

One Horton Heath

Central Green Infrastructure (GI) Biodiversity Net Gain (BNG) Assessment

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1.0 Draft	Draft Central GI BNG Report issued to Client for review	08/01/24
1.1 Final	Final Central GI Parcel BNG Report issued to Client for submission. Updates to post-development hedgerow BNG included. Pending an addendum with River BNG results.	09/02/24

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NON-TECHNICAL SUMMARY

Purpose of the Report	To provide information baseline condition assessments of OHH Central GI Parcel and to provide the Statutory Biodiversity Metric assessment results of the post-development habitat BNG.
Proposed Development Information	The proposals will include construction of the Central Green Infrastructure including open space landscaping, bridleways, footpaths, SuDS, play areas and ecological and biodiversity enhancements at One Horton Heath.
Surveys Undertaken	An extended Phase 1 habitat survey of the Site was conducted in 2018-2020. An updated UKHab habitat survey was conducted on 1 and 13 March 2023 to transpose the Phase 1 survey results into UKHab and to provide condition assessment results for the habitats present. A Defra Metric 4.0 BNG assessment has then been conducted for the Central GI Parcel of OHH and a summary of the results is provided within this report. The Defra Metric 4.0 spreadsheet calculator is provided separately to this report.
Summary of Results	- The baseline value of the habitats within the development area (Phases 5G-5I) is 45.64 units. - The baseline value of the hedgerows is 4.48 units. - Following the assessment, it is anticipated that the value of the post-development habitats within the development area will be 59.78 units. The trading rules are satisfied. - The post-development value of the hedgerows is 5.73 units. The trading rules satisfied. - In the absence of mitigation, the development will therefore result in a net gain of 31.00% for habitat units, and 27.82% for hedgerow units.
Conclusions	Providing the recommendations for the creation and management of new habitats stated within this report are adhered to, it is considered likely that the development will exceed the mandatory requirement for development to enhance the ecological value of a site by a minimum of 10% which is outlined within the Environment Act 2021 and will become a statutory requirement from February 2024.
Monitoring & Management	A 30-year Habitat Monitoring and Management Plan (HMMP) will be implemented on Years 1, 2, 3, 5, 7, 10, 15, 20, 25 and 30.
Data Valid Until	February 2025

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1 INTRODUCTION

1.1 BACKGROUND

Johns Associates Ltd was commissioned by the One Horton Heath team on behalf of Eastleigh Borough Council to provide a Statutory Biodiversity Metric Biodiversity Net Gain (BNG) assessment of the Central GI Parcel development (hereafter referred to as the "Site"). The Site has a central Ordnance Survey (OS) grid reference of the Site is SU 48794 17139 and the Site location is shown in Figure 1. The BNG will supersede and update all previous BNGs conducted for the Site and will form the baseline from which all future monitoring of the Site will be compared and assessed against.

The assessment has been informed by previous habitat surveys conducted at the Site in 2018, 2019 and 2020 conducted in season and by an updated UKHab assessment in early March 2023 with further walkover updates in July 2023 to ground truth the transposition of the previous Phase 1 Habitat survey into UKHab habitat survey results.

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.

1.2 SUMMARY OF PROPOSALS

The proposals will include construction of the Central Green Infrastructure including open space landscaping, bridleways, footpaths, SuDS, play areas and ecological and biodiversity enhancements at One Horton Heath.

1.3 PURPOSE OF THIS REPORT

This report has been produced to provide the Statutory Biodiversity Metric assessment for the Site based upon the previous Phase 1 Habitat survey baseline results conducted in July/August 2018, August 2019, and July/August 2020. The Site was re-surveyed in March 2023 using the UKHab system to convert the previous Phase 1 habitat survey results into the most current system for habitat survey and condition assessment.

The post-development landscape and ecological plans produced by Deacon Design have informed the post-development BNG calculations and the plans were designed with ecological advice and through consultation with the landscape team and Eastleigh Borough Council ecology team to avoid habitats of higher distinctiveness and to maximise the BNG through the proposed plans connecting habitats within the site to the wider landscape.

1.4 STATUTORY BIODIVERSITY METRIC

The Statutory Biodiversity Metric uses habitat as a proxy for overall biodiversity within different habitat types. Habitats are assigned a value based on their intrinsic biodiversity value or 'distinctiveness', which is predefined for each habitat within the metric. This value is then multiplied based on the size, condition, and geographical location of the habitat in order to ascertain its absolute value in 'biodiversity units'. Separate calculations are used within the metric for area-based habitats, linear habitats (such as hedgerows) and watercourses (including ditches and streams). These units are non-transferable and must therefore be considered individually for each project or development. Hereafter they will be referred to as "habitat units", "hedgerow units" and "river units" respectively. Collectively, they will be referred to as "biodiversity units".

Natural England provides a Calculation Tool with all calculations built in to aid in the assessment process. This report should be read in conjunction with the Calculation Tool provided for the assessment of this Site.

Underlying this assessment process are a key set of principles which explain the intended use of the Metric. They are as follows:

- Principle 1 – The metric assessment should be completed by a competent person;
- Principle 2 – The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licensing processes, for example woodlands;
- Principle 3 – This biodiversity metric should be used in accordance with established good practice guidance and professional codes;
- Principle 4 – This biodiversity metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice;
- Principle 5 – Biodiversity units are a proxy for biodiversity and should be treated as relative values;
- Principle 6 – This biodiversity metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance;
- Principle 7 – Habitat interventions need to be realistic and deliverable within a relevant project timeframe;
- Principle 8 – Created and enhanced habitats should be, where practical and reasonable, local to any impact and deliver strategically important outcomes for nature conservation; and
- Principle 9 – This biodiversity metric does not enforce a minimum habitat size ratio for compensation of losses. Proposals should aim to:
 - maintain habitat extent - supporting more, bigger, better and more joined up ecological networks;
 - ensure that proposed or retained habitat parcels are of sufficient size for ecological function.

During the process of undertaking a biodiversity net gain assessment using the Statutory Biodiversity Metric, the following rules must be followed to ensure its proper use:

- Rule 1 – The trading rules of this biodiversity metric must be followed;
- Rule 2 – Biodiversity unit outputs, for each type of unit, must not be summed, traded, or converted between types. The requirement to deliver at least a 10% net gain applies to each type of unit;
- Rule 3 – To accurately apply the biodiversity metric formula, you must use the biodiversity metric calculation tool or small sites biodiversity metric tool (SSM) for small sites. The tools remove the need for a user to manually calculate the change in biodiversity value. The tool will summarise the results of the calculation and inform a user whether the biodiversity net gain objective has been met;
- Rule 4 – In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority.

