



**103 Bournemouth Road,
Chandler's Ford, Eastleigh, Hampshire**

Biodiversity Net Gain and Ecological Enhancement Plan

For Eastway Estates Limited

By Arun Ecology Ltd

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Issuing Office

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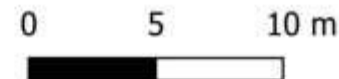
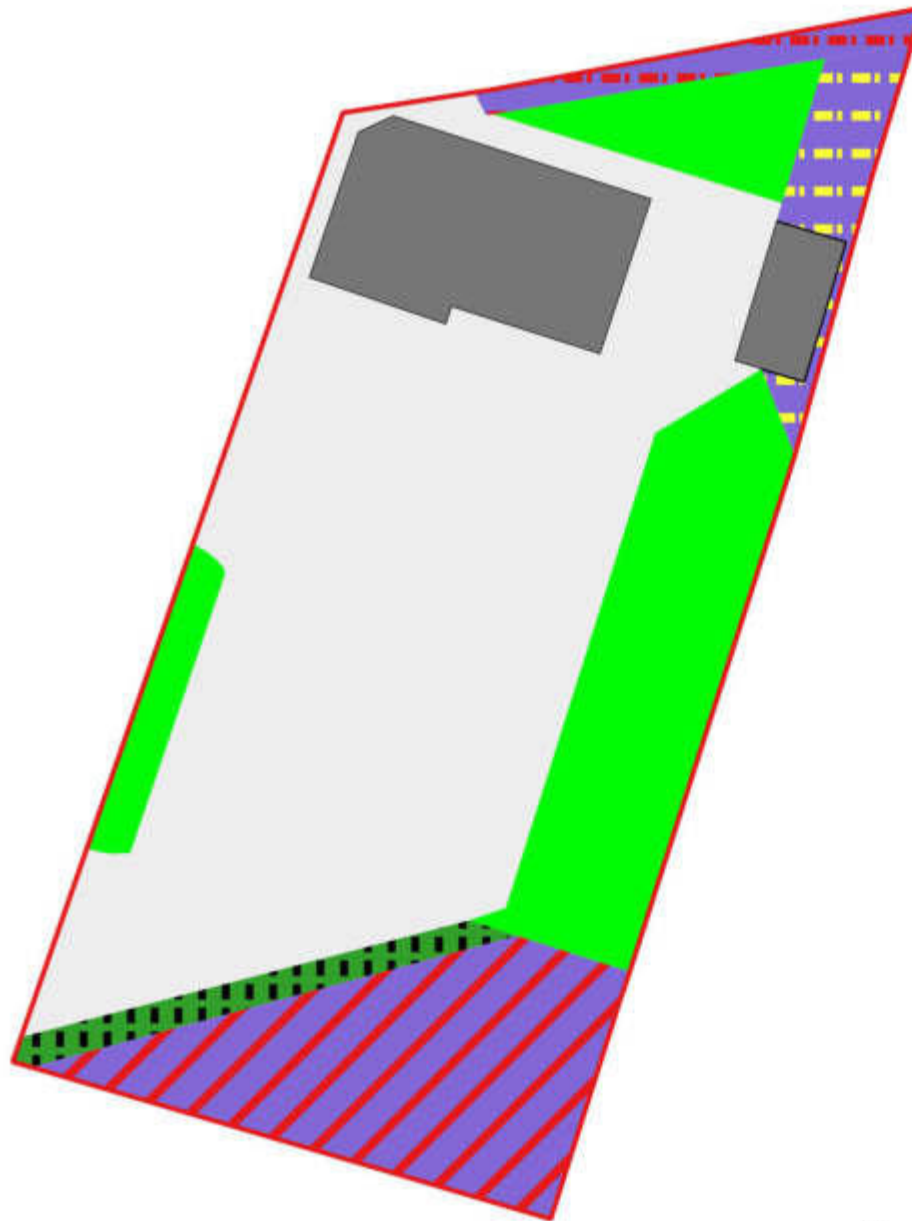
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Contents

1.	Introduction	8
1.1	Development Background	8
1.2	Ecology Background	9
1.3	Brief and Objectives	9
2.	Method	12
2.1	Biodiversity Net Gain Assessment	12
2.2	Assumptions and Adjustments	16
3.	Biodiversity Net Gain Assessment	17
3.1	Baseline Ecological Conditions	17
3.2	Proposed Landscaping Plans	17
3.3	Biodiversity Net Gain Calculation	19
4.	Biodiversity Net Gain and Ecological Enhancement Plan	20
4.1	Background	20
4.2	Proposed Habitat Creation	20
4.3	Habitat Retention	22
4.4	Other Site Ecological Enhancements	23
4.5	Proposed Schedule	26
4.6	Compliance and Monitoring	26
4.7	Responsibility	26
5.	Biodiversity Net Gain Principles	28
5.1	Background	28
5.2	Evaluation	28
6.	Legislation and Planning Policy	34
6.1	Background	34
6.2	Biodiversity Net Gain and Ecological Enhancement	34
7.	Conclusion	36
7.1	Summary	36
8.	Bibliography	37
	Appendix I – Baseline Habitat Condition Assessment	38
	Appendix II – Post Development Target Condition Assessment.	41
	Appendix III – Legislation and Planning Policy	44

