



Landscape & Ecological Management Plan

Land Known as
Interbridges, Emsworth

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Report	Landscape & Ecological Management Plan (LEMP)
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Client	PNH Properties Ltd
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EXECUTIVE SUMMARY

Ecosupport Ltd were commissioned by PNH Properties to produce a Landscape and Ecological Management Plan, to support the application for the 'Land known as Interbridges, Emsworth' site and the associated BREEAM submission.

This report brings together all relevant sections of the ecological reports associated with the site 'Land Known as Interbridges, Emsworth' to inform a site-wide Landscape & Ecological Management Plan, covering the prescription management of the habitats within the site post-development in perpetuity as well as the biodiversity mitigation and enhancements to be included within the site.

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1.0 INTRODUCTION

1.1 Aim

The aim of this report is to provide a prescription of the management of habitats within the site and to bring together all relevant sections of the ecological reports associated with the site called 'Land known as Interbridges, Emsworth' and use them to inform a site-wide Landscape Ecological Management Plan. This will ensure the creation and management of habitats is suitable and beneficial to biodiversity within the site and all features of ecological importance are protected. This report has been produced to support the application for the 'Land known as Interbridges, Emsworth' and the associated BREEAM submission.

The management outlined within this report includes the following:

- Creation and management of amenity grassland,
- Creation and management of trees, shrubs and hedgerows across site,
- Creation and management of mixed scrub habitat,
- Creation and management of other neutral grassland,
- Installation of bat and bird boxes.

The baseline assessments relevant to this report were undertaken by Ecosupport Ltd during the survey walkover on the 27th March 2024 and reported within the PEA (Ecosupport, 2024). The PEA should be referred to for information on UKHab habitat classifications on site and plant species recorded.

This report should be read in conjunction with the Preliminary Ecological Appraisal (Ecosupport, 2024), Phase II Bat Survey Report (Ecosupport, 2024) and BNG Assessment, Management and Monitoring Report (Ecosupport, 2024)

1.2 Objectives

The following objectives are considered for this report in order to protect and enhance the ecology on site:

1. To preserve existing habitat and create and manage new habitats to provide the greatest benefit to bats, reptiles, amphibians, badgers and birds.
2. To ensure the created and enhanced habitats within the site fulfil their ecological function and remain in good condition to provide a benefit to biodiversity.
3. To protect retained hedgerows and trees (including features situated in adjacent 3rd party land) and provide suitable planting compensation.
4. To create and maintain new habitat features for bats and birds.
5. To detail management responsibilities and practices, including ongoing monitoring and remedial measures

1.3 Site Location and Description

The site is located adjacent to the A27 known as land associated with Interbridges, Emsworth PO10 7PH centered on OS grid reference SU749063 (**Fig 1**). The site covers approximately 0.65ha and comprises predominantly of grassland, woodland and scrub. The site is bound by

the A27 to the north, the railway to the south and further scrub/trees to the east and west of the site.

Figure 1. Aerial image of the site with approximate redline boundary provided (Google Earth, 2024)



1.3 Development Proposals

The proposed development will involve the creation of an employment development, with associated access, parking, yards, landscaping and substation (**Fig 2**).

Figure 2. Proposed site layout, drawing NoPNH-9173-HYP-00-DR-A-000010 (Hyphen, 2024)



2.0 BASELINE DATA

2.1 Designated Sites

2.1.1 Statutory Designated Sites

Figure 3 displays the map provided from HBIC (2024) showing the statutory designated sites from within 1 km of the site, with **Table 1** providing a greater level of detail.

Table 1. Statutory designated sites within 1 km (HBIC, 2024)

Site Name	Designation	Distance and Direction	Description of Interest
Brook Meadow (Emsworth)	LNR	0.14km South	Brook Meadow LNR comprise of a 3.9ha site supporting grassland which is surrounded by woodland and flanked by two streams.
Chichester and Langstone Harbour	SPA & Ramsar	0.9km South	Chichester and Langstone Harbours SPA is located on the south coast of England in Hampshire and West Sussex, and features large sheltered estuarine basins that comprise of extensive mudflats that are exposed at low tide. The site is noted to support internationally important overwintering bird assemblages, with notable species including ringed plover (<i>Charadrius hiaticula</i>), black-tailed godwit (<i>Limosa limosa islandica</i>), dark-bellied brent goose (<i>Branta bernicla bernicla</i>), dunlin (<i>Calidris alpina alpina</i>), grey plover (<i>Pluvialis squatarola</i>), redshank (<i>Tringa tetanus</i>) and ringed plover (<i>Charadrius hiaticula</i>).
Chichester Harbour	SSSI	0.9km South	Chichester Harbor SSSI comprises of a large estuarine basin supporting extensive mud flats and sandflats, with the site of particular significance for wintering wildfowl and waders, in addition to important plant communities.

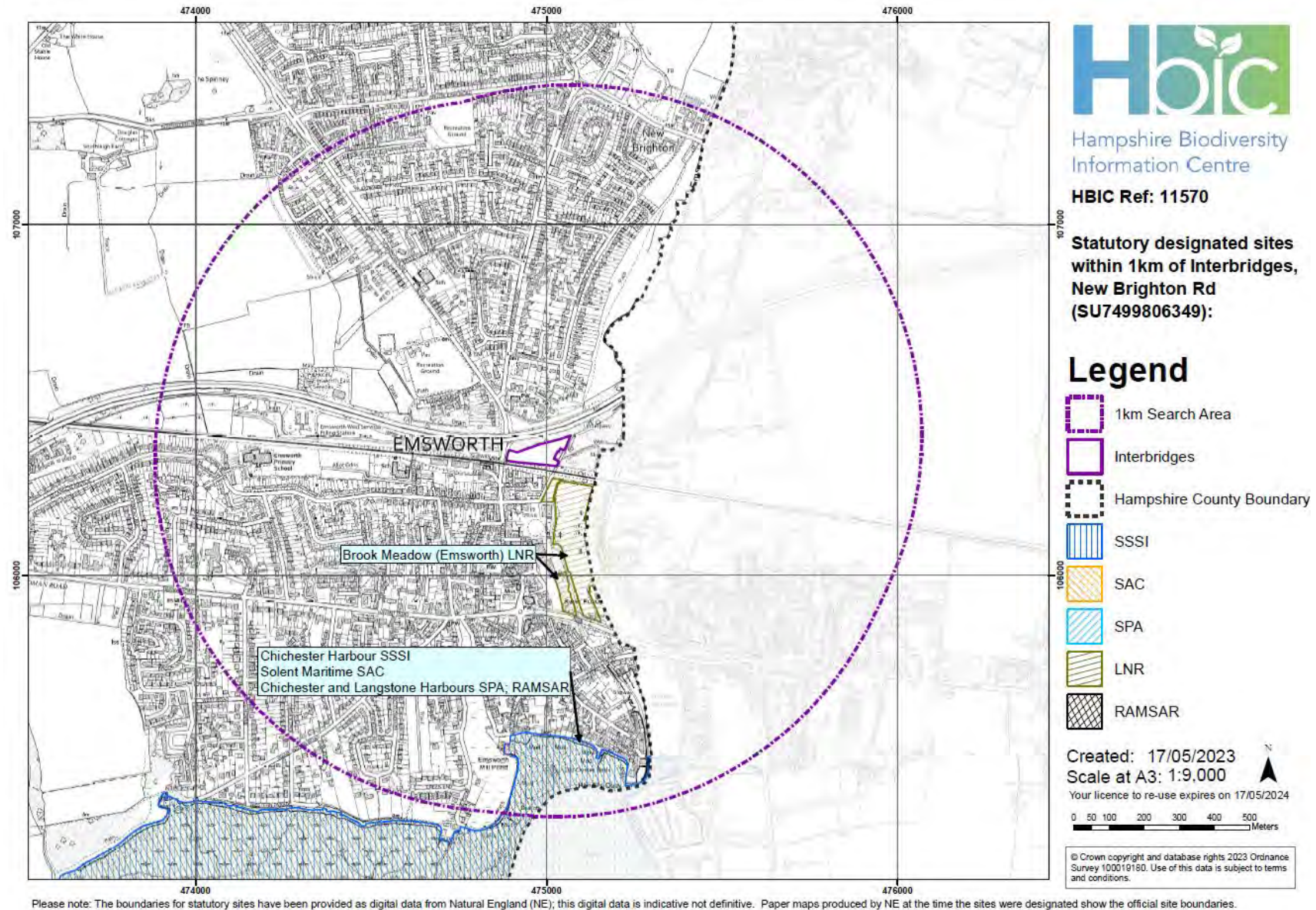
Solent Maritime	SAC	0.9km South	The Solent Maritime SAC is designated as a result of supporting Estuaries, Spartina swards and Atlantic salt meadows annex 1 habitats, with the Solent encompassing four coastal plain estuaries and four bar-built estuaries, which form a unique hydrographic regime.
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SPA: Special Protection Area

RAMSAR: Wetland of international importance under the Ramsar Convention

SSSI: Site of Special Scientific Interest

LNR: Local Nature Reserve

Figure 3. Map showing statutory designated sites located within 1 km of the site (HBIC, 2024).