1.5 PERSONNEL

The updated Condition Assessments and BNG calculations were led by Lexi Dowson Wallace BSc (Hons) MSc ACIEEM and supported by Tessa Pepler BSc (Hons) MSc MCIEEM. Lexi is a Senior Consultant at Johns Associates who has worked

as an ecological consultant since 2015. Lexi is highly experienced in conducting BNG assessments and is the BNG Lead at Johns Associates.

Tessa is a Principal Ecologist at Johns Associates who has worked as an ecological consultant since 2005 and has a BSc (Hons) in Environmental Studies and an MSc in Ecology and Management of the Natural Environment. Tessa is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and holds Natural England Class 1 survey licences for bats, great crested newts and dormice.

1.6 LEGISLATION AND POLICY

The legislation and national and local planning policies which are relevant to this assessment are provided in Appendix A to this report.

Figure 1: Site Location



2 METHODOLOGY

2.1 STRATEGIC SIGNIFICANCE

As part of the BNG assessment, habitats are afforded different levels of strategic significance, which describes the local significance of the habitat based on its location and the habitat type. Habitats were assigned a strategic significance value using the Biodiversity Action Plan (BAP) for Eastleigh Borough 2012-2022 and the Hampshire Ecological Network Mapping document provided as part of the data search by HBIC. The strategic significance is assigned to be high, moderate, and low.

2.2 DISTINCTIVENESS

For the purposes of the metric assessment, distinctiveness refers to the relative scarcity of the habitat and its importance for nature conservation. The actual values assigned to each habitat type used in the metric are given in the Technical Supplement. These are automatically applied by the calculator tool based on the habitat type.

2.3 HABITAT CLASSIFICATION AND CONDITION ASSESSMENT

2.3.1 UKHab Field Survey

A UKHab survey of the Site was undertaken on 1 and 13 March 2023 by experienced ecologists Tessa Pepler BSc (Hons) MSc MCIEEM and Lexi Dowson-Wallace BSc (Hons) MSc ACIEEM from Johns Associates Ltd. The weather was dry and sunny with good visibility. This survey was completed in accordance with the UK Habitat Classification (UKHab) (2020) guidelines, Preliminary Ecological Appraisal (CIEEM, 2017) and BS 42020:2013 Biodiversity - Code of practice for planning and development (British Standards Institute, 2013).

The previous Phase 1 Habitats surveyed in July/August 2018, August 2019, and July/August 2020 by Katherine Newbert BSc (Hons) MSc, Wiltshire County Botanical Recorder were reviewed and transposed into UKHab habitats (Appendix B) with an updated condition assessment where this information was not available within the previous Phase 1 Habitat Report (OHH, Environment Statement Chapter 10: Ecology - Appendix 10.2).

2.3.2 Habitat Classification

The on-Site habitats were classified following UK Habitat Classification (UKHab) (2020) guidelines (which were the most up to date guidelines at the time of survey), which provides a more detailed interpretation of baseline habitat survey data than previous habitat classifications systems, such as Phase 1 Habitat Assessments. The professional edition of UKHab "UK Habitat Classification –Professional Edition¹" (UKHab-P) was used which includes Priority Habitat Types, all Annex 1 Habitats and the habitats listed in EUNIS.

The classification of primary habitats is hierarchical with five levels, which include terrestrial/freshwater/marine, ecosystem types, broad habitats, priority habitats and Annex 1 habitats. Habitat types were assigned a primary code to a hierarchical level of at least three, and secondary codes were 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 following UKHab-P were used, which are grouped under the following headings of which the first three listed are considered mandatory sections.

¹ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at <http://www.ukhab.org/>

- Habitat Mosaics (10 - 18)
- Habitat Complexes (19 – 32)
- Origin (33 – 49)
- Management (51 – 85)
- Land Use (86 – 116)
- Environmental Qualifier (117 – 138)

2.3.3 Condition Assessment

An annotated habitat map together with descriptions of the recorded habitat types was produced, which was subsequently digitised using a geographical information system (ArcGIS). The survey also included identification of any non-native invasive plant species. Flora taxonomy follows the nomenclature detailed in New Flora of the British Isles (4th Edition) (Stace C. , 2019). Flora, where appropriate, are 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)

Each habitat parcel is assessed on its condition via a series of relevant criteria as per The Biodiversity Metric 4.0 User Guide (Natural England, 2023a) and The Biodiversity Metric 4.0 – Technical Annex 1: Condition Assessment Sheets and Methodology (Natural England, 2023b).

Information recorded including species abundance, presence of non-native species, undesirable species, management, habitat structure, human impacts and age of habitats were recorded using the Defra Metric 4.0 Habitat Condition sheets in the field which are appended to this report.

2.4 STATUTORY BIODIVERSITY METRIC METHODOLOGY

The Statutory Biodiversity Metric provides a nationally measurable structured calculation methodology to account for biodiversity losses and gains resulting from development or land management change. The Statutory Biodiversity Metric uses habitat, the places in which species live, as a proxy to describe biodiversity. These habitats are converted into measurable 'biodiversity units'. These biodiversity units are the 'currency' of the metric.

Biodiversity units are calculated using the size of a parcel of habitat and its quality. The metric uses habitat area as its core measurement, except for linear habitats where habitat length is used. To assess the quality of a habitat the metric scores habitats of different types, such as woodland or grassland, according to their relative biodiversity value. Habitats that are scarce or declining typically score highly relative to habitats that are more common and widespread. The metric also takes account of the condition of a habitat. The metric accounts for the location of the habitat relative to other similar habitats to measure its connectedness in the landscape. Being 'better' and 'more joined-up' are important facets

of habitats that can contribute to halting and reversing biodiversity declines⁵. Lastly, the metric also accounts for whether or not the habitat is sited in an area identified locally, typically in a relevant policy of plan, as being of significance for nature.

Where new habitat is created, or existing habitat is enhanced the difficulty and associated risks of doing so are taken into account by the metric. If habitat is created to compensate for losses elsewhere, then the metric also takes account of its proximity to the impact site. The metric incentivises delivery that is on or close to the impact site.

The Statutory Biodiversity Metric score has been calculated for the existing habitats at the Site and for the habitats proposed within the masterplan. The Site was split into distinct habitat parcels and linear habitats based on the UKHab system, which were then mapped and measured using the ArcGIS mapping tool. Baseline habitats are shown in Figure 2.

