

Habitat Management and Monitoring Plan

Site Name:	Ecological Mitigation Area: Land Off Dig Gate Lane
Date:	22/01/2026
Version:	3.0

Author:



Client:



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1. Project Background

Site Overview PB-B01	
Project type	On-site
Development Name and Address	Ecological Mitigation Area
BNG Project Name and Address	N/A
Author Organisation	FPCR Environment and Design Ltd
Landowner	Balance Power Projects Ltd
Land Manager	Balance Power Projects Ltd
Responsible person/organisation for creating or enhancing the habitat	Balance Power Projects Ltd
Period covered by this management plan	2026-2056
Planning authority	Rochdale Borough Council
Planning reference (if applicable)	24/00043/FUL
BNG register reference (if applicable)	N/A
Central OS grid reference	SD 9187 1117
Metric revision/title	Metric Version 4.0 completed 20.10.2023
Are any Irreplaceable Habitats present onsite	Yes: ☐ No: ☒

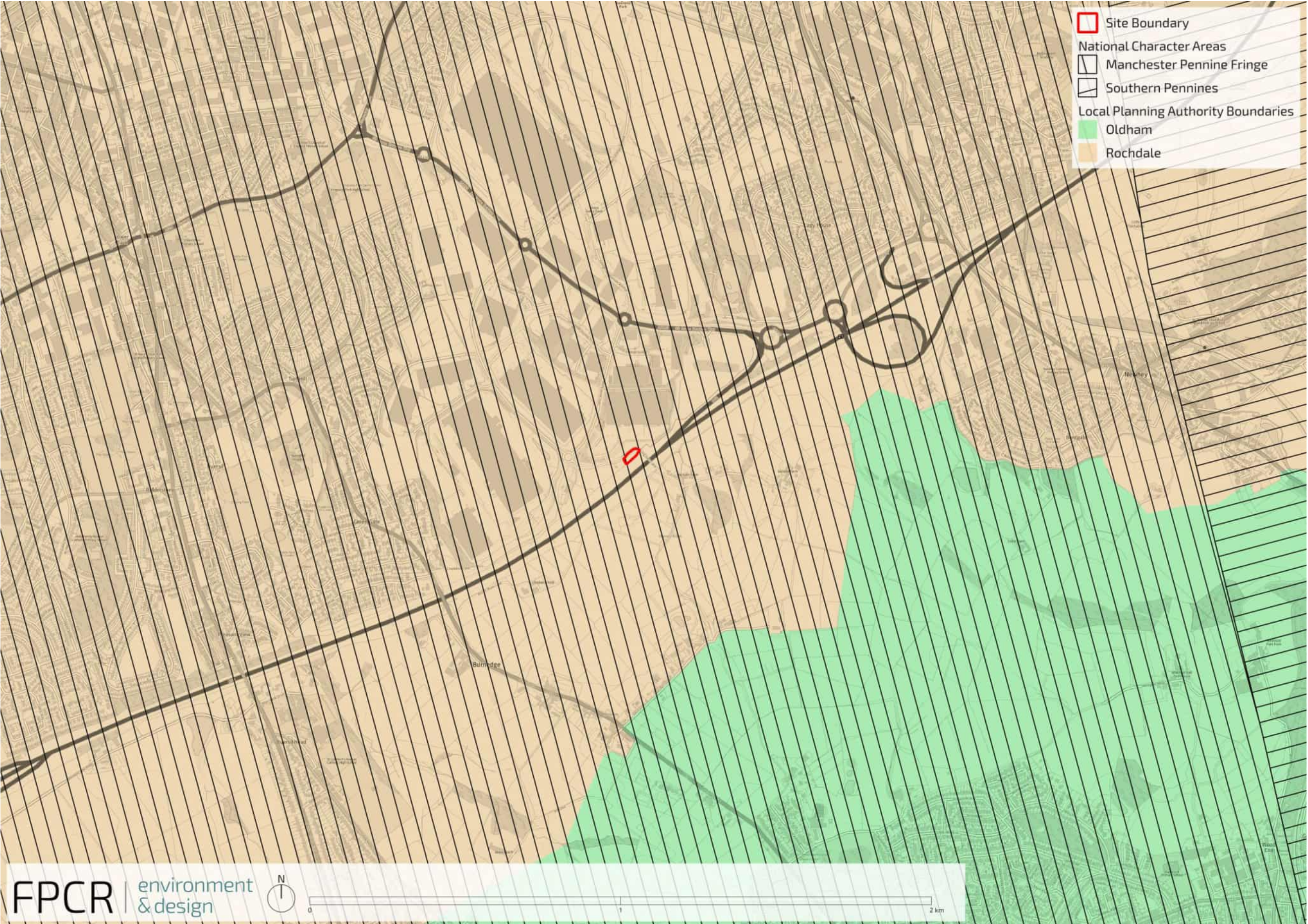
This HMMP should be read in conjunction with following documents:

- Replacement Pond Strategy and Ecological Management Plan by Weddle Landscape Design Aug. 2022. (Strategy to provide ecological mitigation area and pond snail translocaton)
- Ecology Implementation Plan. Axis Dec. 2023 (Overview plan of the proposed ecological mitigation area)
- Technical Note: Scope of Work by FPCR Environment and Design Ltd. November 2025. (Provides a scope of works for habitat creation and requirements for translocation of pond mud snails)
- Letter Report Brindle and Green 2026.

Summary of Management Plan

Habitats to be Retained, Created and Enhanced PB-B02
Retained – Modified grassland along the roadside and hedgerows along the roadside. Created – Other neutral grassland, priority pond, mixed scrub and individual trees with species-rich hedgerow.
Timescales for Actions PB-B03
The habitats created in the Ecological Mitigation Area will be in advance of the development of the wider site. The Ecological Mitigation Area will be created in 2026 (Year 0) with Year 1 being 2027. It is anticipated that the landowner will appoint a management company under contract for the future management of the Ecological Mitigation Area with the period of ongoing management not to be shorter than 30 years. The specific timescales for the implementation of wider habitat creation works, and the full duration of the management activities will be confirmed within the legal agreement used to secure the management of the wider area. This period will not be shorter than 30 years
Monitoring Requirements PB-B04
During the habitat establishment phase (year 1 to 5) yearly reports will be submitted to the LPA detailing the progress of the habitats onsite with evidence including photographs and a schedule of works undertaken for that specific year. This will reduce to every five years from year 5 to 30.
Required Consents and Licences PB-B05
There are no known protected or notable species present within the Site that would require licencing. No consents are known to be required for the proposed changes of habitats or management activities. Although licencing is not required the works will include the translocation of pond mud snail <i>Omphiscola glabra</i>(a Species of Principal Importance NERC Act 2006) and habitats will be designed with the objective of maintaining this species with a favourable population status at the Site.
Funding PB-B06
Balance Power Projects Limited
Legal Agreement PB-B07
To be confirmed with LPA Ecologist and Legal Team.





Roles and Responsibilities

Ecologist or Other Professional Responsible for HMMP PB-B09				
Name or Initials		PRA		
Organisation		FPCR Environment and Design Ltd		
Responsibility	Start Date:	2026	End Date:	2056
FPCR are responsible for overseeing the preparation of this HMMP and for providing ecological advice on the delivery of the habitat establishment and management prescriptions provided.				
Statement of Competency				
As one of the leading consultancies in the advancement and delivery of BNG, FPCR has worked with a broad range of landowners, Local Authorities, and government bodies to establish banks of biodiversity units. The experienced team at FPCR has a proven record and competency in delivering Habitat Banking schemes. This HMMP has been prepared by an FPCR Senior Ecologist with more than 10 years' experience in the ecology sector.				

Management Organisation(s) Responsible for Implementing the HMMP PB-B11				
Name or Initials		N/A		
Organisation		To be appointed by Balance Power Projects Ltd		
Responsibility	Start Date:	2026	End Date:	2056
Balance Power Projects Ltd will be responsible for implementing the HMMP and will appoint an appropriate contractor to carry out the works.				
Statement of Competency				
The appointed organisation/consultant/contractor will have extensive experience in land and habitat management, demonstrated through years of managing various projects. The team will be equipped with relevant qualifications, training, and hands-on experience in site management and environmental stewardship.				

Landowner or Land Manager PB-B10				
Name or Initials		N/A		
Organisation		Balance Power Projects Ltd		
Responsibility	Start Date:	2026	End Date:	2056
Balance Power will be the main point of contact for site management and will liaise with the appointed management organisation as required.				
Statement of Competency				
Experience of appointing companies responsible for management as part of other schemes brought forward by Balance Power.				

LPA or Responsible Body for Reviewing HMMP PB-B12				
Name or Initials		TBC by the LPA		
Organisation		Rochdale Borough Council		
Responsibility	Start Date:	2026	End Date:	2056
The LPA will be responsible for the compliance monitoring of the site, including auditing of monitoring reports over the duration of the agreement.				

Land Use Summary

Overview of Baseline Site Use PB-B13

The Site considered within this HMMP is the Ecological Mitigation Area relating to the wider future development site located to the west and north-west (see Site context photo 1). The wider development Site is proposed to be developed as an energy storage facility in future. The Ecological Mitigation Area will be created in advance of the wider development.

The Site is currently species poor modified grassland which is heavily poached and used for grazing horses.. The hedgerows on-site are unmanaged. In the north of the Site there is a small area of introduced Chinese bramble.

