

HABITAT MANAGEMENT PLAN

EL03 - IVY HOUSE FARM

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A NEW PLAN FOR
THE PLANET

 ENVIRONMENT
BANK

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To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement. Where information is provided by others, EBL shall bear no liability in respect of any advice given on the basis of that information. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations (date, work, interpretation of that data or work) completely defined the degree or extent of e.g., species abundances, habitat management efficacy, conservation credit calculations and hence credit requirements, described in the report.

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Management Plan Overview

The purpose of this Habitat Management Plan (HMP) is to detail the habitat creation and enhancement proposals required to achieve the target habitats of land at Ivy House Farm (Environment Bank Ltd Ref: EL03) (hereafter referred to as the 'Site') and shown within the Site Boundary at Figure 1. The HMP will also set out the provisions for their long-term management.

The management period of at least 30 years is defined by the Environment Act 2021.

The plan is designed to be an adaptive 'live' document and will be reviewed and amended regularly to ensure the management objectives achieve their intended aims over the 30-year management period.

Third party oversight of the HMP will be carried out by the relevant Local Planning Authority, who will review progress of the habitat bank against the proposed management objectives.

The Land Manager is responsible for implementing the management works in the HMP and reporting back progress to Environment Bank in accordance with the terms within the signed Habitat Management Agreement (HMA).

The HMP ensures that works do not adversely affect any protected species within the site and is compliant with UK Wildlife Legislation.

1 Site Information

1.1 Habitat Bank Details

- 1.1.1 Table 1 below summarises the details of the Site subject to the HMP. The Habitat Bank Site Boundary is shown on Figure 1.

Table 1: Site details

Site Details	
Site	Ivy House Farm
Address	Ivy House Farm, Chapel Lane, Minting, Lincolnshire, LN9 5RX
National Grid Reference (Centroid)	TF1676 7379
Local Planning Authority	East Lindsey District Council
National Character Area	44 Central Lincolnshire Vale
Land Ownership	Private

1.2 Principal Contacts

- 1.2.1 Table 2 contains the contact information for the Site.

Table 2: Principal contact details

Principal contact details	
Land Owner	The Environment Bank Limited
Contact address	The Catalyst, Baird Lane, York, YO10 5GA
Land Manager	The Environment Bank Limited

1.3 Management Context

1.3.1 Table 3 below details the management context associated with the Site and delivery of the HMP. Field numbers are provided in Figure 2.

Table 3: Management context

Management context	
Existing Management	Four distinct parcels, with the primary land use currently a <i>Miscanthus</i> crop.
Utilities	A gas pipeline runs through the centre of the Site.
Flooding	The Site is not within a flood zone. Some surface water can occur after heavy precipitation.
Public Access	None
Protected Species	Several protected species were identified within 2km of the Site within a ten-year period.
Invasive Species	No invasive species were identified on Site during surveys. No records were returned for within 2km of the Site within a ten-year period.

2 Enhancement and Management Proposals

2.1 Excluded Habitats

- 2.1.1 Excluded habitats are parcels and features which are located within the boundary of the Site but do not form part of the Habitat Bank. Excluded habitats may still provide important ecological functions within the Site, such as forming connecting features or transition spaces between habitats. Examples of frequently excluded habitats include hedgerows and ditches.
- 2.1.2 All hedgerows, the existing willow scrub and the drain have been excluded from the Site. Hedgerows and woodland within the site will be naturally enhanced through the planting of mixed scrub habitats. The drain is predominantly under the hedgerows and the existing pond is within the woodland. Both waterbodies are heavily shaded and therefore habitat creation on site will not contribute to any negative changes to the drain.
- 2.1.3 These hedgerows and the drain have not been included within any metric calculations. No BU uplift will be gained from these areas. These habitats are not considered further within this report.

2.2 Management Aims

- 2.2.1 The aims of the HMP are summarised in Table 4 below and indicative proposed habitats shown within Figure 2.
- 2.2.2 This report details the 4 habitat types proposed for the Site. The target condition criteria are in line with the Statutory Biodiversity Metric (Defra, 2023) (the Metric) and are provided for each proposed habitat in Appendix A.

Table 4: Aims for each habitat management project option proposed for the site.

Proposed habitat	Aims
EL03-ONG (Other neutral grassland)	To create species rich neutral grassland and maintain in Moderate ecological condition.
EL03-OBW (Other woodland; broadleaved)	To create and maintain woodland to at least Moderate ecological condition. New woodland will link to and expand existing woodland in the western section of the Site.
EL03-MXS (Mixed scrub)	To create dense continuous woody mixed scrub, with regenerative scrub structure of good ecological condition.
EL03-PND (Pond)	To create ponds within newly created species rich neutral grassland. Ponds will be maintained to at least Moderate ecological condition.

- 2.2.3 This HMP sets out the management objectives for the above management aims. Soil analysis, a hydrological assessment, and botanical surveys will be completed prior to the implementation of creation works in order to further inform the micro-siting of habitat types and inform the habitat creation methods.

2.3 Early Works - Habitat Creation, Establishment and Management

2.3.1 Table 5 below lists the works that will be undertaken at the beginning of the lease term to create, establish and manage the habitats and fulfil the management objectives described in full and provided within Appendix A. The actions are listed sequentially across all projects for ease of project planning.