The area or length of each habitat type was entered into the Calculation Tool along with the condition and strategic significance (informed by the desk study) in order to obtain the baseline (i.e. existing) value of each in biodiversity units. This process was repeated for the post-development habitats to be retained, enhanced and/or newly created. The post-development habitat plan is shown in Figure 3.

BNG is an approach to development that seeks to halt the current loss of biodiversity through development and through the planning system; restore ecological networks through early masterplanning and increase the natural habitat resource and ecological features. This has been included within the Environment Act 2021, and a mandatory requirement for development to enhance the ecological value of a site by a minimum of 10% will come into force in February 2024.

2.5 LIMITATIONS, CONSTRAINTS AND ASSUMPTIONS

The findings of this report are valid at the time of reporting. Should there be delays to the project timetable and/or implementation of the proposed development, updated desk study and/or site survey work may be required. In this instance, advice should be sought to ensure the data, recommendations and conclusions set out in this report remain valid.

The original extended Phase 1 Habitat Survey was undertaken in early March, which is outside of the JNCC's optimum field survey season for the south of England (from late March to Mid-October), wherein the most accurate picture of the vegetation communities present can be gained. The results of the previously recorded species from botanical surveys conducted in July/August 2018, 2019, and 2020 and updated walkover inspection in July 2023 have been used to inform the condition assessments. Where these are not present for a parcel; a precautionary condition has been applied e.g. a condition level higher than that surveyed in March 2023.

No other limitations or constraints with regards to the field survey or desk study were encountered and therefore the BNG calculations are considered valid.

3 BIODIVERSITY NET GAIN RESULT

3.1 STRATEGIC SIGNIFICANCE

The Site is adjacent to strategic locations identified in the Eastleigh Borough Council Biodiversity Action Plan 2012-22. This assessment concluded that the habitats on site are well connected to the wider landscape via suitable, high value connective habitats and have the potential to for valuable connective habitats as part of the wider Hampshire biodiversity network. This level of strategic significance is applied consistently to both lost and enhanced/created habitats. The results of the strategic significance assessment are as follows:

High

- All areas included within the HBIC Ecological Network Map. This includes biodiversity opportunity areas, core statutory sites, core non-statutory sites and network opportunity areas.
- Priority habitats as identified within the Biodiversity Action Plan (BAP) for Eastleigh Borough 2012-2022. Priority habitats relevant to this application include: lowland mixed deciduous woodlands; pond; lowland fens; reedbeds; and hedgerows.

Medium

- Areas located adjacent to 'high' strategic significance areas which are considered to provide ecological connectivity to the wider landscape such as woodland and grassland were categorised as having 'medium' strategic significance.

Low

- Areas that are not included in or are adjacent to the HBIC Ecological Network Map were categorised as having 'low' strategic significance. Areas adjacent to areas of high strategic significance that do not provide ecological connectivity to the wider landscape such as cereal crops, were also categorised as having a 'low' strategic significance.

3.2 BASELINE

3.2.1 Cropland – Cereal Crops c1c

Maize *Zea sp.* crops were grown in C3. The field had narrow margins which are retained un-ploughed, up to a width of 1 m at the base of hedges.

3.2.2 Grassland - Modified Grassland g4

Modified grassland (F12, F13) was largely unmanaged at the time of survey, becoming particularly rank and tussocky in F13. The sward was dominated by common and competitive grass species, with a small diversity of forb species which are tolerant of nutrient-enriched and disturbed soils. Typical species within this community include perennial rye-grass *Lolium perenne*, creeping bent *Agrostis stolonifera* and Yorkshire fog *Holcus lanatus*. Forb species present at low frequency and abundance included curled dock *Rumex crispus*, creeping thistle *Cirsium arvense*, ribwort plantain *Plantago lanceolata* and white clover *Trifolium repens*.

3.2.3 Grassland – Other Neutral Grassland g3c

Land within F27 comprised a dry shallow ditch within marshy grassland where management had been abandoned and the sward was becoming tall and rank with species such as hemlock-water dropwort *Oenanthe crocata* becoming dominant. The ditch was deemed likely to hold water at wetter times of year. Species recorded included common sorrel *Rumex acetosa*, marsh bedstraw *Galium palustre*, creeping buttercup *Ranunculus repens*, soft rush *Juncus effusus*, Yorkshire fog and common nettle.

3.2.4 Heathland and Scrub – Mixed Scrub h3h

A wet ditch/depression was situated beneath dense willow *Salix* sp. scrub growth. The dense scrub (S1) supported a number of fallen willows *Salix* sp. with growth from the horizontal trunks and fallen dead trees.

3.2.5 Heathland and Scrub – Hawthorn Scrub h3f

Recently planted hawthorn *Crataegus monogyna* hedgerow which has failed, probably due to cattle grazing. Plants are bushy but no more than 30 cm high and sporadic. This has been classified as hawthorn scrub, as opposed to hedgerow, due to the fact that it was never a continuous shrubby linear feature.

3.2.6 Other Woodland; Broadleaved – w1g7

Broadleaved semi-natural woodland (W3) included a woodbank at the Central boundary. The canopy was dominated by oak *Quercus robur* with frequent ash *Fraxinus excelsior*. The woodland was unmanaged, with a sparse understorey of grey willow *Salix cinerea* and hazel *Corylus avellana* in places and in others dominated by bramble *Rubus fruticosus* agg.. Ground flora was largely species-poor and dominated by nettle but included locally frequent remote sedge *Carex remota* in places.

The woodland sloped down to a shallow depression running through the centre of the habitat approximately 20 cm depth and 1 m width. This was largely dry at the time of survey with the exception of isolated pools but is thought likely to hold running water at times of high rainfall. The stream bed was largely free of vegetation with an orange iron precipitate on the surface and heavily shaded by the canopy. Lesser pond sedge *Carex acutiformis* was present at low abundance.

W7 is a continuation of W3 with a similar species composition but situated on slightly elevated drier land.

