

One Horton Heath: Green Infrastructure

Habitat Management and Monitoring Plan (HMMP)

Final

J00947/Version 1.0

Client: Eastleigh Borough Council

Date: 14th February 2024

DOCUMENT CONTROL

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Eastleigh Borough Council

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DOCUMENT REVISIONS

Version	Details	Date
1.0 Final	Final report issued to client	14/02/2024

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1 INTRODUCTION

1.1 BACKGROUND

Johns Associates have been commissioned by Eastleigh Borough Council to prepare a Habitat Management and Monitoring Plan to accompany the full application for construction of the Green Infrastructure (GI) areas alongside the Biodiversity Net Gain (BNG) calculations.

1.2 SUMMARY OF PROPOSALS

The proposed development has been designed in full accordance with the Development Plan and Outline Planning Application (OPA) O/20/89498, which has a resolution to grant consent subject to S106 negotiations relating to education. The application is for full planning consent due to the time for these negotiations to complete. Submitting details of the Green Infrastructure Landscaping (GI) as a full planning application will deliver the GI in accordance with, and as part of the OPA, but enable commencement more quickly than waiting for the resolution of the OPA S106 and the determination of an application for reserved Matters Approval of details of the GI.

The 'Proposed Development' associated with this application is for the construction of three Green Infrastructure areas including open space landscaping, bridleways, footpaths, SuDS, play areas and ecological and biodiversity enhancements at One Horton Heath (OHH) (hereafter referred to collectively as the "Site") as a full planning application.

The Site is split into three distinct areas, namely the Northern GI, the Central GI, and the Southern GI.

1.3 PURPOSE OF THIS REPORT

This HMMP should be read in association with the approved Biodiversity Net Gain Assessment and with current best practice guidelines. It includes the following:

1. An up-to-date UKHab map of proposed habitats.
2. Habitat Management Plan comprising long-term management and protection measures for all retained habitats and species.
3. Long-term aims and objectives for habitats (extents, condition).
4. A list of activities and operations that shall not take place and shall not be permitted within the HMMP area (for example use of herbicides; disposing of grass cuttings/arising in "compost" heaps on-site or in hedgerows (or other on-site waste disposal); routinely cutting ivy where there is no specific arboricultural justification; inappropriate maintenance methods; storage of materials; machine or vehicle access).
5. Detailed monitoring strategy for habitats, and methods of measuring progress towards and achievement of stated objectives.
6. Details of proposed reporting to the Local Planning Authority and proposed review and remediation mechanism.

The Habitat Management Plans shall be implemented in accordance with the agreed details and timetable, and all habitats and measures shall be maintained thereafter in accordance with the approved details.

1.4 SCOPE OF WORKS

This Habitat Management and Monitoring Plan (HMMP) should be read in association with the following supporting documents, with particular attention to the Biodiversity Net Gain (BNG) reports and Landscape Management Plan (LMP):

- The EMMS for the OPA (Johns Associates September 2022)
- OHH Ecology Chapter of ES (Johns Associates 2020)
- OHH Green Infrastructure Ecological Appraisal (Johns Associates 2024a)
- OHH Northern GI BNG Assessment Report (Johns Associates 2024b)
- OHH Central GI BNG Assessment Report (Johns Associates 2024c)
- OHH Southern GI BNG Assessment Report (Johns Associates 2024d)
- Landscape Management Plan: Green Infrastructure, One Horton Heath (Deacon Design, 2023)
- Northern Green Infrastructure Sheets 1-3 of 3 dwg. DD579L16-R6, DD579L17-R6 and DD579L18-R6 by Deacon Design)
- Central Green Infrastructure Sheets 1-3 of 3 (dwg. DD579L13-R6, DD579L14-R6, DD579L15-R6 by Deacon Design)
- Southern Green Infrastructure Sheets 1-6 of 6 (dwg. DD579L05-R6, DD579L06-R6, DD579L07-R5, DD579L08-R5, DD579L09-R6, DD579L10-R5 by Deacon Design)

This HMMP describes a scheme of habitat protection, creation, and enhancement, and the subsequent management and monitoring that is required to ensure that the ecological and landscape framework is sustained, such that all benefits to ecological biodiversity and visual amenity are delivered successfully, particularly with regard to BNG.

The HMMP, alongside the LMP, therefore serves as a handbook for future landscape and ecological management and monitoring following the construction phase and considers the whole of the proposed planning application area.

The HMMP includes the following:

- Description and evaluation of features to be managed, as contained in the BNG Assessment Reports as listed above;
- Appropriate management actions for achieving the aims and objectives;
- Body or organisation(s) responsible for implementation of each element of the Plan;
- Monitoring and review measures; and
- Timeframe for reviewing the plan.

It provides details of the required maintenance, management, and monitoring of all retained, newly created and enhanced habitat areas within the application site, as outlined below. The management prescriptions shall be implemented in full in accordance with the approved details.

This HMMP covers the period of ongoing monitoring, maintenance and management associated with the construction and operational phases of the three proposed OHH Green Infrastructure areas (Northern, Central and Southern) to achieve the calculated Biodiversity Net Gain at the Site as shown in Table 1 following the initial 12-month implementation and establishment phases. Any replacement planting to be carried out during the period of this HMMP will follow the soft landscape specification forming part of the proposals unless otherwise agreed.

The HMMP will be reviewed and updated as necessary following ongoing monitoring visits throughout the implementation stages of the proposed development, in consultation with Eastleigh Borough Council.

Table 1: Summary of biodiversity net gain assessments (after offsetting)

GI Area	Baseline Units	Post-development Units	Net Unit Change	% Change	Trading Rules Satisfied?
Habitats					
Northern GI	42.01	49.51	7.49	17.84	Yes
Central GI	45.64	59.15	13.51	29.60	Yes
Southern GI	73.23	88.57	15.34	20.94	Yes
Hedgerows					
Northern GI	5.70	6.49	0.80	13.95	Yes
Central GI	4.48	5.66	1.18	26.31	Yes
Southern GI	17.31	19.09	1.77	10.24	Yes

NB: The HMMP provides details of the required management and monitoring of all retained and proposed new planting/vegetation types/habitats/habitat features on site following an initial 12-month establishment/defects period post practical completion.