Table 5: Creation and establishment prescriptions for all areas

Project ref	Action	Objective/s	Comments	Timing	Delivery body	Capital works / Management
EL03-ONG (Other neutral grassland)	Harvest <i>Miscanthus</i> crop and remove rhizomes using Glyphosate	1. Deliver 15 or more other neutral grassland indicator species in 2m x 2m quadrat samples (averaged).	Former owner to undertake final harvest of <i>Miscanthus</i> crop and EBL to remove all rhizomes within 12 months of harvest.	Harvest – March/April 2024 Rhizome removal – July 2024-July 2025	EBL	Capital works
EL03-ONG (Other neutral grassland)	Prepare ground for seeding and create a weed-free, fine seedbed. Cultivate soil using non-intrusive harrowing methods.	1. Deliver 15 or more other neutral grassland indicator species in 2m x 2m quadrat samples (averaged).	Wildflower seed must make contact with bare ground without competition.	August - September 2025	EBL	Capital works
EL03-ONG (Other neutral grassland)	Spread green hay and/or brush-harvested seed. This will be done in combination with allowing natural	1. Deliver 15 or more other neutral grassland indicator species in 2m x 2m quadrat samples (averaged).	Green hay and/or brush-harvested seed ensures species are local to the area. A ratio of 1:3 should be used for donor site collected hay to spreading hay on the recipient site.	August - September 2025	EBL	Capital works

Project ref	Action	Objective/s	Comments	Timing	Delivery body	Capital works / Management
	succession of existing vegetation.					
EL03-ONG (Other neutral grassland)	For areas without green hay- sow commercial seed mix (10-40kg per hectare) and roll to ensure contact with ground. This will be done in combination with allowing natural succession of existing vegetation.	1.Deliver 15 or more other neutral grassland indicator species in 2m x 2m quadrat samples (averaged).	Seeding prior to heavy rain events should be avoided or during periods of prolonged drought. Seed should be sown onto surface and rolled.	August-September 2025	EBL	Capital works
EL03-ONG (Other neutral grassland)	Use grazing to control swards. Subject to findings post-harvest and the underlying wet soil. Alternative include mowing.	1.Deliver 15 or more other neutral grassland indicator species in 2m x 2m quadrat samples (averaged). 2.Deliver a variable sward height of at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm.	Use machinery to cut and clear sward to a height of 50-100 mm if conditions are deemed unsuitable for grazing. Long term grazing prescriptions will to be determined once the grassland has become established.	Livestock - August- October 2026 Cutting and clearing – July, October 2026	EBL	Capital works
EL03-OBW (Other woodland; broadleaved)	Prepare ground for woodland planting. Cultivate soil using non-intrusive harrowing methods.	Promote diverse ground flora communities and woodland understorey of native species.		August - September 2025	Land manager	Management

Project ref	Action	Objective/s	Comments	Timing	Delivery body	Capital works / Management
		Ensure non-native cover is less than 10%.				
EL03-OBW (Other woodland; broadleaved)	Plant native tree whips at a density of approximately 1600/ha with 2.5m spacing between trees.	Ensure at least four native tree species are found across the woodland parcel. Two storeys across all survey plots	Tree spacing to allow for machine access for weeding. Native species mix will be determined following soil analysis and comprise species in-keeping with the natural character of the Site. Planting will need to be undertaken in appropriate weather conditions, avoiding ground frost or waterlogged conditions.	October 2025- March 2026	EBL	Capital works
EL03-OBW (Other woodland; broadleaved)	Install stock-proof and deer guard fencing around the perimeter of woodland planting to protect from grazing.	Prevent damage to newly establishing woodland planting.		Before tree planting 2025/26	EBL	Capital works

Project ref	Action	Objective/s	Comments	Timing	Delivery body	Capital works / Management
EL03-OBW (Other woodland; broadleaved)	Manage/remove undesirable weeds including <i>Miscanthus</i> .	Ensure that non-native species cover is less than 10%. Promote diverse ground flora communities and woodland understorey of native species.	Control to include topping/pulling or spot treatment only.	April- September 2026	Land manager	Management
EL03-OBW (Other woodland; broadleaved)	Replace failed planting stock.	Ensure at least four species are found across the woodland parcel. Ensure that at least two age classes of trees are present within the woodland parcel. Tree mortality is less than 10%	Planting will need to be undertaken in appropriate weather conditions, avoiding ground frost or waterlogged conditions.	October 2026- February 2027	EBL	Capital works
EL03-MXS (Mixed scrub)	Manage/remove undesirable weeds/ <i>Miscanthus</i>	3. Reduce / remove the presence of undesirable species (must be less than 5% coverage).	Due to the nature of the <i>Miscanthus</i> , glyphosate will be used.	July 2024- July 2025	EBL	Capital works
EL03-MXS (Mixed scrub)	Plant native shrub and tree whips (different ages) at a density of approximately 1000/ha with lower planting densities towards the margins.	2. Deliver a good age range with seedlings, young shrubs, and mature shrubs present. 4. Deliver a well-developed edge.	Plant native shrub and tree whips at mixed intervals to create a mosaic.	October 2025- March 2026	EBL	Capital works