3.2.7 Hedgerows

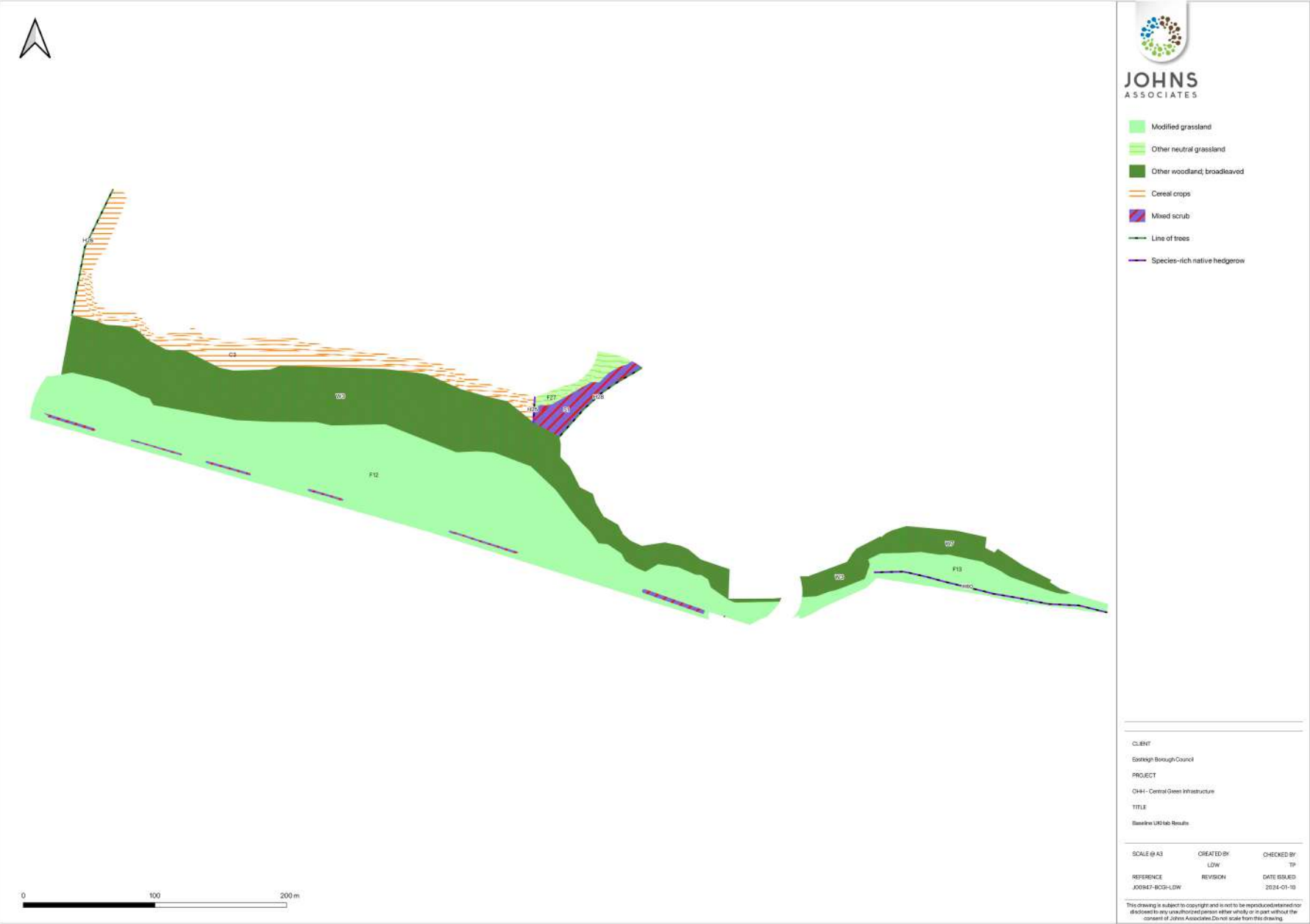
The hedgerow numbers, classification and descriptions are provided in Table 1.

Table 1: Hedgerows and their descriptions

Hedgerow Number	Classification	Description
H25	Species-rich native hedgerow	An outgrown hedge, with the most abundant woody species comprising hazel, English elm <i>Ulmus procera</i> and hawthorn. Oak, rose <i>Rosa</i> sp., dogwood <i>Cornus sanguinea</i> , ash, field maple <i>Acer campestre</i> and blackthorn <i>Prunus spinosa</i> were also present. Ground flora was species poor with locally abundant stands of bracken <i>Pteridium aquilinum</i> . The hedgerow reached 5 m height, and 1 m width.
H26	Line of trees – associated with bank or ditch	This hedgerow was similar in character to H25 in species composition, although supported a greater proportion of standard mature oak and ash trees. The hedgerow reached approximately 5 m height in general.
H28	Line of trees – associated with bank or ditch (defunct)	A lack of management had resulted in an outgrown hedge of mostly mature standard trees and large shrubs. Woody species included oak, ash, blackthorn, bramble, broom <i>Cytisus scoparius</i> and holly <i>Ilex aquifolium</i> . The hedgerow was

Hedgerow Number	Classification	Description
		situated upon a small bank with an associated small ditch. The ground flora was species poor. Evidence of management in the past by hedge laying was evident.
H60	Species-rich native hedgerow with ditch	Woody species include bramble, blackthorn, rose, hawthorn, ash, and hazel. The hedgerow is dense but gappy at the base in places and managed by flailing to a height of 3 m and a width of 1 m. The hedgerow has an integral small ditch.

Figure 2: Baseline Habitats



3.3 BASELINE HABITAT ASSESSMENT

Tables 2 and 3 below detail the specific area-based and linear existing habitat types respectively (Figure 2), with their relative conditions and baseline area unit values.

Table 2: Summary of baseline assessment for habitats

Broad Habitat	Habitat	Distinctiveness	Area (Ha)	Condition	Units
Cropland	Cereal crops	Low	0.6391	N/A	1.27
Grassland	Modified grassland	Low	0.3946	Poor	0.86
			2.6206	Moderate	11.53
	Other neutral grassland	Medium	0.0742	Good	1.00
Heathland and Shrub	Hawthorn scrub	Medium	0.0469	Poor	0.22
	Mixed scrub	Medium	0.1249	Moderate	1.15
Woodland and Forest	Other woodland; broadleaved	Medium	0.2212	Moderate	2.04
			1.9993	Good	27.59
		Totals	6.12		45.64