An existing pond (in the wider development site but not within the Ecological Mitigation Area – see Site context photo 2) is fenced which has protected it from the heavy poaching present in the wider grassland. Pond mud snail *Omphiscola glabra* has been recorded within the mud around the existing pond and within the pond itself. The pond mud snail is a Species of Principal Importance (SPI). This pond will be lost to the future development of the Site.

Overview of Proposed Site Use PB-B14

The Site considered within this HMMP is the Ecological Mitigation Area relating to the wider future development site located to the west and north-west. The wider development Site is proposed to be developed as an energy storage facility in future. The Ecological Mitigation Area will be created in advance of the wider development.

The Site will be used for the creation of natural/semi-natural habitats to translocate the population of pond mud snail and provide habitat to compensate for future loss of habitats in the wider development site.

The Ecological Mitigation Area will include other neutral grassland, native scrub and additional hedgerow planting as well as the newly-created pond. The Ecological Mitigation Area will also include gravel banks and hibernacula features suitable for a range of wildlife.

All habitats on-site within the Ecological Mitigation Area will be created and managed with consideration for the pond mud snail to ensure the long-term protection of the population of this species.

Site Context Photos PB-F03



Site Baseline, Environmental Information and Associated Impacts Checklist PB-T01

Baseline and Environmental Information	Prompts for when these may be relevant.	Check box if included	Document Reference or Reason if not included
Statutory / Non-statutory Designated Sites	Will your proposals lead to direct or indirect effects on designated sites?	☒	
Protected and Notable Species	Does the presence or proximity of specific species on or near your site present any constraints or opportunities to project design or management?	☒	Pond mud snail (Species of Principal Importance (SPI) NERC Act 2006)
Invasive Non-Native Species (INNS)	Are any INNS present onsite that could affect the proposals?	☐	No Wildlife and Countryside Act 1981 (as amended) Schedule 9 species. Chinese bramble is present (non-native) but is not Schedule 9.
Biological Records Plan - Sites and Species	Does the presence of designated sites or specific species on or near the site present any constraints or opportunities to proposals?	☒	
Baseline Habitats Survey	Is this current and important HMMP information located in a separate document? If so, provide details on where it is located.	☒	
Public Access	Has public access, or proposals to allow public access, influenced your management prescriptions? If so, how?	☐	Footpath off-site to the north of Site but no public access to Site itself. Proposals are to fence/hedge boundary to prevent public access.
Climate	Are local climate conditions and, or, climate change likely to impact the target habitat retention, creation or enhancement?	☐	Not considered a constraint for the types of habitats being created above the normal risks of unpredictable weather/climate.
Geology and Topography	Any geological or topographical constraints or opportunities?	☐	N/A
Agricultural Land Status	Does the site support any land favourable for agricultural management? Could this affect the proposals?	☐	Historic agricultural land, meadow and permanent grass
Soils and Substrates	Do soils and substrates present any constraints or opportunities?	☐	No information is available for soils and substrates for the Site.
Contaminated Land	If there is any contaminated land, will this present any constraints?	☐	No contaminated land present in the area, no previous development
Hydrology and Drainage	Will the site hydrology present any constraints or opportunities?	☐	N/A
Flood Risk Zones	Is the site within a flood risk zone? Will that present any site management risks?	☐	The Site is located outside any current flood risk zones (Environment Agency, 2022) or any likely future flood risk zone based on various scenarios (Climate central, 2023).
Landscape Character and Designations	Does the landscape character of the site present any constraints or opportunities?	☐	N/A
Historic Land Use	Does the historic land use present any constraints or opportunities?	☐	Arable land until 2016, grazed field since.
Historic Environment and Earth Heritage	Are there any historic environment designations? What are the implications for your plan?	☐	N/A

2. Baseline and Environmental Information

Biological Records

Designated Sites (BI-T01)

Site Name	Designation	Distance from Project Site	Potential Impact from Project
Rochdale Canal	Sites of Special Scientific Interest (SSSI)	1.4km north	Negligible
South Pennine Moors	Special Area of Conservation (SAC)	10km east	Negligible
South Pennine Moors Phase 2	Special Protection Area (SPA)	10km east	Negligible
Marsh Near Turf Hill	Site of Biological Importance (SBI)	800m north	Negligible
Stanney Brook	SBI	1km north	Negligible
Sudden Brook	SBI	1km southwest	Negligible

Summary of Designated Sites (BI-B01)

Rochdale Canal is designated as a SAC for the presence of floating water plantain *Luronium natans* and is designated as a SSSI for providing important habitats for aquatic plants including nationally scarce SAC species floating water plantain and a diverse range of pondweeds *Potamogeton* species.

Pennine Moors SAC for dry heath, blanket bog, and old sessile oak woodland, with wet heaths and transition mires also listed but not for selection. It is designated as an SPA is designated for an important assemblage of breeding moorland/moorland fringe birds and designated as a SSSI due to the extensive moorland habitats and bird assemblages.

Marsh Near Turf Hill is a grade B SBI categorised as grassland GS2 and fen GSG1, Remnant of marsh and open water which supports water vole and important populations of invertebrates including pond mud snail *Omphiscola glabra*. Contains

Sudden Brook Is also a grade B SBI classed as Grassland GS2.

Constraints and Opportunities for Project (BI-B02)

Rochdale Canal SAC and SSSI is located 1.4km north-west of Site with the South Pennine Moors (SPA, SAC, SSSI) approximately 4.7km north-east of the Site.

Due to the small-scale and nature of the Proposed Development and the intervening distance and land-use between the Site and these designated areas it is considered unlikely that the works would have any direct or indirect impact on any designated habitats or species.

Protected and Notable Species (BI-T02)

Species	Dates	Conservation Status	Distance of Closest Record	Potential Impact from Project
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	28/07/2003	EPS, HDir, LBAP, WCA5	370m north	Positive
Barn Owl <i>Tyto alba</i>	01/05/2016	Schedule 1	580m north	Negligible
Black-tailed Godwit <i>Limosa limosa</i>	15/04/2013	Schedule 1, NERC, BoCC Red/Amber	860m northwest	Negligible
Bullfinch <i>Pyrrhula pyrrhula</i>	01/06/2021	NERC	On Site	Positive
Curlew <i>Numenius arquata</i>	07/03/2013	NERC, BoCC Red	870m north	Negligible
Dunnock <i>Prunella modularis</i>	01/04/2021	NERC	340m northeast	Positive
Grasshopper Warbler <i>Locustella naevia</i>	26/04/2020	NERC, BoCC Red	670m east	Negligible
Grey-headed Wagtail <i>Motacilla Cinerea</i>	19/05/2012	BoCC Amber	890m north	Negligible
Herring Gull <i>Larus argentatus</i>	16/03/2017	NERC, BoCC Red	690m south	Negligible
Hobby <i>Falco subbuteo</i>	04/09/2012	Schedule 1	870m north	Negligible
House Sparrow <i>Passer Domesticus</i>	01/10/2021	NERC, BoCC Red	240m north	Negligible
Kingfisher <i>Alcedo atthis</i>	14/12/2011	Schedule 1	730m north	Negligible
Lapwing <i>Vanellus vanellus</i>	04/04/2020	NERC, BoCC Red	480m southwest	Negligible
Lesser Redpoll <i>Carduelis cabaret</i>	06/01/2013	NERC, BoCC Red	870m northwest	Negligible
Linnet <i>Carduelis cannabina</i>	22/05/2016	NERC, BoCC Red	770m north	Negligible
Little Ringed Plover <i>Charadrius dubius</i>	11/05/2016	Schedule 1	870m north	Negligible
Peregrine <i>Falco peregrinus</i>	18/05/2013	Schedule 1	860m north	Negligible
Reed Bunting <i>Emberiza schoeniclus</i>	04/04/2015	NERC	350m northeast	Negligible
Skylark <i>Alauda arvensis</i>	14/02/2019	NERC, BoCC Red	550m north	Negligible
Song Thrush <i>Turdus philomelos</i>	01/03/2021	NERC	470m north	Negligible