Project ref	Action	Objective/s	Comments	Timing	Delivery body	Capital works / Management
EL03-MXS (Mixed scrub)	Replace all failed planting stock with native species. This may be the same species or different native species depending on why planting stock has failed.	1. Delivery of 3 or more woody species within the mixed scrub with no more than 1 species providing 75% of the cover. 2. Deliver a good age range with seedlings, young shrubs, and mature shrubs present.	Maintain desired scrub habitat type	October 2026- March 2027	EBL	Capital works
EL03-MXS (Mixed scrub)	Install stock-proof and deer guard fencing around the perimeter of scrub planting to protect from grazing.	4. Prevent damage to newly establishing woodland planting.	Protect newly planted shrubs and allow them to establish	After tree planting 2025	EBL	Capital works
EL03-MXS (Mixed scrub)	Manage competitive growth of grasses and tall herbs through strimming/cutting during first years of establishment until grazing commences.	2. Deliver a range of shrub ages, including seedlings, young and mature shrubs. 4. Reduce / remove the species indicative of sub-optimal condition (must be less than 5% coverage).	To reduce competition and allow shrub establishment	As required (2025-2030)	EBL	Management
EL03-PND (Pond)	Pond creation. Ponds / scrapes can be dug using digger to specification provide by EBL ecologist.	5. Pond water levels should be able to fluctuate naturally throughout the year. No obvious dams, pumps, or pipework.	Ponds will slope at the edges (maximum of 12° slope). Embayment created around pond edges. The ponds will have underwater hummocks and bars at deeper points.	September - December 2024 – January -April 2025	EBL	Capital works

Project ref	Action	Objective/s	Comments	Timing	Delivery body	Capital works / Management
EL03-PND (Pond)	Natural establishment or seeding / planting of marginal and pond plants.	8. Ensure emergent, submerged aquatic and/or floating plants (excluding duckweeds), should cover at least 50% of the pond that is less than 3m deep.	If planting is required, species will be native and sourced from a supplier that is able to guarantee that the stock is free from contamination from non-native invasives.	May-July 2027	Land manager	Management
EL03-PND (Pond)	If required: Stock-proof fencing erected around pond areas. Pond areas include 'drawdown' zones that hold water seasonally.	1. Ensure good water quality by preventing pollution entering the ponds. 2. Appropriate management of grassland habitat within 10m of the pond bankside.	Access to pond edges will be maintained to allow machinery access. A 2m buffer zone will be left between the pond 'drawdown' zone and the fence line.	After creation of ponds 2024	EBL	Capital works

2.4 Early Works - Habitat Creation and Establishment Schedule

- 2.4.1 Table 6 below summarises the schedule of the early works actions as outlined in Table 5. Please note, this schedule assumes that one year of nutrient stripping will be sufficient to deliver the appropriate soil fertility levels prior to sowing/spreading of green hay. Should fertility levels still be too high after this year of nutrient stripping (to be confirmed through soil sampling and analysis), further nutrient stripping may be required thereby delaying the subsequent habitat establishment and management actions.

Table 6: Early works schedule

Project ref	Prescription	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
EL03-ONG (Other neutral grassland)	Prepare ground for seeding and create a weed-free, fine seedbed.	2025												
EL03-ONG (Other neutral grassland)	Spread green hay and/or sow commercial seed mix	2025												
EL03-ONG (Other neutral grassland)	Use grazing/mowing to control swards	2026												
EL03-ONG (Other neutral grassland)	Manage/remove undesirable weeds/Miscanthus	2024												
		2025												

Project ref	Prescription	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
EL03-OBW (Other woodland; broadleaved)	Prepare ground for woodland planting.	2025												
EL03-OBW (Other woodland; broadleaved)	Plant native tree whips	2025												
		2026												
EL03-OBW (Other woodland; broadleaved)	Install stock-proof fencing around the perimeter of woodland planting to protect from grazing animals.	2025/26												
EL03-OBW (Other woodland; broadleaved)	Manage / remove undesirable weeds/ <i>Miscanthus</i> .	2024												
		2025												
EL03-MXS (Mixed scrub)	Manage / remove undesirable weeds/ <i>Miscanthus</i> .	2024												
		2025												
EL03-MXS (Mixed scrub)	Plant native shrub and tree whips. Stock-proof and deer guard fencing to be installed before tree planting.	2025												
		2026												
EL03-MXS (Mixed scrub)	Manage competitive growth of grasses and tall herbs through topping/cutting during first years of establishment until grazing commences.	As required (2025-2030)												

Project ref	Prescription	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
EL03-MXS (Mixed scrub)	Replace failed planting stock.	2026												
		2027												
EL03-PND (Pond)	Create ponds	2024												
		2025												
EL03-PND (Pond)	Stock-proof fencing installation	2025												
EL03-PND (Pond)	Planting of marginal and pond plants (if required)	2027												
			Permitted timing 'windows' for habitat creation and management activity											

2.5 Long Term Habitat Management

2.5.1 Table 7 below lists the habitat enhancement and management works that will be implemented over the management period (30 years) following the initial establishment of the habitat during the Early Works. The actions are colour coded for each project for ease of reference.