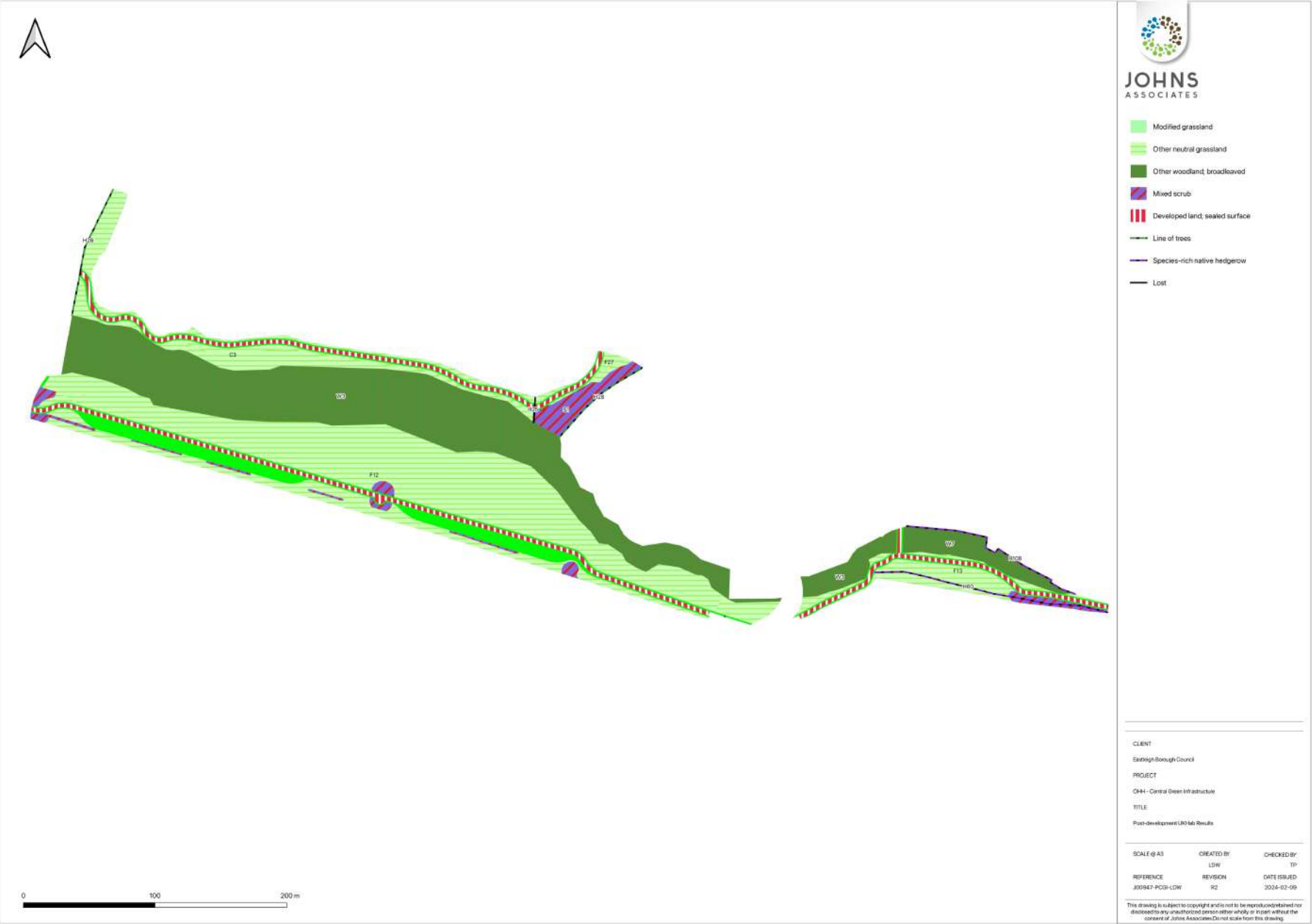
Table 3: Summary of baseline assessment for hedgerows

Linear Habitat	Distinctiveness	Length (km)	Condition	Units
Line of trees	Low	0.102	Moderate	0.47
Line of trees – associated with bank or ditch		0.080	Moderate	0.37
Species-rich native hedgerow	Medium	0.019	Poor	0.08
Species-rich native hedgerow - associated with bank or ditch	High	0.180	Good	3.56
Totals		0.381		4.48

3.4 POST-DEVELOPMENT HABITAT ASSESSMENT

The post-development proposals for the Site comprise the retention of the woodland, and the enhancement of grassland to species-rich other neutral grassland with the addition of a footpath. The following calculations are based on Central Green Infrastructure Sheets 1-3 of 3 (dwg. DD579L13-R6, DD579L14-R6, DD579L15-R6 produced by Deacon Design). The landscape and ecological plan comprise retainment of existing area-based habitats, enhancement of existing habitats and also newly created habitats. See Figure 3 for the post-development UKHab habitat map.

Figure 3: Post-development Habitats



3.4.1 Habitats

Table 4 below details the specific post-development habitat types, their proposed conditions and unit values for the Central GI parcel.

Table 4: Summary of post-development assessment for habitats

Broad Habitat Type	Habitat	Distinctiveness	Area (Ha)	Condition	Units
Urban	Sealed surface/ hardstanding	V. low	0.3843	N/A	0.00
Grassland	Modified grassland	Low	0.5252	Moderate	2.01
	Other neutral grassland	Medium	0.7113	Moderate	5.16
			2.0403	Good	19.53
Heathland and shrub	Hawthorn scrub	Medium	0.0320	Poor	0.15
	Mixed scrub	Medium	0.2166	Moderate	1.84
Individual trees	Rural trees (67 small trees)	Medium	0.2728	Moderate	0.92
Woodland and forest	Other broadleaved woodland	Medium	2.2111	Good	30.1
Totals			6.12*		59.78

* Total shown excludes additional area of individual trees.

3.4.2 Hedgerow Habitats

Table 5 below details the specific post-development hedgerow types, their proposed conditions and unit values.

Table 5: Summary of post-development assessment for hedgerows

Linear Habitat Type	Retained/ Enhanced/ Created?	Distinctiveness	Length (km)	Condition	Units
Line of trees	Retained	Low	0.096	Moderate	0.44
Line of trees – associated with bank or ditch			0.080	Moderate	0.37
Species-rich native hedgerow	Created	Medium	0.151	Good	1.36
Species-rich native hedgerow – associated with bank or ditch	Retained	High	0.180	Good	3.56
Totals			0.507		5.73

3.4.3 Headline Results

As demonstrated in Table 6 below, the biodiversity net gain results show an overall net gain in habitats and hedgerows. The trading rules are satisfied for both.