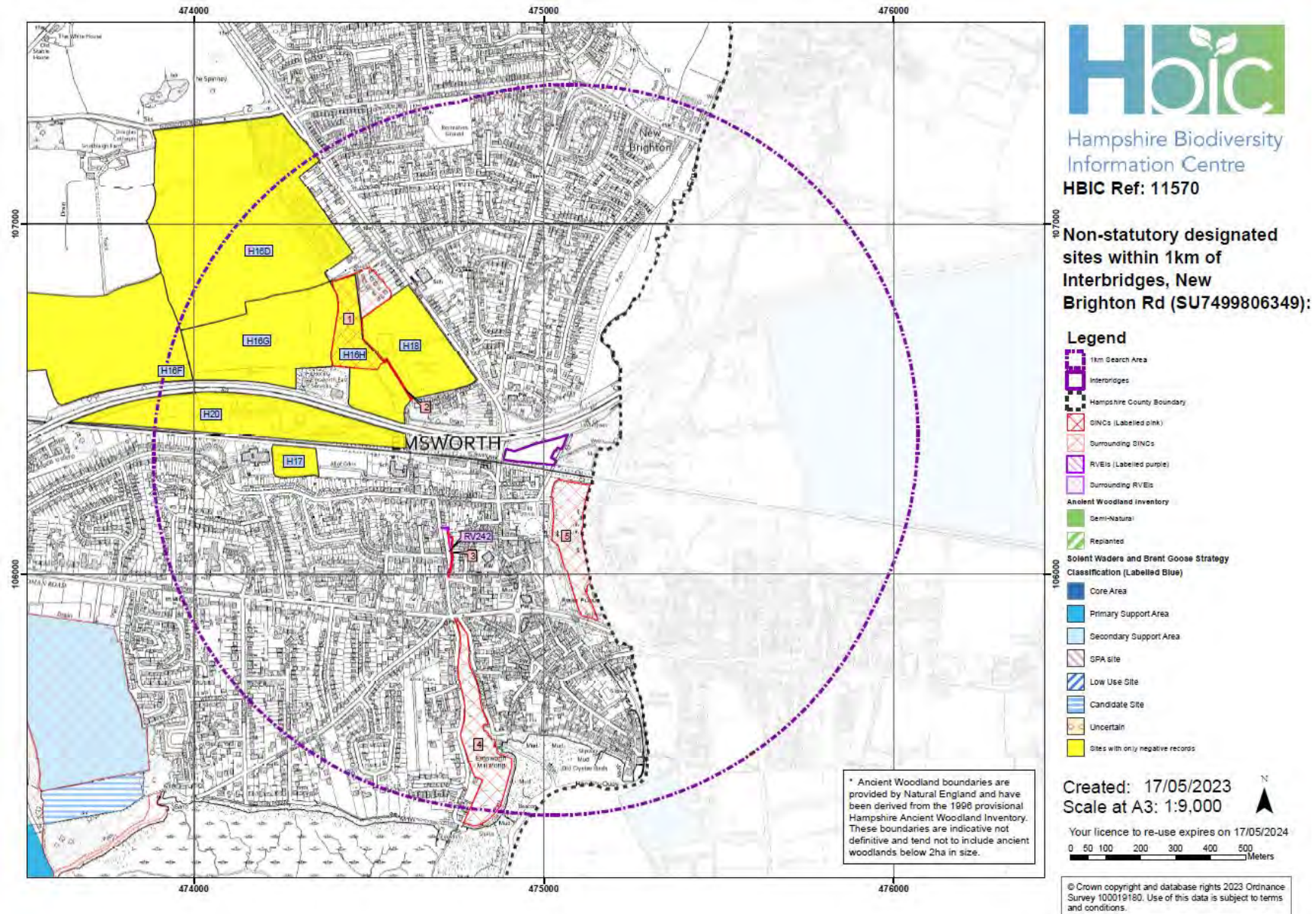
2.1.2 Non-Statutory Designated Sites

Figure 4 displays the map provided from HBIC (2024) showing the non-statutory designated sites from within 1 km of the site, with **Table 2** providing a greater level of detail.

Table 2. Non-Statutory designated sites within 1 km (HBIC, 2024)

Site Name	Map Label	SINC Criteria	Designation	Distance and Direction
Lumley Meadow	5	2A/6A	SINC	0.05km South-East
Stream West of Emsworth Recreation Ground	2	6A	SINC	0.29km West
Westbrook Stream, Bridge Road	3	6A/7A	SINC	0.27km South-West
Land West of Emsworth Recreation Ground	1	2B/5B	SINC	0.42km North-West
Emsworth Millpond	4	4A	SINC	0.48km South

SINC: Site of Importance for Nature Conservation

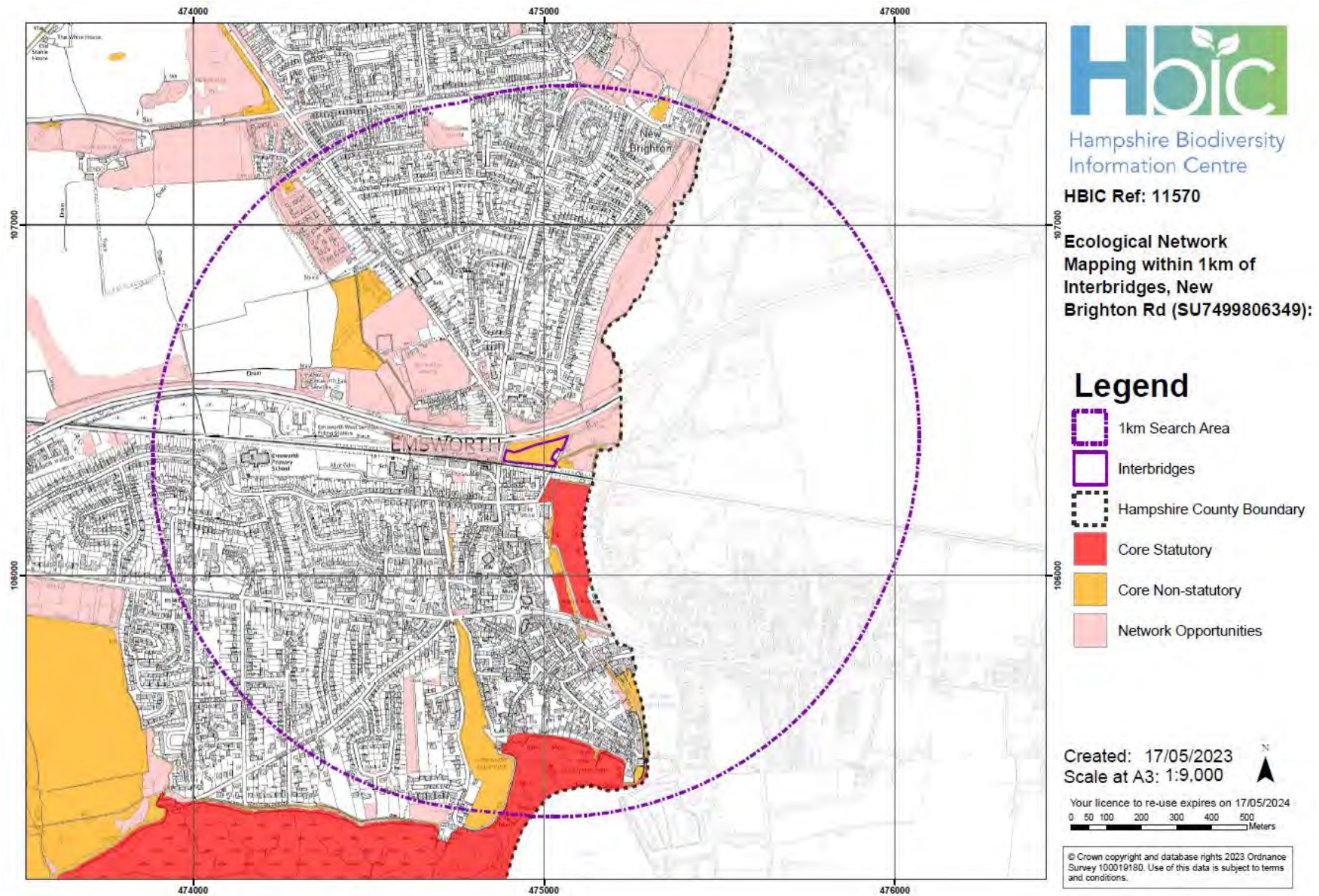
Figure 4. Map showing non-statutory designated sites located within 1 km of the site (HBIC, 2024).

2.1.3 Ecological Network

The data received from HBIC also includes the provision of information about the local Ecological Network designations, the aim of which is to:

- Improve the quality of current wildlife sites by better habitat management
- Increase the size of existing wildlife sites
- Enhance connections between sites, either through physical corridors or through 'stepping stones'
- Create new sites; and
- Reduce pressure on wildlife by improving the wider environment (Court & Ritter 2016)

As shown in **Fig 5** below, the site represents an area noted as a 'core non-statutory' zone of the local ecological network.