1.5 SITE ROLES/SUPERVISION

Eastleigh Borough Council (EBC), or their successors, hold the overall responsibility for the adoption and implementation of this Habitat Management and Monitoring Plan. The management, monitoring, and maintenance regimes for the Site, as specified in this document, will be carried out by a suitably experienced landscape contractor appointed by EBC and overseen by a suitably qualified ecologist (SQE) and/or suitably qualified landscape architect (SQLA), as required: these are collectively referred to as the client representatives (CR). Appointments are to be agreed.

Where the appointed landscape contractor may have concerns regarding maintenance of any areas within the site, this must be discussed and agreed with the CR prior to carrying out any works. EBC has overall responsibility for all health and safety matters required for ecological and landscape maintenance operations within the site. Site specific Risk Assessment and Method Statements (RAMS), evidence of suitable training and qualifications, insurance cover and use of appropriate Personal Protective Equipment (PPE) and other required equipment will need to be provided by all organisations/ individuals implementing the works set out in this HMMP, which will be reviewed and approved by EBC in advance of works being undertaken.

It shall be the landscape contractor's responsibility to request all relevant and up to date details regarding any protected species identified on site, and to ensure that all operatives are fully trained and aware of their obligations regarding legally protected species. Extreme care must therefore be taken to ensure that

no maintenance/management works are carried out on site that will adversely affect protected species without prior discussions with the SQE/CR.

Where the contractor identifies the presence of species thought to be of importance and previously unidentified on site, they shall immediately stop work and contact the SQE/CR.

Ecological condition assessments of new habitat areas will be conducted **yearly** post-implementation for the first 5 years and a monitoring report for the Site will be submitted to Eastleigh Borough Council with actions for the next 12-month period. The report will include representative photographs and plans of habitat areas to demonstrate compliance with the HMMP and Biodiversity Net Gain targets. Further details of the proposed Monitoring Strategy are provided in Section 5 of this HMMP.

Following this, monitoring will be undertaken at 5-year intervals for a period of 30 years post-construction, with reports to be issued following each monitoring visit. These reports will identify all actions taken and will identify where deviations have been made and why. The reports will include the results of Statutory Biodiversity Metric Condition Assessments to demonstrate progress towards the target habitat conditions.

1.5.1 Deviation from Approved Drawings

Where any deviation from the specification/drawings occurs, consultation will first be made with Eastleigh Borough Council. It is the landscape contractor's responsibility to request all relevant details prior to carrying out any maintenance operations to these areas.

1.6 DOCUMENT REVIEW

To ensure that the Plan continues to remain appropriate, applicable, and effective, a review will be undertaken every 5 years by both the CR and Eastleigh Borough Council, to ensure that all information contained within the document remains relevant.

Monitoring of all semi-natural habitats will be undertaken annually for the first 5 years post-construction, and a report will be prepared by the CR which will summarise the results of the monitoring and which will be submitted to the landowner/operator and Eastleigh Borough Council.

Should it be determined that the aims of the Habitat Management and Monitoring Plan are not being met, remedial action will then be identified, agreed, and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme.

1.7 CONTROLLING AUTHORITY

The controlling authority is Eastleigh Borough Council, who will be consulted on any matters relating to the approved proposals for the scheme.

1.8 HEALTH AND SAFETY

The CR will ensure that the Site is managed to comply with all relevant health and safety legislation, Approved Codes of Practice (ACOP's) and Health and Safety Executive (HSE) guidance.

2 ECOLOGICAL CONSTRAINTS

This Habitat Management and Monitoring Plan sets out a range of suitable measures that will need to be implemented to safeguard both protected species and their associated habitats within the Site and immediately adjacent areas (where applicable). The ongoing management of the Site will therefore take account of these ecological receptors.

2.1 HABITATS

The Northern GI area comprises several habitats including the margins of other lowland mixed deciduous woodland (Quobleigh Woods), together with cropland, modified grassland, and unmanaged marshy other neutral grassland. Field and site boundaries comprise various species-rich hedgerows, and lines of trees. A proposed habitat plan is provided as Figure 1.

Foxwood Stream runs east to west through the centre of the Central GI area and is surrounded by unmanaged other broadleaved woodland. To the north of the woodland is a section of a cropland field as well as an area of mixed scrub and marshy other neutral grassland. To the south is species-poor modified grassland with some hawthorn scrub. The Site also contains species-rich hedgerows and lines of trees. A proposed habitat plan is provided as Figure 2.

The Southern GI area is split into two areas, both of which comprise largely other neutral grassland with hedgerows and lines of trees. Other broadleaved woodland and modified grassland are also present in the southernmost portion of the Site, along with an area of wood pasture & parkland habitat. A proposed habitat plan is provided as Figure 3.

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Figure 2: Central GI Proposed UKHab Habitat Plan