Table 6: Summary of biodiversity net gain assessment before offsetting

Unit Type	Baseline Units	Post-development Units	Net Unit Change	% Change	Trading Rules Satisfied?
Habitat	45.64	59.78	14.15	31.00	Yes
Hedgerow	4.48	5.73	1.25	27.82	Yes

3.4.4 Application of the Mitigation Hierarchy

Because some area-based habitats and hedgerows are being lost in order to facilitate the proposed development, compensation and enhancement has been incorporated into the design in order to ensure compliance with Rule 1 and Principle 8 of the Metric User Guide. Table 7 demonstrates how the mitigation hierarchy has been applied to all habitats on Site in accordance with Principle 3 of the Metric User Guide. A map showing habitats to be retained (and protected during construction), enhanced, and lost can be found in Appendix B.

Biodiversity units are more easily achievable when habitats are retained and protected during construction and thereafter enhanced through improved management practices or additional planting (Principle 6 of the Metric User Guide). Therefore, as per the mitigation hierarchy, the improvement of the distinctiveness or condition (or both) of the retained habitats should always be a high priority. In this case, the enhancement of retained tree lines is not practicable, therefore new habitat creation is proposed in order to compensate for losses and provide sufficient enhancement to the Site overall.

Table 7: Application of the mitigation hierarchy

Broad Habitat Type		Impacts Avoided?	Habitat Lost	Compensation to Meet Trading Rules	Details/ Recommendations
Cropland		No	0.6391 ha of cropland (1.27 units)	Same distinctiveness or better habitat required	- Creation of 0.5252 ha of modified grassland (2.01 units) 0.0331 ha of other neutral grassland to be retained (0.44 units) - Creation of 0.4545 ha of other neutral grassland (3.92 units) - Enhancement of 2.264 ha modified grassland to other neutral grassland (20.33 units).
Grassland		No	0.7512 ha of modified grassland (2.94 units)		
			0.0411 ha of other neutral grassland (0.56 units)	Same broad habitat or a higher distinctiveness habitat required	0.032 ha of hawthorn scrub to be retained (0.15 units) 0.1231 ha of mixed scrub to be retained (S1) (1.13 units) - Creation of 0.0935 ha of mixed scrub (0.68 units). 1.9993 ha of woodland to be retained (W3) (27.59 units) 0.2118ha of woodland to be enhanced (W7) (2.64 units) 67 small trees to be planted (0.92 units).
Heathland and Shrub		No	0.0149 ha of hawthorn scrub (0.07 units)		
			0.0018 ha of mixed scrub (0.02 units)		
Woodland and Forest		No	0.0094 ha of broadleaved woodland (0.09 units)		
Hedgerows	Lines of Trees	No	0.006 km lost (0.03 units)	Same distinctiveness band or better	0.176 km lines of trees to be retained (H26, H28) (0.81 units) 0.151 km of species-rich hedgerow to be created (H108) (1.36 units)
	Species-rich Hedgerows	No	0.019 km lost (0.08 units)		
	Species-rich Hedgerows with bank or ditch	Yes	N/A	Like for like or better	0.18km of species-rich hedgerow with bank or ditch to be retained (H60) (3.56 units).

3.4.5 Compensation and Enhancements

Table 8 below details the compensation and enhancement measures which will be implemented in order to achieve the net gain in area and linear units stated in Table 7 above. These should be read in conjunction with a Landscape and Ecology Management Plan (LEMP) and a Habitat Monitoring and Management Plan (HMMP).

Table 8: Proposed compensation and enhancement measures

Habitat Type	Proposed Compensation or Enhancement Measure	Target Condition	Delivery Details
Grassland	Creation of 0.5252 ha of modified grassland	Moderate	In order to satisfy the criteria for moderate condition as per the Statutory Biodiversity Metric, the following must apply: - There must be 6-8 vascular plant species per m² - The sward height must be varied with at least 20% of the sward >7cm in height, and 20% <7cm - No bracken or scrub encroachment should be allowed to establish - No invasive non-native species should be present.
	Creation, retention and enhancement of 2.7516ha of other neutral grassland	Moderate	In order to satisfy the criteria for moderate condition, the following must apply: - The appearance and composition must fit the UKHab definition of other neutral grassland - The sward height must be varied with at least 20% of the sward >7cm in height, and 20% <7cm - No bracken or scrub encroachment should be allowed to establish - No invasive non-native species should be present.
		Good	In order to achieve good condition, the following must apply: - The appearance and composition must fit the UKHab definition of other neutral grassland - At least 10 vascular plant species per m² should be present, including forbs that are characteristic of the habitat type - The sward height must be varied with at least 20% of the sward >7cm in height, and 20% <7cm - No bracken or scrub encroachment should be allowed to establish - No invasive non-native species should be present.
Woodland and Forest	Retention and enhancement of 2.2111ha of other broadleaved woodland	Good	See appended Woodland Condition Assessment sheet (Appendix C).
Heathland and Scrub	Retention of 0.032 ha of hawthorn scrub	Poor	There are no specific criteria requirements to meet 'poor' condition under Statutory Biodiversity Metric guidance, however, in order to maximise benefits to wildlife and to ensure the habitat is not degraded further, the following should apply: - An absence of invasive non-natives, and species indicative of sub-optimal condition should make up <5% of ground cover - The scrub must remain hawthorn dominant and bramble encroachment should not exceed 50% of ground cover - The scrub should be allowed to naturally mature such that seedlings, sapling, young and mature shrubs are all present.
	Creation and retention of 0.2166 ha of mixed scrub	Moderate	In order to achieve moderate condition, at least three of the following must apply: - The appearance and composition must fit the UKHab definition of mixed scrub - No invasive non-native species should be present - The scrub should have a well-developed edge with scattered scrub and tall grassland and/or forbs present between the scrub and adjacent habitat - Clearings, glades or rides should be present within the scrub.

Trees	Planting of 67 small trees	Moderate	In order to achieve moderate condition, <u>at least two</u> of following must apply: - Tree species should be native - Trees should not be unnecessarily pruned or subjected to detrimental activities - Deadwood, cavities, ivy and loose bark should be preserved - At least 20% of the tree canopy should oversail vegetation beneath.
Hedgerows	Retention of 0.176 km of line of trees	Moderate	In order to achieve at least moderate condition, <u>at least three</u> of the following must apply: - At least 70% of trees are native - The canopy is predominantly continuous with gaps <10% and no gap >5m wide - One or more trees has veteran features and/or natural niches for vertebrates and invertebrates such as deadwood, cavities, ivy or loose bark - There is an undisturbed naturally vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing) At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.
	Retention and creation of 0.331 km of species-rich hedgerow	Good	In order to achieve good condition, the following must apply: - The hedgerow should be >1.5m in height on average - The hedgerows should be >1.5m in width on average - Gap between ground and base of canopy should be <0.5m for at least 90% of the length - Canopy gaps make up <10% of total length and no gaps are >5m wide - Plant species indicative of nutrient enrichment should account for <20% of ground flora at the hedge base OR >1m of undisturbed ground with herbaceous perennial vegetation is present on at least one side of the hedgerow (this should be left largely unmanaged, especially over winter, to maximise the value for wildlife) - >90% of the hedgerow is free of undesirable species OR >90% of the hedgerow is free of damage from human activities

4 CONCLUSIONS

Provided that the recommendations for creation and management of habitats can be adhered to, it is predicted that the development will achieve a net gain of **31.00%** in habitats. It is anticipated that the development will result in a net gain of **27.82%** in hedgerows. The trading rules are met for both.