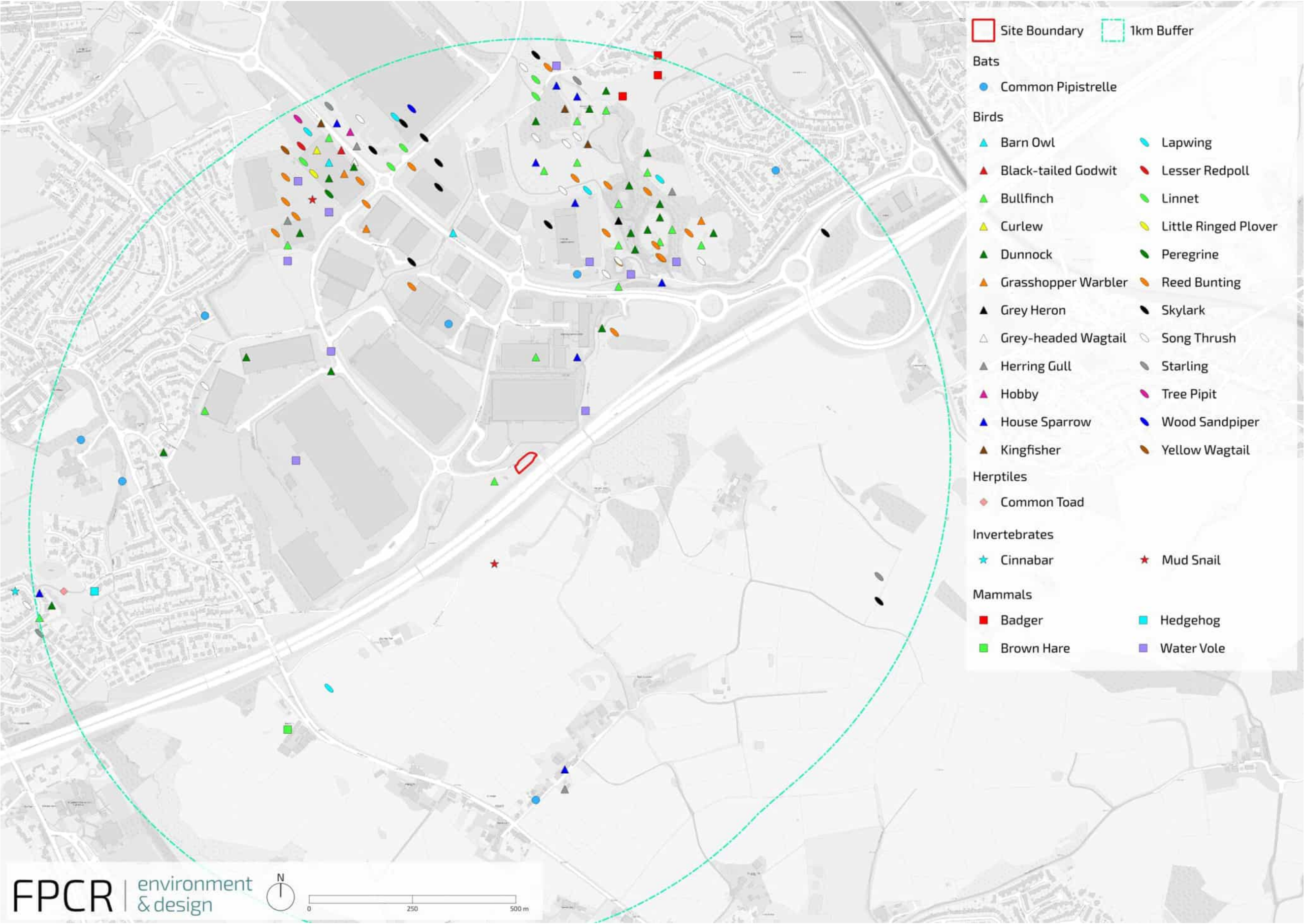
Starling <i>Sturnus vulgaris</i>	01/09/2021	NERC, BoCC Red	840m north	Negligible
Tree Pipit <i>Anthus trivialis</i>	25/04/2013	NERC, BoCC Red	860m north	Negligible
Yellow Wagtail <i>Motacilla flava</i>	09/05/2014	NERC, BoCC Red	860m north	Negligible
Wood Sandpiper <i>Tringa glareola</i>	19/05/2012	Schedule 1, BoCC Amber	890m north	Negligible
Common Toad <i>Bufo bufo</i>	01/05/2021	WCA	990m west	Positive
Cinnabar <i>Tyria jacobaeae</i>	06/06/2019	NERC	990m west	Negligible
Badger <i>Meles meles</i>	13/04/2022	BPA	890m north	Negligible
Brown Hare <i>Lepus europaeus</i>	21/01/2011	WCA, NERC	620m southwest	Negligible
Hedgehog <i>Erinaceus europaeus</i>	28/09/2020	NERC	850m west	Negligible
Water Vole <i>Arvicola amphibius</i>	11/11/2019	WCA, NERC	150m northeast	Negligible
Pond Mud Snail <i>Omphiscola glabra</i>	16/05/2023	NERC	On Site	Positive

Summary of Protected and Notable Species (BI-B03)

Bats are present within the local area and suitable habitats are present on-site for foraging, commuting and roosting. Habitats within the Site were considered generally unsuitable for farmland/ground nesting birds due to the shortly grazed grassland being unable to provide cover. The tall ruderal vegetation around the existing pond, as well as the hedgerow in the north of the Site may provide some limited nesting opportunities for common and widespread species. Incidental records of birds observed during survey included a kestrel *Falco tinnunculus* hunting over the M62 embankment. A number of woodpigeon *Columba palumbus* flying over the Site east to west, a number of blue tits *Cyanistes caeruleus* and a single blackbird *Turdus merula* within the hedgerow in the north of the Site. Pond mud snails, found on-site, are a SPI that will be relocated to the proposed new pond. Impacts on all species noted will range from positive to negligible.

Constraints and Opportunities for Project (BI-B04)

Pond mud snails will be translocated from the existing pond in the wider development site to the proposed pond within the Ecological Mitigation Area. Habitats suitable for the species will be created and managed through the lifetime of this HMMP. This will ensure the long-term viability of the pond mud snail population at the Site. Habitats created will also provide opportunities for a range of wildlife and botanical species, gravel banks and hibernacula features will provide potential for amphibians and invertebrates as well as small mammals.



Baseline Habitats Survey

Ecologist responsible for baseline surveys (BI-T03)

Name or Initials	Paul Andrews (PRA)
Organisation	FPCR Environment and Design
Survey Date	16 th May 2023

Statement of Competency

PRA is an Associate Ecologist with over twenty years’ experience working as an environmental and ecological consultant.

They have been a member the team at FPCR for around 3 years, providing expertise on botanical and habitat surveying to assist with the delivery of BNG metric calculations to support planning applications and to design habitat management and monitoring plans for developments. They have achieved a BSBI FISC Level 4 and provide support for clients in both the public and private sectors, assisting them in achieving their targets while protecting local wildlife and enhancing ecosystems.

PRA has extensive experience of designing habitat creation sites including receptor sites for protected species (great crested newt/reptiles), and sites to compensate for habitat losses. PRA held the role of GCN mitigation design lead for HS2 Phase 1 Area North which included the design of numerous habitat creation sites.

Survey conditions and limitations

The survey was undertaken during the optimal survey season and under suitable survey conditions. No limitations have been identified in relation to the habitat survey or condition assessments.

Habitat Degradation

Are there any signs or evidence that the baseline habitats have been purposefully degraded since 30th January 2020? (BI-B05)

There is no sign of degradation of the habitats within the Site boundary since 30th January 2020.

The Site has been used as grazing land since 2016 having been part of a larger arable landscape before the construction of the surrounding commercial/business park development prior to 2016.

Publicly available historical satellite imagery dating back to the year 2000 was obtained through use of Google Earth to inform this assessment.

If habitats have been purposefully degraded, provide details of how this has been accounted for (BI-B06)

N/A

Baseline Habitat Descriptions and Condition

Habitats (BI-T04)

Habitat Type and Code	Irreplaceable	Priority	Description and Condition Justification	Condition	Area (ha)
Modified grassland – g4	No	No	The Site comprises grassland, in use as a horse paddock. The grassland was all noted to have similar species composition and affected by poaching from the movement of the horses in places, with patches of bare ground common. The sward of the grassland was noted to be very short. A small grass verge is present in the north of the Site, adjacent to the south of Dig Gate Lane. This area appeared to have been heavily managed previously and some areas of the grass had been stripped with bare ground and aggregate substrate exposed adjacent to the kerb. Species diversity was notably poor with only a few grasses present and an extensive bed of moss.	Poor	0.7969ha
Introduced shrub	No	No	In the north of the Site there is a small area of introduced Chinese bramble	N/A	0.009ha

Hedgerows (BI-T05)

Feature Refs	Habitat Type and Code	Irreplaceable	Priority	Description and Condition Justification	Condition	Length (km)
H1 and H2	Native Hedgerow with Trees - h2NE4	No	Yes	Two hedgerows were noted within the Site boundary, located on the northern boundary of the Site, Hedgerow H1 is present on in the north-west and Hedgerow H2 is present in the north-east of the Site, divided by the electrical substation, and a small section of post and rail fence with a gate. Both hedgerows were of similar composition noted to be dominated by hawthorn Crataegus monogyna but with occasional trees noted to be established but not yet mature.	Good	110m

Priority and Irreplaceable Habitats

Summary of Priority and Irreplaceable Habitats (BI-B07)
The pond in the wider future development area is considered to be a priority habitat due to supporting pond mud snails (SPI).
Potential Constraints and Opportunities for Project (BI-B08)
The loss of the priority habitat pond to future development requires replacement. In addition, the resident pond mud snail population require translocation to ensure the long-term viability of the population at the Site. The presence of these constraints provides an opportunity for enhancement and delivery of a small mosaic of habitats which is considered to be of greater ecological value than the baseline. The mosaic will include mixed scrub planting, a large pond with marginal and emergent planting, tussocky neutral grassland and planting of hedgerow.