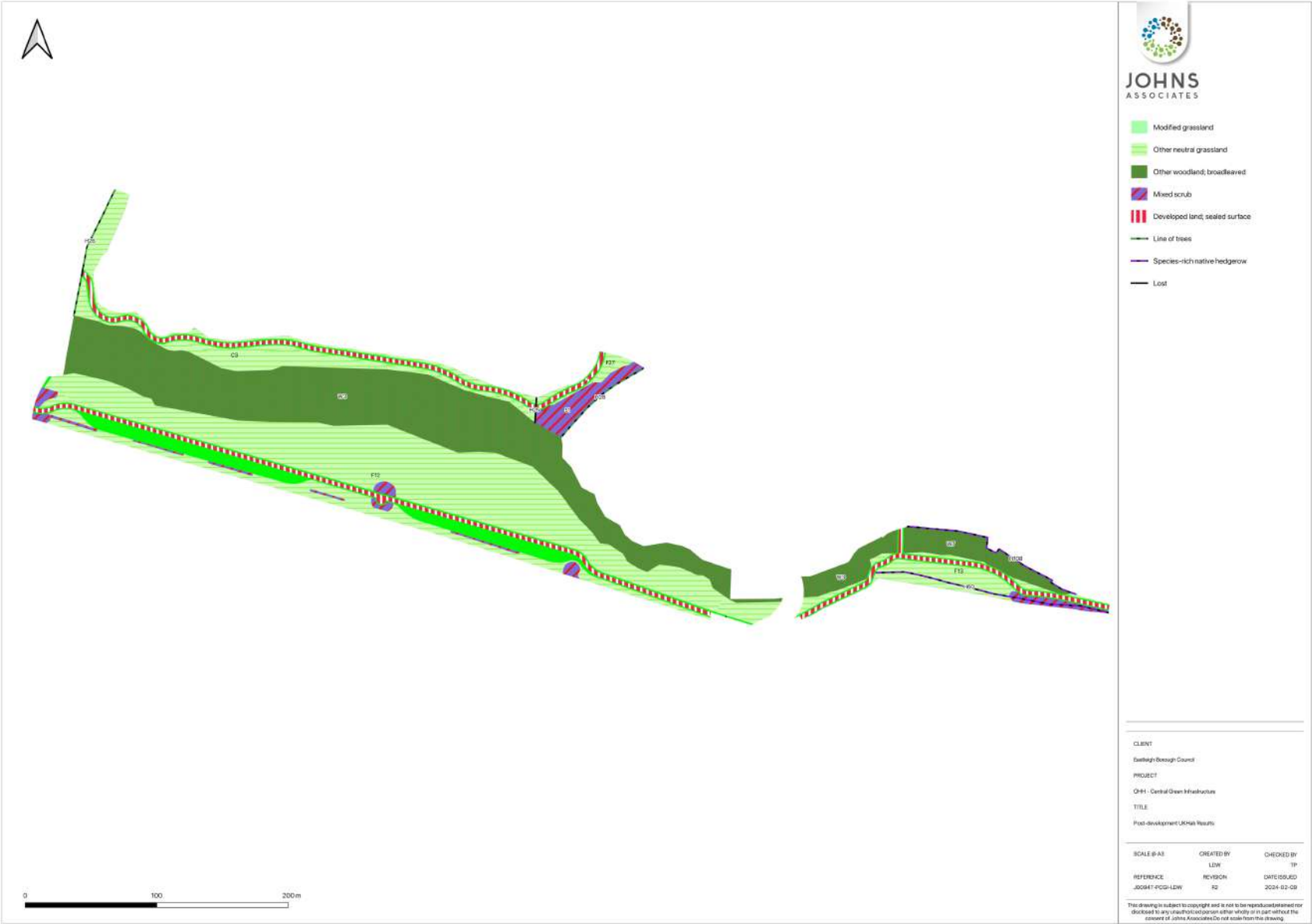


Figure 1: Southern GI Proposed UKHab Habitat Plan



2.2 PROTECTED AND NOTABLE SPECIES

The woodland, other neutral grassland and linear features within the Northern GI are of value for bats, great crested newts and other amphibians, reptiles, and hedgehogs. The hedgerows, lines of trees and woodland provide habitat for breeding birds. Invasive non-native plant species Japanese knotweed *Reynoutria japonica*, Himalayan balsam *Impatiens glandulifera*, rhododendron *Rhododendron ponticum*, and laurel *Prunus laurocerasus* have all been recorded within Quobleigh Woods. Evidence of invasive non-native American mink *Neovison vison* has also been recorded within the Northern GI area.

In the Central GI, dormice have been found to be present within a small part of the woodland, which is also of value to bats, amphibians, reptiles, and hedgehog along with the grassland, scrub, and linear features. No evidence of invasives non-native plants or animals have been recorded within the Central GI area.

The woodland, other neutral grassland and linear features within the Southern GI are of value for bats, great crested newts and other amphibians, reptiles, and hedgehogs. The hedgerows, lines of trees and woodland provide habitat for breeding birds. No invasive non-native plants have been found within the Southern GI area; however, evidence of American mink has been recorded.

2.2.1 Habitat Management & On-Site Vehicle Movements

Should trees, grassland, scrub or woodland habitat require habitat management at the Site the following species must be considered during clearance, pruning, strimming, and mowing works and with respect to vehicle movements at the Site:

October/November to March/April (temperature dependent)

Hibernating reptiles, dormouse, amphibians, and hedgehogs within tree/scrub roots and/or holes in the ground.

March to August inclusive

Nesting birds in hedgerows, trees and woodland.

March/April to October/November (temperature dependent)

Active reptiles, amphibians, and hedgehogs under hedgerows and in woodland edges. Dormouse may be present in woodlands and suitable linked hedgerows.

Year Round

Foraging/traversing badgers.

2.2.2 Avoidance Actions

Bats

Any potential roost features (PRFs) and bat boxes present to be checked for roosting bats by a SQE prior to works to trees with suitable holes, cracks, and crevices or artificial bat boxes present.

All species of British bat are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).

Nesting Birds

The habitats within and adjacent to the Site (particularly woodland, scrub hedgerows and individual trees) provide suitable nesting habitat for a range of common breeding birds. Works over the period covered by this HMMP that disturb bird boxes and/or the habitats listed above should be undertaken outside of the bird breeding season (1st March – 31st August inclusive).

If works are necessary during the breeding season, potential bird nesting habitat will be inspected by a SQE no more than 48 hours prior to works commencing and the appropriate level of avoidance applied prior to any works to avoid disturbance of nesting birds which may be present. A suitable disturbance buffer will be implemented around the nest and no disturbing works will be conducted until the young have fledged the nest and the nest is confirmed by the SQE to be inactive (up to 8 weeks).

It is an offence under UK legislation to wilfully destroy or damage the nest of a wild bird while it is being built or is in use in any location.

Reptiles and Amphibians

To mitigate for harm to individual reptiles and amphibians, vegetation manipulation measures will be implemented **prior to Site clearance works** within the active season (March to September inclusive) under an appropriate Method Statement with a SQE supervising key activities to reduce the suitability of the Site for these species, and to encourage them into retained and protected sections of each GI area respectively (see Figures 4-6).

These measures will include:

- Areas detailed in Figures 4-6 as being “retained” or “enhanced” will be maintained in a suitable condition for reptiles and amphibians throughout construction and operation.
- Directional two-phase cutting of the vegetation initially to 15 cm (towards the nearest suitable retained/enhanced habitat) to reduce vegetation height.
- Destruction and removal of any suitable refugia by hand from the working areas.
- A second cut will then be conducted within 48 hours of the first and following the fingertip search. Vegetation will be cut to ground level and maintained as short as possible (on at least a monthly basis), to prevent suitable refuge areas for reptiles and amphibians, and therefore prevent re-colonisation of the working area until works are complete.
- All waste and construction materials will be stored either raised on pallets in areas of hardstanding, within skips, or removed from the Site, to avoid the creation of suitable artificial refuge or hibernacula (in winter) for reptiles and amphibians during construction phases.