Table 7: Management prescriptions for all areas

Project ref	Action	Objective/s	Comments	Timing	Delivery body
EL03-ONG (Other neutral grassland)	Cut and/or graze grassland	1. Deliver at 9-15+ grassland indicator species in 2m x 2m quadrat samples (averaged). 2. Deliver a variable sward height of at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm. 3. Deliver bare ground cover (1 – 5% coverage). 4. Maintain/ reduce scrub coverage to less than 5% and Bracken <i>Pteridium aquilinum</i> less than 20%. 5. Remove the presence of invasive non-native species. 6. Maintain / reduce combined cover of species indicative of sub-optimal condition and physical damage to less than 5%.	Grazing regime will be prescribed following an assessment of the grassland after the completion of the early works. Grazing will be dependent on grassland condition, and other variables, such as weather and ground conditions. Grazing may not be required every year. Livestock density will be assessed each year to fit requirements. Close fields off from grazing for at least 10 weeks over the flowering season.	Every year. Mid-May - mid October and/or when the ground becomes too wet.	EBL
EL03-ONG (Other neutral grassland)	Manage/remove undesirable weeds (e.g. nettle, thistles, docks) and invasive species.	5. Remove the presence of invasive species. 6. Maintain / reduce combined cover of undesirable species and physical damage to less than 5%.	Control to include topping/pulling or spot treatment only. Removal of non-native invasive species should follow appropriate guidance.	As required. Timing dependant on when appropriate	EBL

Project ref	Action	Objective/s	Comments	Timing	Delivery body
				for species which requires removal (April – September).	
EL03-OBW (Other woodland; broadleaved)	Cutting using machinery to eliminate dense Bracken or other undesirable species.	Ensure at least four species are found across the woodland parcel. Promote diverse ground flora communities and woodland understorey of native species.	Bracken and other dominant tall rank species can prevent natural colonisation of native trees and shrubs. The 'colonisation pattern' should be observed for a few years after planting to determine if weeding is required.	When required	EBL
EL03-OBW (Other woodland; broadleaved)	Ensuring areas of open habitat are maintained through cutting back dense scrub understorey. No more than 20 % of scrub should be removed in any one year.	Promote diverse ground flora communities and woodland understorey of native species. Provision of deadwood including standing deadwood, large dead branches/ stems and stumps.	Deadwood can be left in open areas to benefit wildlife. Dense patches of scrubby understorey should be maintained to provide suitable habitat for Nightingale <i>Luscinia megarhynchos</i> .	5-10 years after planting. Then, when required.	EBL
EL03-OBW (Other woodland; broadleaved)	Replacing damaged stock-proof fencing.	To ensure browsing pressure is controlled to reduce damage to woodland and to promote natural colonisation.		When required	EBL
EL03-OBW (Other woodland; broadleaved)	Light grazing within woodland to promote light patch-scarification or moulding.	Promote diverse ground flora communities and woodland understorey of native species. Promote 21 – 40% of woodland has areas of temporary open space	This is not required if good ground flora diversity has already been achieved through other management. Grazing should be done for brief periods to prevent excessive damage to trees and ground flora. Dense scrub patches should be allowed to develop to promote suitable Nightingale habitat.	10 - 15 years after planting. Late summer (after seedfall)	EBL

Project ref	Action	Objective/s	Comments	Timing	Delivery body
EL03-MXS (Mixed scrub)	Graze with livestock	2. Deliver a range of shrub ages, including seedlings, young and mature shrubs. 3. Remove the presence of invasive species. Cover of undesirable species to less than 5%.	Allow animals to graze, browse and trample to open up areas of scrub and create edge habitats. Dense patches of woody scrub should be present prior to allowing grazing Rotational grazing may be employed at first – this will be assessed when the scrub has developed.	2028 Onwards – In line with the adjacent grassland type grazing regime.	EBL
EL03-MXS (Mixed scrub)	Coppice 20% of shrubs in years 15, 20, 25 and 30 in rotation to encourage different height classes amongst the shrubs.	1. Delivering habitat including at least 3 woody species, with no one species comprising over 75% of habitat area. 2. Deliver a range of shrub ages, including seedlings, young and mature shrubs.	Maintain variation in height and structure. Creates some areas of young regrowth and dense areas of mature scrub Coppiced shrubs to be selectively thinned. Scrub cutting is not permitted between 28 th February to 1 st September to avoid nesting bird season – later cutting is preferred. Delay where possible cutting shrubs with berries until January / February to provide a foraging resource for birds and mammals. Dense blocks of scrub should be allowed to develop to promote suitable Nightingale habitat.	October – February (2032, 2042 and 2053)	EBL
EL03-MXS (Mixed scrub)	Maintain the scrub edge.	5. Deliver a well-developed edge.	Manage the scrub edge to reduce in height along the edge to the grassland field. Cut back any scrub which is encroaching onto the grassland. Cut the grassland edge once a year ensuring the grassy scrub edge is maintained. However, browsing pressure should maintain this edge.	Every year once established in October – February	EBL
EL03-MXS (Mixed scrub)	Manage and remove any undesirable species and invasive non-native species.	2. Remove invasive species. 3. Reduce / remove undesirable species (must be less than 5% coverage).	Control to include topping/pulling or spot treatment only.	April-September (2024 – 2054)	EBL