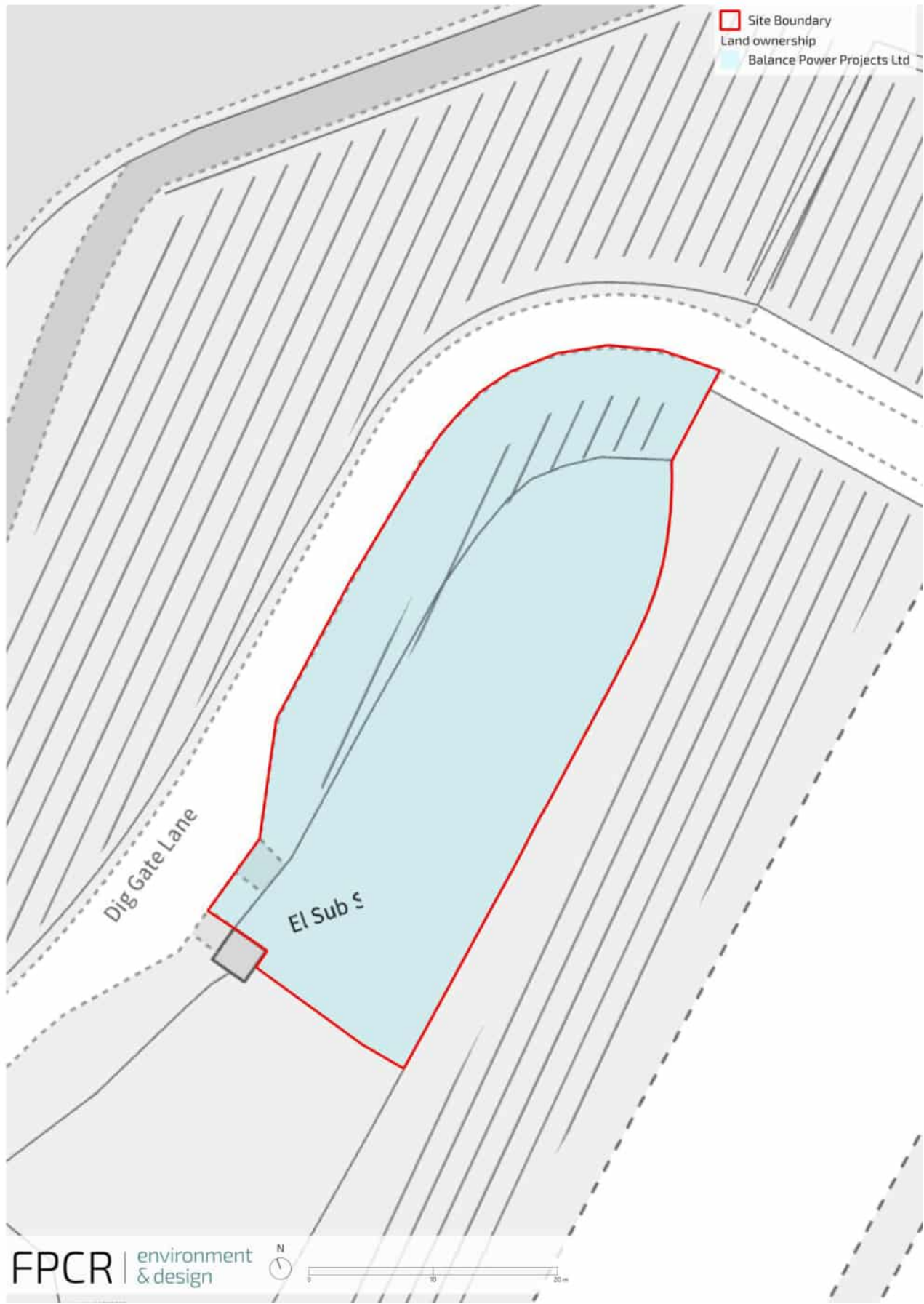




Land Tenure and Public Access

Relevant Land Tenure Information (EI-B01)
The land is owned by Balance Power Projects Ltd. Dig Gate Lane is an adopted highway.
Potential Impact to Scheme (EI-B02)
Balance Power Projects Ltd will be responsible for the habitat creation and future management for all the area within the Site boundary.
Public Access Information (EI-B03)
There is currently no public access to the Site, and this will remain the case with fencing installed for the safety of the public.
Potential Impact to Scheme (EI-B04)
N/A

Land Tenure and Public Access Plan (EI-F01)



3. Planned Management Activities

Management Plan Aims and Objectives PM-B01

The aim of this plan is to create habitat for the benefit of wildlife especially the pond mud snail *Omphiscola glabra*.

- Tussocky grassland will be created within a wildlife area and around the perimeter of the site.
- Mixed scrub and hedgerows will be protected within the wildlife area and further hedgerow provided on the boundaries of the site.
- Species diversity will be monitored, and supplementary planting will occur where needed.
- Individual trees will be planted across the grassland

Principles Informed by Design Stage

Design Principles Informed by Baseline Information PM-B02

The design of the scheme is significantly influenced by the requirement for the provision of a replacement to the priority habitat pond and translocation of the pond mud snail population.

Careful planning has been put into the development of habitats, with an emphasis on using native plant species and sustainable land management practices. This approach ensures that the new habitat areas enhance the local biodiversity.

Habitat and Condition Targets PM-T01

Baseline Habitat Type	Target Habitat Type	Baseline Condition	Targeted Condition	Years to Targeted Condition	Condition Assessment Targets	Comments
Modified grassland	Modified grassland	Poor	Poor	N/A	C, F, G	No change to management
Modified grassland	Other neutral grassland	Poor	Good	10	A, B, C, D, E, F	-
Modified grassland	Priority pond	Poor	Good	10	A, B, C, D, E, F, G, H, I	-
Introduced shrub	Mixed scrub	N/A	Moderate	10	AC, D	-
Native hedgerow with trees	Native hedgerow with trees	Good	Good	N/A	A1, A2, B3, B2, C1, C2 D1, D2, E1, E2	No change to management

Habitat Retention

Measures to be Implemented to Protect Retained Habitats PM-03

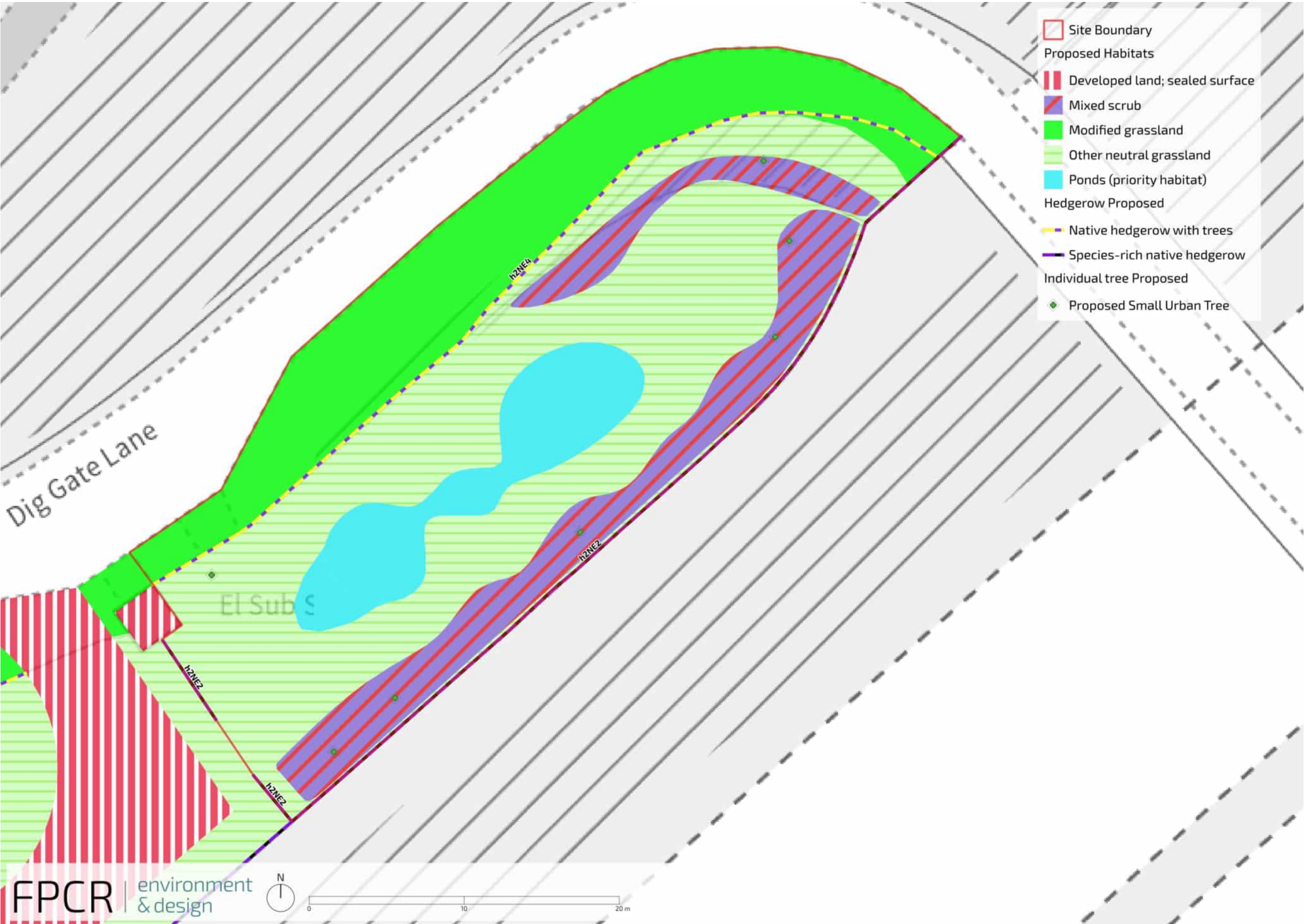
Modified grassland along the roadside and hedgerows along the roadside are all retained in the Site boundaries. These will be protected using HERAS fencing during construction works.