Figure 4: Northern GI Habitat Retention Plan

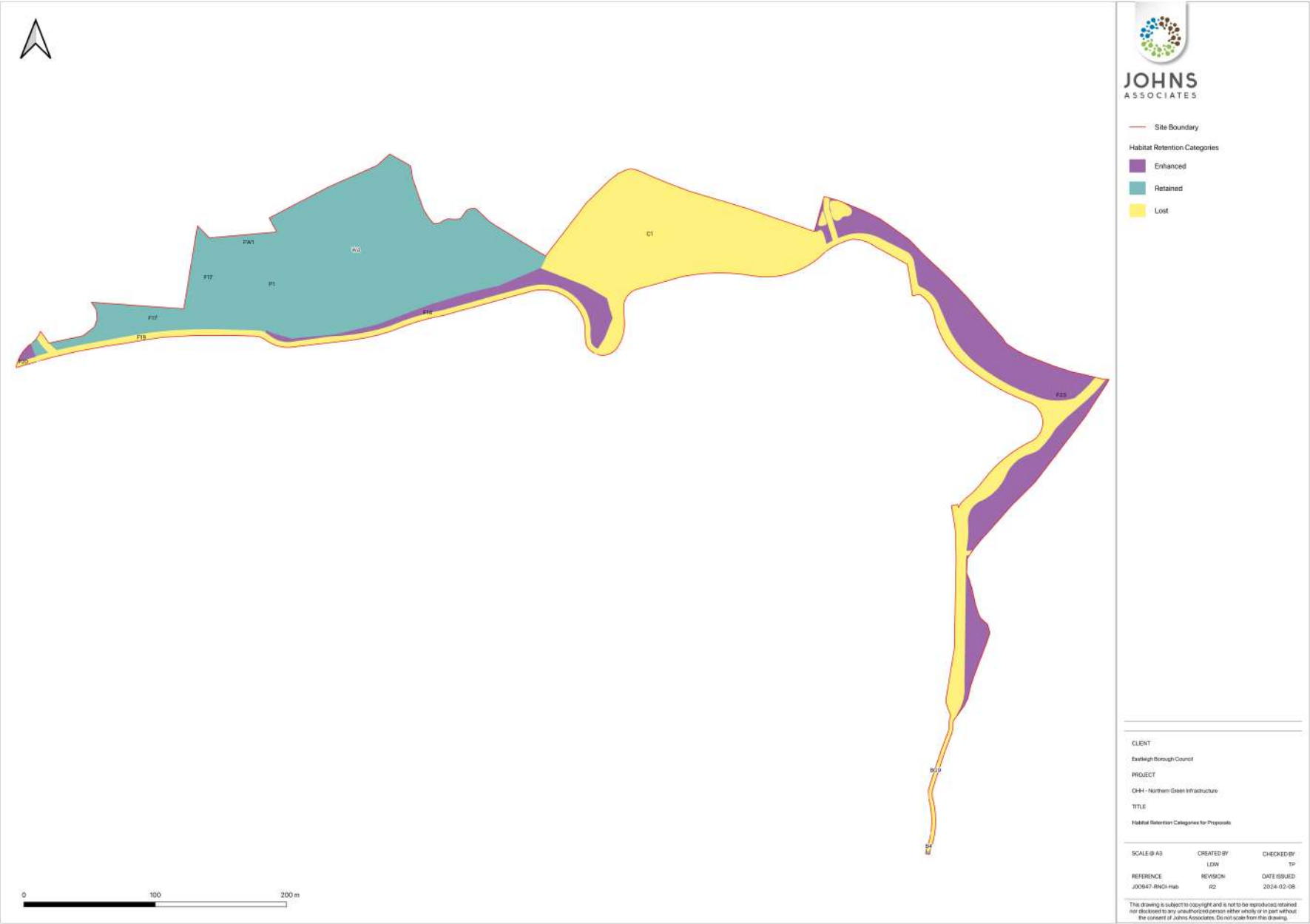


Figure 5: Central GI Habitat Retention Plan



Figure 6: Southern GI Habitat Retention Plan



3 MANAGEMENT OBJECTIVES AND PRESCRIPTIONS (YEARS 1-5)

This Habitat Management and Monitoring Plan aims to manage both existing habitat/vegetation types to be retained and enhanced and newly created habitats within the Site (described below) in order to allow them to develop and thrive whilst introducing the additional landscape and biodiversity net gain elements associated with the proposals. This section must be read in conjunction with the LMP, which provides specific timings, management prescriptions and use of equipment where applicable. The HMMP provides a companion to the LMP in that it describes measures specific to achieving the BNG targets.

Management objectives for habitats within the Site are:

- To preserve and enhance existing ecological value.
- To create and maintain new habitats within the Site.
- To achieve the calculated Biodiversity Net Gain detailed in Table 1.

3.1 GENERAL REQUIREMENTS

3.1.1 Responsibilities, Timescales and Management

The HMMP will be implemented by Eastleigh Borough Council who will be responsible for its delivery including coordination of inputs as prescribed/necessary including the appointed landscape contractor, and ecologist etc.

Maintenance and management operations are to be undertaken in such a way as to allow healthy plants to develop, and habitats to establish unhindered by weed growth or other inhibiting factors to deliver the landscape and ecological objectives for the site.

Please refer to the LMP for full operation and habitat creation specifications and timescales.

3.2 BIOSECURITY & LOCAL PROVENANCE

In the interest of biosecurity, replacement trees will not be imported directly from European suppliers and planted straight into the field, unless they have appropriate certification that they are 100% disease free and have come from an area with no known horticultural diseases. If disease free certification is not possible, the trees shall have spent a full growing season in quarantine, in a British nursery to ensure plant health and non-infection by foreign pests and diseases. This is a measure to address the threat of the introduction of pests and diseases from outside the UK. For current advice refer to DEFRA website: <https://www.gov.uk/government/collections/importing-and-exporting-plants-and-plant-products>.

The landscape contractor must demonstrate local provenance sourcing of all native trees and shrubs where possible and appropriate to follow best practice to sustain regional biodiversity.

3.3 GENERAL (ALL AREAS)

The general intent of habitat management at the Site is to ensure that the new planting and seeding works achieve successful establishment during this critical phase.

Maintenance and management operations are to be undertaken in such a way as to allow healthy plants to develop, unhindered by weed growth or other inhibiting factors.

The landscape contractor shall make themselves aware of all ecological constraints, drainage infrastructure and services prior to commencing maintenance operations.

Please refer to Section 4 of the LMP for general notes and soft landscaping maintenance activities relating to:

- Ecological enhancements and habitat creation (also see respective BNG reports).
- Existing trees.
- Existing hedgerows.
- Existing grassland areas.

