

BIODIVERSITY MANAGEMENT PLAN

Aston Flamville Solar Farm
On Behalf of Elgin Energy Esco

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Aston Flamville BMP

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REPORT

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1 INTRODUCTION

- 1.1.1 This Biodiversity Management Plan (BMP) has been prepared on behalf of Elgin Energy Esco for the 20MW solar farm at Aston Flamville.
- 1.1.2 Full planning permission has been granted for the solar farm (Planning condition reference: 22/00739FUL). The development will comprise the solar photo voltaic (PV) array with an associated infrastructure and ancillary works including a substation, access track and security fencing.
- 1.1.3 The solar farm development comprises two separate areas of solar arrays divided by the M69: a 28.5ha development area to the east (centred at OS grid reference SP458919), and a 13.5ha development area to the west (centred at OS grid reference SP455927).
- 1.1.4 Condition 9 of the planning approval states that
- Prior to the commencement of development, a Biodiversity Management Plan shall be submitted to and approved in writing by the District Planning Authority. The Plan shall be based on the DEFRA Biodiversity Net Gain Metric completed for the development and the accompanying Biodiversity Gain Assessment Report (ref P18-480) completed by BSG Ecology and be consistent with the Landscape and Ecological Management Plan (LEMP) submitted in respect of condition 7. The Plan shall include:*
- (a) measures to achieve the biodiversity net gains detailed in the metric;*
- (b) a timetable for the implementation of the measures;*
- (c) a management and monitoring plan for how biodiversity net gain will be secured during the lifetime of the development, including a timetable for monitoring surveys; a strategy for identifying and undertaking any remedial measures required; and submission of monitoring surveys to the District Planning Authority for approval.*
- 1.1.5 This BMP has been produced to specifically address the requirements of condition 10 and is specific to this solar farm. The format and contents largely follow the Defra Habitat Management and Monitoring Plan template.
- 1.1.6 The BMP details the biodiversity aims for the habitats that will be present within the operational solar farm for the lifetime of the development. The BMP defines the management actions / specifications / schedule which will be implemented over a minimum of 30 years.
- 1.1.7 An associated monitoring programme will assess defined target conditions for each habitat type as defined in the BMP. Monitoring will identify where these are being achieved or if there are shortfalls. It is understood that some habitat types may take several years to reach target condition following the creation and/or enhancement. Monitoring will review change/trends (positive and negative) and the extent to which initial works are moving towards the defined targets. Once targets are reached monitoring will inform future management actions and specifications to ensure that the biodiversity gains are maintained for the remainder of the BNG management period.
- 1.1.8 In the event of shortfalls, the results of the monitoring results will inform the required remedial actions or modifications to management that should be implemented to address them.
- 1.1.9 This process of habitat management for biodiversity, supported by monitoring, will remain a long-term commitment that will continue over the lifetime of the operational solar farm.

1.2 Project Background

- 1.2.1 This BMP has been drafted in tandem with the Landscape and Ecology Management Plan (RPS 2024^a) referred in the wording of condition 9 to provide consistency.
- 1.2.2 The separate LEMP includes: descriptions and evaluation of the features to be managed; management aims and objectives; prescriptions for management; work schedule; species/seed mixes to be planted/sown; and a programme of ongoing monitoring informing remedial measures where necessary.
- 1.2.3 There are several other planning conditions of relevance to the BMP.
- 1.2.4 Condition 8 relates to the preparation of soft and hard landscaping design including elements with crossover with the BMP and LEMP including details of habitat retention and protection; tree and shrub planting species mixes, grass and meadow seeded areas and written specifications for their establishment. In addition, Condition 11 also requires full details of the methods for the protection of trees and hedgerows.
- 1.2.5 An overview of the project is provided in Table 1.1 below.

Table 1.1: Project overview

Criteria	Notes
Project type	Solar Farm
Development Name and Address	Land North And South Of Lychgate Lane, Aston Flamville
BNG Project Name and Address	Aston Flamville Solar Farm
Author Organisation	RPS Consulting UK and Ireland
Landowner	Leicestershire Diocesan Board of Finance
Land Manager	Land manager will be assigned by Elgin Energy Esco
Responsible person/ organisation for creating or enhancing the habitat	Elgin Energy Esco
Period covered by this management plan	30 year period
Start date	2025
End date	2055
Frequency of BMP report updates	Every 5 years
Planning authority	Blaby District Council; Hinckley and Bosworth Borough Council
Planning reference (if applicable)	22/0048/FUL
Central OS grid reference – centre of eastern section	SP458919
Central OS grid reference – centre of western section	SP455927
Metric revision/title	Statutory biodiversity metric
Are any Irreplaceable Habitats present onsite	Yes: ☐ No: ☒

2 SITE BASELINE

2.1 Site Context

- 2.1.1 The site is located adjacent to the M69 within the Leicestershire Vales National Character Area (NCA). This landscape is composed of low-lying clay vales with a range of varied river valleys creating a large, relatively open, uniform landscape. The site is located within the western section of the NCA, where the land has a rural character with a mixture of arable and pastoral farmland. The village of Aston Flamville is located to the east of the site.
- 2.1.2 The site does not overlap or adjoin any designated nature conservation sites. Burbage Wood and Aston Firs Site of Special Scientific Interest lies over 500m to the north-west and the closest Local Wildlife Site (LWS) lies over 400m to the north-east.

2.2 Land Use Summary

- 2.2.1 The eastern section of the solar farm is currently arable farmland with grassy field margins bound by ditches, hedgerows and trees. There is a small pond present in a small block of woodland in the south-east part of the site.
- 2.2.2 A linear area of broadleaved semi-natural woodland is present along the eastern boundary. This part of the Site is bound to the north and south by arable fields.
- 2.2.3 The western section of the Site also comprises arable fields and field boundary habitats. A small waterbody lies adjacent to the western boundary. The Site is located within an arable landscape. Lychgate Lane runs along the southern boundary of the western part of the site.

2.3 Baseline Habitat Conditions

- 2.3.1 Sections of grassland / tall ruderal along the field boundaries are species-poor, supporting coarse grasses, perennial rye-grass *Lolium perenne* and forbs typical of enriched ground. They have a uniform height.
- 2.3.2 The areas of broadleaved woodland comprise a range of native tree and shrub species but no ancient woodland indicator species were found.
- 2.3.3 The scrub located along one of the field boundaries is small in size and lacks features present in larger and more established stands of scrub.
- 2.3.4 The majority of hedgerows are in good condition but hedgerows and tree lines along an access road into the eastern section are in poor condition.
- 2.3.5 The small pond has poor water quality with duckweed present on the surface. The surrounding arable limits its value for wildlife.
- 2.3.6 The wet ditches have poor water quality and a shallow depth. Duckweed is present on the surface and the ditches lack emergent, submerged, and floating vegetation.
- 2.3.7 The full ecological baseline is presented in the Preliminary Ecological Assessment (BSG, 2022^a) and the baseline BNG information is summarised in the Biodiversity Gain Assessment Report (BSG, 2022^b).

2.4 Protected / Notable Species

- 2.4.1 Roosting bats could utilise individual trees with potential roost features within the site. The network of field boundary habitats will be used by commuting and foraging bats. The level of bat activity over arable fields would be expected to be low.

- 2.4.2 The species confirmed or classified as probably breeding within the site included eight species classified as Birds of Conservation Concern (BoCC). These comprised four red list species of high conservation concern (linnet, skylark, greenfinch and yellowhammer) and four amber list species of moderate conservation concern (dunnock, willow warbler, whitethroat, and wren).
- 2.4.3 Barn owl, legally protected under Schedule 1 of the Wildlife and Countryside was confirmed to be using a small building within the site as a regular roost (BSG, 2022a).
- 2.4.4 The presence of reptile populations was considered unlikely because of the intensive nature of the agricultural management. Common frog was the only amphibian species recorded in the small field pond. There are no badger setts and no evidence of activity within any that part of the Site, but this species is likely to be active in parts of the surrounding landscape.