Figure 5. Ecological networks located within 1km (HBIC, 2024)

2.2 Habitats

The vegetation within the site has been described below using classification terminology as described within Habitat Definitions Version 2.0 (UKHab Ltd, 2023). The below species should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. A UKHabs map showing the locations of the habitats present within the site has been included within Appendix A. The habitat types identified within the site comprise of:

- g3c – Other neutral grassland (32 – scattered trees, 517 – recent management)
- h3d – Bramble scrub (517 – recent management)
- w1h – Other woodland; mixed

2.2.1 g3c – Other Neutral Grassland (32,517)

The grassland on-site forms a strip which runs through the centre of the site which loosely follows the footprint of this habitat type that was identified on site prior to vegetation clearance works (**Fig 6**). Similar to the previous survey, the forb diversity in the sward was consistently > 9 species / m². Grasses noted within the sward included Perennial Rye Grass (*Lolium perenne*), Red Fescue (*Festuca rubra*), Meadow Fescue (*F. pratensis*), Meadow Foxtail (*Alopecurus pratensis*), Timothy (*Phleum pratense*), Creeping Bent (*Agrostis stolonifera*), Meadow Grasses (*Poa* sp). Crested Dogstail (*Cynosurus cristatus*) and False Oat Grass (*Arrhenatherum elatius*). The grassland was also noted to support a high herb content with Common Knapweed (*Centaurea nigra*), Ribwort Plantain (*Plantago lanceolata*), Yarrow (*Achillea millefolium*), Common Vetch (*Vicia sativa*), Creeping Cinquefoil (*Potentilla reptans*), Lesser Celandine (*Ficaria verna*), Cut-leaved Crane's-bill (*Geranium dissectum*), White dead-nettle (*Lamium album*), Winter Heliotrope (*Petasites fragrans*), Common Daisy (*Bellis perennis*), Comfrey (*Symphytum* sp.) and Oxeye Daisy (*Leucanthemum vulgare*).

Figure 6. View of the g3c grassland habitat. Taken from the sites western boundary facing east (March, 2024)



2.2.2 h3d – Bramble Scrub (517)

Bramble (*Rubus fruticosus*) dominated scrub was throughout the site with this habitat type forming the dominant habitat type recorded on site (**Fig 7**). Similar to the other habitats within the site, the scrub was managed last year as part of the previous planning application, with the habitat now growing in the interim period. In addition to Bramble, other species noted included Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), and Dog rose (*Rosa canina*), with high coverage of species including Common Hogweed (*Heracleum sphondylium*), Common Nettle (*Urtica dioica*), Field Horsetail (*Equisetum arvense*), Cleavers (*Galium aparine*) and Ivy (*Hedera helix*) noted following the removal of dense scrub habitat.

Figure 7. View of a section of h3d Bramble scrub situated along the site's northern boundary (March, 2024)



2.2.3 w1h – Other Woodland; Mixed

A small section of mixed woodland habitat was noted to encroach the site from beyond the railway boundary situated along the southern boundary of the site (**Fig 8**). Trees noted within this area comprised of a mixture of Field Maple (*Acer campestre*), Sycamore (*Acer pseudoplatanus*), Ash (*Fraxinus excelsior*), Horse Chestnut (*Aesculus hippocastanum*), Lime (*Tilia x europaeus*) and Maritime Pine (*Pinus pinaster*). The understory was largely dominated by Ivy, species including Lords & Ladies (*Arum maculatum*) and Cleavers also noted.

Figure 8. View of a section of the small area of w1h woodland habitat situated along the sites southern boundary (March, 2024)



2.3 Bats

2.3.1 Pre-existing Information

The data request from HBIC returned the following records within 1 km of the site (**Table 5**).

Table 3. List of Bat records within 1 km of the site (HBIC, 2024)

Taxon Name	Species Name	Number of Records	Distance to nearest record
<i>Plecotus auritus</i>	Brown Long-eared Bat	11	0.21km
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	59	0.17km
<i>Nyctalus noctula</i>	Noctule Bat	16	0.16km
<i>Pipistrellus</i> spp.	Pipistrelle Bat species	18	0.22km
<i>Eptesicus serotinus</i>	Serotine	18	0.15km
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	54	0.19km

<i>Barbastella barbastellus</i>	Western Barbastelle	2	0.58km
<i>Myotis spp.</i>	Myotis Bat Species	29	0.46km
<i>Myotis daubentonii</i>	Daubenton's Bat	8	0.33km
<i>Myotis nattereri</i>	Natterer's Bat	1	0.93km
<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle	11	0.22km
<i>Nyctalus noctula</i>	Lesser Noctule	4	0.57km

2.3.2 Preliminary Roost Assessment (Trees)

A preliminary roost assessment of the trees on site was undertaken during the site walkover. No trees on site were identified to support roosting features and such are considered to hold **Negligible potential** to support roosting bats.

2.3.3 Foraging and Commuting Bats (Updated bat survey work)

In accordance with the 4th edition of the BCT Guidelines, a total of three walked transects have been completed between April – October 2024, with static detectors placed within key habitat types on site for 5 consecutive nights each month during April - October 2024. Based on the results of the updated survey effort, the site has been classified to be of at least '**Local**' importance to support commuting and foraging bats. Activity was predominantly recorded adjacent to the sites northern and southern boundaries (commuting along the adjacent rail/road corridors), with the registered calls dominated by *Pipistrellus* spp. (which is to be expected based on a typical species composition sampled across an active season). Additionally, low numbers of Serotine and Noctule were also recorded, with sporadic registrations Daubenton's, Natterers, Whiskered/ Brandts bat and Leislers's (and a single Barbastelle registration) were also recorded across the season (with these species considered widespread or rarer as per Reason and Wray, 2023). The results of the updated survey work are outlined within the associated Phase II Bat Survey Report (Ecosupport, 2024).

2.4 Reptiles

2.4.1 Pre-existing Information

HBIC returned recorded 4 records of Slow Worms (*Anguis fragilis*) from within the 1km search radius.

2.4.2 Site Assessment

As part of the works associated the granted full planning permission (ref: APP/10/00912 and variant of condition APP/16/00295) for this site, the reptile population within the site was subject to a translocation operation, with the on-site habitats managed to facilitate these works. Following the translocation of the reptile population to an off-site receptor (With a total of 13 Slow Worms relocated to Patrica Way, Nutborne, PO18 8FX) the site was subject to a sensitive destructive search. As such, due to the exclusion of reptiles and subsequent maintenance of reptile exclusion fencing around the perimeter of the site (thus preventing recolonization of the site), the site is considered to hold **Negligible** potential to support common UK reptiles.

2.5 Badgers

2.5.1 Pre-existing Information

HBIC returned no records of Badger (*Meles meles*) from within 1km of the site boundary.

2.5.2 Site Assessment

During the updated walkover, the site was thoroughly searched for evidence of use by Badgers (*Meles meles*). Evidence of Badgers could include latrines, dung pits, feeding remains and foraging evidence, trails and setts. No Badger setts or evidence of associated badger activity (e.g. deceased animals, snuffle holes, latrines, spoil heaps) were detected within the proposed site. Notwithstanding this, the presence of earth mounds situated within the site offer suitable locations for sett creation, with the grassland habitat offering suitable habitat to support foraging activity. As such, the site is considered to hold **Moderate** potential to support foraging and commuting Badgers.

2.6 Breeding Birds & Nesting Birds

2.6.1 Pre-existing Information

HBIC returned a high volume of records for bird species within 1km of site boundary, with the records predominantly originating from the statutory/ non-statutory designated wetland/ coastal sites that are situated within 1km of the site boundary (Chichester and Langstone Harbor SPA & Ramsar). As such, based on the habitats present on site, it is considered that the majority of bird species records provided are not relevant (with no suitability to support Schedule 1 listed birds) and therefore a full species list has not been provided in this section.

2.6.2 Site Assessment

There is limited suitable habitat within the redline boundary for breeding and nesting birds. The boundary woodland habitats within the highways and railway estates offer potential to support nesting and foraging activity, although as this is limited to the boundaries, the site is considered to hold **Low** potential to support breeding and nesting birds.

3.0 MITIGATION, COMPENSATION AND ENHANCEMENTS

The chapter addresses the relevant mitigation, compensation and enhancement required to provide appropriate protection to species found within the site. Mitigation refers to measures that can be undertaken to avoid or reduce ecological impacts. Compensation refers to measures taken in order to offset potential significant impacts and finally enhancements result in a net gain for ecology. Measures relating to habitat creation and management are addressed in **Section 4.0**.

3.1 Protection of Woodland, Hedgerows and Trees

The areas of woodland, existing hedgerows and trees that will be retained will be protected from damage during the works. Notwithstanding this, the thinning/removal of five trees within the woodland area (T5,T6,T8,T11 and T12) has been recommended within the associated arboricultural report (Johnston Tree Consultancy, 2024) due to health and safety concerns. All other trees will be protected using the methods outlined within the *Arboricultural Report and Method Statement* (Johnston Tree Consultancy, 2024). This will also provide protection for wildlife species that may be using the woodland and retained hedgerows as well as the margins of the site including bats, birds, invertebrates, and other mammals. No vehicles will enter the protective ring fencing and no materials will be stored within their circumference; access will only be granted with authorisation from the relevant LPA. All protective fencing must be in place prior to any construction machinery arriving on site, before any works on site get underway, and will remain in place until all work is completed. This will minimise the level of disturbance within the woodland, boundary habitat / buffer areas during the works and ensure the habitats and any wildlife species that may be using them are protected.

3.2 Bats

3.2.1 Maintaining Connectivity

Many bat species are reluctant to leave the cover of features such as tree lines and hedges as they move between their roost and foraging grounds and as such, habitat fragmentation of the landscape can therefore be a serious issue for bats. The key commuting corridors identified during the updated survey work situated along the adjacent road/ rail land will not be impacted by the proposed works, therefore maintaining the established commuting corridors around the site.