3.3.1 Pesticides, Herbicides & Fertiliser

NB: No pesticides, herbicides, or fertilisers to be used in the ongoing management and maintenance of the Site unless otherwise approved by the CR.

Where the use of pesticide/herbicide is deemed necessary for the removal of injurious or invasive species they are only to be used with prior agreement of the SQE/SQLA/CR. Any pesticides/herbicides to be applied by appropriately certified contractors.

Detailed records of any such applications must be kept in accordance with relevant legislation. These records shall be available for viewing during normal working/office hours by any person wishing to see them.

3.3.2 Weed Control

Weed control is to be kept to a minimum, and be restricted to hard standing areas, and those areas immediately adjacent to them unless otherwise specified. In all other areas, weed control is to be restricted to the control of injurious and invasive species, undesirable species and highly competitive weeds, unless otherwise instructed. When weeding, ensure that the methods used cause the minimum of damage to adjacent plants/vegetation, including trees and grass, as well as to animal species. Preferred method of removal of all encroaching scattered scrub/weeds is by mechanical methods or hand pulling weeds as required.

Hand Weeding

Remove all weeds, including roots, by hand using hoes, trowels or forks, taking care to remove not more than a minimum quantity of soil, causing minimum disturbance to neighbouring plants and leaving the area in a neat, raked, clean condition.

Weed Cutting by Hand or Machine

Cut down completely and cleanly all undesirable grass, brambles, herbaceous growth, etc. to a maximum height of 75mm. Tall herb and tussocky grass (if applicable) will be subject to a phased cut as a precautionary method to avoid injury to protected species such as reptiles.

- First cut the grass to a height of 15cm. Cut vegetation will be raked or blown from the works area into a small number of piles outside of the working area working from the centre to the edge. Arisings should then be removed from areas that will be affected by construction.
- The area will then be left to settle for at least 24 hours to allow reptiles to move from this works area.
- The area will then be inspected by a suitably qualified ecologist to confirm no reptiles remain.

- A subsequent cut to 5cm and then to ground level (within the working area) with arisings being removed from areas that will be affected by construction. Vegetation maintained with a short sward height until construction works commence.
- The vegetation will be maintained in an unsuitable condition by strimming for the duration of the works, not being allowed to grow more than 5cm tall, and inspected weekly during the growing season by the construction manager and periodic inspection from the project ecologist.

Weeding Around Tree and Plant Stems

Do not allow nylon filament rotary cutters or other mechanical tools closer than 100 mm to the stem of any tree or shrub to be retained. Complete operations close to stems using hand tools.

Herbicide Application

To be carried out only as last resort. Application rate as per manufacturer's instructions. Remove arisings before applying.

Application of General Systemic Weedkiller (only where required for invasive weed species and following approval of the SQA/CR).

Spray or spot-treat individual plants or whole colonies in April/May. Spot-treat new plants as they appear and re-treat in August/September as necessary. Application to be carried out as per manufacturers' recommendations. Apply herbicide in calm weather conditions and at the appropriate time of the year.

NB: General systemic weed killers will kill/ damage all plant matter that it touches. Care must be taken to cover any adjacent plant material with polythene or similar to protect it from spray drift.

3.3.3 Vegetation Clearance (if required)

Any vegetation clearance will avoid the bird nesting season (March-August, inclusive), otherwise pre-works checks will be undertaken by the SQE.

Clearance of trees which have been identified as having, or with the potential to have suitable bat roosting features must be inspected by the SQE before any works (at all times of year).

Groundworks/movement of soil/tree roots during the winter hibernation period (mid to late October to March) will be avoided to prevent harm to herptiles, and other legally protected and/or notable species that may be present.

3.3.4 Arisings

Unless otherwise specified, deal with arisings from operations as follows:

Biodegradable arisings

Remove to designated recycling facility.

Grass cuttings and brash - where grass cuttings are to be boxed, remove them to a designated recycling facility. Where agreed with the SQE and/or Eastleigh Borough Council, create piles from grass cuttings to create reptile/hedgehog habitat along the edges of grassland with borders with the boundary of the Site and borders with woodland habitat.

Leaf fall, branches and prunings

To be chipped and reused on Site and/or removed to designated recycling area. Where appropriate create piles from leaf litter/small prunings in suitable areas for wildlife.

Litter and non-biodegradable arisings

Remove from Site to designated recycling/refuse facilities.

3.3.5 Removal of Tree Guards

At year five after planting, or once plants are established, all tree stakes, ties, supports and shelters can be removed and disposed of (recycled/composted) off-site.

4 LONGER TERM MANAGEMENT (YEARS 6-30)

4.1 GENERAL REQUIREMENTS

The following section sets out broad management and maintenance tasks for the long-term care and protection of ecological features on-site. Given the dynamic nature of habitats and their ability to change over time, it is both inappropriate and impractical to set out a fixed and prescriptive set of management tasks to be implemented 'regardless of progress.' A key element of the plan is flexibility.

It is therefore considered that this plan should be reviewed every five years with any necessary changes to management documented within an updated HMMP. However, the recommendations for management discussed below will be broadly adopted during the management regime of years six to thirty and included within an updated HMMP as required.

4.2 HABITAT-SPECIFIC MANAGEMENT MEASURES

4.2.1 Existing Habitats

Refer to Section 4 of the LMP.

Management of all existing habitats which are to be **retained** in their current condition should follow existing prescriptions, if any exist, where possible. If no management regime is currently in place, habitats should be managed in accordance with the details in Section 4.2.2 below (where applicable).

Where habitats are to be **enhanced**, management must seek to ensure the target conditions in Section 6 below are achieved.

Woodland

A plan for elimination/ management of invasive non-native species will be required in order to ensure maximum ecological benefits within Quobleigh Wood in the Northern GI.

Parkland

The oak trees within the Southern GI parkland will be preserved with all veteran features intact where this does not pose a risk to public health and safety. The grassland beneath will be managed appropriately to the specification of Other Neutral Grassland below. See Section 6 of the LMP.

Wetland

Existing fens and pond within the Northern GI will be managed as per Section 8 of the LMP to retain their current condition.

4.2.2 Newly Created Habitats

Individual Trees

To be managed and monitored in accordance with Section 11.1 of the LMP.

Where any branch or tree removal is required, the dead wood should be retained and redistributed within the nearest area of woodland in order to further enhance these habitats and ensure the maximum opportunities for invertebrates across the Site.