Figure 1 Site Baseline Habitats.....	6
Figure 2 Biodiversity Net Gain and Ecological Enhancement Plan	7



Legend

Baseline Habitats



Figure Title:

Site Baseline Habitats

Client/Project no:

Cordage 13 Ltd - C-CGP-002-003

Site Location:

103 Bournemouth Road,
Chandler's Ford, Eastleigh.

Figure no:

1

Revision no:

002

Scale:

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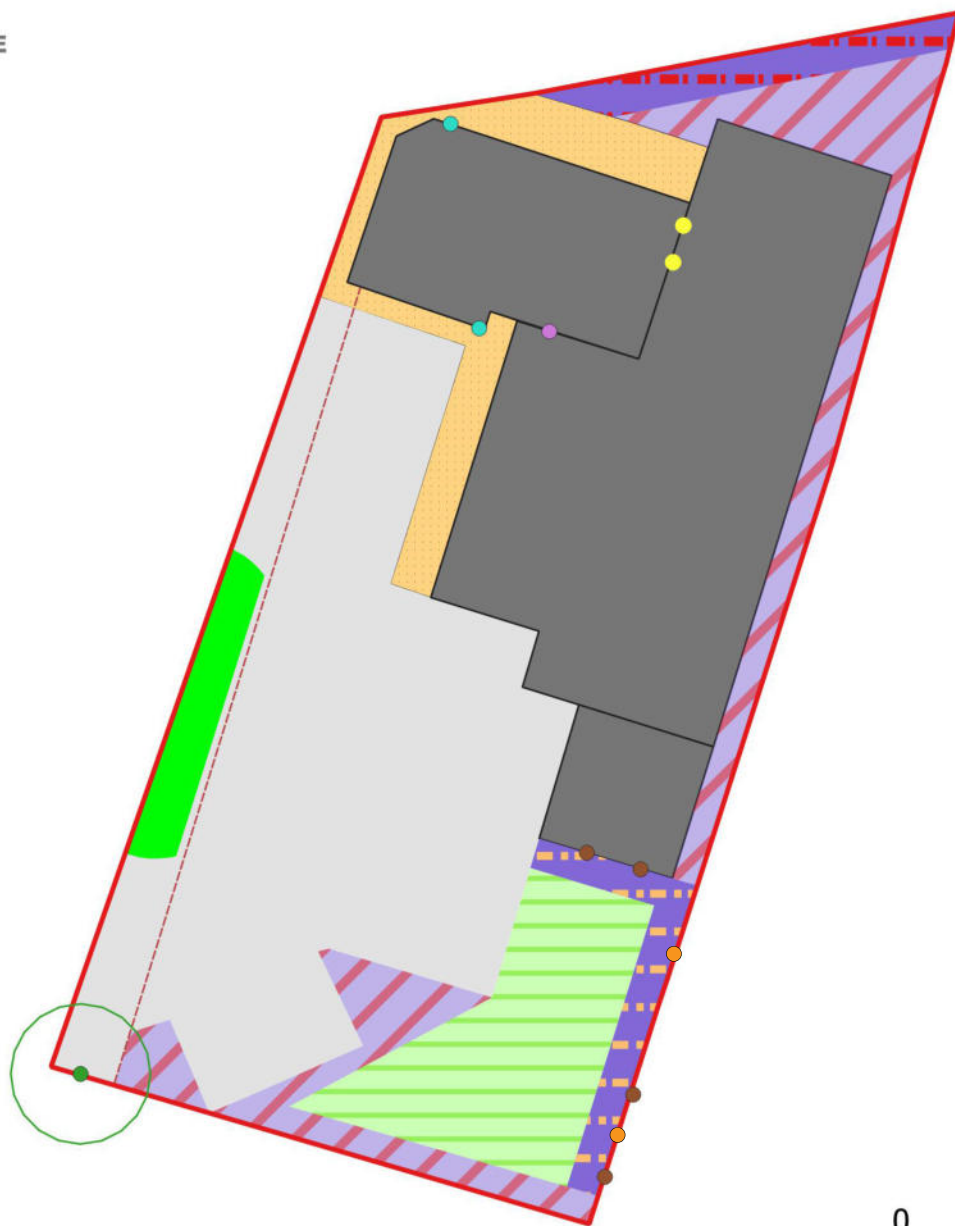
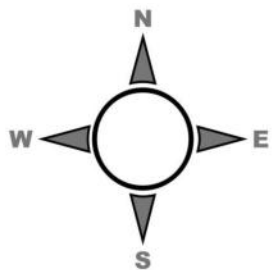
Joseph
Baker