3 HABITAT PROTECTION AND ENHANCEMENT PROPOSALS

- 3.1.1 The solar farm layout and habitats (post intervention) are illustrated on Drawing 1 and 2 (Landscape Strategy Plan Plan) which illustrates the sub-division of the site into management compartments based on the different habitat types and field boundaries as described in Table 3.1. Habitat losses primarily relates to fields under arable crop production which will be converted into grassland of higher biodiversity value.
- 3.1.2 These habitats within the operational solar farm will be subject to conservation management.

Table 3.1- Habitat management compartment references

Habitat Types/location	Management Compartments	
	Western Section	Eastern section
Area Habitats		
Neutral grassland beneath the solar arrays	Compartment 1a – 4a	Compartment 5a – 8a
Neutral grassland (between the perimeter fencing and field boundaries)	Compartment 1b – 4b	Compartment 5b – 8b
Neutral grassland within fields without solar panels		Compartments 9 and 10
Scrub (Woodland edge planting)	Compartments 14	Compartments 15 - 16
Pond		Compartment 13
Broadleaved woodland		Compartment 11 (linear tree belt) and 12 (pond margin)
Mature and semi-mature trees		Compartment 9 and multiple hedgerow trees
Linear Habitats		
Native hedgerows	H1, H4, H5, H7 – H9, H11	H12 – H13, H16 – H18, H20 – H22, H24 – H28
Native hedgerows with ditches	H2, H3, H6, H10	H19, H23
Lines of trees		H14, H15
Watercourse Habitats		
Wet ditches	W1, W2	W3

3.2 Newly Created Habitats

- 3.2.1 The majority of the existing arable will be sown with General Purpose Meadow Mixture Emorsgate EM2 (or a similar mixture approved by an ecologist) with the aim of creating neutral grassland. The grassland within the flood risk zone (compartment 10) will be sown with Proposed Wildflower Meadow Wetland Mixture Emorsgate EM8 (or a similar mixture approved by an ecologist) with the aim of creating neutral grassland typical of wetter ground conditions.
- 3.2.2 Field boundaries will be managed with the aim of creating a tussocky structure. The achievement of a tussocky structure has potential to increase the BNG habitat unit score for these areas though this has not been assumed within the BNG Assessment completed for the site (BSG, 2022^b).
- 3.2.3 A field at the east of the Site partially lies within a flood risk zone and will be left without solar panels. This field will be managed with the aim of creating a neutral grassland with a

wildflower-rich sward which would provide suitable habitat for invertebrates, small mammals and reptiles, and foraging habitat for barn owl.

- 3.2.4 Several new sections of native species hedgerow and scrub belts will be planted around the site boundaries, increasing connectivity for wildlife and providing additional habitat for nesting birds.

3.3 Retained Habitats

- 3.3.1 Where grassland / tall ruderal are present along the field boundaries these sections will be retained and will be managed with the aim of creating a tussocky neutral grassland.
- 3.3.2 Hedgerows and lines of trees within the site will be retained, along with hedgerow trees and a single tree located within a field.
- 3.3.3 Two sections of broadleaved woodland will be retained: a linear section at the east of the site and a small block surrounding a pond.
- 3.3.4 The pond will be retained and will be enhanced through the sowing of grassland in the surrounding field.
- 3.3.5 Wet ditches within the Site will be retained.

4 FACTORS AFFECTING MANAGEMENT

Constraints and Opportunities

- 4.1.1 The management approach and specifications for the Site are influenced by:
- Past agricultural improvement of the soils
 - The clay soil impeding drainage and waterlogging of soil in winter
 - Low percentage cover and restricted diversity of forb species within existing grassland
 - Shading from solar arrays
- 4.1.2 The main enhancement measures that will be implemented as part of the construction of the solar farm are:
- Creation of neutral grassland and management to build up and then retain the species diversity and biodiversity value
 - Creation of 5m wide grassland field margins
 - Planting of new native hedgerow and scrub (woodland edge planting)
 - Creation of grassland buffer zones around ponds
 - Pond habitat diversification
 - Creation of a field of wildflower grassland

Legally Protected Species

- 4.1.3 The protection of legally protected species will be integrated into the management proposals for actions to be consistent with the species protection requirements of wildlife legislation.
- 4.1.4 The potential presence of bat roosts in trees will need to be fully addressed before the implementation of any arboricultural works to trees (pruning, crown reduction, crown thinning etc). The presence/absence of bat roosts must be confirmed by a suitably experienced ecologist.
- 4.1.5 Pre-works climbing inspections would need to be undertaken by a class II bat licence holder to inspect any cavities or gaps in the structure of the tree and areas of dense ivy cover, which all have the potential to be roost features. Conservation measures will be required under a licence where damage or disturbance of bat roost is unavoidable.
- 4.1.6 The majority of the breeding bird assemblage at the site is associated with the retained field boundary habitats – hedgerows and associated dense ground cover, and linear woodland belt.
- 4.1.7 Ground nesting birds using fields in which solar panels will be installed will have a very low likelihood for nesting but the meadow grassland habitats within the site will be a potential foraging habitat for pairs breeding in the locality.
- 4.1.8 There is potential for badger setts to be established prior to construction or during the operational life of the solar farm.
- 4.1.9 The retention of the small buildings would be expected to maintain a barn owl roost within the solar farm.
- 4.1.10 Increasing the extent of the long grassland supporting populations of small voles will increase the potential value of the Site as foraging habitat for barn owl.

5 HABITAT AND CONDITION TARGETS

- 5.1.1 A summary of the habitats and conditions which the development will seek to deliver is provided in Table 5.1, based on the statutory biodiversity metric completed for the solar farm development (BSG, 2022^b). These habitat condition targets form the basis of what the management plan is setting out to achieve throughout the minimum management period of 30 years.
- 5.1.2 The management compartments references in the table are shown on the Landscape Strategy Plan (Drawings 1 and 2).
- 5.1.3 The Defra condition criteria are specific to each habitat type. Full descriptions of the condition criteria relevant to a habitat type and the details of the conditions being target through management are presented in Appendix B.

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Table 5.1: Target habitat types and conditions

BNG Habitat Type	Management Compartment	Baseline Condition	Targeted Condition	Years to Targeted Condition	BNG Condition Assessment Targets	Management Approach
Retained Area Habitats						
Other broadleaved woodland	12	Moderate	Moderate	n/a	Targeted minimum score of 26; criteria include: - No significant browsing damage - Absence of invasive non-native species - A minimum of 5 native trees / shrubs are present >80% of trees are native 10 – 40% of woodland has temporary open space - Evidence of regeneration is present <10% of woodland suffers tree mortality, crown die back, pests or disease - Absence of damaged / nutrient enriched ground	Minimal management of larger trees should be required and deadwood features to be retained. Selected coppicing of shrub species in the scrubby woodland bounding the pond; Monitoring for invasive species and remedial measures to remove any stands present.
Lowland mixed deciduous woodland	11	Moderate	Moderate	n/a	As above	Minimal management of larger trees should be required and deadwood features to be retained. Localised native tree and shrub planting to increase the structural diversity of the woodland. Monitoring for invasive species and remedial measures to remove any stands present.
Enhanced Area Habitats						
Pond (non-priority habitat)	13	Poor	Moderate	4	Moderate condition to be achieved through: - Good water quality - Maintaining semi-natural habitat around the pond perimeter for at least 10m - Less than 10% duckweed / algae cover - Absence of fish - Absence of non-native invasive species	Pollution prevention, algae and duckweed to be removed; removal of any non-native invasive plant species following discovery; sensitive maintenance of woodland and grassland surrounding pond.
Enhanced Watercourse Habitats						