3.2.2 Lighting

During the updated bat survey work sporadic registrations of Daubenton's, Natterers, Whiskered/Brandts bat and Leislars's (with these species considered widespread or rarer as per Reason and Wray, 2023) were recorded alongside Common and Soprano Pipistrelle (in addition to a single Barbastelle registration), with the sites northern and southern boundaries (comprising of the adjacent highways/ lineside estates supporting the highest levels of bat activity across the site. Minimal lighting is proposed as part of the development, with the lighting strategy designed to avoid light spill onto the habitats situated within the adjacent lineside and highways estates (to the north and south), in order to maintain and avoid disruption to these commuting routes for bats (with these habitats retained to maintain the commuting and foraging resources already present adjacent to the site). As outlined within

the associated lighting strategy (DFL, 2024), the sensitive site boundary habitats which were identified during the updated phase II surveys to support commuting bats will be protected through the minimal lighting design, and therefore it is anticipated that the lighting is not expected to have an adverse impact upon nocturnal wildlife.

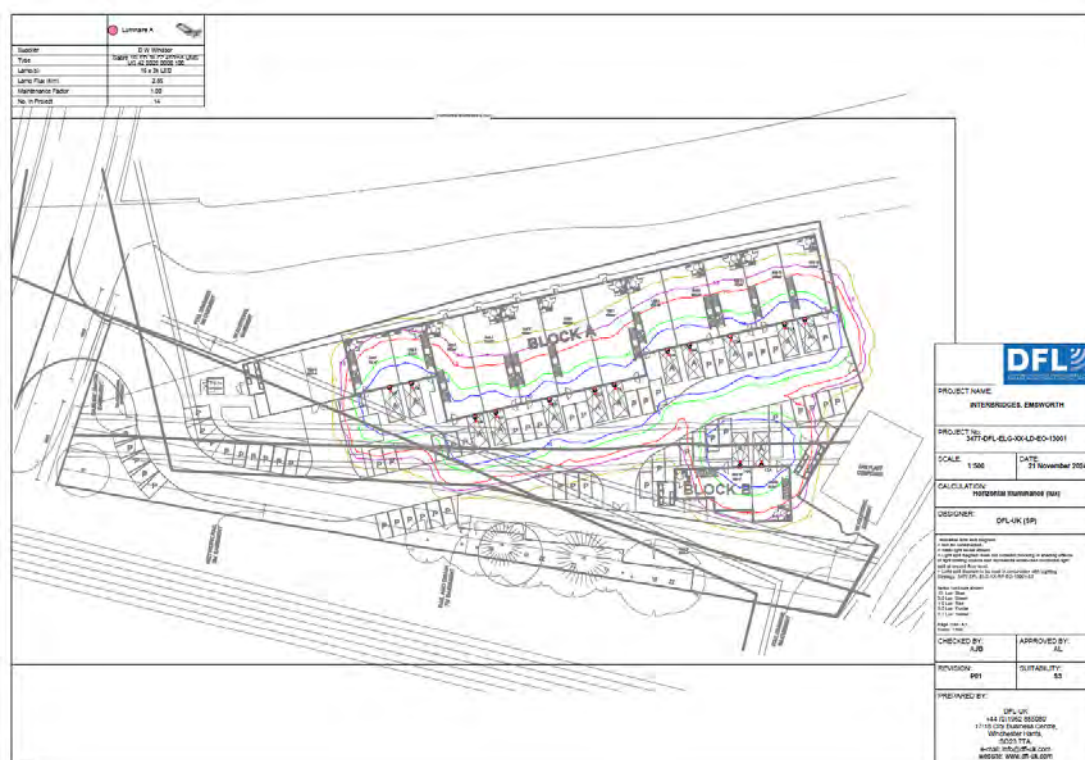
3.2.2.1 Lighting During Construction

In order to avoid any disturbance to bats (and other potential nocturnal wildlife) construction works should be limited to daylight hours and should not be undertaken 30 minutes prior to dusk through to dawn. All lighting should be sensitive to the use of the site by nocturnal wildlife, for example by including low-level downward-facing / hooded lights that are sensor-operated where possible.

3.2.2.2 Lighting During Operation

The proposed lighting within the site will comprise of 16 DW Windsor (or similar) wall mounted LED lights, which will be fitted above the access ramps of the industrial units and controlled/activated by motion sensors. As outlined within the lighting strategy (DFL, 2024), the strategy has been written in accordance with GN08/2023 *Bats and Artificial Lighting in the UK* (ILP / BCT, 2023), adopting appropriate warm white light sources, buffer zones and suitable positioning downwards to avoid vertical and horizontal light spill into identified sensitive receptors (**Fig 9**). The car parking and access road will not be lit to avoid adverse impacts on the identified commuting corridors adjacent to the site boundary, with the rear exits of units 3-7 (northern boundary) also remaining unlit.

Figure 9. Horizontal Illuminance Diagram, DWG No.3477-DFL-ELG-XX-LD-EO-13001 (DFL, 2024)



3.2.3 Enhancement Bat Boxes

A total of three bat boxes will be installed on suitable trees around the site boundaries to provide additional roosting features within this area. The following woodcrete models will be erected on suitable retained trees:

- 5 No. Schwegler 2FN boxes (or similar)
- 1 No. 1 Schwegler 2F boxes (or similar)

N.B. if there are issues obtaining any of the boxes stated above, similar alternatives can be used if first agreed with the ecologist.

The woodcrete bat boxes will be erected by or under the supervision of an ecologists to ensure they are placed in the most appropriate / effective locations. The indicative location of these habitat features are shown in the Ecological Enhancements Plan attached in **Appendix C**.

3.3 Reptiles

Following the previous exclusion operations of reptiles within the site, reptile exclusion fencing is present around the perimeter of the site. In order to prevent recolonization of the site from the adjacent highways/ railway boundary habitats, the exclusion fencing must be checked regular intervals and appropriately repaired/maintained.

3.4 Badgers

3.4.1 Pre-commencement Walkover

Whilst reptile exclusion fencing is present around the majority of the site's boundaries, there is potential for Badger to access the site under the existing Heras fencing situated along the site's western boundary. As such, it is recommended that immediately prior to the commencement of works a walkover of the entire working area/ area of impact will be carried out by staff. If any new mammal holes are noted, an appropriately qualified ecologist will be consulted.

3.4.2 Other Mitigation Measures

During construction, any excavations on site should be covered nightly and/or include a suitable escape ramp for the protection of wildlife e.g. Badgers and Hedgehogs (a suitable escape ramp can be created using wooden planks placed at a 45-degree angle or provision of a sloping end wall). Any temporarily exposed open pipe systems should be covered.

3.5 Breeding and Nesting Birds

3.5.1 Avoidance of Impacts to Nesting Birds

In order to avoid disturbance of nesting birds or damage to their nests, clearance of any vegetation will be undertaken outside of the bird nesting season (typically March – August dependent on weather). If this is not possible, sections to be cleared should be thoroughly checked by a suitability qualified ecologist immediately prior to clearance. If any active nests are found they should be left undisturbed with a suitable buffer of vegetation (5m) until the nestlings have fledged.

3.5.2 Enhancements

In addition to planting trees across the site (which may provide nesting opportunities), as a biodiversity enhancement, the erection of bird boxes within trees around the site boundary will be implemented. The following bird boxes/ bricks will be erected within the site:

- 6 No. Schwegler 1B hole nest boxes (Tree mounted) (or similar)

N.B. if there are issues obtaining any of the boxes stated above, similar alternatives can be used if first agreed with the ecologist.

The tree-mounted boxes will be erected on suitable trees situated around the site's boundary. The indicative location of these habitat features are shown in the Plan attached in **Appendix C**.

4.0 HABITAT CREATION, ENHANCEMENT & MANAGEMENT

4.1 Introduction

As part of the proposed development, extensive habitat creation, enhancement and management will be undertaken within the site. This section includes details on how habitat creation works will be carried out, managed, and monitored for long-term biodiversity improvement, with the landscaping design for the scheme outlined in drawing DWG No. M444-200 (IJLA, 2024 – **Appendix B**). The following habitat creation and management works will be undertaken:

- Creation and management of amenity grassland,
- Creation and management of trees, shrubs and hedgerows across site,
- Creation and management of mixed scrub habitat,
- Creation and management of other neutral grassland.

4.2 Modified Grassland

4.2.1 Proposed Planting

Areas of modified grassland of 'poor' condition are proposed for creation around the site boundary with scattered areas throughout the site. This grassland will be seeded with Emorsgate EG22 – Strong Lawn Grass Mixture or similar (approved by an ecologist). Additional areas situated along the sites eastern boundary will be planted with native groundcover species as outlined within the landscape planting schedule, DWG No. M444-200 (IJLA, 2024).

4.2.2 Management

The sowing of these seeds will be completed either during the Spring (March-May) or the late Summer (August-October) when the temperatures are warm, and the ground is dry. The seed must be surface sown at an even distribution throughout the entire landscaped area.

Given the formal location of this grassland surrounding car parking areas and fronting the proposed buildings, it is expected to be regularly maintained to a short ward height during April to August

First year management: During the first year the grassland areas must be regularly maintained to the above noted heights every 3-4 weeks (or more frequently as needed) to prevent the establishment of weeds. All arisings must be taken from site to prevent the addition of too many nutrients into the soil. If necessary, glyphosate-based weed killer can be used to spot treat any areas with dense patches of Nettles or Bramble.

Management Once Established: Once the seed is established after the first year, regular mowing is still expected which will result in a shorter sward height however grass should not be cut lower than 30mm.