Date Drawn:

15/11/23

Reviewer:

Hannah
Baker



Legend

-  Insect Box
-  Starling Box
-  Bat Box
-  Swift Box
-  Retained tree
-  Hedgehog crossing

Proposed Habitat Retention and Creation

-  Other neutral grassland
-  Modified grassland
-  Native hedgerow
-  Non-native ornamental hedgerow
-  Mixed scrub
-  Developed land, sealed surface
-  Buildings
-  Path
-  Site boundary
-  Highways boundary

Figure Title:

BNG & Ecological Enhancement Plan

Client/ Report ref:

Cordage 13 Ltd - C-CGP-002-003

Site Location:

103 Bournemouth Road,
Chandler's Ford, Eastleigh.

Figure no:

2

Revision no:

007

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Baker

1. Introduction

1.1 Development Background

Site Location

- 1.1.1** Eastway Estates Limited are proposing to undertake the re-development of the 103 Bournemouth Road site, (Grid ref: SU 43071 19658) located at Bournemouth Road, Chandler's Ford, Eastleigh, Hampshire, SO53 3AJ (See Figure 1). The land at 103 Bournemouth Road is hereafter referred to as 'the site' in this report. The site falls under the governance region of Eastleigh Borough Council (EBC).

Development Proposals

- 1.1.2** Eastway Estates Limited submitted a planning application on behalf of their client in December 2022 (Planning number: F/22/94159) that includes the following proposals:

- Extension to an existing commercial building;
- Removal of a further temporary/ portable building within the site; and
- Re-landscaping of the site as per drawing reference: 22.3377.106_P5 (PLC Architects, 2022).

- 1.1.3** The development proposals outlined in this section of the report will hereafter be referred to collectively as the development.

Planning Status

- 1.1.4** Planning permission for the development was decided on the 04/07/2023 by EBC, with permission being granted subject to twenty five conditions of planning, of which three were for reasons of biodiversity.

- 1.1.5** Planning condition 13 is relevant to this report and states:

'Prior to any works above foundation/slab level, a Biodiversity Enhancement Management Plan shall be submitted to and approved in writing by the Local Planning Authority. This shall include a Biodiversity Net Gain calculation and include full details of biodiversity enhancement measures, which shall broadly accord with the recommendations set out in Section 7.4 of the Preliminary Ecological Appraisal (Arun Ecology, December 2022, ref. C-CGP-002/001/001).'

1.2 Ecology Background

1.2.1 Arun Ecology Ltd undertook a Preliminary Ecological Appraisal (PEA) at the site in September 2022 which was comprised of a desk based study and a UK Habitat Classification Survey (Arun Ecology, 2022). The habitats recorded within the site are summarised in section 3.1 of this report and form the baseline data for the Biodiversity Net Gain Assessment in this report.

1.2.2 The UK Habitat Classification data was collected within the last 12 months and therefore is acceptable to form the baseline data of the BNG assessment.

1.2.3 Ecological enhancements for the benefit of biodiversity were broadly outlined in the PEA report to include the following:-

- Incorporate two bat boxes for crevice dwelling bat species within unlit areas of the site or as part of building B1. Alternatively four bat tiles could be installed to the roof of building B1;
- Two swift boxes and one starling box to be incorporated within the design of building B1;
- Incorporate four solitary bee bricks or boxes within the site;
- Incorporate a 13cm x 13cm gap into any permanent boundary fencing to allow the movement of small animals including hedgehogs;
- Incorporate the planting of native species as part of the development and undertake the removal of non-native plants (including the replacement of non-native plants with native species) within the site;
- Incorporate a sensitive light regime into the design of the development to retain dark areas within the site and reduce light pollution and overspill (see ILP and BCT (2018) Guidance Note 08/18 Bats and Artificial Lighting in The UK); and
- It may be possible to create additional vertical habitat (green walls) within the site with the use of native climbing plants on the new building or on the eastern and southern boundaries of the site.

1.3 Brief and Objectives

1.3.1 Arun Ecology Ltd were commissioned on the 20th of July 2023 by Cordage 13 Limited, on behalf of their client Eastway Estates Limited, to provide a Biodiversity Net Gain (BNG) assessment and Ecological Enhancement Plan for the site.