Specification of Protective Measures to be Used PM-04

Root Protection Areas for hedgerows and trees – a buffer zone of at least 2m will be created along the length of all retained hedgerows, incorporating the Root Protection Areas (RPAs) of hedgerows and their associated trees. The buffer zone will protect the roots of the hedgerow and the ground flora at the base of the hedgerow.

Habitat Retention Plan PM-F01





Grassland (Low Distinctiveness)

Creation, Enhancement and Management Summary (GL-T01)

Target Habitat:		Modified grassland	
Condition Assessment Criteria		Targeted	Management Approach
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² , please review the full UKHab description to assess whether the grassland should be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high or very high distinctiveness, please use the relevant condition sheet.	No	This criterion is not targeted due to the high risk of failure in passing.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	This criterion is not targeted due to the high risk of failure in passing.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	Monitoring and management will ensure scrub is not allowed to cover greater than 20%.
D	Physical damage is evident in less than 5% of total grassland area Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No	This criterion is not targeted due to the high risk of failure in passing.
E	Cover of bare ground between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens.)	No	This criterion is not targeted due to the high risk of failure in passing.
F	Cover of bracken <i>Pteridium aquilinum</i> less than 20%.	Yes	Monitoring and management will ensure bracken is not allowed to cover greater than 20%.
G	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA).	Yes	The site will be monitored for the establishment of non-native invasive species, and these will be removed where they have established.

Additional Management Prescriptions (PO-B01)	
Pond mud snails use a variety of habitats including deadwood, waterbodies and inundated grassland. Any deadwood present within the modified grassland should be left in situ to continue to provide habitat for this species. If necessary to move any deadwood, the deadwood should be carefully lifted and moved to the area around the new pond. Arisings from cutting grassland should be removed on the day of cutting.	

All habitats on-site but particularly the pond will be monitored through establishment to ensure conditions are created suitable for the translocation of pond mud snail. The translocation shall only take place once the habitats are sufficiently established as determined by an appropriately experienced ecologist.

Grassland (Low Distinctiveness)

Creation, Enhancement and Management Detailed Methods (GL-T02)

Action	Timing	Prescriptions
Short-term management	Year 2 – Year 5	The condition of grassland will be reviewed for the first 2 years for any areas of pernicious weeds (i.e. docks <i>Rumex</i> spp., thistles <i>Cirsium</i> spp. or ragwort <i>Jacobaea</i> spp.), which will be controlled by direct physical removal of the plants (preferred option) or if the management contractor determines it would be effective/appropriate through the spot-application of target herbicides Cut frequently as required to maintain a formal and tidy aesthetic. All arisings will be removed from the site.
Long-term Management	Year 6+	Cut frequently as required to maintain a formal and tidy aesthetic. All arisings will be removed from the site.

What Does Success Look Like? (GH-F01)



Grassland (Medium, High, and Very High Distinctiveness)

Creation, Enhancement and Management Summary (GH-T01)

Target Habitat		Other neutral grassland		
Condition Assessment Criteria		Targeted	Creation Approach	Management Approach
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type. Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Yes	Seeding with EM10 Tussock Meadow Mixture (or similar) will be undertaken in the first year with reseeding in the second if uptake is slow.	Ongoing management will include an annual hay cut (ideally late August) after wildflower seeds have shed. This traditional hay meadow management will help maintain a diverse sward characteristic of good quality other neutral grassland.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Yes	The selected seed mix will introduce a range of grass and herbaceous species that will promote the establishment of a diverse sward.	Following the establishment of the grassland the meadow style management will ensure variety in sward height. The later cut will benefit moth species by providing a food source for longer, and subsequently provide increases foraging opportunities for bats in their active season of April to October.
C	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Yes	Delivered by management	Natural process and pressure cutting
D	Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	Delivered by management	Monitoring and management will ensure bracken and scrub is not allowed to cover greater than 20% for bracken or 5% for scrub.
E	Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging activities) accounts for less than 5% of total area. If any invasive non-native species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Yes	Delivered by management	The site will be monitored for the establishment of non-native invasive species, and these will be removed where they have established. Pernicious weed will be spot treated as required to prevent their widespread establishment.
F	There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type. Note – this criterion is essential for achieving Good condition for non-acid grassland types only.	Yes	Seeding with EM10 Tussock Meadow Mixture (or similar) will be undertaken in the first year with reseeding in the second if uptake is slow. All the factors above will ensure a high proportion of characteristic indicator species present throughout the sward.	Ongoing management will include an annual hay cut (ideally late August) after wildflower seeds have shed. This traditional hay meadow management will help maintain a diverse sward characteristic of good quality other neutral grassland.

Grassland (Medium, High, and Very High Distinctiveness)

Creation, Enhancement and Management Detailed Methods (GH-T02)

Action	Timing	Prescriptions
Planting of grassland	Year 1	Cut existing vegetation short and spread additional topsoil of similar consistency to the silty clay loam. Areas will be sown with the species-rich grassland EM10 Tussock Meadow Mixture during spring (April/early May) selecting a time when the soil is moist and can be worked at a rate of 40kg/ha. Sowing must be undertaken in still wind conditions when the soil is saturated but not flooded. After sowing, seed will be bedded in by rolling.
Establishment Management	Year 1	The sward will be kept short during the first year of establishment. This will be achieved through a cut and collect approach. All Arisings will be removed from the site on the day of cutting. Mow/top the grassland once per month during the growing season to encourage perennial species propagation and control vigorous growth of weeds/grasses. Mowing/topping before July in the first year should be done above the height of germinated yellow rattle plants to allow this annual species to flower and seed. No fertiliser to be applied.
Short-term management	Year 2 – Year 5	After the successful implementation of the establishment management stage, take a hay crop from August onwards after wildflower seeds have set. This should be done when the ground is dry and to a height of 15cm or higher. Aftermath graze the site after the hay cut if possible, to keep the grass sward low through the winter. This will ensure the wildflowers have the space to germinate and grow in the spring. No fertiliser to be applied.
Long-term Management	Year 6+	Start 5-year cutting regime similar that shown in the tables below with consideration of most suitable weather and ground conditions. Where pernicious and/or invasive weed species establish mowing, targeted cutting prior to setting seed in late summer will be undertaken. Where this management does not prove effective, stands of pernicious and/or invasive weeds will be spot treated using glyphosate spray as appropriate. <i>A 2m buffer around hedgerows and scrub should be left uncut.</i>
Supplementary seeding	Year 6+	Spread supplementary locally sourced native wildflower seeds as necessary in response to poor uptake of establishment by broadcasting seeds, plug plants or green hay of a nearby species rich meadow on similar soils. Sowing must be undertaken in still wind conditions when the soil is saturated but not flooded.

Additional Management Prescriptions (PO-B01)

Pond mud snails use a variety of habitats including deadwood, waterbodies and inundated grassland. Any deadwood present within the grassland should be left in situ to continue to provide habitat for this species. Arisings from cutting grassland should be removed on the day of cutting. Care should be taken in proximity to the pond not to cut marginal pond vegetation.

All habitats on-site but particularly the pond will be monitored through establishment to ensure conditions are created suitable for the translocation of pond mud snail. The translocation shall only take place once the habitats are sufficiently established as determined by an appropriately experienced ecologist.

Grassland (Medium, High, and Very High Distinctiveness) Species Lists (GH-T03)

Common Name	Scientific Name	Abundance / %
Yarrow	<i>Achillea millefolium</i>	0.80
Agrimony	<i>Agrimonia eupatoria</i>	0.60
Lesser Burdock	<i>Arctium minus</i>	0.20
Common Knapweed	<i>Centaurea nigra</i>	2.00
Greater Knapweed	<i>Centaurea scabiosa</i>	1.00
Wild Carrot	<i>Daucus carota</i>	2.00
Wild Teasel	<i>Dipsacus fullonum</i>	1.60
Meadowsweet	<i>Filipendula ulmaria</i>	0.60
Hedge Bedstraw	<i>Galium album</i>	1.80
Meadow Crane’s-bill	<i>Geranium pratense</i>	0.40
Field Scabious	<i>Knautia arvensis</i>	0.80
Meadow Vetchling	<i>Lathyrus pratensis</i>	0.40
Oxeye Daisy	<i>Leucanthemum vulgare</i>	1.60
Musk Mallow	<i>Malva moschata</i>	0.40
Ribwort Plantain	<i>Plantago lanceolata</i>	1.80
Salad Burnet	<i>Poterium sanguisorba</i>	0.80
Red Campion	<i>Silene dioica</i>	1.20
Tufted Vetch	<i>Vicia Cracca</i>	0.40
Bladder Campion	<i>Silene vulgaris</i>	1.60
Common Bent	<i>Agrostis capillaris</i>	4.00

Meadow Foxtail	<i>Alopecurus pratensis</i>	8.00
Grey Sedge	<i>Carex divulsa ssp divulsa</i>	4.00
Crested Dog’s-tail	<i>Cynosurus cristatus</i>	24%
Cocksfoot	<i>Dactylis glomerata</i>	4.00
Sheep’s-fescue	<i>Festuca ovina</i>	4.00
Slender-creeping Red Fescue	<i>Festuca rubra ssp rubra</i>	16
Smaller Cat’s-tail	<i>Phleum bertolonii</i>	8.00
Tall Fescue	<i>Schedonorus arundinaceus</i>	8.00