Project ref	Action	Objective/s	Comments	Timing	Delivery body
EL03-PND (Pond)	Remove / control non-native invasive species.	6. Removal or control of non-native species within the ponds or on pond bankside.	If a non-native plant is found within pond or within 10 m of the pond, it should be removed. Regular checks will be undertaken to check for regrowth and further vegetation removal if required. All non-native invasive species must be disposed of appropriately and in line with legislation and best practice, with specialist contractors engaged if requires, so as to not contaminate other waterbodies or other land parcels.	When required *Likely undertaken May-September when plants are easier to identify.	EBL
EL03-PND (Pond)	Scrub and bankside woody vegetation is cut back if pond shading exceeds 50% cover.	9. Ensure the surface of the ponds are no more than 50% shaded by woody bankside species. 2. Appropriate management of grassland habitat within 10m of the pond bankside.	Access to pond edges will be maintained to allow access to machinery.	October/ February	EBL
EL03-PND (Pond)	Remove 1/5 of emergent and aquatic vegetation on rotation in years 5, 10, 15, 20, 25, 30	1. Maintain good water quality 8. Established a variety of aquatic plants (emergent, submerged and floating) across at least 50% of the pond.	Removed vegetation should be left on the bank edges for a minimum of 48 hrs to allow invertebrates to re-enter the pond.	September / October	EBL

2.6 Annual Management Schedule

2.6.1 Table 8 below summarises the schedule of management works to be implemented over the course of the 30-year management agreement. For additional details regarding each prescription refer to Table 7.

Table 8: Annual management schedule (all proposals)

Project ref	Prescription	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
EL03-ONG (Other neutral grassland)	Cut or graze grassland to manage sward height	2026-2056												
EL03-ONG (Other neutral grassland)	Remove undesirable weeds (e.g. nettle, thistles, docks).	2025-2055												
EL03-OBW (Other woodland; broadleaved)	Application of herbicides or cutting using machinery to eliminate dense Bracken or other undesirable species	2026-2056												
EL03-OBW (Other woodland; broadleaved)	Ensuring areas of open habitat are maintained through rotational cutting dense scrub understorey or removing some individual trees.	2027-2057												
EL03-OBW (Other woodland; broadleaved)	Replacing damaged stock-proof fencing.	2026-2056												

Project ref	Prescription	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
EL03-OBW (Other woodland; broadleaved)	Light grazing within woodland to promote light patch-scarification or moulding.	2033-2053												
EL03-MXS (Mixed scrub)	Coppice 20% of shrubs in years 15, 20, 25 and 30 on rotation to encourage different height classes amongst the shrubs.	2032, 2042 and 2053.												
EL03-MXS (Mixed scrub)	Retain any dead wood	2025 – 2055												
EL03-MXS (Mixed scrub)	Maintain the scrub edge.	2025 – 2055												
EL03-MXS (Mixed scrub)	Manage and remove invasive non-native species	2025 – 2055												
EL03-PND (Pond)	Remove / control non-native invasive species.	2025-2055												
EL03-PND (Pond)	Maintain pond edges.	2025-2055												
EL03-PND (Pond)	Scrub and bankside woody vegetation is cut back if pond shading exceeds 50% cover.	2027-2053												
EL03-PND (Pond)	Remove 1/5 of emergent and aquatic vegetation on rotation	2025 -2055												

3 Early Implementation Actions

- 3.1.1 The ‘Early Implementation Actions’ are the habitat establishment actions (as defined within the Habitat Management Agreement (HMA)) that, once complete, confirm that the land is formally being managed as a Habitat Bank for habitat creation and restoration purposes and in turn, starts the 30 year management time period required of all Biodiversity Net Gain delivery sites. The following actions are the Early Implementation Actions for this Habitat Bank:

Table 9: Early implementation actions

Proposed habitats	Prescription
EL03-ONG (Other neutral grassland)	Removal of <i>Miscanthus</i> crop and rhizomes. Prepare ground for green hay and / or seeding.
EL03-OBW (Other woodland; broadleaved)	Prepare ground for tree planting. Record and remove undesirable species.
EL03-MS (Mixed scrub)	Prepare ground for shrub planting. Record and remove undesirable species.
EL03-PND (Pond)	Clear areas for pond creation.

- 3.1.2 There will be a requirement to formally document and demonstrate that these Early Implementation Actions have been completed and on which date. This will be achieved through a signed declaration that works were carried out in line with prescriptions, accompanied by timestamped photos of any management works taken before and after implementation. Correspondence between Environment Bank, Land Manager and contractors can also be used for this purpose.

4 Deviation from Management Prescriptions

- 4.1.1 All steps within the habitat management plan will need to be followed accurately. However, it is inevitable that slight deviations may be required in certain years due to variable elements such as weather conditions.
- 4.1.2 Any deviation from the management prescriptions in Tables 5, 6, 7 and 8 must be agreed in writing with an Environment Bank ecologist.
- 4.1.3 Should significant interventions in management actions be required (for example, as a result of an environmental event like drought/flood) then the change management procedure outlined in the Habitat Management Agreement (HMA) should be followed.

4.2 Annual HMP Review

- 4.2.1 A review of the HMP will be undertaken every year. The review will determine if the management actions proposed remain appropriate to achieve the aims of the plan and/or what, if any, amendments, or contingency will be needed to remediate any shortfalls.
- 4.2.2 The review will be informed from data and comments provided by the Land Manager in the 'Report of Actions Taken' form, the monitoring surveys and any further discussions between the Land Manager and Environment Bank.
- 4.2.3 Table 9 outlines potential change in management proposals that may be required during the term of the project to ensure that the management objectives are met.
- 4.2.4 Habitats will be monitored annually, and Environment Bank will propose interventions as early as possible in order to avoid delays in the time to target condition. During the establishment period for each habitat type, professional judgement will be used to assess the status of any transitional habitat in order to decide if it is at the expected pre-target condition and moving towards target condition within the expected time period.