1.3.2 The key objectives and good practice principles (Baker et al., 2019) of the BNG assessment are as follows:

- Apply the 'Mitigation Hierarchy' (in line with CIEEM Guidelines for Ecological Impact Assessment (EcIA) (CIEEM, 2018) and be 'additional' by achieving outcomes that exceed existing obligations;
- Avoid losing biodiversity which cannot be off-set elsewhere (e.g. irreplaceable or high distinctiveness habitats);
- Be inclusive and equitable (e.g. engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to net gain);
- Address risk (e.g. difficulty of achieving habitat creation / enhancement for net gain);
- Make a 'measurable' net gain contribution (e.g. calculated using an appropriate metric) and ensure that calculations are consistent and transparent (i.e. limitations and assumptions are clearly identified); and
- Ensure that net gain design achieves the best outcome for biodiversity (this may require both quantitative and qualitative assessment);
- Identify opportunity for additionality in achieving net gains and incorporate this within the design of the development;
- Create a net gain legacy for long-term benefits;
- Optimise sustainability (e.g. prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy); and
- Be transparent (e.g. communicate all net gain activities in a transparent and timely manner, sharing the learning with all stakeholders).

1.3.3 The brief was to:

- Carry out a BNG Assessment of the development based upon the results of the UK Habitat Classification survey undertaken at the site (Arun Ecology, 2022a) and the final landscaping plans of the development to calculate pre-and post-construction biodiversity units using the Natural England Biodiversity Net Gain Metric 4.0 (JP039);
- Provide a Biodiversity Net Gain and Ecological Enhancement Plan to outline how the biodiversity net gain and ecological enhancements will be achieved at the site;

- Provided digitised mapping of the BNG and Ecological Enhancement Plan.

2. Method

2.1 Biodiversity Net Gain Assessment

General Approach

- 2.1.1** The BNG Assessment was undertaken in accordance with industry best practice guidelines: BNG: Good Practice Principles for Development (CIEEM, IEMA & CIRIA 2016 and Baker et al., 2019).
- 2.1.2** Natural England's Biodiversity Metric 4.0 (JP039) was used to undertake the BNG calculation. The Biodiversity Metric 4.0 Technical Supplement was used as a supporting document for the BNG calculation (Natural England., 2023).
- 2.1.3** A field survey to record habitat within the survey area was undertaken following the methodology of the UK Habitat Classification (Butcher, et al 2020 and UK Hab, 2023). The habitats recorded within the survey area form the baseline data for the pre-development biodiversity unit calculation.
- 2.1.4** The landscaping plan (drawing ref: 22.3377.106_P5) provided by Cordage 13 Limited to Arun Ecology Ltd provides the layout for habitat design as part of the post development biodiversity unit calculation (PLC Architects, 2022).
- 2.1.5** The output of the BNG calculation is the total value of the biodiversity units post development which is reported as a percentage net gain or loss of biodiversity units for both habitats and linear (hedgerow) features.

Habitat Distinctiveness

- 2.1.6** Distinctiveness is based on the type of habitat and its distinguishing features, including consideration of species richness, rarity (at local, regional, national and international scales), the extent to which it is protected by designations and the degree to which a habitat supports species rarely found in other habitats.
- 2.1.7** The habitats recorded within the site were each assigned a multiplier value based upon their 'distinctiveness' which is set out in the Biodiversity Metric 4.0 technical supplement (Natural England, 2023). The distinctiveness criteria is detailed in Table 1.

Table 1 - Distinctiveness criteria adapted from Natural England, 2023.

Category	Multiplier	Summary
Very High	8	Priority Habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action, e.g. blanket bog. Small amount of remaining habitat with a high proportion unprotected by designation. Endangered or critical European red list habitats.
High	6	Priority Habitats as defined in Section 41 of the NERC Act requiring conservation action, e.g. lowland fens. Remaining Priority Habitats not in very high distinctiveness band and other red list habitats.
Medium	4	Semi-natural habitats not classed as a Priority Habitat but with significant wildlife benefit, e.g. mixed scrub. Arable field margins (Priority habitat) only.
Low	2	Habitat of low biodiversity value e.g. temporary grass and clover ley. Agricultural and urban land of lower biodiversity value.
Very low	0	Little or no biodiversity value e.g. hard standing or sealed surface.

Condition Assessment

- 2.1.8** The Biodiversity Metric 4.0 uses habitat condition as one of the measures of habitat quality. It is an evaluation of whether a habitat meets a number of criteria relating to key physical characteristics of that habitat and its ability to support typical species.
- 2.1.9** The habitat condition multiplier was assigned to each habitat following guidance from the 'Technical Supplement' document (Natural England, 2023) which accompanies the Biodiversity Metric 4.0 Assessment criteria. The habitat condition criteria is set out in Table 2.