What Does Success Look Like? (GH-F01)



Hedgerow

Creation, Enhancement and Management Summary (HD-T01)

Target Hedgerow Type:			Native Hedgerow with Trees (H1 and H2) and Species-rich Native Hedgerow (H3)		
Condition Assessment Criteria		Targeted?	Relevant Features	Creation Approach	Management Approach
A1	Height >1.5m average along length.	Yes	H1-H3	-	Hedgerow to be cut to 2m in winter each year after the hedge has been laid.
A2	Width >1.5m average along length.	Yes	H1-H3	During planting the whips will be planted in two rows to increase the width of the hedgerow.	Hedgerow to be cut to 2m in winter each year once established
B3	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length.	Yes	H1-H3	-	Once the hedgerow reaches 4m it will be laid to prevent gaps forming at the base of the hedgerow and to create a denser form.
B2	Gap – hedgerow canopy continuity Gaps make up <10% of total length; and no canopy gaps >5m.	Yes	H1-H3	-	Laying will be used to reduce any gaps formed by failed planting
C1	Undisturbed ground and perennial vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	Yes	H1-H3	Grassland and scrub will be present on the southern side of the hedgerow with semi-natural habitat also present along the railway line to the north.	-
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Yes	H1-H3	No fertilisers will be used on site and grassland will be planted along its length	The site will be monitored for the establishment of enriched perennial vegetation which will be spot treated as required to prevent its widespread establishment.
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 of WCA) and recently introduced species.	Yes	H1-H3	-	Regular monitoring will track the presence of invasive non-native species and will trigger remedial action where necessary to remove or reduce their presence respectively.
D2	Current damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Yes	H1-H3	-	-

E1	Tree class (applicable to hedgerows with trees only) 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.	Yes	H1 and H2		
E2	E2. Tree health (applicable to hedgerows with trees only) 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 and H2		

Additional Management Prescriptions (HD-B01)

All species of bats and their roosts are protected by law from disturbances or damage/destruction. As such, if works are required on any mature trees they should be first assessed by a suitably qualified ecologist before any works are undertaken to establish if there are any features suitable to support a bat roost. Advice on management will depend on the results of this assessment.

All birds whilst breeding, their eggs, dependent young and active nests are protected from damage or destruction. Management of the trees should be undertaken between September and February, outside of the breeding bird season. If management during this period is not possible, then a nesting bird check by a suitably experienced ecologist should be made of all areas requiring management no more than two days before works are scheduled. Management should then be conducted under a watching-brief undertaken by a suitably qualified ecologist. Should an active nest be found, works in this area must stop until the young have fledged or the nest is no longer active. A buffer around the affected area will be necessary to reduce disturbance effects that could cause a nest to be abandoned.

Pond mud snails use a variety of habitats including deadwood, waterbodies and inundated grassland. Any deadwood present within the hedgerow base should be left in situ to continue to provide habitat for this species.

All habitats on-site but particularly the pond will be monitored through establishment to ensure conditions are created suitable for the translocation of pond mud snail. The translocation shall only take place once the habitats are sufficiently established as determined by an appropriately experienced ecologist.

Hedgerow

Creation, Enhancement and Management Methods (HD-T02)

Action	Relevant Features	Timing	Prescriptions
Ground Preparation	H3	Year 1	Direct physical removal of weeds and removal from Site (preferred option) Apply herbicide to control weed growth prior to planting (only if required). An appropriate herbicide will be selected by an appropriately qualified contractor. Any chemicals will be used in accordance with the product label.
Hedgerow Planting	H3	Year 1	The soil will be harrowed to create an even bed. Any evidence of existing soil compaction will be remediated before planting to ensure the soil is able to support establishment and growth. Native hedgerow species of local providence where possible will be planted between November and March, in a zig zag pattern forming two alternating lines. Tree guards will be installed around establishing whips to prevent them becoming browsed. The planting pit dug will be a shallow square, larger than the root ball of the whip. Backfilling of soil will utilise existing excavated soils only with no compost or fertiliser application. It will be important to ensure the tree is not planted lower than the surrounding ground level. The aim of planting will be to ensure that the level that the tree base meets the soil level will be slightly above ground level, aiming for 25mm above.
Long-term management	H1-H3	After Laying	The hedge should be cut to 2m once a year in winter.
Supplementary planting	H1-H3		Supplementary planting will be undertaken as necessary where failed specimens occur. Planting will be undertaken between November and March.

Hedgerow Species Lists (HD-T03)

Common Name	Scientific Name	Abundance / %
Field maple	<i>Acer campestre</i>	5
Hazel	<i>Corylus avellana</i>	20
Hawthorn	<i>Crataegus monogyna</i>	30
Spindle	<i>Euonymus europaeus</i>	5
Holly	<i>Ilex aquifolium</i>	5
Crab apple	<i>Malus sylvestris</i>	5
Bird cherry	<i>Prunus avium</i>	5
Blackthorn	<i>Prunus spinosa</i>	15
Dog-rose	<i>Rosa canina</i>	5
Elder	<i>Sambucus nigra</i>	5

What Does Success Look Like? (HD-F01)



Pond

Creation, Enhancement and Management Summary (PO-T01)

Target Habitat:		Pond (Priority Habitat)		
Condition Assessment Criteria		Targeted	Creation Approach	Management 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	-	Monitoring of the water quality will be undertaken and any source of pollution or turbidity established and resolved.
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	Planting of the wider grassland and scrub habitats will be present within 10m surrounding the ponds edge. of management.	Established and maintained with management. These habitats will be managed as per the relevant habitat management prescriptions within the other sections of this HMMP. These habitats will remain present and managed appropriately throughout the 30 year period
C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.	Yes	-	Duckweed and algae will be monitored by the management contract on each monitoring and management visit to the Site. Should levels be found to be above 10% this will be resolved with direct management (removal of duckweed and algae) with any plant material removed from the Site. Should this be a recurring issue the source of recurrence would be investigated and the HMMP updated with additional management prescriptions/details to be implemented to prevent further recurrence.
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	Yes	Pond will naturally fill and not connected to any other waterbodies. (Some water may be transferred from the existing pond during translocation works and this is considered to be acceptable).	-
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams, pumps or pipework.	Yes	Pond will naturally fill and not connected to any other waterbodies. (Some water may be transferred from the existing pond during translocation works and this is considered to be acceptable).	-
F	There is an absence of listed non-native plant and animal species.	Yes	-	The site will be monitored for the establishment of non-native invasive species, and these will be removed where they have established.
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	Pond will not be stocked with fish	Monitored and resolved (management contractor would implement measures to remove fish) if required.
H	Emergent, submerged or floating plants (excluding duckweed) cover at least 50% of the pond area which is less than 3 m deep.	Yes	Planting of vegetation to be undertaken	Established and maintained with management. Should establishment be lacking the management contractor will look to provide additional planting of emergent vegetation which

				may include different species that may be more responsive to site specific conditions. Should the emergent vegetation become over productive and cover significantly more than 50% of the area less than 3m deep the management contractor would implement direct management measures to remove an appropriate amount of vegetation and remove arisings from the Site. The vegetation will continue to be monitored throughout the 30 year management period.
I	The pond surface of ponds is no more than 50% shaded by adjacent trees and scrub.	Yes	No significant tree or shrub planting directly adjacent to the pond is proposed.	Monitoring of the wider habitats and ongoing management will ensure that self-seeded trees or scrub encroachment do not establish within the grassland around the pond. Where saplings of suckers are identified the management contractor would physically remove these specimens during management visits.

Additional Management Prescriptions (PO-B01)

Pond mud snails use a variety of habitats including deadwood, waterbodies and inundated grassland. Any deadwood present should be left in situ to continue to provide habitat for this species. Management of marginal vegetation should be undertaken with care to avoid injury to snails and their habitat.

All habitats on-site but particularly the pond will be monitored through establishment to ensure conditions are created suitable for the translocation of pond mud snail. The translocation shall only take place once the habitats are sufficiently established as determined by an appropriately experienced ecologist.

Pond

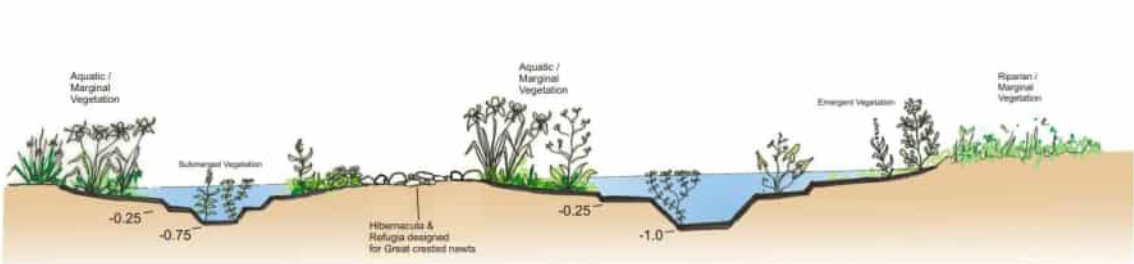
Creation, Enhancement and Management Detailed Methods (PO-T02)

Action	Timing	Prescriptions
Planting	Year 1	To be undertaken between September and April using stock of British native origin.
Short-term management	Year 2 – Year 5	Reduce any one species which has become dominant to less than 50% cover.
Long-term Management	Year 6+	Manage growth so cover of vegetation is at least 50% of the pond area which is less than 3 m deep
Supplementary seeding	Year 6+	If gaps are present in the vegetation, then supplementary planting with less dominant species should be undertaken to maintain diversity.