Table 9: Costed contingency proposals for each Habitat Enhancement and Management Project

Project ref	Trigger	Contingency	Management / Capital works
EL03-ONG (Other neutral grassland)	Soil nutrient levels within the soil are higher than recommended for grassland creation.	Continue to grow and harvest a cereal crop without the application of fertiliser.	Capital works and management.
	Invasive non-native species identified.	Adjust the management to include topping/pulling or spot treatment of the invasive species.	Capital
	Cover of undesirable species and physical damage over 5%.	Review with the land manager or contractor the use of machinery within the habitat. Adjust the management plan in line with the outcomes to reduce physical damage.	Management
	Cover of Bracken over 20% and cover of scrub over 5%	Introduce removal of existing Bracken and scrub which is beginning to establish into the management plan area.	Management
	Target sward composition or diversity not achieved	Plug planting may be necessary to increase species diversity or additional overseeding to improve sward composition.	Management
	Physical damage has increased over 5% due to	Install fencing along the edge of the footpath to ensure that physical damage from the public is prevented.	Management

Project ref	Trigger	Contingency	Management / Capital works
	activity / disturbance from the footpath.		
EL03-OBW (Other woodland; broadleaved)	Failure of tree planting	Replacement planting accounted for at 10% (as required)	Capital
	Invasive non-native species identified.	Specific control methodology for species identified will be required. Specialist contractors and permits may be required in some circumstances.	Capital
	Excessive damage to woodland due to over browsing.	Existing tree protection methods will be reassessed, and damaged stock-proof fencing replaced when required. *EBL will not instruct shooting as a way of deer / rabbit control and this activity is not covered within the management plan. Any shooting activity within the Site boundaries will need to be discussed with an EBL ecologist prior to shooting activities starting.	Management
EL03-MXS (Mixed scrub)	Failure of tree/shrub planting	Replacement planting accounted for at 10% (as required)	Capital
	Invasive non-native species identified.	The specific control method will depend on the species identified. Specialist contractors and permits may be required in some circumstances.	Capital
	Lack of a well-developed edge	Adjust the cutting of the scrub edge to ensure that the grassland margin is maintained.	Management
	Lack of a good age range of shrubs within the habitat.	Additional planting of seedlings or young shrubs where required to provide the diverse habitat structure.	Management
EL03-PND (Pond)	Invasive non-native species identified.	The specific control method will depend on the species identified. Specialist contractors and permits may be required in some circumstances. Non-native species will need to be disposed of in a way that will not result in the contamination of other waterbodies in the local area.	Management
	Ponds fail to colonise naturally, or damage is caused to the ponds where vegetation has been removed.	Planting of native species from commercial stock. Plants will be sourced from a supplier that is able to guarantee that the stock is free from contamination from non-native invasives.	Management
	Pollution entering ponds.	Source of the pollution should be identified immediately and removed. An EBL ecologist	Management

Project ref	Trigger	Contingency	Management / Capital works
		will be contacted, and next steps will be discussed.	
	Excessive damage by livestock.	Livestock are permitted to use ponds as a water source if discussed with EBL ecologist beforehand. If ponds show excessive damage due to livestock, ponds will need to be fenced off with stock-proof fencing.	Management
EL03-Existing Habitat	Temporary physical damage to existing hedgerow due to habitat creation activities.	If required, existing hedgerow should be protected by temporary fencing. Any digging within the root protection zone (RPZ) of existing hedgerow / trees will need to be supervised by an EBL ecologist.	Capital

- 4.2.5 In addition to the above, amendments to the timings or prescriptions of the management plan can be made subject to the provision of evidence to justify the relevant management change. It is essential all changes receive prior agreement with Environment Bank before they can be implemented.

5 Monitoring Schedule

5.1 Monitoring Strategy

- 5.1.1 Monitoring will follow a dual-purpose approach: first, to enable the swift identification of issues and allow for rapid adaptation of management prescriptions. This will be conducted by regular site visits, thoroughly inspecting the Site to detect any immediate concerns and adjust management strategies as necessary.
- 5.1.2 Secondly, monitoring will ensure that each habitat parcel progresses towards the target habitat type and specified condition. Standard best practice survey methodologies will be employed to assess each habitat type, with data compiled and reviewed to evaluate progress. If at any point, the habitat type or condition criteria are, or perceived to be, failing, the remedial actions outlined in the HMP will be implemented.
- 5.1.3 Additional monitoring surveys for protected and notable species may be conducted beyond the requirements of the Biodiversity Net Gain assessment, either for added interest or as supplementary monitoring. Over the 30-year span of the Habitat Bank, further protected species surveys may be carried out as necessary.

5.2 Monitoring Methods and Intervals

Table 10 summaries the monitoring methods to be implemented, along with the corresponding time periods and frequency during which they will be conducted.