Trees should not be over-pruned and should be allowed to retained >75% of expected canopy for their age range and height.

Where wounds/ defects are present but do not pose a threat to the overall health of the tree, these should be retained in order to maximise opportunities for invertebrates.

Hedgerows

To be managed and monitored in accordance with Section 11.2 of the LMP.

Hedgerows will be managed to create bushy structures as per the Hedgerow Management Cycle.

Where any limb/ specimen removal is required, the dead wood should be retained and redistributed within the nearest area of woodland in order to further enhance these habitats and ensure the maximum opportunities for invertebrates across the Site.

Weeding of the strip of 'undisturbed ground' either side of hedgerows should only seek to target invasive non-natives, nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. such that ground cover consists of less than 20% cover of these species.

Other Neutral Grassland

To be managed and monitored in accordance with Section 11.3 and Section 9 of the LMP.

Distinct areas (i.e. single fields) of grassland should be cut on rotation such that at any one time at least 20% of the sward is less than 7cm and at least 20% is over 7cm in height. This can be achieved by leaving strips at field edges or islands of grassland long throughout the year.

Modified grassland should be managed similarly where possible, but with a more regular mowing regime to enable use by open space users at all times.

Scrub

To be managed and monitored in accordance with Section 11.4 of the LMP.

Where any branch or tree removal is required, the dead wood should be retained and redistributed within the nearest area of woodland in order to further enhance these habitats and ensure the maximum opportunities for invertebrates across the Site.

Thinning works should seek to create glades and clearings to encourage seedlings, saplings and young shrubs to grow.

The scrub edge should not be allowed to encroach into adjacent grassland habitats.

Wetland

To be managed and monitored in accordance with Section 10 of the LMP.

These habitats should be monitored for scrub encroachment such that cover of scrub and scattered trees is less than 10% of ground cover.

Bare ground should be limited to less than 5% of ground cover – re-seeding may be required if bare ground persists at a level higher than 5%.

5 MONITORING STRATEGY

This HMMP has been prepared to ensure an appropriate long-term monitoring strategy covering all habitat areas and ecological features is implemented, and that these are maintained and enhanced for the 30-year period required. As such it serves as a handbook for monitoring the site. The scheme of monitoring is focused on the key aspects of the ecological enhancement for the site.

5.1 MONITORING SCHEDULE OBJECTIVES

The biodiversity requirements of the Site are to create, maintain and enhance the habitats to achieve the stated BNG results as detailed in Table 1. This document refers in detail to the ecological requirements and specifications for the existing habitats and those to be created on Site.

Specific monitoring (including UKHab and BNG Condition Assessment) of:

- Retained, enhanced, and created grassland – modified grassland and other neutral grassland.
- Retained and enhanced woodland and parkland – lowland mixed deciduous and other broadleaved woodland, and wood-pasture & parkland.
- Created SuDS features – fens and ponds (non-priority habitat).
- Other retained and created wetland habitats – fens and pond in Northern GI and great crested newt mitigation pond in Southern GI.
- Retained and created scrub – hawthorn scrub and mixed scrub.
- Retained and enhanced lines of trees.
- Retained, enhanced, and created hedgerows.

5.2 LONG-TERM MONITORING AIMS

- To monitor the Site to ensure habitats become established and/or are managed appropriately achieve the target condition in order to preserve and enhance the existing biodiversity value.
- To monitor the Site to confirm the biodiversity specifications and targets have been achieved as a result of the implementation of appropriate management and monitoring regimes, to ensure compliance with BNG requirements.

5.3 MONITORING SPECIFICATIONS

5.3.1 Timing of Monitoring Site Visits

An initial Site visit will be conducted immediately following completion of the construction works. The site visit will establish whether all ecological measures have been implemented. The CR will be notified of any remedial actions required to be carried out at the site following this inspection. The post-construction habitats will be surveyed, vegetation species and abundances will be recorded, and the baseline condition established.

The subsequent monitoring site visits will be conducted starting one year post construction, in Monitoring Years 1, 2, 3, 4, 5, 10, 15, 20, 25 and 30.

Monitoring visits will be conducted between May and June in the Monitoring Years.

5.3.2 Monitoring Compliance Reporting

An initial post-construction report will be produced and submitted to Eastleigh Borough Council following implementation of any remedial actions that may be required and a second site visit conducted within 3 months of the first to inspect the remedial actions.

A Monitoring and Management Compliance Report will be produced/ updated following each monitoring site visit and issued to the CR. The report will be issued to the LPA within 6 months of the site visit and following re-inspection of the implementation of any remedial management actions or adaptations to the management regime required to enhance the condition of the habitats present.

The report will include the previous monitoring survey results in tables of abundances/population counts as appropriate so that any increase/decrease in abundances of species can be clearly monitored and remedial action taken if required.

5.4 MONITORING SPECIFICATIONS

The following target conditions should be assessed using the Statutory Biodiversity Metric Condition Assessments, as current at the time of writing. **Please refer to Table 8 in the respective BNG reports for specific delivery details pertaining to each GI area.**

5.4.1 Northern GI

Grassland

- Retain 0.1968ha of other neutral grassland (F17) in good condition.
- Create 0.3574ha of modified grassland in moderate condition.
- Enhance 0.0091ha of modified grassland (F20) to other neutral grassland in moderate condition.
- Enhance 1.0158ha of modified grassland (F14, F23) to other neutral grassland in good condition.
- Create 0.0077ha of other neutral grassland in moderate condition.
- Create 0.2616ha of other neutral grassland in good condition.

Woodland

- Retain 1.7985ha of lowland mixed deciduous woodland (W4) in moderate condition.

Wetland

- Retain 0.0392ha of fens (FW1) in good condition.
- Retain 0.0747ha of pond (P1) in moderate condition.
- Create 0.7482ha of fens in good condition.
- Create 0.0675ha ponds/ SuDS in moderate condition.

Scrub

- Create 0.0223ha of mixed scrub in moderate condition.
- Create 0.1052ha of mixed scrub in good condition.

Lines of Trees

- Retain 0.288km of lines of trees (L3, L4) in moderate condition.
- Retain 0.293km of lines of trees (L5) in good condition.
- Enhance 0.393km of lines of trees (H12a, H18a, H18b) to good condition.

Hedgerows

- Create 0.022km of species-rich hedgerow (H107) in good condition.
- Enhance 0.042km of species-rich hedgerow (H9) to good condition.
- Create 0.041km of species-rich hedgerow with trees and bank (H106) in good condition.