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BNG Habitat Type	Management Compartment	Baseline Condition	Targeted Condition	Years to Targeted Condition	BNG Condition Assessment Targets	Management Approach
Wet ditches	-	Poor	Poor	n/a	Condition to be enhanced by achieving: - Good water quality - Less than 10% duckweed / algae cover - At least 95% of the ditch is undamaged - Absence of non-native invasive species	Pollution prevention, algae and duckweed to be removed; removal of any non-native invasive plant species following discovery; sensitive maintenance of banksides and adjoining hedgerows.
Created Area Habitats						
Other neutral grassland (no solar panels)	9, 10	n/a	Moderate	5	Neutral grassland habitat supporting a range of other grasses and wildflower species with a species diversity higher than 9 species per m2. An absence of other negative factors.	Conservation cutting regime 1-3 times per year in late summer, autumn and spring; outside of the flowering season using cut-and-collect machinery. Removal of weed species - preventing flowering and setting of seed. Alternatively implement a low intensity seasonal grazing regime.
Other neutral grassland (below solar panels)	1 - 8a	n/a	Poor	2	Grassland habitat consistent with the UKHab description for other neutral grassland with a low percentage of perennial ryegrass. Grassland to have an absence of negative factors but with no minimum species diversity per m ² .	Annual cutting regime 1-3 times per year in late summer, autumn and spring; control of sub-optimal species. Alternatively implement a low intensity grazing regime.
Other neutral grassland (tussocky field margins)	1b – 8b	n/a	Poor	2	Grassland habitat consistent with the UKHab description for other neutral grassland with a low percentage of perennial ryegrass. Grassland to have an absence of negative factors but with no minimum species diversity per m ² .	Rotational cutting management regime in autumn; each section of grassland cut on a 3 year rotation.
Scrub (Woodland edge planting)	14 - 16	n/a	Poor*	1	Dense structured scrub habitat comprising mixed native species is a good representation of mixed scrub habitat consistent with the UKHab description. Absence of invasive non-native species and less than 5% cover of species indicative of sub-optimal condition.	Prune to establish and then maintain a dense structure. Monitoring for and removal of invasive species.

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BNG Habitat Type	Management Baseline	CompartmentCondition	Targeted Condition	Years to Targeted Condition	BNG Condition Assessment Targets	Management Approach
Retained Linear Habitats						
Native hedgerows (some of which are species-rich, and some of which include trees and / or are associated with bank or ditch)	H1 – H9, H11, H16 - H25, H27 – H28	Good	Good	n/a	Good condition will be targeted by achieving at least 1 criteria in each category and failing no more than 2 criteria. • Average height and width over 1.5m • Base hedge canopy less than 0.5m above ground level • Greater than 1m wide herbaceous vegetation along the base of the hedgerow • Plants indicative of nutrient enrichment <20% of ground cover of hedge base • Absence of non-native invasive species • At least 90% of hedgerow trees are in a healthy condition	Trim back on rotation (i.e. with a third-fifth of the hedgerow cut each year) to a broadly 'A' shape structure. Infill native planting to replace any failures. Trees within hedgerows to be protected during hedgerow cutting.
Native hedgerows	H12 – H13	Poor	Moderate	n/a	Moderate condition will be targeted by achieving at least 1 criteria in each category and failing no more than 4 criteria. • Average height and width over 1.5m • Base hedge canopy less than 0.5m above ground level • Plants indicative of nutrient enrichment <20% of ground cover of hedge base • Absence of non-native invasive species At least 90% of hedgerow trees are in a healthy condition	As above.

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BNG Habitat Type	Management Compartment	Baseline Condition	Targeted Condition	Years to Targeted Condition	BNG Condition Assessment Targets	Management Approach
Line of trees (ecologically valuable) - with bank or ditch	H14 - H15	Poor	Poor	n/a	Canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	Allow trees to continue to mature. Prune only when unavoidable.
Created Linear Habitats						
Native species-rich hedgerow - associated with bank or ditch	H10, H26	n/a	Good	12	Good condition will be targeted by achieving at least 1 criteria in each category and failing no more than 2 criteria. - Average height and width over 1.5m - Base hedge canopy less than 0.5m above ground level - Greater than 1m wide herbaceous vegetation along the base of the hedgerow Absence of non-native invasive species.	Trim back on rotation (i.e. with a third-fifth of the hedgerow cut each year) to a broadly 'A' shape structure. Infill native planting to replace any failures.

6 HABITAT CREATION, ENHANCEMENT AND MANAGEMENT METHODS

6.1 Overview

- 6.1.1 Habitat management will include creation and initial aftercare of the sown grassland and newly planted hedgerows as set out below.
- 6.1.2 The ongoing habitat management prescriptions to be undertaken for retained habitats and newly created habitats following the establishment phase are described below. The ongoing habitat management prescriptions are summarised in the Annual Habitat Management Programme provided in Appendix A.

6.2 Neutral Grassland

Management Compartments 9 and 10

- 6.2.1 To encourage the development of a wildflower-rich grassland, grassland within management compartment 9 and 10 should be subject to conservation cutting outside of the flowering season to promote wildflower diversity and prevent dominance of the habitat but a small number of common grass species.
- 6.2.2 Following establishment the grasslands will be cut 1 to 3 times per year in early spring, late summer and autumn with all arisings removed after each cut. Ideally tractor mounted cut and collect machinery would be used for maximum efficiency. The timing of cuts using machinery would be timed to be outside of periods where the ground is waterlogged to avoid compaction and soil degradation.
- 6.2.3 High soil fertility in the existing arable fields is likely to increase the growth of a few widespread plant species. Over time they would be likely to adversely affect the populations of wildflower species. Consequently, neutral grassland with the target of moderate condition is likely to need to be subject to cutting three times annually (outside of the mid April to mid August period) during the first five years to control the growth of the grass and prevent individual grass species becoming dominant.
- 6.2.4 From Year 3 onwards the grassland may alternatively be managed via conservation grazing. Conservation grazing would be a low intensive grazing regime with a stocking density restricted to no more than 0.5 Livestock Units (LU) per ha. The grassland should be left ungrazed between April and July each year to allow plants to flower and set seed and to increase nectar and pollen sources on-site.

Neutral Grassland Beneath the Solar Panels (Management Compartments 1a – 8a)

Establishment (Years 1 and 2)

- 6.2.5 The management of the areas of grassland during the establishment phase is described in the Landscape and Ecology Management Plan (RPS, 2024).
- 6.2.6 During the first and second years the grassland should be cut in early spring, late summer/ early autumn and if required late autumn, or more frequently where required with the arisings removed; ideally using cut-and-collect machinery. Perennial weeds such as docks, thistles, and common nettle should be carefully dug out or spot treated.

- 6.2.7 The management actions will control annual weed growth, prevent significant spread and help maintain balance between faster growing grasses and slower developing wildflowers.

Management (Year 3 onwards)

- 6.2.8 Long term grassland management beneath the lower panels will be through conservation cutting or conservation grazing.
- 6.2.9 As described above, cutting management would involve a cut in early spring (where required) a late summer/early autumn outside of the flowering season and if required a second cut in late autumn. 'Cut-and-collect' machinery should be used where possible. The use of hand tools and removal of cut grass by hand will be required where machinery access is not possible.
- 6.2.10 Conservation grazing would be a low intensive grazing regime with a stocking density restricted to no more than 0.5 Livestock Units (LU) per ha. If fields 1-8 are included in the grazing regime, at least one field should be left ungrazed (on rotation) between April and July each year to increase nectar and pollen sources on-site.