Targeted scrub, bracken and invasive plant removal should also be carried out as needed to prevent encroachment into the grassland.

4.3 Individual (Urban) Trees

4.3.1 Proposed Planting

One native tree (Rowan, *Sorbus aucuparia*) will be planted close to the site entrance at the western boundary.

Planting will be carried out in the first year. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. Rootgrow or Bonemeal will be applied to the new plants to encourage healthy root growth.

4.3.2 Management

4.3.2.1 Mycorrhizal Treatment

To ensure a successful establishment of the newly planted trees, it is recommended that mycorrhizal treatment to the tree roots is conducted **during the planting**, this would reduce the risk of tree mortality and increase the long-term tolerance of these trees to periods of drought or adverse soil conditions thus ensuring a higher chance of successful long-term establishment.

4.3.2.2 Weed Management

All newly planted trees must have a 1-metre exclusion zone whereby weeds are routinely and pro-actively removed for the **first 2 – 3 years**. Bark mulch is recommended around each tree and will act as an effective management method to also suppress weed colonisation.

4.3.2.3 Pruning

The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms (but pruning will not be extensive enough to restrict expected canopy or height for their species).

4.3.2.4 Monitoring and Replacement

Trees will be inspected every 3 years by a suitably experienced arborist **during late winter – early spring of each year when required**. These monitoring visits will assess the general health of the trees and determine if any remedial action is required, including noting any presence of disease. As part of these monitoring visits, the arborist will produce a monitoring report which will be sent to the LPA outlining the results and appropriate recommendations (i.e. remedial works, removal /replacement). Any plants that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season.

4.4 Other Neutral Grassland (Wildflower Meadow)

4.4.1 Proposed Planting & Enhancement

Two areas of other neutral grassland will be created as part of the proposed landscaping schedule. These habitats will be established via sowing of a suitable wildflower mix, with the proposed area along the sites northern boundary to be seeded with Emorsgate EM2 – Standard General Purpose Meadow Mixture and the grassland within the sites south-western corner to be seeded Emorsgate EW1 – Woodland Mixture. The EM2 mixture comprises of

other neutral grassland indicator species such as Common Bent (*Agrostis capillaris*), Crested Dog's Tail (*Cynosurus cristatus*), Common Knapweed (*Centurea nigra*) and Agrimony (*Agrimonia eupatoria*). In addition to other neutral grassland indicator species, the EW1 mix includes shade tolerant grasses and wildflowers to assist establishment within close proximity to retained trees and planted shrubs. The sowing of these seeds will be completed either during the Spring (March-May) or the late Summer (August-October) when the temperatures are warm, and the ground is dry. The seed must be surface sown at an even distribution throughout the entire landscaped area.

4.4.2 Management

Wildflower areas do not require any additional watering or fertilizer. Cutting a meadow and removing the clippings retains low nutrient levels in the soil and suppresses coarse grasses which would otherwise out-compete the wildflowers. It is recommended the wildflower grassland undergoes two annual cuts. The cut grass should be dried on site. Cuttings should be left in situ for approximately one week, after this the arisings are to be removed from site.

First year management: Perennial species take at least a full year to establish. For newly sown areas the first summer will be dominated by annual weeds (species indicative of sub-optimal condition) arising from the soil seed bank and by grass growth. This should be controlled by mowing throughout the first year to minimise competition and weed seed production.

Management Once Established: After the first year, the wildflower areas will be mown in Spring to 100mm and will then be left to flower through to late July/August. This is beneficial for nesting birds, which do not fledge until late July, as well as insects and other wildlife. After flowering, the area will undergo a hay cut with growth reduced to 50mm.

Targeted scrub removal will also need to be carried out as necessary to prevent encroachment into the grassland.

4.5 Mixed Scrub

4.5.1 Proposed Planting

Within the areas of Mixed Scrub to be created, native planting will be undertaken to ensure at least 3 native woody species are present with no one species dominant. Species to be planted include Dogwood (*Cornus sanguinea*), Hazel (*Corylus avellana*), Privet (*Ligustrum vulgare*), Wayfaring Tree (*Viburnum lantana*), Dog Rose (*Rosa canina*) and Spindle (*Euonymus europaeus*) in line with landscape planting schedule (IJLA, 2024).

Shrubs will be planted at 1m centres to allow foraging (1.2/m²) (IJLA, 2024) to avoid creating dense clusters. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. The scrub will become denser and more connected as it grows up.

4.5.2 Invasive / Undesirable Species Removal

Throughout all of the mixed scrub parcels, removal of invasive species will be undertaken as necessary if any are to establish on site.

4.5.3 General Management

Following establishment, scrub will require minimal ongoing management however the following measures can be employed as necessary:

- New scrub will be weeded following first planting and watered whenever necessary during the first growing season.
- Scrub will be cut back annually as needed to ensure the area does not become overgrown and thinned every five years. Different areas of scrub will be cut back / thinned on rotation in order to ensure a diverse age range (seedlings, sapling, young shrubs and mature shrubs) persists.
- Any existing or later establishing Bramble will be reduced in density and will be maintained at approximately 15% density within the scrub patches.
- Ongoing management will be undertaken to prevent successional scrub developing within the adjacent grassland areas.
- Management must take into account the requirement for maintaining habitat connectivity across the site. Should any such vegetation die or its density become sparse, additional planting will be undertaken, replacing like-for-like.

All management of trees and scrub will be undertaken outside of the bird nesting season, which spans February – August inclusive (Natural England, 2015). A well-developed edge will be encouraged by employing a less intensive mowing regime for the surrounding grassland in order to encourage a longer sward height. As part of this process, scalloped edges will be created to provide a variety of shade and temperature conditions for invertebrates and reptiles.

4.6 Mixed Hedgerows

4.6.1 Proposed Planting

Several mixed native and non-native hedgerows will be planted across the site both as screening along the sites western boundary and within formal locations around the proposed industrial units. The non-native hedgerow features will comprise of *Euonymus japonicus* 'Green Spire', with the native hedgerow along the sites western boundary comprising of a 50/50 split between *Crataegus monogyna* and *Prunus spinosa*

The shrubs will be planted in staggered double rows with 5 plants per linear metre (if using bareroot stock) or 3-4 plants per linear metre (if using container grown stock).

4.6.2 Management

Given the formal locations of the majority of the hedgerows on site, it is expected that they will be clipped annually to maintain the desired height and width.

4.7 Safeguarding

The developer and project manager will be responsible for briefing all site personnel on the ecological sensitivities of the site and implementing the mitigation measures outlined above. If any protected species are encountered during the construction works, it will be the

responsibility of the project manager to cease works and immediately contact an ecologist for advice.

4.8 Post-Construction Habitat Creation

Section 5.0 below depicts the indicative timings associated with the habitat creation and enhancements to be undertaken prior to first occupation on the development site. This is considered to be year 1 of the management plan. For those activities that can be undertaken at any time of year, the earliest possible time is recommended.

4.9 Compliance Check and Management Responsibilities

A compliance visit will be completed by a suitably qualified ecologist once the construction phase of the development has been completed. The check will be conducted annually for the first 5 years post-completion, and every 5-years thereafter until year 30. The compliance check will be carried during a suitable time of year and in suitable weather conditions. The ecologist will check all biodiversity ecological enhancements set out to assess if they have been completed and make an assessment if any recommended changes are required to management.

Management and maintenance of the newly created and enhanced habitats will initially be the responsibility of the client to ensure all management works are completed and qualified ecologists, arborists or landscape managers are contracted, where required. All management works as described above should be secured through an appropriate Section 106 agreement for the site that will legally oblige the client or other agreed party to carry out the works. An annual management timeline of all habitats has been provided in **Section 5.0**; management works should continue in perpetuity.

A formal review process will be implemented when objectives and management recommendations are not reached / roles and responsibilities are not fulfilled as agreed. The details of this formal review process are as below:

- A suitably qualified ecologist will visit the site to conduct the compliance check,
- The compliance check will include the write up and submission of a monitoring report,
- The project manager is contacted by the ecologist and is informed of the recommendations or management actions which have not been fulfilled to identify what or who is responsible,
- The monitoring report will include a section addressing any raised issues identified during the compliance check,
- This document will be issued to the assigned management body whom will review and undertake remedial actions as appropriate.

5.0 IMPLEMENTATION PLAN SUMMARY

Schedule of monitoring and management from Year 1 with outlined elements in perpetuity (for 80+ years) for all habitats / ecological enhancements.