5.4.2 Central GI

Grassland

- Retain 0.0331ha of other neutral grassland (F27) in good condition.
- Create 0.5252ha of modified grassland in moderate condition.
- Enhance 0.5608ha of modified grassland (F12, F13) to other neutral grassland in moderate condition.
- Enhance 1.7032ha of modified grassland (F12) to other neutral grassland in good condition.
- Create 0.1505ha of other neutral grassland in moderate condition.
- Create 0.3040ha of other neutral grassland in good condition.

Woodland

- Retain 1.9993ha of other broadleaved woodland (W3) in good condition.
- Enhance 0.2118ha of other broadleaved woodland (W7) to good condition.

Scrub

- Retain 0.0320ha of hawthorn scrub (F12) in poor condition.
- Retain 0.1231ha of mixed scrub (S1) in moderate condition.
- Create 0.0935ha of mixed scrub in moderate condition.

Lines of Trees

- Retain 0.76km of lines of trees (H26, H28) in moderate condition.

Hedgerows

- Retain 0.180km of species-rich hedgerow (H60) in good condition.
- Create 0.151km of species-rich hedgerow (H108) in good condition.

5.4.3 Southern GI

Grassland

- Retain 0.0062ha of modified grassland (F1) in moderate condition.
- Retain 1.1742ha of other neutral grassland (F4, F6) in good condition.
- Enhance 0.6530ha of modified grassland (F1, F2, F7, F8, F35, F39) to other neutral grassland in moderate condition.
- Enhance 1.2322ha of modified grassland (F2, F7, F8, F9, F35, F39) to other neutral grassland in good condition.
- Enhance 5.8104ha of other neutral grassland (F3, F5, F10, F40) to good condition.
- Create 0.8573ha of modified grassland in moderate condition.
- Create 0.0715ha of other neutral grassland in good condition.

Woodland

- Retain 0.0029ha of other broadleaved woodland (W2) in moderate condition.
- Retain 0.5599ha of other broadleaved woodland (W1) in good condition.
- Enhance 0.6707ha of wood-pasture & parkland (WP1) to moderate condition.

Wetland

- Create 0.3752ha of fens in good condition.
- Create 0.0974ha ponds/ SuDS in moderate condition.
- Create 0.0387ha of pond (for GCN mitigation) in good condition.

Scrub

- Create 0.0154ha of mixed scrub in moderate condition.

Lines of Trees

- Retain 0.366km of lines of trees (L1, L2) in moderate condition.
- Enhance 0.211km of lines of trees (H67) to good condition.

Hedgerows

- Retain 0.047km of species-poor hedgerow (H69) in good condition.
- Retain 0.258km of species-rich hedgerow (H47, H48) in good condition.
- Retain 0.237km of species-rich hedgerow with trees (H49) in good condition.
- Enhance 0.020km of species-poor hedgerow (H50) to species-rich hedgerow in good condition.
- Enhance 0.018km of species-rich hedgerow (H46) to good condition.

- Enhance 0.145km of species-poor hedgerow (H38) to species-rich hedgerow with trees in good condition.

5.4.4 Time to Target Condition

The times to target condition for each proposed habitat type is as follows. These times should be taken into account on monitoring visits, especially those which occur before the habitats can be expected to have reached their target conditions. Professional judgement should be applied as to whether the habitats seem likely to achieve their target condition within the following timescales, and, if not, propose remedial action.

- Created modified grassland: 4 years.
- Created other neutral grassland: 5-10 years.
- Enhanced other neutral grassland: 10-15 years.
- Enhanced other broadleaved woodland: 10 years.
- Enhanced wood-pasture & parkland: 10 years.
- Created fens: 30 years.
- Created ponds/ SuDS: 3-5 years.
- Created scrub: 5-10 years.
- Enhanced lines of trees: 10 years.
- Created species-rich hedgerow 12 years.
- Enhanced species-rich hedgerow: 2 years.
- Created species-rich hedgerow with trees: 20 years.
- Enhanced species-rich hedgerow with trees: 10 years.

5.5 MONITORING METHODOLOGY

5.5.1 UKHab Habitat Classification

The on-Site habitats will be classified following current (at time of writing) UK Habitat Classification guidelines.

Habitat types will be assigned a primary code to a hierarchical level of at least three, and secondary codes will be used to further clarify the habitat and record additional information linked to the primary habitat such as habitat management. The full range of secondary codes will be used as necessary.

During the UKHab survey the condition of the habitats found within the site will be individually assessed using the Statutory Biodiversity Metric habitat condition assessment criteria which are current at the time of writing (February 2024) unless agreed in writing by Eastleigh Borough Council.

Where appropriate, maps will be supplemented with target notes which provide specific information on habitats present that are too limited in extent to map at the scale at which data is presented, or the presence of species and habitats of ecological interest.

An annotated habitat map together with descriptions of the recorded habitat types will be produced, which will be subsequently digitized using a suitable geographical information system (such as ArcGIS).

The survey will also include identification of any non-native invasive plant species. Flora taxonomy will follow the nomenclature detailed in New Flora of the British Isles (4th Edition) (Stace C., 2019), with any necessary future changes to be clearly stated in the subsequent monitoring report (for example, should subsequent editions become available). Flora, where appropriate, will be given a descriptive score of abundance using the DAFOR scale, as follows:

- D – Dominant
- A – Abundant
- F – Frequent
- O – Occasional
- R – Rare
- L – Locally (to be used as a prefix for any of the above)
- V – Very (to be used as a prefix for any of the above).

6 REFERENCES

Johns Associates (2020). Environmental Statement – Chapter 10: Ecology. V1.

Johns Associates (2022). One Horton Heath: Ecological Mitigation and Management Strategy (EMMS). V1.

Johns Associates (2024a). One Horton Heath: Green Infrastructure – Ecological Appraisal Report. V1.1.

Johns Associates (2024b). Northern Green Infrastructure (GI) Biodiversity Net Gain (BNG) Assessment. V1.1.

Johns Associates (2024c). Central Green Infrastructure (GI) Biodiversity Net Gain (BNG) Assessment. V1.1.

Johns Associates (2024d). Southern Green Infrastructure (GI) Biodiversity Net Gain (BNG) Assessment. V1.1.

Deacon Design (2023). Landscape Management Plan: Green Infrastructure, One Horton Heath. R1.

