
2. Arisings: Remove for composting on site

270 Mowing rough-grassed areas - base of bunds Type A

1. Grass height: 40 - 60mm in the first season, then cut every 2 years down to 60mm
2. Arisings: Remove for composting on site

272 Maintaining grassed areas with perennial wildflowers

1. Preparation: Before each cut remove litter and debris.
2. Height and frequency of cut in first growing season
   2.1. Time of first cut: March/ April
   2.2. Height of first cut: 50 mm
3. Height and frequency of cut in second growing season
   3.1. Time of cut: Single cut in October
   3.2. Height of cut: 50 mm
4. Trimming: All edges.
   4.1. Arisings: Remove (after 7 day period)
5. Watering: When instructed

340 Spot weed killing in rough grass areas

1. Herbicide: Suitable for suppressing perennial weeds
2. Operations: Spot-treat All broad-leaved weeds.

Shrubs/ trees/ hedges

500 Establishment of new planting

1. Duration: Five full growing seasons from the date of planting
2. Weed control
   2.1. Method: Keep planting beds clear of weeds by Use of suitable herbicides, noting grass species are fine.
   2.2. Area: Maintain a weed-free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit. Maintain a weed-free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.

510 Tree stakes and ties

1. Inspection/ maintenance times: As scheduled and immediately after strong winds
2. Stakes
   2.1. Replace loose, broken or decayed stakes to original specification.
   2.2. If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
3. Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
   3.1. Where chafing has occurred, reposition or replace ties to prevent further chafing.
4. Removal of stakes and ties: During spring when no longer required to support the tree
   4.1. Fill stake holes with lightly compacted soil.

520 Refirming of trees and shrubs

1. Timing: After strong winds, frost heave and other disturbances.
2. Refirming: Tread around the base until firmly bedded.
3. Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

530 Tree shelters

1. Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
2. Removal: During spring when no longer required to protect the tree

590 Pruning particular species

1. Species to be pruned to separate specific instructions: Ivy (Hedera sp.) to be pruned once full coverage of gabion baskets is achieved to prevent furth growth into internal areas of the BESS compound

615 Trimming field hedges

1. Operations: Trim to specified height and profile using suitable mechanical cutters.

620 Removal of dead plant material

1. Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

710 Woodland planting maintenance

1. Watering: In exceptional circumstances to prevent plants dying.
2. Loose plants: Refirm surrounding soil, without compacting.
3. Vegetation: Except trees and coppice shoots to be retained, cut down to 50 mm above ground level within the plantation area.
   3.1. Arisings: Leave between rows.
4. Ditches and drains: Keep clear.

Ω End of Section

Specification created using NBS Chorus

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