Table 2 - Condition categories and multiplier scores for area habitats as adapted from Natural England, 2023.

Habitat condition multipliers	
Good	3.0
Fairly good	2.5

Moderate	2.0
Fairly poor	1.5
Poor	1

Desk Based - Strategic Significance

2.1.10 The strategic significance of a habitat is treated as a component of the quality of a habitat parcel in the same way as distinctiveness and condition. Strategic significance relates to the spatial location of a habitat parcel and works at a landscape scale. It gives additional biodiversity unit value to habitats that have been identified as habitats of strategic importance to that local area.

2.1.11 A desk based search was undertaken which has also been used to inform the strategic significance of the habitats recorded in the UK Habitat Classification survey. The following sources of information were searched:

- The Multi-Agency Geographical Information for the Countryside (MAGIC);
- Government open source GIS datasets;
- Eastleigh Borough Council Local Plan (2022); and
- Satellite images (powered by google satellite via QGIS 3.2).

Table 3 - Strategic significance categories as adapted from Natural England, 2023.

Strategic Significance Category	Definition	Score
High strategic significance	High potential - area/action formally identified within a local plan, strategy or policy	1.15
Medium strategic significance	Good potential - location ecologically desirable but area/action not identified in local plan, strategy or policy	1.1
Low Strategic Significance	Low potential - area/action not identified in any local plan, strategy or policy; or no local strategy in place	1

Desk Based – Irreplaceable habitats

- 2.1.12** A desk based search to identify any irreplaceable habitats or statutory designated sites was undertaken, due to the exclusion of such habitats and sites from BNG calculations (as BNG is not achievable with impacts to irreplaceable habitats or designated sites).
- 2.1.13** Information for irreplaceable habitats was also sought from the PEA undertaken by Arun Ecology Ltd (Arun Ecology, 2022).

Pre and Post Development Biodiversity Unit Calculations

- 2.1.14** The baseline pre-development biodiversity unit is calculated by multiplying the area (hectares), distinctiveness (habitat type) with condition (quality) and strategic significance (local significance for biodiversity) of each habitat parcel on site. This gives a total number of biodiversity units.
- 2.1.15** The post development biodiversity unit calculation takes account of habitat loss and creation as well as the enhancement of retained habitat.
- 2.1.16** The post-development biodiversity unit calculation also takes into account the risk associated with the delivery of the creation/enhancement of habitat. This multiplier is applied to represent the uncertainty in the effectiveness of management techniques used to restore or create habitat.
- 2.1.17** The habitats recorded within the site were each assigned a multiplier value based upon their 'risk category' which is set out in the Biodiversity Metric 4.0 technical supplement (Natural England, 2023). The distinctiveness criteria is detailed in Table 1.

Table 4 - Risk multipliers for difficulty categories as adapted from Natural England, 2023.

Difficulty and risk categories	
Very high	0.1
High	0.33
Medium	0.67
Low	1

2.1.18 The time scale of the creation/enhancement of habitats is assigned a temporal risk multiplier to compensate for the fact that there will not be an instant change in habitats and conditions, which may result in a biodiversity deficit until the habitat has matured.

2.1.19 These time multipliers cover from zero years to over 30 years to reach the desired state (Natural England, 2023).

2.2 Adjustments and Considerations

2.2.1 The following adjustments have been made to the baseline habitat area in this report (see Figure 1) from the habitat mapping provided in the PEA (see Arun Ecology, 2022):

- Change to the site boundary and habitat areas due to minor measurement inaccuracies in the PEA mapping in comparison to the final site plans (Drawing ref: 22.3377.106_P5)
- Inclusion of a small area of modified grassland on the western boundary not mapped during the PEA; and
- The habitat area used in this assessment were changed from 2 to 4 decimal places (using QGIS 3.22) to provide the most accurate comparison in hectares to squared meters, reflecting the small size of the site.

2.2.2 In our professional judgement none of the above adjustments represent a limitation and resulted in more accurate representation of the habitat value on the site.

3. Biodiversity Net Gain Assessment

3.1 Baseline Ecological Conditions

Habitats Recorded within the Site

- 3.1.1** A summary of the baseline habitats recorded within the site including an assessment of distinctiveness, condition and strategic significance is given in Table 5 and are displayed in Figure 1. Full details of the condition assessment for each habitat recorded with the site is provided in Table 9 Appendix I.
- 3.1.2** No irreplaceable habitats, habitats of principal importance (HPI) or high distinctiveness habitats were recorded within the site during the UK Habitat Classification Survey. Furthermore, no water bodies including rivers were recorded within the site (Arun Ecology, 2022).
- 3.1.3** Using the Biodiversity Metric 4.0 the site is calculated to have **0.12** habitat biodiversity units and **0.06** hedgerow biodiversity units.