Neutral Grassland Field Margins (Management Compartments 1b – 8b)

- 6.2.11 Grassland beyond the perimeter fence should be cut to close to ground level once every 3 years, on rotation, to control the colonisation by scrub and maintain the grassland habitat. Reducing the frequency of cutting will promote the development of areas with a tussocky sward providing variation in the grassland habitat alongside meadow grassland or low intensively grazed pasture beneath the solar panels.
- 6.2.12 To ensure areas of tussocky grassland are retained within each part of the site each year, management compartments should be cut in the following groups:
- Rotation 1: 1b, 3b, 5b
 - Rotation 2: 2b, 8b
 - Rotation 3: 4b, 6b, 7b

6.3 Scrub (Woodland edge Planting)

- 6.3.1 During the initial establishment phase, areas of native planted shrubs will be checked and maintained as described in the Landscape and Ecology Management Plan (RPS, 2024).
- 6.3.2 Following establishment, the scrub will be regularly trimmed back (annually) throughout the first five years to encourage the development of side shoots and promote a dense growth structure. Following establishment trimming may be undertaken every 2-3 years or as required.
- 6.3.3 Bramble on the woodland edge should be managed through annual cutting back of encroachment into adjoining neutral grassland while maintaining dense thickets which have value for a range of wildlife.
- 6.3.4 All shrub management should be undertaken outside of the bird nesting season (March-August inclusive) or after confirmation by an ecologist that no active nests are present in the affected habitat.

6.4 Broadleaved Woodland

- 6.4.1 The areas of established broadleaved woodland should be subject to management only as required. Trees and shrubs should be allowed to continue to mature. Minimal management of

larger trees should be required and deadwood features should be allowed to develop where safe and practical. Where limb removal is required, the wood should be retained within the site to provide habitat for invertebrates.

- 6.4.2 Cavities in trees may provide potential roost features for bats and should be left undisturbed. If works affecting tree cavities are planned, an inspection should be undertaken by an ecologist prior to the works to ensure no roosts will be affected.
- 6.4.3 Selected coppicing of groups of hazel shrubs will increase the structural diversity. Long term management decisions should promote the extent of dense scrub cover for nesting birds.
- 6.4.4 Woodland management should be undertaken outside of the bird nesting season (March-August inclusive) or after confirmation by an ecologist that no active nests are present in the affected habitat.

6.5 Hedgerows

New Hedgerows

- 6.5.1 The maintenance of the new hedgerows during the five-year establishment phase is described in the Landscape and Ecology Management Plan (RPS, 2024). During this aftercare period both sides of the whole of the new hedgerow will be trimmed back annually to encourage dense growth and maintain an even shape. Where any gaps form, native hedge shrubs will be planted as infill to maintain a continuous hedgerow.
- 6.5.2 From Year 5 onwards the sides of the hedgerow will be trimmed back on a 3 year rotation in late autumn - winter (i.e. with a third of the hedgerow cut each year). Trees within hedgerows should be allowed to continue to mature and must be protected during hedgerow cutting.
- 6.5.3 At each cut, the hedgerow will be trimmed back to broadly form a 'A' shaped structure, encouraging dense growth to ground level and avoiding creating a wide flat top. All arisings will be removed off-site after cutting.
- 6.5.4 All management of hedgerows should be undertaken outside of the bird nesting season (March-August inclusive) or after confirmation by an ecologist that no active nests are present in the affected habitat.

Retained Hedgerows

- 6.5.5 Gappy and species-poor hedgerows will be supplemented by species infill planting. A mixture of native species will be used.
- 6.5.6 The hedgerows will be trimmed back on a 3 year rotation in late autumn - winter (i.e. with a third of the hedgerow cut each year) to a broadly A shape structure with all arisings removed off site.

Hedgerow Trees

- 6.5.7 Minimal management of larger trees is required, and deadwood features should be allowed to develop, where safe and practical. Where limb removal is required, the wood should be retained within the site to provide habitat for invertebrates.
- 6.5.8 Cavities in trees may provide potential roost features for bats and should be left undisturbed. If works affecting tree cavities are planned, an inspection should be undertaken by an ecologist prior to the works to ensure no roosts will be affected.

Rotational Cutting

- 6.5.9 The hedgerows should be cut in the following groups where practicable to maintain areas of dense cover each year:
- Rotation 1: H1, H6 (south), H7, H10, H13, H16 (west), H17 (south), H20, H21 (east), H22 (north), H24 (south), H26 (west), H28
 - Rotation 2: H2 (north), H4, H5, H9, H11, H12, H17 (north), H16 (east), H19, H23 (east), H25 (west), H26 (east), H27
 - Rotation 3: H2 (south), H3, H6 (north), H8, H18, H23 (west), H25 (east)

6.6 Pond

- 6.6.1 Highly competitive emergent plant species including the reed canary grass present within the pond and any additional species should they colonise should be uprooted and removed by hand to allow a wider diversity of plants to establish. Algae and duckweed should also be removed from the pond surface.
- 6.6.2 All plant removal should be undertaken between October to November, avoiding the GCN breeding period (March-June). Removed material should be left on the pond bank adjacent to the water edge for 24 hours before removal from site.
- 6.6.3 The removal of highly competitive species should be undertaken annually or as required based on the species present and their extent and would be informed by monitoring.

6.7 Wet Ditches

- 6.7.1 Monitoring and adaptive management will be key to achieving the aims for the habitat.
- 6.7.2 Where hedgerows adjoin the ditches, these should be cut back as required to prevent shading.
- 6.7.3 Where a significant amount of sediment has accumulated within the pond / wet ditches, this should be removed during winter (November to January).
- 6.7.4 Should any highly competitive emergent plant species such as reed canary grass, bulrush and common reed colonise, these should be controlled to allow a wider diversity of plants to establish.
- 6.7.5 When the ditch is holding water, material removed from the ditch should be left on the ditch banks adjacent to the water edge for 24 hours before removal from site.

7 HABITAT CREATION AND MANAGEMENT – RISK REGISTER AND ADAPTIVE MANAGEMENT

- 7.1.1 Where unforeseen changes are encountered or the current management specification is not effective changes to the management or remedial measures may be required. Examples of risks and remedial measures which may be encountered are provided in Table 7.1.
- 7.1.2 The need for the implementation of remedial measures would be triggered by monitoring. This Management Plan will be a working document with flexibility allowing the management prescriptions can be tailored to achieving the habitat targets.