Table 10: Monitoring Methods and Intervals

Habitat Type	Monitoring Methods	Monitoring Interval and Timing
Entire site	Report of Actions Taken (RAT) Each year the Land Manager must complete a 'Report of Actions Taken' form. The Land Manager must complete the form to show they have completed all actions required in the management plan for that particular year. The report will be used alongside the habitat review walkover to ascertain any management interventions. Data on stock animals used and stocking density, dates during which stock are on the Site, and shutting-up and cutting dates – where applicable – will be collected.	Annually
Entire Site	Habitat Review Walkover EBL ecologist will regularly visit and walkover the whole site.	Annually
Entire site	Soil sampling To determine soil chemistry, primarily pH and Phosphorous.	At the baseline. Every 5 years
All habitat parcels	Whole feature assessment Each parcel will be assessed annually using one or more of the following survey methodologies as appropriate for the target habitat • UKHab Assessment (UKHab Ltd, 2023) • Metric Condition Assessment (Defra, 2024) • National Vegetation Classification (NVC) (Rodwell, 1991 et seq.) • Comprehensive species list (DAFOR and/or percentage cover)	Annually Surveys will be undertaken during the optimal survey season for the relevant habitat ensuring no limiting factors

5.3 Reporting

5.3.1 Data compiled during the monitoring surveys will be summarised within the Habitat Monitoring Report. These reports will be issued every five years for review. EBL will aim to issue the report following the fifth survey season of every five-year block of monitoring.

6 Scheme completion

- 6.1.1 The enhancement and management proposals set out in this report will be implemented over a period of 30 years from completion of the “Early Implementation Actions” (as defined above). For this site, the expected time period will be winter 2024 – autumn 2054. On completion of the final year of management, the final review of the HMP and monitoring surveys will be undertaken. Once complete, a final Habitat Bank Monitoring Report will be completed in addition to a covering note outlining scheme completion.

References

- Defra (2023a). The Statutory Biodiversity Metric Calculation Tool – macro-enabled. Available at Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)
- Defra (2023b). The Statutory Biodiversity Metric User Guide (draft). Available at Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)
- Defra (2023c). The Statutory Biodiversity Metric Condition Technical Annex 1: Condition Assessment Sheets and Methodology. Available at Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)
- UKHab Ltd (2023). *The UK Habitat Classification Version 2.0* at <http://ukhab.org>
- UK Habitat Classification Working Group (2018). *UK Habitat Classification User Manual* at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>

Figure 1: Site Boundary



Figure 2: Proposed Habitats



Appendix A: Management Objectives

The aims of the HMP will be achieved through the following objectives.

EL03-ONG – Other Neutral Grassland

A species rich neutral grassland will be created on existing arable land within the Site shown on Figure 2.

It is likely that it will be necessary to lower the nutrient levels to gain a phosphorous index of 0 or 1 prior to the creation. However, this is dependent on the results of the soil data. This will be achieved by continued cereal cropping with no inputs.

To achieve the target condition of good for 'other neutral grassland' in line with the current version of the Metric, it requires fulfilment of ALL the following criteria within 10 years:

- A. The appearance and composition of the vegetation closely matches characteristics of the habitat 'other neutral grassland'. Wildflowers, sedges, and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.
- B. Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
- C. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.
- D. Cover of Bracken less than 20% and cover of scrub (including bramble) less than 5%.
- E. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species** 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.
- F. Species considered undesirable for this habitat type include: Creeping Thistle *Cirsium arvense*, Spear Thistle *Cirsium vulgare*, Curled Dock *Rumex crispus*, Broad-leaved Dock *Rumex obtusifolius*, Common Nettle *Urtica dioica*, Creeping Buttercup *Ranunculus repens*, Greater Plantain *Plantago major*, White Clover *Trifolium repens*, Cow Parsley *Anthriscus sylvestris*.

The Habitat Management Objectives for EL03-ONG are as follows:

- Deliver 15 or more other neutral grassland indicator species in 2m x 2m quadrat samples (averaged).
- Deliver a variable sward height of at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm.
- Deliver bare ground cover (1 – 5% coverage).
- Maintain/reduce scrub coverage to less than 5% and bracken less than 20%.
- Remove the presence of invasive species.

Maintain / reduce combined cover of undesirable species and physical damage to less than 5%.

- There are greater than 9 species per metre squared.

1.6.1. EL03-MS – Mixed Scrub

Creation of mixed scrub is proposed across 7 the Site (see figure 2).

Mixed native woody scrub will be managed to provide suitable habitat for a range of species including nightingale. The habitat will be created through natural succession/regeneration of the nearby hedgerow network and planting of native tree whips and shrubs.

The scrub species associated with the nearby, existing hedgerow network will self-seed and spread, providing a local source from which the habitat will establish. This low intervention management technique is expected to achieve a target condition of good in line with the current version of the Metric.

Nightingale require extensive dense coppices of scrub within two metres of the ground to nest. This structure can be achieved by allowing natural regeneration of scrub and by allowing a dense vegetative ground cover to develop within coppiced woodland. Nightingale also require scrub that has a dense canopy with little ground vegetation, allowing for ground foraging while remaining well concealed. The scrub will link to the areas of woodland creation on Site.