3.2 Proposed Landscaping Plans

Habitat Loss, retention and enhancement

- 3.2.1** Habitat loss, retention and enhancement that will arise as part of the development and the required action under the Biodiversity Metric 4.0 is summarised in Table 5 below.
- 3.2.2** A total of **0.11** habitat units and **0.05** hedgerow units will be lost as part of the development. The total area of habitat lost within the site is **0.10 ha**.
- 3.2.3** There are **0.01** habitat units and **0.1** hedgerow units that will be retained as part of the development.

Table 5: Summary of baseline habitat, habitat loss, retention and enhancement including relevant Biodiversity 4.0 Metric data.

Baseline Habitats	Area ha / length km	Distinctiveness	Condition	Strategic Significance	Baseline Habitats Units	Area retained	Area lost	Area enhancement	Enhancement condition	Units lost/ gained	Requirements and notes
Habitat											
Modified grassland	0.0025 ha	Low	Poor	Low	0.01	0.001	n/a	n/a	n/a	0.00	Compensation not required as habitat retained. It is not possible to enhance this habitat as management falls on highways land.
Modified grassland	0.0147 ha	Low	Poor	Low	0.04	n/a	0.0147 ha	n/a	n/a	-0.04	Same distinctiveness or better habitat required
Modified grassland	0.0042 ha	Low	Poor	Low	0.01	n/a	0.0042 ha	n/a	n/a	-0.01	Same distinctiveness or better habitat required
Bramble scrub	0.0034 ha	Medium	N/A	Low	0.01	n/a	0.0034 ha	n/a	n/a	-0.01	Same broad habitat or a higher distinctiveness habitat required.
Mixed scrub	0.0158 ha	Medium	Poor	Low	0.06	n/a	0.0158 ha	n/a	n/a	-0.06	Same broad habitat or a higher distinctiveness habitat required.
Developed land, sealed surface	0.0680 ha	Very low	N/A	Low	0.00	0.0094	0.0586 ha	n/a	n/a	0.00	Compensation not required.
Hedgerow											
Hedgerow - Ornamental or non-native hedgerow	0.020 km	Low	Poor	Low	0.02	0.017	0.005 km	n/a	n/a	-0.01	Same distinctiveness band or better
Line of trees	0.021 km	Low	Poor	Low	0.04	n/a	0.021 km	n/a	n/a	-0.04	Same distinctiveness band or better

Habitat Creation

3.2.4 A summary of the habitat creation as part of the development including distinctiveness, target condition and strategic significance is given in Table 6 and displayed in Figure 2.

Table 6 - Proposed habitat creation within the site as part of the agreed site layout.

Proposed habitats	Area ha/ length km	Distinctiveness	Target Condition	Strategic significance	Biodiversity Units
Habitat					
Other neutral Grassland	0.0093 ha	Medium	Moderate	Low	0.05
Mixed scrub	0.0070 ha	Medium	Moderate	Low	0.06
Mixed scrub	0.0050 ha	Medium	Moderate	Low	0.03
Developed land, sealed surface	0.0753 ha	Very Low	N/A	N/A	0.00
Hedgerow					
Native Hedgerow	0.021 km	Medium	Moderate	Low	0.07

3.2.5 The proposed habitat creation as part of the development generates **0.14** habitat units and **0.7** hedgerow units.

3.2.6 The trading summary rules and requirements outlined in the Biodiversity Metric 4.0 (see Table 5 in section 3.2) are all satisfied based upon the proposed habitat creation outlined in Table 6. Furthermore, the area of habitat created satisfies the threshold of the habitat area lost as part of the development under the Biodiversity Metric 4.0.

3.3 Biodiversity Net Gain Calculation

3.3.1 The final landscaping plan will generate **0.15** habitat units resulting in a net gain increase of +23.41% from the baseline habitat value and **0.8** hedgerow units with an increase of +31.17% from the baseline hedgerow value.

4. Biodiversity Net Gain and Ecological Enhancement Plan

4.1 Background

- 4.1.1** The purpose of this section is to outline how BNG will be achieved within the site and how ecological enhancements will be incorporated into the development design. This will include methods for habitat retention, habitat enhancement and habitat creation as well as scheduling, on-going monitoring and maintenance details.