Table 7.1: Examples of Modifications to Management and Remedial Measures

Habitat	Risk Factor	Trigger for Action	Adaptive Management / Remedial Measures
Tussocky grassland in field margins	Establishment and spread of sub-optimal weed species (including creeping thistle, spear thistle, broadleaved dock, curled dock, common nettle)	Species at least locally frequent or abundant within sward	Increase in herbicide spot treatment of basal leaves to control vegetative spread Frequent topping of stems during the growing season, sufficient to prevent flowering and seeding
Wildflower grassland in management compartments 9 and 10	Tall height or uniform structure of sward reduces suitability for barn owl foraging	Height is uniform or >30% is over 30cm in height	Supplemental wildflower seeding Changes to levels of grazing stock or increase the number of grass cuts between August -September once wildflowers will have set seed. All arisings should be collected and removed.
	High abundance of sub-optimal weeds	Species at least locally frequent or abundant within sward	Increase in herbicide spot treatment of basal leaves to control vegetative spread Frequent topping of stems during the growing season, sufficient to prevent flowering and seeding
Native species-rich hedgerows	Shrubs fail to establishment leading to low diversity	Fewer than 5 species are present in a representative 30m section	Selective cutting back of dominant species to promote diversity
	Shrubs fail to establishment leading to gaps in hedgerow	Gaps in hedgerow exceed 5% of hedgerow length	Supplement planting to infill gaps and replace losses Adapting cutting regime/method to promote dense growth to ground level; and Supplementary planting to infill gaps and replace losses
Pond / wet ditches	Establishment of non-native species	Presence of non-native species recorded	Removal of any non-native species if introduced into ponds
	Low species diversity and dominance of competitive species	Cover of competitive species >20% of margin	Removal of bulrush, common reed, duckweed or algae by hand Planting of non-competitive native marginal species
	Establishment of algae	Algae cover >10%	Placement of barley hay bale to reduce algae

ASTON FLAMVILLE SOLAR FARM - BMP

Habitat	Risk Factor	Trigger for Action	Adaptive Management / Remedial Measures
	Silt accumulation reducing water depth	Estimated silt depth > 0.3m	Removal of sediment / leaf litter

8 MONITORING

8.1 Monitoring Strategy

- 8.1.1 The long-term monitoring of habitats and their biodiversity value will specifically assess the extent to which the target conditions are met as a result of the management actions.
- 8.1.2 The monitoring will be aligned to the Biodiversity Net Gain Condition Assessment criteria. Examples of information which may be collected to assess the condition of the habitats are provided in Table 8.1. The key measurable values will relate to the extent, structure and botanical species composition of each habitat.
- 8.1.3 All habitat monitoring should be undertaken in Years 1, 3 and 5. After Year 5 the success of the management would be reviewed to inform the monitoring frequency between Years 5 and 10. From Year 10 monitoring would be undertaken every five years for the remainder of the 30 year monitoring period.
- 8.1.4 Optimally the grasslands should be assessed in June and the areas of broadleaved woodland in May. The other habitats can be assessed during the growing season, between May and August with the pond habitat ideally assessed in late summer.
- 8.1.5 As a practical approach it is proposed that all the habitats will be monitored in June at every monitoring round. Completing the assessment at the same time of year will allow direct comparison between years.

Table 8.1: Assessment method for habitat monitoring

Habitat	Monitoring Methods
Other neutral grassland and modified grassland	– To be undertaken for each area of the four groups of management compartments: 1a – 8a, 1b - 8b, 9 and 10. – Undertake quadrat sampling to identify the habitat type that is establishing and the number of species per m². – Estimate percentage of bare ground, bramble and bracken cover. – Collect a botanical species list across grassland to check against target species list. – Estimate sward height and structure. – Record presence of invasive non-native species and instigated removal/eradication.
Woodland	– Assess health of trees. – Describe woodland structure. – Describe woodland ground flora. – Record percentage of bare ground. – Estimate percentage cover of open area. – Assess structure of woodland edge habitat (including spread of bramble and saplings). – Record presence of invasive non-native species.
Scrub (Woodland edge planting)	– Describe scrub structure. – Record species present and the proportion of each. – Record presence of invasive non-native species.
Hedgerows	– Record average number of native woody species and their abundance. – Assess whether newly planted shrubs have successfully established. – Describe hedgerow structure – height, width, and density. – Describe hedgerow base flora.
Pond and wet ditches	– Describe marginal species cover. – Describe emergent and visible submerged species.

Habitat	Monitoring Methods
	– Estimate percentage cover of competitive species (bulrush and common reed). – Estimate percentage cover of duckweed and algae. – Estimate water depth. – Record percentage of margin shaded by surrounding vegetation. – Record presence of invasive non-native species. – Record presence of fish if visible.

Target Conditions

- 8.1.6 The habitat monitoring will consider the extent to which the objectives and aims are being achieved through the ongoing implementation of management actions over the lifetime of the Proposed Development.
- 8.1.7 The effectiveness of the prescriptions, methods and timing of works will be assessed based on the status of habitats.
- 8.1.8 The assessments will consider trends in habitat change, drawing upon the results of previous years and the known the pre-development habitat conditions.

Monitoring Report

- 8.1.9 The monitoring results will be compiled in monitoring reports. The report will highlight positive and negative outcomes for biodiversity, nature conservation and species. The monitoring reports will highlight any unforeseen changes to factors influencing management decisions and actions and the continued relevance of each of the management prescriptions.
- 8.1.10 Any shortfalls in achieving the management objectives will be highlighted such as adverse habitat changes and trends or habitat establishment failures or damage. The monitoring reports would include additional management actions in the work schedules to address unexpected changes such as the colonisation of invasive non-native plants, actions to repair the adverse effects of prolonged drought or where a current management specification is not effective.

Responsibilities

- 8.1.11 Elgin Energy Esco will be responsible for the full implementation of the management actions and monitoring activities in accordance with the plan and work schedule. Elgin Energy Esco will document progress in relation to the nature conservation aims and objectives through monitoring reports which would be prepared by an ecologist. Monitoring reports would be made available to the LPA.
- 8.1.12 The implementation of the management prescriptions at the correct time of year will continue over the lifetime of the Proposed Development. Elgin Energy Esco will appoint suitably experienced contractors and ecologists as required to assist in the delivery.
- 8.1.13 The mechanism through which the long-term funding can be guaranteed will be agreed with the local planning authority prior to the start of construction. Funding will cover the physical management on the ground following good ecological practice, targeted biological monitoring and the associated reporting and when necessary remedial measures.

Summary of Adaptive Management Approaches

- 8.1.14 The management prescriptions and timing will be reviewed after each monitoring visit. The review will focus on the structure, features and nature conservation value of habitats, to ensure that they remain an important resource for wildlife within the Proposed Development.
- 8.1.15 The review will inform if changes are required to the future management prescriptions, actions and/or timing. Additional management actions could be added to the work schedule to address unexpected changes or where additional remedial measures not listed in this plan become a requirement.
- 8.1.16 Maintaining flexibility will be essential in ensuring that the management prescriptions can be tailored as necessary to achieve the desired outcomes. Many of the management prescriptions during the first five years post construction will be undertaken as required based on the checks and monitoring to assess the habitats condition specified in the plan.

REFERENCES

BSG (2022^a) Ecology Report Land at Aston Flamville

BSG (2022^b) Biodiversity Gain Report, Aston Flamville BSG (2022) and the accompanying Biodiversity Metric 2400386.

Defra (2023). Habitat Management and Monitoring Plan. Natural England.