It is recommended that a CEMP be produced in order to set out avoidance and mitigation measures during construction, particularly in relation to **retained and enhanced** habitats, and root protection zones. A LMP and HMMP will need to also be provided to ensure that the required habitats and habitat conditions are created, maintained and monitored appropriately to ensure that the BNG conditions stated within this assessment are achieved. Monitoring Site visits will be required to be conducted on Years 1, 2, 3, 5, 7, 10, 15, 20, 25 and 30 and follow up Site visits will also be required following any remediation measures being implemented to ensure success.

If any significant changes to the proposals shown in Figure 3 occur, a reassessment of the potential impacts may be required.

APPENDIX A – LEGISLATION AND PLANNING POLICY

LEGISLATION

Many species of animal and plant receive some degree of legal protection. For the purposes of this report, legal protection refers to: species included on Annex II of the Habitats Directive 1992 (Council of European Communities, 22/07/1992) , Schedules 2 and 5 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended) , excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]) reflecting the fact that the proposed development does not include any proposals relating to the sale of species.

Legal offences associated with species listed on Schedule 2 of the Conservation of Habitats and Species Regulations and Schedule 5 of the Wildlife and Countryside Act in England and Wales include inter alia:

- Deliberate capture, injury or killing of animals or taking or destroying their eggs;
- Deliberately disturb animals in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young;
- Intentional or reckless disturbance of an animal in its place of shelter or protection;
- Damaging or destroying a resting place or breeding site;
- Intentionally or recklessly obstructing access to a place of shelter or protection; and
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead animal or any part of an animal.

Relevant species listed on these Schedules that are potentially associated with this Site include bats and reptile species (e.g. slow worm). All species of bat receive full protection from all legal offences listed above. Common reptile species receive partial protection under the Wildlife and Countryside Act in that they are protected from killing and injury only.

All species of wild bird are protected under the Wildlife and Countryside Act (1981) (as amended) from killing or injury. In addition, it is an offence to take or damage/ destroy their eggs and to damage or destroy a nest whilst it is in use. Species listed on Schedule 1 (such as barn owl) receive additional protection in that it is illegal to disturb birds or their young whilst occupying, or near to, an active nest.

A number of wild plants, habitats and animals (including reptiles, hedgehog and most species of bat) are also included within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 which lists flora, fauna and habitats considered by the Secretary of State to be of principal importance for conserving biodiversity. The publication of the "England Biodiversity List" satisfies the requirements of Section 41 of the NERC Act 2006 for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires public bodies, including local planning authorities, to have regard for the conservation of biodiversity in England, when carrying out their normal functions.

Badgers are protected under the Protection of Badgers Act 1992 (UK Government, 1992) which makes it an offence to willfully kill, injure or take (or attempt to kill, injure or take) a badger; or to disturb badgers whilst occupying their setts.

NATIONAL PLANNING POLICY

There are numerous national and local planning policies associated with flora and fauna (also referred to as biodiversity) that need to be addressed as part of the planning process. The Government has issued its National Planning Policy Framework (NPPF) 2021, which requires impacts to biodiversity to be minimised. Paragraph 181 of the NPPF applies the same protection to Ramsar sites as that conferred by the Habitats Regulations to SACs and SPAs. The NPPF requires development to apply the following principles (Paragraphs 179-180):

- Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressure;
- Identify and pursue opportunities for securing measurable net gains for biodiversity;
- Ensure that there will be no adverse impacts to SSSIs (such development would not normally be permitted);
- Ensure that there will be no loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- Where significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts) adequate mitigation, or as a last resort compensation, must be provided.
- The NPPF and associated Planning Practice Guidance also emphasise the requirement for ecological networks and wildlife corridors to be created throughout the wider landscape (paragraph 179).

Planning authorities should follow key principles to ensure that the potential impacts of planning decisions on biodiversity conservation are considered. Circular 06/05: Biodiversity and Geological Conservation provides guidance on the application of the law relating to planning and nature conservation and complements the NPPF.

The Natural Environment Paper

“The Natural Choice: Securing the Value of Nature” outlines the Governments approach and vision for nature in the UK including protecting and improving our natural environment, growing a green economy and reconnecting people and nature.

Biodiversity 2020

A strategy for England’s wildlife and ecosystem services, are the country level strategies for England and builds on the natural Environment White Paper. It sets out the strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea. The priorities for action include a more integrated large-scale approach to conservation, putting people at the heart of biodiversity policy, reducing environmental pressure and improving knowledge.

LOCAL PLANNING POLICY

Eastleigh Borough Council’s Local Plan 2016 to 2032 (dated April 2022) contains Policies relating to the natural environment which are reproduced below:

Policy DM11, Nature Conservation

1. The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:
 - a. protect, conserve, enhance and facilitate adaption to climate change:
 - i. international, national and local nature conservation designations; and
 - ii. networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character.
 - b. assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);

- c. seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and
 - d. contribute to major elements of the PfSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements (see strategic policy S9).
- 2. Development which is likely (either individually or in combination with other developments) to adversely affect the integrity of an international or European nature conservation site will not be permitted subject only to imperative reasons of overriding public interest and securing any necessary compensatory measures in the absence of alternative solutions. A 'project level' Habitat Regulations Assessment will be required where there are likely significant effects or uncertainty. Any mitigation measures required to ensure no adverse impact must be implemented at the appropriate time.
- 3. The Council will work with PfSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement with developers a strategic approach to the protection and enhancement of international and European sites from the direct and indirect effects of development. Within Eastleigh Borough this will include:
 - a. implementing:
 - i. the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and
 - ii. the interim and any future New Forest Recreation Mitigation Strategy if required;or alternative agreed site specific measures to address recreational disturbance;
- b. preserving the water quality and flows within the Itchen and Hamble, Southampton Water and Solent;
 - c. protecting the River Itchen SAC, in particular the maintenance and where appropriate restoration of habitats and qualifying species to favourable conservation status (as defined by article 1 of the Habitats Directive); and
 - d. seek contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.
- 4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:
 - a. there are no alternative solutions;
 - b. the adverse effects are unavoidable;
 - c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;
 - d. there is an overall biodiversity net gain; and
 - e. if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.

5. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on **priority habitats, protected priority species, or on the local exological network** unless it can be demonstrated that:
- there are no alternative solutions;
 - the adverse effects are unavoidable;
 - measures are taken to mitigate or, as a last resort, compensate for the adverse effects;
 - there is an overall biodiversity net gain; and
 - if there are any residual adverse effects, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.
6. Development will not be permitted if it results in the loss or deterioration of **irreplaceable habitats** (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy exists.
7. **Buffers** free from development will be provided to designated sites to avoid/mitigate impacts, including recreational impact and impacts on edge habitats, and to maintain dark skies.
8. Development will not be permitted unless it can be demonstrated that:
- there have been thorough habitat and species **surveys**;
 - the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and
 - the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.

Strategic Policy S9, Green Infrastructure

1. Through new development and other initiatives and the Borough Council will seek to achieve the provision, retention and/or enhancement of the following forms of multi-functional green infrastructure, including provision of:
- landscape scale strategic links across the Borough boundary, to and between the Borough's settlements, the countryside, the coast, and the major areas of open space including the country parks (see strategic policy S12);
 - interlinked publicly accessible open space through new and existing development including for example formal sports facilities and informal amenity spaces and cemeteries (see policies DM32-DM34, Chapter 5 and detailed proposals in Chapter 6);
 - green infrastructure incorporated into all new development with multifunctional spaces connected by primary, secondary and tertiary green links;
 - interconnected urban green infrastructure within the fine grain of existing and new development including green, cycle ways, paths and linkages between community facilities and open spaces to link community facilities;
 - green stepping stones such as street trees, green roofs and walls, pocket parks and urban copses (see policy DM1, Chapter 5);

- f. connected habitats linking the network of designated sites and existing priority habitats, taking account of the Hampshire ecological network map (see policy DM11, Chapter 5);
- g. incorporation of historic buildings and landscapes, including historic parks and gardens within the wider Green Infrastructure to protect their setting (see policy DM12, Chapter 5); and
- h. opportunities for local food growing including allotments, community orchards and farms (see policies DM32 to DM34, Chapter 5 and detailed proposals in Chapter 6).

APPENDIX B – AREAS TO BE LOST, RETAINED AND ENHANCED





APPENDIX C – WOODLAND CONDITION ASSESSMENT CRITERIA

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.	<i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species ³ <10% cover.	<i>Rhododendron</i> 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)	

APPENDIX D – BASELINE CONDITION ASSESSMENTS

Modified Grassland

Habitat parcel	F12	F13
Average sward height (cm)	20	15
Percentage cover		
Rye grass (%)	50	80
Wild flowers and sedges (%)	1	20
Undesirable species (%)	0	2
Management		
Condition assessment criteria		
1. 6 - 8 species per m2	Yes	No (4)
2. Varied sward height	No	No
3. Scattered scrub <20%	Yes	Yes
4. Physical damage <5%	No	Yes
5. Bare ground 1 - 10 %	Yes	Yes
6. Bracken <20%	Yes	Yes
7. No invasives	Yes	Yes
Condition	Moderate	Poor

Other Neutral Grassland

Habitat parcel	F27
Average sward height (cm)	20
Management	None
Condition assessment criteria	
A. Good representation of habitat	Yes
B. Varied sward height	Yes
C. Bare ground 1 - 5 %	No
D. Bracken <20% and scrub <5%	Yes
E. Undesirable species and physical damage < 5%	Yes
F. 10 or more species per m2	No
Condition	Moderate

Other Broadleaved Woodland

Habitat parcel	W3	W7
Condition assessment criteria		
A. Age distribution of trees	3	2
B. Wild, domestic and feral herbivore damage	3	3
C. Invasive plant species	3	3
D. Number of native tree species	3	3
E. Cover of native tree and shrub species	3	3
F. Open space within woodland	3	3
G. Woodland regeneration	2	2
H. Tree health	3	2
I. Vegetation and ground flora	1	1
J. Woodland vertical structure	2	2
K. Veteran trees	1	1
L. Amount of deadwood	2	1
M. Woodland disturbance	3	3
Score	32	29
Condition	Moderate	Moderate

Scrub

Habitat parcel	S1	S2
Scrub type	Mixed scrub	Hawthorn scrub
Species	Salix sp.	Hawthorn
Condition assessment criteria		
A. Good example of habitat type	No	No
B. All age classes present	Yes	No
C. No invasives	Yes	Yes
D. Well-developed edge	Yes	No
E. Clearings, glades or rides	No	No
Condition	Moderate	Poor

Lines of Trees

Tree Line No.	H26	H28
Tree Line Type	Line of trees	Line of trees with bank and ditch
CONDITION ASSESSMENT CRITERIA (tick or cross)		
1. >70% of trees are native	Yes	Yes
2. Gaps in canopy <10% AND all gaps <5m	Yes	Yes
3. 1 or more mature or veteran tree present	Yes	Yes
4. Undisturbed vegetated strip at least 6m wide on both sides	No	No
5. 95% of the trees are in healthy condition (excluding veteran features)	Yes	Yes
Condition	Moderate	Moderate

Hedgerows

Hedgerow No.	H25	H60
Hedgerow type	Species-rich native hedgerow	Species-rich native hedgerow with ditch
ASSOCIATED FEATURES (yes or no)		
Bank or wall (at least half of length)	No	No
Gaps <10%	Yes	Yes
1 or more standard tree per 50m	No	No
Ditch (at least half of length)	No	Yes
CONDITION ASSESSMENT (yes or no)		
A1 - Height >1.5m on average	Yes	Yes
A2 - Width >1.5m on average	No	Yes
B1 - Base gap <0.5m for >90% length	No	No
B2 - Gaps <10% AND all gaps <5m	Yes	Yes
C1 - >1m undisturbed ground for 90%	No	Yes
C2 - Nettles/cleavers/docks <20%	No	Yes
D1 - >90% free of invasives/neophytes	Yes	Yes
D2 - >90% free of human damage	No	Yes
Condition	Poor	Good