4.2 Proposed Habitat Creation

Other Neutral Grassland

- 4.2.1** The development will include the creation of approximately 0.0093ha of other neutral grassland (see Figure 2). The grassland will primarily be located in the south-east corner of the site.
- 4.2.2** The grassland will be managed for the benefit of wildlife and will act as a source of food and shelter for a variety of faunal species, particularly foraging bats and birds as well as invertebrates.
- 4.2.3** The target condition for the other neutral grassland is moderate condition, as defined by criteria set out in the Natural England condition assessment (see Table 10 in Appendix II).
- 4.2.4** The grassland area will be prepared by first removing the existing modified grassland and bramble scrub habitats. This will ensure that there is bare, weed free ground for seeding. A harrow or rake will be used to produce a medium tilth and the soil will then be made firm by treading or rolling.
- 4.2.5** The area will be sown with the commercial seed mix Emorsgate EM3 – Special General Purpose Meadow Mixture (or similar), used at a rate of 4g/m². This seed mix contains 33 species at a ratio of 80% grasses and 20% native wildflower with many neutral grassland indicator species included within the mix. It is also anticipated that faster growing neutral grassland grass species will also establish.
- 4.2.6** The seed mix will be sown in August-September. The seeds will be surface sown and can be applied by machine or broadcast by hand and firmed in by treading or rolling, to give good soil/seed contact.

4.2.7 First year of management - Most of the meadow species in the seed mix are perennial and are slow to establish. Weeds will be left and removed in mid-late summer as they will offer shelter to the sown seedlings. The grassland will then be kept short by mowing through to the end of March of the following year (grass will be cut to 50mm once it reaches 100-150mm) and the grass cuttings removed. Any residual perennial weeds such as docks will be dug out. No cutting of the grassland will be conducted from spring through to late July/August to allow the sown species to flower.

4.2.8 Second year and subsequent years of management - In the second and subsequent years the grassland will be cut (up to a height of 70mm) once it has flowered and the seed has dropped (late July-August). The 'hay' will be left to dry and shed seed for 5-7 days and then will be removed from the site. After it has been cut, the grassland will then be kept short until the end of the growing season, and again in early spring if needed. No cutting of the grassland will be conducted from spring through to late July/August to allow the sown species to flower. Where required, weeding will be undertaken by hand with cuttings removed immediately from site.

Hedgerows and Mixed Scrub

4.2.9 The development will include approximately 21m (0.021km) of hedgerow and 0.012ha of mixed scrub habitat creation within the site (see Figure 2). Hedgerows and mixed scrub habitats are valuable ecological features and can provide feeding and nesting habitat for a range of fauna.

4.2.10 Hedgerows habitats created within the site will be a minimum of 1.5m tall and 1.5m wide, be species rich and contain at least six native species in the following ratios:-

- 70% from a choice of hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), buckthorn (*Rhamnus cathartica*), privet (*Ligustrum vulgare*), beech (*Fagus sylvatica*), hazel (*Corylus avellana*) and dog rose (*Rosa canina*).
- 25% from a choice of guelder rose (*Viburnum opulus*), field maple (*Acer campestre*), spindle (*Euonymus europaeus*), crab apple (*Malus sylvestris*), holly (*Ilex aquifolium*) and yew (*Taxus baccata*).
- 5% from a choice of climbers, such as honeysuckle (*Lonicera periclymenum*), bramble (*Rubus fruticosus*), ivy (*Hedera helix*) and native clematis (i.e. *Clematis vitalba*).

4.2.11 The mixed scrub habitats will be comprised of the above species and ratios. The width of mixed scrub will be a minimum width of 1m. Mixed scrub height will vary across the site with a minimum height of 1.5m. The mixed scrub should be allowed

to grow into a taller dense structure over time in suitable areas, such as the southern section of the site.

- 4.2.12** Hedgerows and mixed scrub habitat will be planted onsite in late autumn/ early spring. Individual shrubs will be notch planted at approximately 1m centres and will consist of 60 - 80 cm bare root transplants and supported by spiral guards with canes to offer appropriate protection. Soil improver and approximately 140 g Enmag slow-release fertiliser will be incorporated into the soil of all planting pits. Following planting all hedgerows and mixed shrub should be watered regularly (weekly).
- 4.2.13** In years 1-5 following planting, the hedgerows and mixed scrub habitats should be checked twice annually. This will include checking plant health, with any dead, dying or diseased plants removed and replaced on a like-for like bases. Spiral guards should be checked and replaced where missing or damaged. Furthermore, the soil at the location of planting should be checked for compaction.
- 4.2.14** Ground adjacent to the hedgerow length and mixed scrub habitats should be managed to remove any 'weeds' in order to reduce competition and increase sunlight. This should be undertaken by hand or with a targeted application of herbicide in the immediate vicinity of the plants by a suitably qualified contractor. Weed control measures will continue until the establishment of the plants has been successful.
- 4.2.15** Where necessary, hedgerows and mixed shrubs should be pruned to the desired size and shape to stop encroachment of the other neutral grassland habitat (see Figure 2). Hedgerow and mixed scrub cutting will be conducted outside of the breeding bird season (i.e. not between 1st March and 31st August). Bramble and other perennial weeds will be controlled, as required.