RPS (2024). Landscape and Ecology Management Plan: Aston Flamville, On Behalf of Elgin Energy Esco

Drawings

Botanical name	Common name	Girth / size	Stock	Density / %
A. Trees				
i. Standard Tree				
<i>Acer campestre</i>	Field Maple	12-14cm	C / SR / RB	
<i>Carpinus betulus</i>	Hornbeam	12-14cm	C / SR / RB	
<i>Malus sylvestris</i>	Crab Apple	12-14cm	C / SR / RB	
<i>Prunus avium</i>	Wild Cherry	12-14cm	C / SR / RB	
<i>Quercus robur</i>	English Oak	14-16cm	C / SR / RB	
<i>Quercus rubra</i>	Red Oak	14-16cm	C / SR / RB	
<i>Sorbus aucuparia</i>	Mountain Ash/Rowan	12-14cm	C / SR / RB	
<i>Tilia cordata</i>	Small Leaved Lime	14-16cm	C / SR / RB	
B. Native Species Hedgerow				
<i>Acer campestre</i>	Field Maple	60-90cm	B	15%
<i>Corylus avellana</i>	Hazel	60-90cm	B	15%
<i>Crataegus monogyna</i>	Hawthorn	60-90cm	B	40%
<i>Ilex aquifolium</i>	Holly	3L	C	5%
<i>Ligustrum vulgare</i>	Common Privet	60-90cm	B	10%
<i>Prunus spinosa</i>	Blackthorn	60-90cm	B	15%
Planted at 7.00/m in two staggered rows				100%
C. Woodland Edge Planting				
<i>Corylus avellana</i>	Hazel	60-90cm	B	10%
<i>Crataegus monogyna</i>	Hawthorn	60-90cm	B	30%
<i>Prunus spinosa</i>	Blackthorn	60-90cm	B	10%
<i>Ilex aquifolium</i>	Holly	3L	C	10%
<i>Sorbus aucuparia</i>	Mountain Ash/Rowan	60-90cm	B	20%
<i>Ulmus glabra</i>	Wych Elm	60-90cm	B	10%
<i>Viburnum opulus</i>	Guelder Rose	60-90cm	B	10%
				100%
D. Grass and Meadow seed mixes				
i. Grazing Grassland: EM2 General Purpose Mixture by Emorsgate (or similar and approved)				
ii. Field Margin Meadow: EH1 Hedgerow Mixture by Emorsgate (or similar and approved)				
iii. Wetland Meadow: EM8 Wildflower Meadow Wetland Mixture by Emorsgate (or similar and approved)				
Notes:				
- Any alterations to species, stock sizes or planting densities shall only be with prior consent of the CA / LA				
- St C = Container grown S = Seeded RB = Root balled B = Bagged				



Habitat references:

Grassland parcels 1a
Hedgerows H1
Watercourses W1
Other habitat parcels 11

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Notes

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Safety, Health & Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing take note below. It is assumed that all works on this drawing will be carried out by a competent contractor, working, where appropriate, to an appropriate method statement.

Construction risks	Maintenance/Cleaning risks	Demolition/Adaption risks

KEY

PROPOSED ELEMENTS

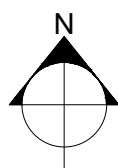
- APPLICATION SITE BOUNDARY
- 3.5m ACCESS TRACK
- SUBSTATION
- SUBSTATION HARD SURFACE.
Compacted MOT Type 1, hoggins gravels or crushed hardcore
- ELGIN HV CABLE
- SECURITY FENCE
- GATES

EXISTING FEATURES

- PUBLIC RIGHT OF WAY
- TREES to be retained and protected during construction
- HEDGEROW to be retained and protected during construction
- WOODLAND

PROPOSED SOFT LANDSCAPE

- STANDARD TREES
- WOODLAND EDGE PLANTING
(for specification refer to LEMP)
- NATIVE SPECIES HEDGE
(for specification refer to LEMP)
- GRAZING GRASSLAND
(for mix refer to schedule)
- FIELD MARGIN MEADOW
(for mix refer to schedule)
- WETLAND MEADOW MIX
(for mix refer to schedule)



Rev	Description	By	Ckd	Date
P02	Updated following client comments	KW	GL	16.06.2025
P01	Cable Easement Removed	KW	GL	25.04.2025



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Client Elgin Energy Escro

Project Aston Flamville Solar Farm

Title Landscape Strategy
Sheet 1 of 2

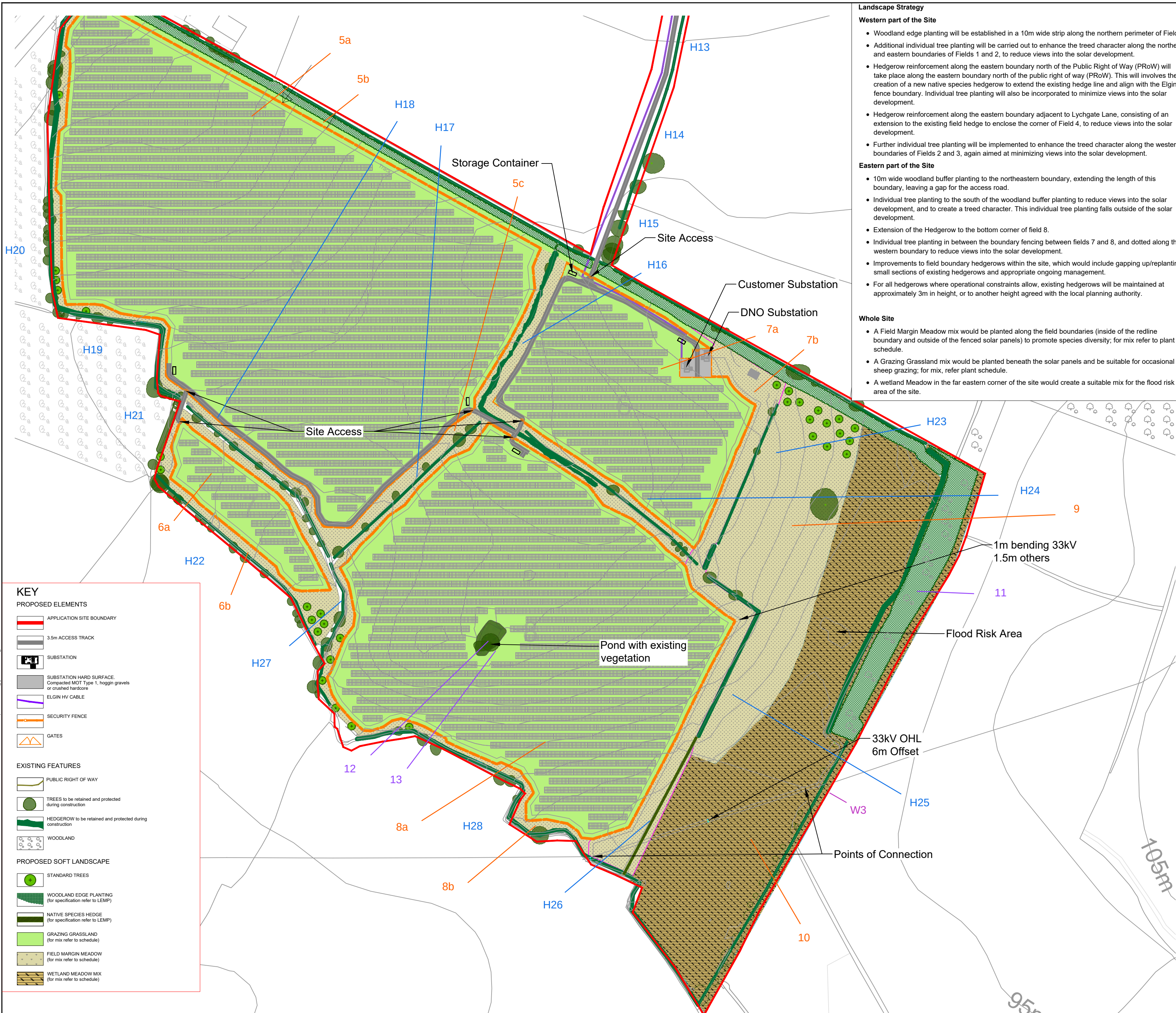
Status Drawing Status Scale 1:500 @A2 Date Created 08.04.2025
Task Team Manager Information Author Task Information Manager
GL KW GL

Document Number
5171-RPS-XX-XX-DR-L-9101

Project Code - Originator - Zone - Level - Type - Role - Drawing Number

RPS Project Number 794-PLN-LAN-5171 Suitability S2 Revision P02

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Landscape Strategy

Western part of the Site

- Woodland edge planting will be established in a 10m wide strip along the northern perimeter of Field 1.
- Additional individual tree planting will be carried out to enhance the treed character along the northern and eastern boundaries of Fields 1 and 2, to reduce views into the solar development.
- Hedgerow reinforcement along the eastern boundary north of the Public Right of Way (ProRW) will take place along the eastern boundary north of the public right of way (ProRW). This will involve the creation of a new native species hedgerow to extend the existing hedge line and align with the Elgin fence boundary. Individual tree planting will also be incorporated to minimize views into the solar development.
- Hedgerow reinforcement along the eastern boundary adjacent to Lychgate Lane, consisting of an extension to the existing field hedge to enclose the corner of Field 4, to reduce views into the solar development.
- Further individual tree planting will be implemented to enhance the treed character along the western boundaries of Fields 2 and 3, again aimed at minimizing views into the solar development.