General Activity	Year	Specific Activity	Dates / Timing	Description
Protection of Trees, Woodland and Hedgerows	1	Arboricultural Fencing (Section 3.1)	Set up pre-commencement of construction phase and retained throughout the works.	The existing trees and hedgerow will be retained will be protected from damage during the works. They will be protected using the methods outlined within Section 3.1.
Bats	1	Installation of Bat Boxes (Trees) (Section 3.2.3)	Prior to commencement of the construction phase.	6 No. bat boxes will be installed on suitable trees situated along the sites boundary.
	Year 2, then once Annually	Bat Box Integrity Checks	Winter	All ecological enhancements will be checked to ensure they do not require replacement.
Badgers	Pre-commencement	Updated walkover (Section 3.4.1)	Prior to commencement of the construction phase.	A walkover of the site is recommended to be undertaken by a suitably qualified ecologist in search of recent Badger activity immediately prior to works commencing.
	1	Covering any open excavations (Section 3.4.2)	During the construction phase.	During the construction phase, any open excavations left overnight should either be covered to prevent commuting Badgers falling in or escape ladders should be used to prevent them from becoming trapped. Any open pipework should be checked and then capped nightly.
Birds	1	Vegetation Removal (Section 3.5.1)	During the construction phase (Ideally September – February)	In order to avoid disturbance of nesting birds or damage to their nests, clearance of any vegetation will be undertaken outside of the bird nesting season (typically March – August)

				dependent on weather). If this is not possible, sections to be cleared should be thoroughly checked by a suitability qualified ecologist immediately prior to clearance. If any active nests are found they should be left undisturbed with a suitable buffer of vegetation (5m) until the nestlings have fledged.
	1	Bird Boxes (Trees) (Section 3.5.2)	Prior to commencement of the construction phase.	6 No. nest boxes will be erected on suitable trees situated along the sites boundary.
	Year 2, then once Annually	Bird Box Integrity Checks	Winter	All ecological enhancements will be checked to ensure they do not require replacement.
Reptiles	1	Exclusion fence integrity checks	Prior to commencement and during the construction phase.	Following the previous exclusion operations of reptiles within the site, reptile exclusion fencing is present around the perimeter of the site. In order to prevent recolonization of the site from the adjacent highways/ railway boundary habitats, the exclusion fencing must be checked regular intervals and appropriately repaired/maintained.
Habitat Creation - Modified Grassland (Section 4.2)	1	Planting	Ideally Autumn or Spring	Establish the grassland through sowing of Emorsgate EG22 – Strong Lawn Grass Mixture/ Planting of native groundcover (IJLA, 2024)
	1	Year 1 Management	Routinely as required	- Control annual weed growth by regular mowing throughout the first year to minimise competition and weed seed production. - If necessary, glyphosate-based weed killer can be used to spot treat any areas with dense patches of Nettles or Bramble.

	2-30	Years 2-30 Management	Year-round	The grassland will be subject to regular mowing to a height of 30-50mm during April-August and 50-70mm for the remainder of the year.
	2-30	Removal of undesirable species	Winter i.e. October - February (outside of bird nesting season)	Targeted scrub, bracken and invasive species removal will be carried out as necessary.
Habitat Creation – Individual Trees (Section 4.3)	1	Planting	Late Autumn	- Plant native tree species. - Apply Rootgrow or Bonemeal to encourage healthy root growth. - Apply Mycorrhizal treatment to the tree roots.
	1	Year 1 Management	Routinely as required	- Remove weeds from a 1m exclusion zone around each newly planted tree. - Apply mulch around the base of the tree as required.
	2-30	Weed management	Routinely as required	Remove weeds from a 1m area around the base of the trees for the first 2-3 years.
	2-30	Pruning	October	The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms
	2-30	Monitoring	Every 3 years, late Winter – early Spring	- Trees will be inspected by a suitably experienced arborist. - General health will be assessed with remedial action recommended as necessary. - Arborist will produce a monitoring report to be sent to the LPA. - Any plants that are removed, die or become seriously damaged shall be replaced like-for-like in the next planting season.

Habitat Creation Other Neutral Grassland (Sections 4.4)	1	Creation of grassland	Ideally Autumn or Spring	The areas of other neutral grassland will be sown with either Emorsgate EM2 or Emorsgate EW1 as outlined within the planting schedule (IJLA, 2024)
	1	Year 1 Management	Routinely as required	Control annual weed growth by mowing to 50-75mm throughout the first year to minimise competition and weed seed production.
	2-30	Years 2 – 30 Management	Spring and mid to late Summer	- Mow to 100mm in Spring. - Leave to flower until late July / August. - Conduct single hay cut after flowering with growth reduced to 50mm. - Manage sections of each grassland parcel at different times from late June to the end of August.
	2-30	Removal of undesirable species	Winter i.e. October - February (outside of bird nesting season)	Targeted scrub, bracken and invasive species removal will be carried out as necessary.
Habitat Creation Mixed Scrub (Sections 4.5)	1	Plant native shrub species	Late Autumn	Plant at least 3 different native shrub species.
	1	Removal of undesirable species	Anytime	Any undesirable species present within MS1 will be removed and replaced with native species.
	1	Year 1 Management	Spring and Summer	- Weed around newly planted shrubs as necessary. - Water whenever necessary during the first growing season. - Replace any dead shrubs like-for-like.
	2-30	Cutting back / thinning	Winter i.e. October - February (outside of bird nesting season)	- Scrub will be cut back annually as needed to ensure areas do not become overgrown. - Thinning will take place routinely every 5 years.

				• Different areas will be cut back / thinned on rotation to maintain a diverse age range. • Any scrub encroaching into adjacent habitats will be cut back as needed.
	2-30	Bramble management	Winter i.e. October - February (outside of bird nesting season)	• Bramble will be cut back as necessary to maintain a density of no more than 15%.
	2-30	Invasive species removal	Winter i.e. October - February (outside of bird nesting season)	• Removal of invasive species will be undertaken as necessary if they establish on site.
	2-30	Shrub replacement	Late Autumn	• Any dead shrubs or areas that become sparse will be planted with new native shrubs, replacing like-for-like.
Habitat Creation Mixed Hedgerows (Sections 4.6)	1	Planting	Late Autumn	• Plant with native shrub species in double staggered rows with 5 plants per linear metre (if using bareroot stock) or 3-4 plants per linear metre (if using container grown stock).
	1	Year 1 Management	Spring and Summer	• Weed around newly planted shrubs as necessary. • Water whenever necessary during the first growing season. • Replace any dead shrubs like-for-like.
	2-30	Years 2 - 30 Management	Winter i.e. October - February (outside of bird nesting season)	• Formal hedgerows to be clipped as necessary to maintain desired height and width. • Use hand tools and avoid the use of flails. • Allow northern boundary hedgerow to grow cutting only one side if necessary to control growth.

	2-30	Year 2 - 30 Monitoring	Late Winter – Early Spring Years 1 – 3: Annually Years 4 – 30: Bi-annually	- Hedgerows will be inspected by a suitably experienced ecologist to assess the general health of the hedgerow. - Remedial action will be taken as necessary. - Any plants that are removed, die or become seriously damaged will be replaced like-for-like in the next planting season.
Compliance Check (Section 4.9)	1 - 30	Monitoring report (Ecologist)	Annually for the first 5 years, then every 5 years until year 30 Must be conducted during a suitable time of year and weather conditions	- A report will be produced by an ecologist to provide details on all management, assessment of habitats, additional management requirements (if required), management to be carried out in the next phase and reporting on any delays - This document will be issued to the assigned management body whom will review and undertake remedial actions as appropriate.

6.0 CONCLUSION

The aim of this report is to provide a prescription of the management of habitats in perpetuity within the site and to bring together all relevant sections of the ecological reports associated with the site 'Land Known as Interbridges, Emsworth' and use them to inform a site-wide Landscape & Ecological Management Plan. With the provision of all inclusions within this report, the site is expected to provide biodiversity enhancements for wildlife and provide appropriate mitigation and compensation measures to protect flora and fauna of value within the site.

7.0 REFERENCES

Bat Conservation Trust / Institute of Lighting Professionals (2018) *Guidance Note 08/18 Bats and Artificial Lighting in the UK*

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DFL (2024) *Interbridges, North Street, Emsworth – Lighting Strategy*, V3.5 AUG2024

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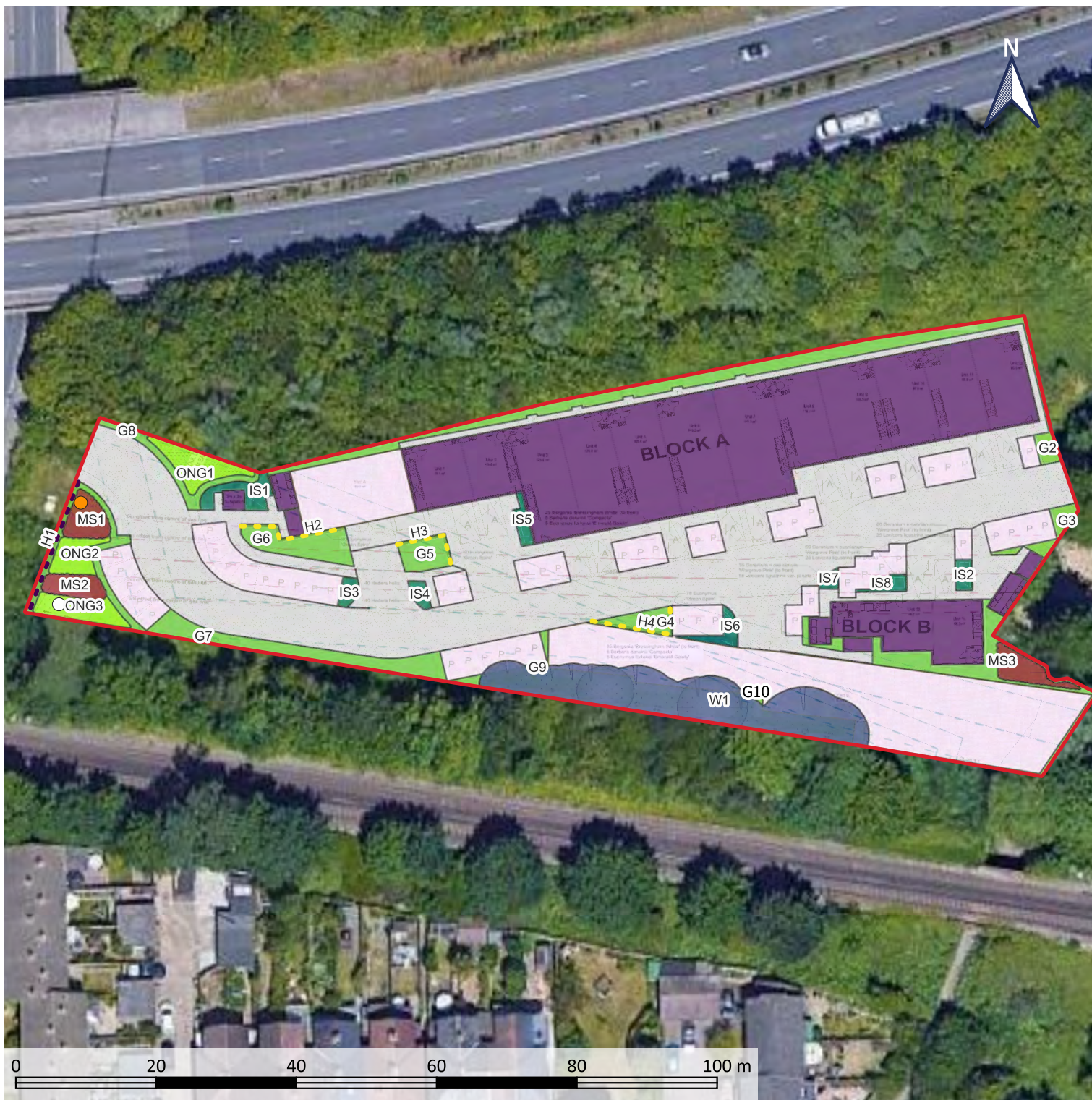
Johnston Tree Consultancy (2024) *Interbridges, North Street, Emsworth, Hampshire – Arboricultural Report and Method Statement*, November 2024