APPENDIX A – TARGET CONDITION MAPS





APPENDIX B – RELEVANT STATUTORY METRIC CONDITION SHEETS

Modified Grassland

Condition Assessment Criteria		Criterion passed (Yes or No)
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). 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 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead 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.	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	
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.	
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.	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	
Essential criterion achieved (Yes or No)		
Number of criteria passed		
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/✓
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	

Other Neutral Grassland

Condition Assessment Criteria		Criterion passed (Yes or No)
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 (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	
E	Combined cover of species indicative of suboptimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.	
Additional Criterion - must be assessed for all non-acid grassland types		
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		
Number of criteria passed		
Condition Assessment Result	Condition Assessment Score	Score Achieved x/✓
Acid grassland types (Result out of 5 criteria)		
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	
Non-acid grassland types (Result out of 6 criteria)		
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)	
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	

Hedgerows

Attributes and functional groupings (A, B, C, D and E)		Criteria - the minimum requirements for 'favourable condition'	Criteria description
Core groups - applicable to all hedgerow types			
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).
C1.	Undisturbed ground and perennial vegetation	>1 m 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 hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.

C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.
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 ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).
Additional group - applicable to hedgerows with trees only			
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.

Condition categories for hedgerows without trees		
Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		
Condition categories for hedgerows with trees		
Category	Category Requirements	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		

Ponds/ SuDS

Condition Assessment Criteria	
Core Criteria - applicable to all ponds (woodland ¹ and non-woodland):	
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.
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.
C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.
F	There is an absence of listed non-native plant and animal species ³ .
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.
Additional Criteria - must be assessed for all non-woodland ponds:	
H	Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3 m deep.
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.
Number of criteria passed	
Condition Assessment Result	Condition Assessment Score
Results for woodland ponds which require assessment of 7 core criteria	
Passes 7 criteria	Good (3)
Passes 5 or 6 criteria	Moderate (2)
Passes 4 or fewer criteria	Poor (1)
Results for non-woodland ponds which require assessment of 9 criteria	
Passes 9 criteria	Good (3)
Passes 6 to 8 criteria	Moderate (2)
Passes 5 or fewer criteria	Poor (1)

Scrub

Condition Assessment Criteria	
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).¹ - At least 80% of scrub is native, - There are at least three native woody species², - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i>, which can be up to 100% cover).
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran³) shrubs are all present.
C	There is an absence of invasive non-native plant species⁴ (as listed on Schedule 9 of WCA⁵) and species indicative of suboptimal condition⁶ make up less than 5% of ground cover.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and/or forbs present between the scrub and adjacent habitat.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.
Number	
Condition Assessment Result (out of 5 criteria)	
Condition Assessment Score	
Passes 5 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)

Wetland

Condition Assessment Criteria		Criterion passed (Yes or No)
Core Criteria - must be assessed for all wetland habitat types:		
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	
D	Cover of scrub and scattered trees are less than 10%.	
E	Cover of bare ground is less than 5%.	
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:		
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	
Additional Criterion - must be assessed for Bog habitats only:		
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	
Additional Criterion - must be assessed for Reedbed habitats only:		
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:		
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	
Essential criterion achieved (required for Good condition) Yes or No:		
Number of criteria passed		
Condition Assessment Result	Condition Assessment Score	Score Achieved x/✓
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):		
• Passes 5 or 6 core criteria, including criterion A.	Good (3)	
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.	Moderate (2)	
• Passes 2 or fewer core criteria.	Poor (1)	
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):		
• Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type).	Good (3)	
• Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type).	Moderate (2)	
• Passes 3 or fewer criteria.	Poor (1)	

Woodland

Condition Assessment Criteria					
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per Indicator
A	Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.	
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in 40% or less of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .	
C	Invasive plant species	No invasive species ³ present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species ³ <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ >10% cover.	
D	Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.	
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native ⁵ .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native ⁵ .	<50% of canopy trees and <50% of understory shrubs are native ⁵ .	
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space ⁶ . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted ⁷ .	21 - 40% of woodland has areas of temporary open space ⁶ .	<10% or >40% of woodland has areas of temporary open space ⁶ . But if woodland <10ha has <10% temporary open space, please see Good category ⁷ .	
G	Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .	
H	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback ⁹ .	11% to 25% mortality and/or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.	
J	Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .	
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	

L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground ¹⁴ .	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground ¹⁴ .	
Total Score (out of a possible 39)					
Condition Assessment Result			Condition Assessment Score		
Total score >32 (33 to 39)			Good (3)		
Total score 26 to 32			Moderate (2)		
Total score <26 (13 to 25)			Poor (1)		

Wood-pasture & Parkland

Condition Assessment Criteria		Criterion passed (Yes or No)
A	Presence of ancient and or veteran trees¹. Note - this criterion is essential for achieving Good condition.	
B	Three different life-stages (for example young, mature or veteran) of open grown or pollarded trees ¹ are present, to ensure replacement and continuity of tree cohort, veteran characteristics and habitat.	
C	Native scrub is present with a variety of heights, widths, shapes and species compositions - as planted or naturally established individual plants, or clumps of trees or shrubs ² .	
D	Frequent ³ presence of decaying wood providing ecological niches – such as standing, attached and fallen deadwood (for example, dead stems, branches and branch stubs), trees with heart-rot, or hollowing in the trunk or major limbs. Decay features might be revealed by certain types of fungal fruiting bodies.	
E	There is no evidence of recent adverse impact on tree health by human activities, livestock, wild animals, pests or diseases (this excludes veteran features valuable for wildlife). For example, no evidence of poaching, damage from machinery use or storage, ground compaction, grazing damage to bark and roots, competition or shading from surrounding trees.	
F	Ground cover comprises open habitats, for example grassland or heathland, which are unimproved or semi-improved (medium distinctiveness or higher).	
G	Ground cover is subject to an appropriate management regime providing structural diversity for vertebrates and invertebrates, which is not being or threatened by infill of trees and scrub, by natural establishment or forestry plantation, native or non-native. See Footnote 4 for details.	
H	There is an absence of invasive non-native plant species ⁵ (as listed on Schedule 9 of WCA ⁶), and species indicative of suboptimal condition ⁷ make up less than 5% cover (this excludes ancient and veteran trees).	
Number of criteria passed		
Condition Assessment Result (out of 8 criteria)	Condition Assessment Score	Score Achieved x/√
Passes 7 or 8 criteria and meets criterion A	Good (3)	
Passes 5 or 6 criteria OR Passes 7 criteria but fails criterion A	Moderate (2)	
Passes 4 or fewer criteria	Poor (1)	