To achieve the target condition of good for mixed scrub in line with the current version of the Metric, requires the fulfilment of ALL of the following criteria within 10 years:

- G. Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover.
- H. There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.
- I. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species* make up less than 5% of ground cover.
- J. The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).
- K. There are clearings, glades or rides present within the scrub, providing sheltered edges.
- L. *Species considered undesirable for this habitat type include: Creeping Thistle *Cirsium arvense*, Common Nettle *Urtica dioica*, Cherry Laurel *Prunus laurocerasus*, Snowberry *Symphoricarpos* spp., Buddleia *Buddleja* spp., Cotoneaster *Cotoneaster* spp., Spanish Bluebell *Hyacinthoides hispanica* (or hybrids)

The Habitat Management Objectives for EL03-MS are as follows:

- Deliver at least 3 woody species, with no one species comprising over 75% of the habitat area;
- Deliver a range of shrub ages, including seedlings, young and mature shrubs and allow some areas of mature shrubs to become dense stands that would support breeding Nightingale;
- Remove the presence of invasive species.
- Reduce the area of undesirable species (must be less than 5% coverage);
- Deliver well-developed edge;
- Deliver glades and rides within the scrub;
- Scarify a few areas of short vegetation within glades to create suitable foraging zones for Nightingale and other species.

EL03-OWB- Woodland

Creation of Other woodland; broadleaved is proposed within the northeast of the Site adjacent to an existing area of woodland (Figure 2). The woodland will be planted with a native species mix appropriate for the Site's soil conditions and the local area. A Moderate ecological condition will be targeted for the woodland.

To achieve the target condition of Moderate for Other woodland; broadleaved in line with the current version of the Biodiversity Metric (Metric 3.1) ([Panks *et al.*, 2022](#)), it requires the habitat score between 26 to 32 of the condition score within 15 years. The criteria for woodland are as follows:

Condition Assessment Criteria			
Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)
Age distribution of trees	Three age classes present	Two age classes present	One age class present
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
Invasive plant species	No invasive species present in woodland	Rhododendron or laurel not present, other invasive species < 10% cover	Rhododendron or laurel present, or other invasive species > 10% cover
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	None to two native tree or shrub species across woodland parcel
Cover of native tree and shrub species	> 80% of canopy trees and >80% of understorey shrubs are native	50-80% of canopy trees and 50-80% of understorey shrubs are native	< 50% of canopy trees and <50% of understorey shrubs are native
Open space within woodland	10 – 20% of woodland has areas of temporary open space, unless woodland is <10ha in which case lower threshold of 10% does not apply	21- 40% of woodland has areas of temporary open space	More than 40% of woodland has areas of temporary open space

Condition Assessment Criteria			
Woodland regeneration	All three classes present in woodland; trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	One or two classes only present in woodland	No classes or coppice regrowth present in woodland
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
Vegetation and ground flora	Ancient woodland flora indicators present	Recognisable NVC plant community present	No recognisable NVC community
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
Veteran trees	Two or more veteran trees per hectare	One veteran tree per hectare	No veteran trees present in woodland
Amount of deadwood	50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps
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

The Habitat Management Objectives for EL03-OWB are as follows:

- Ensure browsing pressure is controlled to reduce damage to newly establishing woodland planting.
- Ensure Rhododendron and laurel are not present and ensure that non-native species cover is less than 10%.
- Ensure at least four native tree species are found across the woodland parcel.
- Ensure that at least two age classes of trees are present within the woodland parcel.
- Promote diverse ground flora communities and woodland understorey of native species.
- Provision of deadwood including standing deadwood, large dead branches / stems, and stumps.

EL03- PO- Ponds (Priority Habitat)

The proposed location of ponds is shown in Figure 2. The exact location of ponds will be determined through further site investigation and will consider topography, ground water levels and soil type. The ponds will be located within the grassland and will be stock fenced, with access by stock restricted for certain periods to ensure the target condition can be attained. A water trough will be installed elsewhere within the grassland to provide drinking water to livestock.

To achieve the target condition of Good for Ponds (priority habitat) in line with the current version of the Metric, it requires the fulfilment of all 9 of the following criteria within 3 years:

- M. The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Some low-level turbidity is acceptable if the pond is grazed by livestock.
- N. There is semi-natural habitat (i.e., Moderate distinctiveness or above) for at least 10 m from the pond edge.
- O. Less than 10 % of the pond is covered with duckweed or filamentous algae.
- P. The pond is not artificially connected to other waterbodies, either via streams, ditches, or artificial pipework.
- Q. Pond water levels should be able to fluctuate naturally throughout the year. No obvious dams, pumps, or pipework.
- R. There is an absence of non-native plant and animal species.
- S. The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.
- T. Emergent, submerged and/ or floating plants (excluding duckweeds), should cover at least 50% of the pond area that is less than 3m deep.
- U. The surface of ponds is no more than 50% shaded by woody bankside species.

The Habitat Management Objectives for EL03-PO are as follows:

- Ensure good water quality by preventing pollution entering the ponds.
- Appropriate management of grassland habitat within 10m of the ponds.
- Removal or control of non-native species within the ponds or on pond bankside.
- Ensure emergent, submerged and/ or floating plants (excluding duckweeds), should cover at least 50% of the pond area that is less than 3m deep.
- Ensure the surface of the ponds is no more than 50% shaded by woody bankside species.
- The pond is should not be artificially stocked with fish.
- Pond water levels should be able to fluctuate naturally throughout the year and should not be artificially connected to other water bodies.
- Less than 10 % of the pond is covered with duckweed or filamentous algae.