Pond Species Lists (PO-T03)

Common Name	Scientific Name	Abundance / %
Marsh marigold	<i>Caltha palustris</i>	8
European water-plantain	<i>Alisma plantago-aquatica</i>	8
Water forget-me-not	<i>Myosotis scorpiodes</i>	8
Soft-rush	<i>Juncus effusus</i>	8
Hard rush	<i>Juncus inflexus</i>	8
Lady’s bedstraw	<i>Galium verum</i>	8
Meadowsweet	<i>Filipendula ulmaria</i>	8
Rough chervil	<i>Chaerophyllum temulum</i>	8
Crosswort	<i>Cruciata laevipes</i>	8

Gypsywort	<i>Lycopus europaeus</i>	8
Water mint	<i>Mentha aquatica</i>	8
Common water-starwort	<i>Callitriche stagnalis</i>	8
Spiked water-milfoil	<i>Myriophyllum spicatum</i>	8



What Does Success Look Like? (PO-F01)



Scrub

Creation, Enhancement and Management Summary (SC-T01)

Target Habitat:		Mixed scrub		
Condition Assessment Criteria		Targeted	Creation Approach	Management Approach
A	The parcel represents a good example of its habitat type – the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). - At least 80% of scrub is native, - There are at least three native woody species, - No single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Yes	Planting with a diverse range of native species with no single species dominant in the planting mix.	Ensure one species does not become dominant (more than 75% cover) by monitoring and selectively thinning.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No	This criterion is not targeted due to the high risk of failure in passing.	
C	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	-	Regular monitoring will track the presence of invasive non-native species or those indicative of sub-optimal condition and will trigger remedial action where necessary to remove or reduce their presence respectively.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	-	Targeted thinning and management will be implemented which will create a successive and scattered edge structure to ensure the tall grassland/herbs remain present and do not establish into continuous dense scrub.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No	This criterion is not targeted due to the high risk of failure in passing.	

Additional Management Prescriptions (SC-B01)

All birds whilst breeding, their eggs, dependent young and active nests are protected from damage or destruction. Management of the scrub should be undertaken between September and February, outside of the breeding bird season. If management during this period is not possible, then a nesting bird check by a suitably experienced ecologist should be made of all areas requiring management no more than two days before works are scheduled. Management should then be conducted under a watching-brief undertaken by a suitably qualified ecologist. Should an active nest be found, works in this area must stop until the young have fledged or the nest is no longer active. A buffer around the affected area will be necessary to reduce disturbance effects that could cause a nest to be abandoned.

Pond mud snails use a variety of habitats including deadwood, waterbodies and inundated grassland. Any deadwood present within the scrub base should be left in situ to continue to provide habitat for this species.

All habitats on-site but particularly the pond will be monitored through establishment to ensure conditions are created suitable for the translocation of pond mud snail. The translocation shall only take place once the habitats are sufficiently established as determined by an appropriately experienced ecologist.

Scrub

Creation, Enhancement and Management Detailed Methods (SC-T02)

Action	Timing	Prescriptions
Long-term management	Year 1+	A programme of selective thinning will begin in year 5, with rotational coppicing and pruning undertaken every 3 years with 1/5th of the total scrub resource in each block coppiced on each cycle. Hawthorn and blackthorn will be pruned as required as these species do not respond well to coppicing, while the remaining species to be planted will be managed through coppicing. During coppicing and pruning retain at least 25% of brash and deadwood in-situ.
Replacement Planting	Year 1+	Supplementary planting will be undertaken as necessary where failed specimens occur. Planting will be undertaken between November and March.

Scrub Species Lists (SC-T03)

Common Name	Scientific Name	Abundance / %
Common dogwood	<i>Cornus sanguinea</i>	20
Hawthorn	<i>Crataegus monogyna</i>	15
Spindle	<i>Euonymus europaeus</i>	25
Blackthorn	<i>Prunus spinosa</i>	15
Guelder-rose	<i>Viburnum opulus</i>	25

What Does Success Look Like? (SC-F01)



Individual Trees

Creation, Enhancement and Management Summary (UT-T01)

Target Habitat:		Rural individual trees		
Condition Assessment Criteria		Targeted	Creation Approach	Management Approach
A	The tree is a native species (or more than 70% within the block are native species).	Yes	All planted trees will be native species	-
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Passed as individually planted trees	-
C	The tree is mature (or more than 50% within the block are mature).	No	Most of the trees planted should achieve maturity naturally within the 30-year period	-
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	-	Management will be restricted to only necessary works to ensure the good condition of the tree and safety of the public. No herbicides are to be used.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	-	-
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	The trees will be planted within grassland and as such fulfil this condition by location.	The grassland under the trees will be maintained appropriately as to continue to meet this condition.

Additional Management Prescriptions (UT-B01)

All species of bats and their roosts are protected by law from disturbances or damage/destruction. As such, if works are required on any trees they should be assessed by a suitably qualified ecologist before any works are undertaken to establish if there are any features suitable to support a bat roost. Advice on management will depend on the results of this assessment.

All birds whilst breeding, their eggs, dependent young and active nests are protected from damage or destruction. Management of the trees should be undertaken between September and February, outside of the breeding bird season. If management during this period is not possible, then a nesting bird check by a suitably experienced ecologist should be made of all areas requiring management no more than two days before works are scheduled. Management should then be conducted under a watching-brief undertaken by a suitably qualified ecologist. Should an active nest be found, works in this area must stop until the young have fledged or the nest is no longer active. A buffer around the affected area will be necessary to reduce disturbance effects that could cause a nest to be abandoned.

Pond mud snails use a variety of habitats including deadwood, waterbodies and inundated grassland. Any deadwood present should be left in situ to continue to provide habitat for this species.

All habitats on-site but particularly the pond will be monitored through establishment to ensure conditions are created suitable for the translocation of pond mud snail. The translocation shall only take place once the habitats are sufficiently established as determined by an appropriately experienced ecologist.

Individual Trees

Creation, Enhancement and Management Detailed Methods (UT-T02)

Action	Timing	Prescriptions
Tree planting	Year 1	The soil will be harrowed to create an even bed. Any evidence of existing soil compaction will be remediated before planting to ensure the soil is able to support establishment and growth Native trees of local providence where possible will be planted between November and March. Tree guards will be installed around establishing standards and whips to prevent them becoming browsed. The planting pit dug will be a shallow square, larger than the root ball of the standard. Backfilling of soil will utilise existing excavated soils only with no compost or fertiliser application. It will be important to ensure the tree is not planted lower than the surrounding ground level. The aim of planting will be to ensure that the level that the tree base meets the soil level will be slightly above ground level, aiming for 25mm above. Trees will be planted at least 2m apart
Replacement planting	As required	Supplementary planting will be undertaken as necessary where failed specimens occur. Planting will be undertaken between November and March.

Individual Trees Species Lists (UT-T03)

Common Name	Scientific Name	Abundance / %
Field maple	<i>Acer campestre</i>	16
Alder	<i>Alnus glutinosa</i>	16
Silver birch	<i>Betula pendula</i>	25
Aspen	<i>Populus tremula</i>	16
English Oak	<i>Quercus robur</i>	8
Small-leaved lime	<i>Tilia cordata</i>	16

What Does Success Look Like? (UT-F01)



Habitat Creation and Management – Risk Register and Remedial Measures PM-T02

Risk Identification Date	Habitat Type	Risk Factor	Trigger for Action	Remedial Measure
Years 1-3	Modified Grassland	Failed areas of seeding	Greater than 10% bare ground during years 2-5	Apply additional seed in areas of failed establishment. Appropriate seed mix to be used for the compartment where reseeding is required.
Project life term	Modified Grassland	Scrub	Scrub cover greater than 5%	Initiate programme of scrub removal as required. This can either be through mechanical removal (preferred option and will be attempted before use of herbicide) or spot spraying with herbicide (if management contractor determines this is appropriate).
Project life term	Modified Grassland	Establishment of species indicative of sub-optimal condition	Where species indicative of sub-optimal condition comprise >5% of sward	Preferred option: Physical removal of species of suboptimal condition. Continued management of grassland through appropriately timed cutting and removal of arisings to reduce nutrient load within soils. Second option (should preferred option not succeed): Initiate a programme of spot-spraying species indicative of sub-optimal condition using glyphosate herbicide. Continued management of grassland through appropriately timed cutting and removal of arisings to reduce nutrient load within soils.
Project life term	Modified Grassland	Establishment of non-native invasive species	Monitoring identifies the presence of any invasive non-native species within the sward	Initiate a programme of eradication of invasive non-native species. Specialist advice should be sought to ensure the appropriate eradication measures for the species identified.
Years 1-3	Other Neutral Grassland	Failed areas of seeding	Greater than 10% bare ground during years 2-5	Apply additional seed in areas of failed establishment. Appropriate seed mix to be used for the compartment where reseeding is required.
Project life term	Other Neutral Grassland	Scrub or bracken encroachment	Scrub and or bracken cover greater than 5% or 20% respectively	Initiate programme of scrub and/or bracken removal as required. This can either be through mechanical removal (preferred option and will be attempted before use of herbicide) or spot spraying with herbicide (if management contractor determines this is appropriate).or spot spraying with herbicide.