Eastern part of the Site

- 10m wide woodland buffer planting to the northeastern boundary, extending the length of this boundary, leaving a gap for the access road.
- Individual tree planting to the south of the woodland buffer planting to reduce views into the solar development, and to create a treed character. This individual tree planting falls outside of the solar development.
- Extension of the Hedgerow to the bottom corner of field 8.
- Individual tree planting in between the boundary fencing between fields 7 and 8, and dotted along the western boundary to reduce views into the solar development.
- Improvements to field boundary hedgerows within the site, which would include gapping up/replanting small sections of existing hedgerows and appropriate ongoing management.
- For all hedgerows where operational constraints allow, existing hedgerows will be maintained at approximately 3m in height, or to another height agreed with the local planning authority.

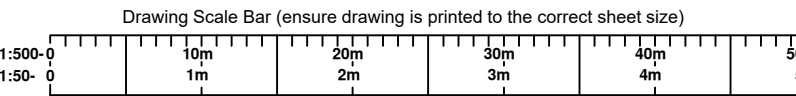
Whole Site

- A Field Margin Meadow mix would be planted along the field boundaries (inside of the redline boundary and outside of the fenced solar panels) to promote species diversity; for mix refer to plant schedule.
- A Grazing Grassland mix would be planted beneath the solar panels and be suitable for occasional sheep grazing; for mix, refer plant schedule.
- A wetland Meadow in the far eastern corner of the site would create a suitable mix for the flood risk area of the site.

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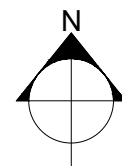
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Construction risks	Maintenance/Cleaning risks	Demolition/Adaption risks

Habitat references:

Grassland parcels	1a
Hedgerows	H1
Watercourses	11
Other habitat parcels	W1



P02	Updated following client comments	KW	GL	16.06.20
P01	Cable Easement Removed	KW	GL	25.04.20
Rev	Description	By	Ckd	Date



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Client **Elgin Energy EsCo**

Project Aston Flamville Solar Farm

Title Landscape Strategy
Sheet 2 of 2

Status	Scale	Date Created
Planning	1:500 @A2	08.04.2025
Task Team Manager	Information Author	Task Information Manager
GL	KW	GL

Document Number
5171-RPS-XX-XX-DR-L-9102

Project Code - Originator - Zone - Level - Type - Role - Drawing Number

RPS Project Number	Suitability	Revision
794-PLN-LAN-5171	S2	P02

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APPENDICES

Long Term Habitat Management Programme (Year 3 Onwards)

Habitat Type	Management Compartment	Actions	Frequency	Month											
				J	F	M	A	M	J	J	A	S	O	N	D
Other Neutral Grassland	1a – 8a	Cut (using cut-and-collect machinery where possible) in late summer and autumn.	Up to 3 cuts annually												
		Alternatively introduce a regime of low intensity grazing regime (with a minimum of one field (on rotation) to be left ungrazed between April – July each year).	Year-round												
		Removal of weeds as required throughout the year.	Multiple visits where required each year												
Other Neutral Grassland	9 and 10	Conservation management, periodic grassland cutting with the removal of all arisings (using cut-and-collect machinery) in late summer and autumn and provisionally early spring. Optional seasonal grazing in late summer after the first cut to replace the second and third cuts.	Up to 3 cuts annually												
		Alternatively introduce a regime of low intensity grazing between August – March, with the grassland left ungrazed between April - July.	Annually, August - March												
		Scarification of the ground to control the dominance of grass species.	Every 2 years												
		Removal of sub-optimal weed species throughout the growing season to prevent flowering and setting of seed – ideally dig out or alternatively spot treat with herbicide.	Multiple visits where required each year												
Other Neutral Grassland	1b – 8b	Cut on rotation once every 3 years in September to a height of 50mm. Removal of weeds as required throughout the year.	A third of the field margin habitat to be cut each year – ideally in September												
		Removal of weed species throughout the growing season to prevent flowering and setting of seed – ideally dig out plants or alternatively spot treat with herbicide.	Multiple visits where required each year												
Broadleaved Woodland	11	Areas of new tree and shrub planting to be monitored for their health and developing structure to inform management.	Annually Years 1- 5, then every 5 years												
Broadleaved Woodland	12	Selective coppicing of margins multi-stemmed shrubs on the margins of the small area of scrubby woodland around the pond to maintain age and structural variation.	Once every five years												
Broadleaved Woodland,	11 and 12 plus hedgerow trees	Standing and fallen dead wood to be retained to provide opportunities for wildlife. Trees with cavities / deadwood will have high biodiversity value and may provide bird nests, bat roosts and high invertebrate diversity.	Non-intervention												

ASTON FLAMVILLE SOLAR FARM - BMP

hedgerow trees, individual trees															
Broadleaved Woodland (Edge only), hedgerow trees, individual trees	11 and 12 plus hedgerow trees	Remediation where the structure of an individual tree is dangerous and poses a risk to site staff and contractors. All trees subject to pruning/surgery must be inspected by an ecologist prior to works, comprising an aerial inspection by a bat survey licence holder to determine if there are any potential roost features. Approval for the works to proceed will be dependent on the findings of the protected species assessment completed by an ecologist. All works to be consistent with BS:7370 Part 4 (clauses 3.6.3 to 3.6.5). All trees to be checked for safety by a suitably trained arborist. Pruning shall be conducted by skilled labour only. No growth retardants, fungicide or sealant to be applied. Wood resulting from pruning or other tree works should be retained within discrete habitat piles within the woodland. Surplus / additional material to be removed.	Only as last resort												
Scrub (Woodland edge planting)	14 - 15	The outer growth of planted shrubs should be trimmed back on the sides to promote side growth and create a dense structured scrub habitat. Monitoring of the habitat structure and adaptation where needed to establish and maintain target habitat conditions.	Every 2-3 years or as required												
		Areas of new tree and shrub planting to be monitored for their health and structure. Years 1 -10.	During monitoring visits.												
Bramble scrub	-	Cut back bramble encroachment into neutral grassland but maintain dense thickets, especially on south facing margins of scrub and woodland.	Annual												
Existing and New Established Hedgerows	H1 – H28	Trim back one section of internal hedgerows each year, with the remainder left untrimmed. (Each section of hedgerow cut only once every 3 years on rotation). Hedge should be managed to a minimum height of 2.5m. All trees within hedgerows to be protected during hedgerow cutting.	Cut each hedgerow once every 3 years (for retained hedgerows, and for new hedgerows from Year 5 onwards)												
Trees (including tree lines H14 and H15)	-	Prune only as necessary to allow deadwood features to develop where safe and practical. Retain removed limbs within the site to provide habitat for invertebrates. Where cavities are present, an inspection should be undertaken by an ecologist prior to the works to ensure no roosts will be affected.	Only as last resort when unavoidable												
Pond	13	Removal of highly competitive emergent plant species (including common reed, bulrush). Management to ensure a third of the pond surface remains free from vegetation with tall emergent vegetation to be maintained at a maximum extent of 20%. No more than 25% of marginal vegetation or silt will be removed from the pond during management in any one year with all works conducted during the winter. Algae and duckweed to be removed from the surface. Removed plant material should be left on the pond bank adjacent to water edge for 24 hours before removal from site. Monitor for and remove (uproot) non-native invasive species by hand and remove from site immediately.	Annually or as required												
Wet Ditches	W1 – W3	Cut trim back any hedgerows overshadowing the ditch channel.	Every 3 years												