8.0 APPENDIX

Appendix A : UK Habs Map

Appendix B : Landscape Plan (*DWG No.M444-200, IJLA, 2024*)

Appendix C : Enhancement Plan



Legend

- Site boundary
- - - Native Hedgerow
- - - Non-Native Hedgerow
- Planted Individual Tree
- Retained Individual Tree
- Artificial Unvegetated; Unsealed Surface
- Building
- Developed Land; Sealed Surface
- Introduced Shrub
- Modified Grassland
- Other Neutral Grassland
- Other Woodland; Mixed
- Mixed Scrub



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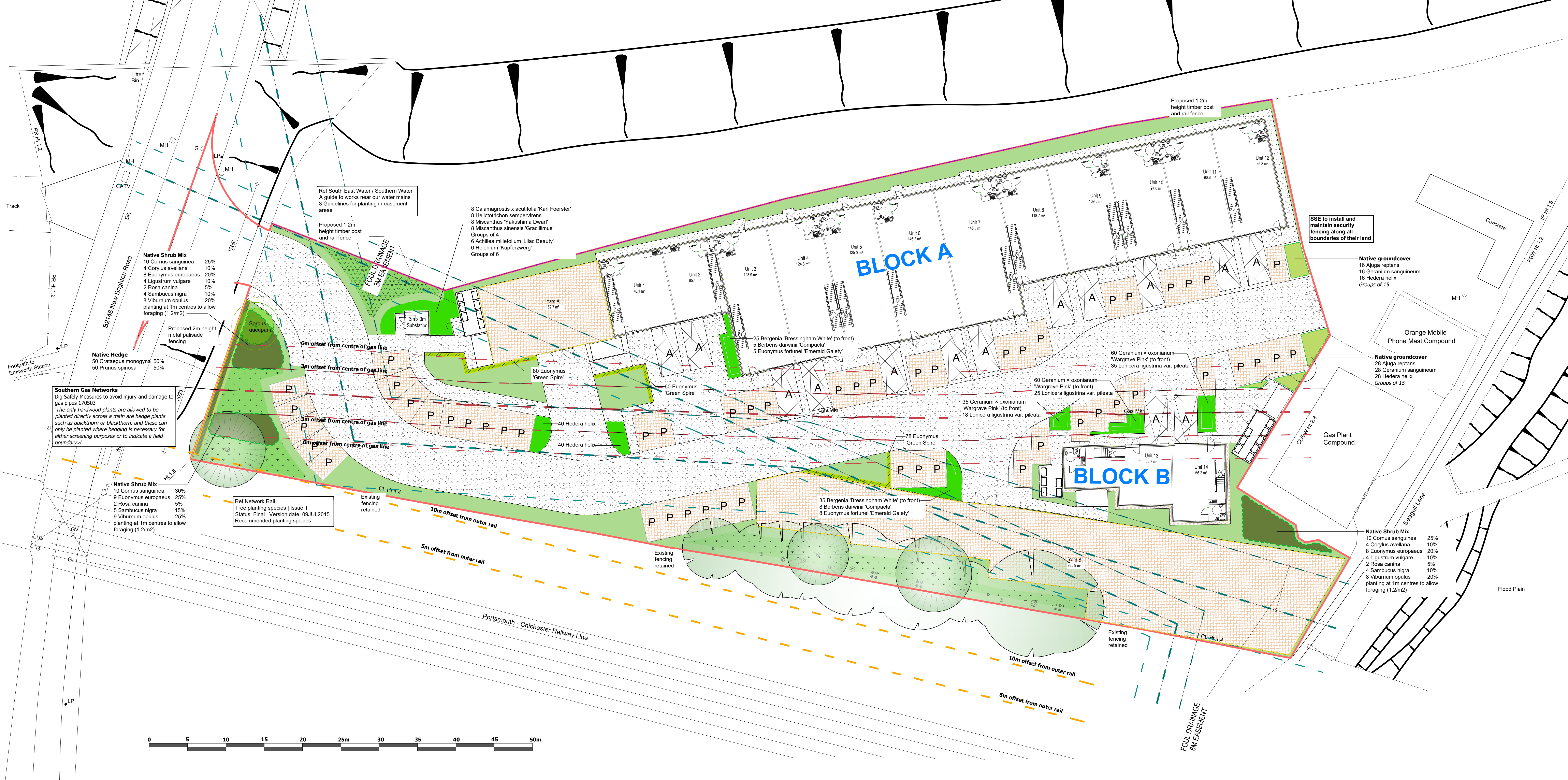
Map Post-Development Habitats

Site Land Known As Interbridges

Client PNH Properties

Date 28/11/2024

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Refer to risk register:
Tenders to confirm locations of all services prior to commencement of work on site
Tenders to refer to site wide risk register

Notes:
Landscape Implementation Guidelines.
The approved soft landscaping scheme for the whole site shall be carried out prior to occupation of the building or during the first planting season following the full completion of building works, whichever is sooner.

All planting and landscape operations should comply with the requirements specified in BS 3936 (1992) Nursery Stock Part One, BS 4428 (1989) Code of Practice for General Landscape Operations (excluding hard surfaces) and BS8545 Trees from nursery to independence in the landscape.

Any plant species shown on the approved landscape scheme which within a period of 5 years from the completion of the development dies, is removed or in the opinion of the LPA becomes seriously damaged or diseased shall be replaced in the same place in the next planting season with identical species unless the LPA gives written consent to any variation.

Proposed Tree Planting
Stock size proposed is as shown.
Tree support for standard trees to be two softwood stakes @ 7.5cm diameter @ 230cm length and should be driven into the ground to knee-height with ties and horizontal cross support.
Tree pit size to conform to BS8545 Trees from nursery to independence in the landscape.
There shall be a 1m diameter weed free mulched border to every tree, with a minimum of 50mm approved bark mulch applied.
Each shrub shall have protective guarding appropriate to species to prevent damage from pests.

Proposed Shrub & Hedge Planting
Shrub planting to be planted as shown in the plant schedule, to be planted in the first available planting season following the occupation of the building or the completion of the development (whichever is sooner), in a minimum 400mm depth of clean topsoil, with a minimum of 50mm approved bark mulch applied.
Each shrub shall have protective guarding appropriate to species to prevent damage from pests.

Additional Notes.
Existing trees and vegetation to be retained are to be protected during construction to BS 8537:2012.
Any necessary tree works to be carried out by an approved tree surgeon to BS 3998.
Trees, hedges and shrubs shown to be retained on the approved plan shall not be damaged, uprooted, felled, lopped or topped without the prior written consent of the local planning authority.
If any retained tree, hedge or shrub is removed or severely damaged during construction work, or is found to be seriously diseased or dying, another tree, hedge or shrub shall be planted at the same place and shall be of a size and species to be agreed in writing by the Local Planning Authority and shall be planted in the first planting season following the completion of the development or the occupation of the buildings, whichever is the earlier.

New footing depths must be calculated to deal with all new tree, shrub and hedge planting in accordance with the latest NHC recommendations.
Proposed tree positions are to be approved by the structural engineers responsible for foundation design.
Root barriers to be installed where trees are within 2m of services.

Landscape Maintenance (for the duration of the development)

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

WATERING
Supply: Potable mains water.
Quantity: Wet full depth of topsoil.
Application: Do not damage or loosen plants.
Compacted soil: Loosen or scoop out, to direct water to rootzone.
Frequency: As necessary for the continued thriving of all planting.

DISPOSAL OF ARISING
General: Unless specified otherwise, disposal of arising by removing from site.
LITTER - Extraneous rubbish to be collected and removed from site.