Project life term	Other Neutral Grassland	Establishment of species indicative of sub-optimal condition	Where species indicative of sub-optimal comprise >5% of sward	Preferred option: Physical removal of species of suboptimal condition. Continued management of grassland through appropriately timed cutting and removal of arisings to reduce nutrient load within soils. Second option (should preferred option not succeed): Initiate a programme of spot-spraying species indicative of sub-optimal condition using glyphosate herbicide. Continued management of grassland through appropriately timed cutting and removal of arisings to reduce nutrient load within soils.
Project life term	Other Neutral Grassland	Establishment of non-native invasive species	Monitoring identifies the presence of any invasive non-native species within the sward	Initiate a programme of eradication of invasive non-native species. Specialist advice should be sought to ensure the appropriate eradication measures for the species identified.
Project life term	Other Neutral Grassland	Poor species diversity and representation of wildflowers, sedges and indicator species.	Wildflowers, sedges and indicator species are not very clearly and easily visible in the sward.	Initiate a further round of yellow-rattle and red bartsia seeding to reduce the competitiveness of grasses.
Project life term	Hedgerow	Failed specimens	Failed specimens observed during years 2-5.	Replacement planting with like for like species of failed specimens
Project life term	Hedgerow	Over-dominance of one species within the canopy	Where one species of scrub within a scrub block represents more than 50% of canopy cover.	Selective thinning of dominant species to allow other species to establish within the canopy.
Project life term	Hedgerow	Establishment of non-native invasive species	Monitoring identifies the presence of any invasive non-native species within the sward	Initiate a programme of eradication of invasive non-native species. Specialist advice should be sought to ensure the appropriate eradication measures for the species identified.
Years 1-3	Pond	Failed specimens	Vegetation is not present over more than 50% of the pond.	Replacement planting with like for like species of failed specimens
Project life term	Pond	Poor water quality	Pollution obvious and/or turbid water	Find source and rectify.
Project life term	Pond	Duckweed Lemna spp. or filamentous algae too great	Over 10% of the water surface is covered with duckweed Lemna spp. or filamentous algae.	Remove Lemna spp. and/or filamentous algae
Project life term	Pond	Fish present	Non-native fish present or excessive levels of native fish present	Remove excess and identify suitable translocation site/removal
Project life term	Pond	Establishment of non-native invasive species	Monitoring identifies the presence of any invasive non-native species within the sward	Initiate a programme of eradication of invasive non-native species. Specialist advice should be

				sought to ensure the appropriate eradication measures for the species identified.
Project life term	Mixed Scrub	Overdominance of one species within the canopy	Where one species of scrub within a scrub block represents more than 50% of canopy cover.	Selective thinning of dominant species to allow other species to establish within the canopy.
Project life term	Mixed Scrub	Insufficient species diversity	Where blocks of scrub include less than three species.	Selective thinning and the introduction of additional species. A minimum of two additional species should be planted to improve the chances of ensuring the canopy of each blocks includes more than three species.
Project life term	Mixed Scrub	Establishment of species indicative of sub-optimal condition	Where species indicative of sub-optimal condition comprise >5% of sward	Preferred option: Physical removal of species of suboptimal condition. Continued management of grassland through appropriately timed cutting and removal of arisings to reduce nutrient load within soils. Second option (should preferred option not succeed): Initiate a programme of spot-spraying species indicative of sub-optimal condition using glyphosate herbicide. Continued management of grassland through appropriately timed cutting and removal of arisings to reduce nutrient load within soils.
Project life term	Mixed Scrub	Establishment of non-native invasive species	Monitoring identifies the presence of any invasive non-native species within the sward	Initiate a program of eradication of invasive non-native species. Specialist advice should be sought to ensure the appropriate eradication measures.
Project life term	Mixed Scrub	Encroachment of scrub into adjacent grasslands	Where the edges of scrub become more densely scrub and this habitat begins to creep into grasslands to an extent that they begin to reduce the overall extent of grasslands on site. This may be a particular problem with blackthorn suckering	Initiate a program of dense scrub removal where this habitat has begun to creep into grassland habitats. This should not be undertaken where only scattered scrub is present at the edges of the boundaries between these habitats and should only be undertaken where more <u>dense</u> scrub establishes.
Years 1-3	Individual trees	Failed specimens	Failed specimens observed during years 2-5.	Replacement planting with like for like species of failed specimens

4. Monitoring Schedule

Monitoring Strategy

Provide details of the monitoring strategy to encourage successful implementation of the management plan (MS-B01)

Habitat monitoring will initiate from when the planting of each habitat has been undertaken. Botanical Surveys should be undertaken yearly to determine the success of the sowing and any remedial measures needed up to Year 5. The quadrat data will be collected and average species per metre squared calculated where applicable and each habitat surveyed will include species list and photographs. The habitats will also be assessed under the condition assessments to demonstrate where it is achieving criteria and where measures need to be put in place if it isn't not.

From Year 5 the frequency of the quadrat surveys can be re-assessed.

End of year report will be handed in to the LPA in December of each year the monitoring has been conducted presenting an overview of the progress on site.

Monitoring Methods and Intervals MS-T01

Habitat Type	Monitoring Methods	Monitoring Interval and Timing
Modified Grassland	To be undertaken on Modified Grassland During the establishment phase of modified grassland (Years 1-5) in monitoring will focus on the cover of species indicative of sub-optimal condition in the sward. During years 6-30, grasslands will be monitored by reviewing the following factors: - Percentage cover of bare ground - Percentage cover of scrub/bracken - Percentage cover of species indicative of sub-optimal condition - Presence of non-native invasive species	Year 2, 3, 4, 5, 10, 15, 20, 25, 30 Grassland monitoring will be undertaken between May-August.
Other Neutral Grassland	To be undertaken on other neutral grassland During the establishment phase of other neutral grassland (Years 1-5) in monitoring will focus on determining the DAFOR abundances of plants present throughout the sward and whether a sufficient number of species within the seed mix used has established. It will also be important to monitor the percentage coverage of palatable grasses. During years 6-30, grasslands will be monitored by reviewing the following factors: - Species diversity per m² - Percentage cover of bare ground - Percentage cover of scrub/bracken - Percentage cover of species indicative of sub-optimal condition - Presence of non-native invasive species - DAFOR Abundances of wildflowers, sedges and rushes - Sward height diversity - Level of poaching or trampling damage	Year 2, 3, 4, 5, 10, 15, 20, 25, 30 Grassland monitoring will be undertaken between May-August.

Hedgerow	To be undertaken on retained and created hedgerows. During years 1-5 of the management plan period, individual specimen hedgerow plants will be monitored for their health. The abundance of species indicative of sub-optimal condition and the presence of non-native invasive species will also be reviewed. Throughout the remainder of management period, the hedgerow will be monitored for: • Height and Width • Any gaps present • Percentage cover of ground disturbance • Percentage cover of species indicative of sub-optimal condition • Presence of non-native invasive species	Years 1, 2, 3, 4, 5, 10, 15, 25, 30 Surveys to be completed between May and August.
Pond	During years 1-5 of the management plan period, plants will be monitored for their health. The abundance of species indicative of sub-optimal condition, presence of turbidity and pollution and the presence of non-native invasive species will also be reviewed. Throughout the remainder of management period, the pond will be monitored for: • Good water quality, with clear water and indicating no obvious signs of pollution • Percentage cover of duckweed <i>Lemna</i> spp. or filamentous algae. • Presence of non-native invasive species • Presence of fish • Percentage cover of emergent, submerged or floating plants • Percentage of pond shaded by adjacent trees and scrub.	Years 1, 2, 3, 4, 5, 10, 15, 25, 30 Surveys to be completed between May and August.
Mixed Scrub	To be undertaken on scrub During years 1-5 of the management plan period, individual specimen scrub plants will be monitored for their health. The abundance of species indicative of sub-optimal condition and the presence of non-native invasive species will also be reviewed. Throughout the remainder of management period, scrub will be monitored for: • The number of native scrub canopy species in each block • Percentage cover of species indicative of sub-optimal condition • Presence of non-native invasive species	Years 1, 2, 3, 4, 5, 10, 15, 25, 30 Surveys to be completed between May and August.
Individual Trees	To be undertaken on planted small trees During years 1-5 of the management plan period, individual trees will be monitored for their health. The abundance of species indicative of sub-optimal condition and the presence of non-native invasive species will also be reviewed. Throughout the remainder of management period, individual trees will be monitored for: • Any vandalism or adverse impacts from human activity • Pruning activities • Presence of vegetation under the tree canopy area	Years 1, 2, 3, 4, 5, 10, 15, 25, 30 Surveys to be completed between May and August.

Monitoring Reports

Monitoring Report Schedule MS-T02

Organisation Responsible for Submitting the Monitoring Reports	Organisation Receiving and Responsible for Reviewing Reports
TBC	Rochdale Borough Council

Project Year	Month Report to be Submitted	Month Management Plan to be reviewed	Comments
Y1	December	September - November	Report on results of initial habitat creation measures.
Y2	December	September - November	Report an update on habitat creation
Y3	December	September - November	First year of grassland Quadrat data, update on other habitat progression.
Y4	December	September - November	Second year of grassland data can be used to track progress, other habitat update.
Y5	December	September - November	Depending on progress of habitats – review management techniques and the need for yearly surveys.
Y6 – Y30	December	September - November	TBC