		Any algae and duckweed to be removed from the surface.	Annual – when present – or as required												
		Control competitive emergent plant species (common reed, bulrush) to maintain diversity of habitat conditions in the ditch.	To be defined by monitoring												
		Removal non-native invasive plant species – seeking ecological advice on method.	To be defined by monitoring												
		Removal of sediment where there is significant accumulation.	To be defined by monitoring												

Measures specific to establishment phase following sowing/planting are described in Section 6 and excluded from the programme

Area Habitat Condition Criteria Targets

Other Neutral Grassland

Criteria	Description	Targeted	Management compartment	Approach
A	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Yes	9, 10	Sensitive cutting regime. Removal of weeds as required throughout the year
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No	-	n/a
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Yes	1a - 8a, 1b - 8b, 9, 10	Remedial resowing to be undertaken if required.
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Yes	1a - 8a, 1b - 8b, 9, 10	Remedial measures to be undertaken to remove bracken if required.
E	Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Yes	1a - 8a, 1b - 8b, 9, 10	Remedial measures to be undertaken to remove bracken if required.
F	There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	No	-	n/a

Broadleaved Woodland

Criteria	Description	1	2	3	Targeted	Management compartment	Approach
A	Age distribution of trees	Three age-classes present.	Two age-classes present.	One age-class present.	No	-	-
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland.	Evidence of significant browsing pressure is present in 40% or less of whole woodland.	Evidence of significant browsing pressure is present in 40% or more of whole woodland.	Yes	11, 12	n/a
C	Invasive plant species	No invasive species present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species <10% cover.	Rhododendron or cherry laurel present, or other invasive species >10% cover.	Yes	11, 12	Monitoring for invasive species and remedial measures to remove any stands present
D	Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	Three to four native tree or shrub species found across woodland parcel.	Two or less native tree or shrub species across woodland parcel.	Yes	11, 12	n/a
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.	<50% of canopy trees and <50% of understory shrubs are native.	Yes	11, 12	n/a
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted.	21 - 40% of woodland has areas of temporary open space.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category.	Yes	11, 12	n/a
G	Woodland regeneration	All three classes present in woodland; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland.	No classes or coppice regrowth present in woodland.	Yes	11, 12	Selected coppicing of shrub species may be undertaken as an enhancement measure.
H	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback.	11% to 25% mortality and/or crown dieback or low-risk pest or disease present.	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	Yes	11, 12	n/a
I	Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present.	No recognisable woodland NVC plant community at ground layer present.	No	-	-
J	Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland.	Two storeys across all survey plots.	One or less storey across all survey plots.	No	-	-
K	Veteran trees	Two or more veteran trees per hectare.	One veteran tree per hectare.	No veteran trees present in woodland.	No	-	-
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities.	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	No	-	-
M	Woodland disturbance	No nutrient enrichment or damaged ground evident.	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground.	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground.	Yes	11, 12	n/a

Scrub (Woodland edge planting)

Criteria	Description	Targeted	Management compartment	Approach
A	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species, with no single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i>)	Yes	14 - 16	Prune as required to maintain a dense structure. Remedial measures to be undertaken where required.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No	-	-
C	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Yes	14 - 16	Monitoring for invasive species and remedial measures to remove any stands present
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	No	-	-
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No	-	-

Pond

Criteria	Description	Targeted	Management compartment	Approach
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Yes*	13	Best practice measures to be followed in relation to pollution prevention.
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	Yes*	13	Sensitive maintenance of woodland and grassland surrounding pond.
C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.	Yes*	13	Algae and duckweed to be removed from the surface.
D	The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework.	Yes*	13	n/a
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	Yes*	13	n/a
F	There is an absence of listed non-native plant and animal species.	Yes*	13	Removal of any non-native invasive plant species to be uprooted and removed by hand. Remedial measures where required to remove non-native animal species.
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Yes*	13	Remedial measures where required to remove fish.
Additional Criteria - must be assessed for all non-woodland ponds:				
H	Emergent, submerged or floating plants (excluding duckweed) cover at least 50% of the pond area which is less than 3 m deep.	-	-	-
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	-	-	-

*A minimum of five criteria should be met to achieve the target condition of moderate set in the BNG Assessment

Linear and Watercourse Habitat Condition Criteria Targets

Hedgerows

Criteria	Description			Targeted	Management compartment	Approach
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	Yes	H1 – H28*	Trim back on rotation (i.e. with a third-fifth of the hedgerow cut each year) to a broadly A shape structure.
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Yes	H1 – H28*	Trim back on rotation (i.e. with a third-fifth of the hedgerow cut each year) to a broadly A shape structure.
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical ‘gappiness’ of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Access points and gates contribute to the overall ‘gappiness’ but are not subject to the >5 m criterion (as this is the typical size of a gate).	Yes	H1 – H28*	Trim back on rotation (i.e. with a third-fifth of the hedgerow cut each year) to a broadly A shape structure.
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal ‘gappiness’ of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall ‘gappiness’ but are not subject to the >5 m criterion (as this is the typical size of a gate).	Yes	H1 – H28*	Remedial actions where necessary – infill planting.
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length:	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Yes	H1 – H28*	Sensitive management of adjoining grassland.
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	Yes	H1 – H28*	Sensitive management of adjoining grassland.
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website where the ‘Online Atlas of the British and	Yes	H1 – H28*	Monitoring for invasive species and remedial measures to remove any stands present

Criteria	Description		Targeted	Management compartment	Approach
	of WCA) and recently introduced species.	Irish Flora contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website.			
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Yes	H1 – H28*	Sensitive management of adjoining grassland.
Additional group - applicable to hedgerows with trees only					
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	-	-	-
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Yes	H1 – H28*	Trees within hedgerows to be protected during hedgerow cutting. Prune only as necessary to allow deadwood features to develop where safe and practical.

*The target condition for hedgerows is good, with the exception of hedgerows H12 and H13 for which it is moderate

Line of Trees

Criteria	Description	Targeted	Management compartment	Approach
A	At least 70% of trees are native species.	Yes	-	-
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	Yes	All lines of trees (H14 – H15)	Prune only as necessary
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	Yes	-	-
D	There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice.	Yes	-	-
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Yes	-	-

Wet Ditches

Criteria	Description	Targeted	Management compartment	Approach
A	The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	W1 – W3	Best practice measures to be followed in relation to pollution prevention.
B	A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.	-	-	-
C	There is less than 10% cover of filamentous algae and or duckweed (these are signs of eutrophication).	Yes	W1 – W3	Algae and duckweed to be removed from the surface.
D	A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.	-	-	-
E	Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.	Yes	W1 – W3	n/a
F	Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.	-	-	-
G	Less than 10% of the ditch is heavily shaded.	-	-	-
H	There is an absence of non-native plant and animal species.	Yes	W1 – W3	Removal of any non-native invasive plant species to be uprooted and removed by hand. Remedial measures where required to remove non-native animal species.