TREES/SHRUBS/HEDGES
ESTABLISHMENT OF NEW PLANTING
Weeds control:
- Method: Keep planting beds clear of weeds by maintaining full thickness of mulch.
- Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
Trees: When in leaf spray crowns in the evening during warm weather.

ESTABLISHMENT OF NEW PLANTING - FERTILIZER
Time of year: March or April.
Type: Slow release.
Spreading: Spread evenly. Carefully lift and replace any mulch materials.
- Coverage: As manufacturer's recommendations.

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

REFORMING OF TREES AND SHRUBS
Timing: After strong winds, frost heave and other disturbances.
Reforming: Tread around the base until firmly bedded.
Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and reform.
PRUNING GENERALLY
Weeds control:
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible and cut cleanly back to sound wood.
- Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
- Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
Disease or infection: Give notice if detected.
Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

Tree clear stem to be maintained at a minimum of 2m

PRUNING OF EXCESSIVE OVERHANG
Timing: Annually.
Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
Special requirements: Allow ground cover plants to partially overlap paths and lawns.

FORMATIVE PRUNING OF YOUNG TREES

Standard: Type and timing of pruning operations to suit the plant species.
Time of year: Do not prune during the late winter/ early spring sap flow period.
Young trees up to 4 m high:
- Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well balanced head and ensure the development of a single strong leader.
- Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
Whips or feathered trees: Do not prune.
Operations: Extensive pruning of young trees and any surgery to larger trees must be carried out by an approved member of the Arboricultural Association or other approved specialist.

TRIMMING SLOWLY ESTABLISHING HEDGES
Operations:
- Timing: Cut back hard in June and September to encourage bushy growth down to ground level.
- Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

REFORMING OF SHRUBS
Timing: After strong winds, frost heave and other disturbances.
Reforming: Tread around the base until firmly bedded.
Pruning: In accordance with good horticultural and arboricultural practice.
Removal of branches: Do not damage or tear the stem.
Wounds: Keep as small as possible and cut cleanly back to sound wood.
Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.

REMOVAL OF DEAD PLANT MATERIAL
Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

DEAD AND DISEASED PLANTS
Removal: As soon as possible.
Replacement: In the next suitable planting season.

WEED CONTROL GENERALLY
Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high.
HAND WEEDING
General: Remove weeds entirely, including roots.
Disturbance: Remove the minimum quantity of soil, and disturb plants and mulched surfaces as little as possible.
Completion: Rake area to a neat, clean condition.
Mulch: Reinstate to original depth.

SOIL LEVEL ADJUSTMENT
Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface. Arisings (if any) to be spread evenly over the bed.

MAINTENANCE OF LOOSE MULCH
Thickness (minimum): 50 mm.
Top up: Annually.
Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
Weeding: Remove weeds growing on or in mulch by hand weeding.

HARD LANDSCAPE AREAS/FENCING
HARD SURFACES
Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arising.
Hard surfaces: Remove litter, leaves and other debris.
Surface gutters and channels: Remove mud, silt and debris.
Drainage gullies: Empty traps and flush clean.
Flexible bituminous pavings: In accordance with the original paving specification or BS 7370-2, clause 4.12.
Stain removal: In accordance with BS 7370-2, table 4.

FENCING
Fences: Inspect and repair to maintain protection against intruders.

EW1 Woodland Mixture:

(Emorsgate Seeds EW1 or similar approved)
For uncult glade clearing

Wild Flowers 20%
1.00% Allium ursinum - Ramsons
2.00% Alliaria petiolata - Garlic Mustard
0.50% Angelica sylvestris - Wild Angelica
1.40% Anthriscus sylvestris - Cow Parsley
0.20% Arum maculatum - Lords-and-Ladies
4.00% Digitalis purpurea - Förglove
0.10% Eupatorium cannabinum - Hemp-agrimony
0.90% Filipendula ulmaria - Meadowsweet
1.50% Galium album - Hedge Bedstraw
0.10% Geum urbanum - Wood Avenis
1.60% Hyacinthoides non-scripta - Bluebell
0.10% Primula vulgaris - Primrose
1.00% Prunella vulgaris - Selfheal
0.40% Ranunculus acris - Meadow Buttercup
3.00% Silene dioica - Red Campion
0.20% Teucrium scorodonia - Wood Sage

Grasses 80%
2.40% Agrostis capillaris - Common Bent (w)
1.60% Anthoxanthum odoratum - Sweet Vernal-grass (w)
0.80% Brachypodium sylvaticum - False Brome (w)
48.00% Cynosurus cristatus - Crested Dogtail
28.00% Festuca rubra - Red Fescue
15.20% Festuca ovina - Red Fescue
6.40% Poa nemoralis - Wood Meadow-grass

Note: REFER TO SPECIFICATION FOR SOWING RATES

Standard General Purpose Meadow Mixture:

(Emorsgate Seeds EM2 or similar approved)
For uncult glade clearing

Wild Flowers
% Latin name Common name
0.3 Achillea millefolium Yarrow
0.5 Centaurea nigra Common Knapweed
1.3 Daucus carota Wild Carrot
3 Galium verum Lady's Bedstraw
0.5 Knautia anensis Field Scabious
0.2 Leontodon hispidus Rough Hawkbit
0.5 Leucanthemum vulgare Oxeye Daisy
0.5 Lotus corniculatus Birdsfoot Trefoil
2.5 Malva moschata Musk Mallow
1 Plantago lanceolata Ribwort Plantain
1 Primula veris Cowslip
1.7 Prunella vulgaris Selfheal
1.5 Ranunculus acris Meadow Buttercup
2.5 Rhinanthus minor Yellow Rattle
20%

Grasses
% Latin name Common name
8 Agrostis capillaris Common Bent
4 Cynosurus cristatus Crested Dogtail
28 Festuca rubra Red Fescue
4 Phleum bertolonii Smaller Cat's-tail
80%

Note: REFER TO SPECIFICATION FOR SOWING RATES

4g/m2 of EM2 with an additional 10g/m2 of EG22

PLANT SCHEDULE

Species **Size & Spec.** **Spacing** **No.**

Trees
Sorbus aucuparia 14-16cmg, EHS 4-4.5m height, 2m clear stem 1

Native Hedge
Crataegus monogyna 50% 2+1, 120-150, BR 5/ln m 50
Prunus spinosa 50% 2+1, 120-150, BR 5/ln m 50
planted in double staggered row

Native Shrub Mix
Cornus sanguinea 60-90 BR 1m ctr / 1.2m2 30
Corylus avellana 60-90 BR 1m ctr / 1.2m2 8
Euonymus europaeus 60-90 BR 1m ctr / 1.2m2 25
Ligustrum vulgare C1, 200-300 1m ctr / 1.2m2 8
Rosa canina C1, 200-300 1m ctr / 1.2m2 6
Sambucus nigra 60-90 BR 1m ctr / 1.2m2 13
Viburnum opulus 60-90 BR 1m ctr / 1.2m2 25
planting at 1m centres to allow foraging (1.2m2)

Native Groundcover
Ajuga reptans C1, well developed in pot 7/m2 44
Geranium sanguineum C1, well developed in pot 7/m2 44
Hedera helix C1, well developed in pot 7/m2 44

Ornamental hedge
Euonymus 'Green Spire' 20-30, C2, bushy 5 ln m 218

Shrubs
Berberis darwinii 'Compacta' 30-40, C10, bushy 1.5/m2 13
Euonymus fortunei 'Emerald Gaiety' 30-40, C10, bushy 1.5/m2 13
Lonicera ligustrina var. pileata 20-30, C2, bushy 7/m2 78

Ornamental Grasses
Calamagrostis x acutifolia 'Karl Foerster' C10 50-60, well developed 8
Helictotrichon sempervirens C10 50-60, well developed 8
Miscanthus sinensis 'Gracillimus' C10 50-60, well developed 8
Miscanthus 'Yakushima Dwarf' C10 50-60, well developed 8

Perennials
Achillea millefolium 'Lilac Beauty' C2, well developed as shown 6
Helenium 'Kupferzweig' C2, well developed as shown 6

Ground cover
Hedera helix C2, well developed 7/m2 80
Bergenia 'Bressingham White' C2, well developed 7/m2 80
Geranium x oxianum 'Wargrave Pink' C2, well developed 7/m2 155

Landscape Legend

Existing Trees
Sorbus aucuparia

Proposed Tree - refer to planting schedule

Planting - Native Shrub Buffer
Refer to plant schedule

Planting - Native Scrub Buffer
Refer to plant schedule

Planting
Refer to plant schedule

Planting - Native Hedge
Refer to plant schedule

Planting - Hedge
Refer to plant schedule

Amenity Grass

Meadow grass (Woodland mix)
Refer to plant schedule

Meadow grass (Standard General Purpose Meadow Mixture)
Refer to plant schedule

Paving - Permeable vehicular block paving, size and depth to suit use class, colour, brindle
refer to Engineer's detail and specification for bedding and bases

Surface - Tarmacadam
refer to Engineer's detail and specification

Gravel margin

Fencing - 2m height metal palisade fencing

Fencing - 1.2m height timber post and rail fencing

Refer to Arboricultural reports for details of root protection areas and tree protection



Legend

- Site boundary
- 6 No. Bat Boxes
- ◆ 6 No. Bird Boxes



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Map	Enhancements Plan
Site	Land Known As Interbridges
Client	PNH Properties
Date	29/11/2024

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