4.3 Habitat Retention

Modified grassland

- 4.3.1** The small area of modified grassland located on the western boundary of the site will be retained as part of the development. This area of grassland falls within the highways boundary and as such, it is our understanding that planting is not permitted in this area and furthermore, that management responsibility cannot be guaranteed. As such it is assumed it is not possible to enhance this habitat.
- 4.3.2** If it is possible for the modified grassland to be enhanced this should be completed in line with the management outlined in section 4.2 under the creation of other neutral grassland.

Hedgerow

- 4.3.3** The non-native ornamental hedgerow located on the northern boundary of the site (see Figure 1) will be partially retained as part of the development (see Figure 2). The retained area of hedgerow will be safeguarded during the construction phase of the development from damage and degradation. This will be achieved with a 1.5 metre buffer on the south face aspect of the hedgerow, from material storage and construction based activity. It may be appropriate to include provisions to safeguard the hedgerow from construction based dust with an appropriate barrier, however, this risk should be assessed dynamically during the construction phase.
- 4.3.4** In the unlikely event the hedgerow is damaged or destroyed. The hedgerow should be replaced with native hedgerow planting, using the species ratios outlined in section 4.2.9.

Tree

- 4.3.5** A single sycamore tree (*Acer pseudoplatanus*) located in the south-west corner of the site will be retained as part of the development (see Figure 2). The tree will be safeguarded during the construction phase of the development by avoiding impacts within the root protection area. This should be in accordance with BS5837, from the commencement to the completion of all works on site.
- 4.3.6** The retained tree should be replaced with a native species in the event the tree dies or deteriorates to an extent that would require it's removal from the site, for the period outlined in section 4.7.

4.4 Other Site Ecological Enhancements

- 4.4.1** This section sets out ecological enhancements separate from any requirements for compensation, mitigation or BNG requirements for the benefit of protected species or species of conservation concern, that based upon the results of surveys undertaken to date are either known to or could use the site.
- 4.4.2** Reference is made to specific brands and models in this section however, in the event that the specified brands or models are not available to purchase, a suitably qualified ecologist should be consulted to advise on a suitable alternative.

Roosting Bats

- 4.4.3** The development will include provisions for new roosting opportunities within the site for crevice dwelling bats. This will include two integrated (1WI Schwegler Summer and Winter Bat Boxes) or externally mounted (Schwegler 1WQ Schwegler

Summer & Winter Bat Roost) bat boxes on the retained section of the building within the site (see Figure 2).

- 4.4.4** The two bat boxes will be installed adjacent to each other on the eastern aspect of the retained building at a height of approximately 5m (or approximately 50cm below the roof eaves). This location will be free from disturbance and artificial light, provide sufficient drop height for emerging bats and will be connected to proposed habitat creation that will provide suitable foraging habitat within the site for bats.

Installation of Swift Boxes

- 4.4.5** The development will include nesting habitat provisions for swifts within the site in order to contribute towards the conservation and recovery of local swift populations. Two integrated or alternatively two externally wall mounted swift boxes (16S Schwegler Swift Box with Starling Barrier, Vivara Pro WoodStone Swift Nest Box and/or WoodStone Build-in Swift Nest Box Deep) will be installed, with one box located on the north and another on the south aspect of the retained building (see Figure 2).
- 4.4.6** The swift boxes will be installed at height of approximately 5m – 6m under the eaves of the building to ensure there is an unobstructed access/egress point with sufficient drop height for emerging swifts from the boxes.

Installation of Starling Box

- 4.4.7** The development will include a single nesting provision for starlings within the site (see Figure 2). This will include a single starling nest box (Vivara Pro Woodstone Starling Nest Box) located on the southern aspect of the retained building within the site. The box will be installed at a height of 3m.

Installation of Solitary Insect Boxes

- 4.4.8** The development will include four habitat provisions for invertebrates including solitary bees and wasp species within the site. The specifications for the solitary insect boxes will be Schwegler Insect Houses.
- 4.4.9** The boxes should be installed in a sunny location with some partial cover (such as fencing or amongst vegetation). The proposed location for installation of the two boxes is in the south east corner of the site on existing fencing posting and two on the proposed storage shed, adjacent to the proposed other neutral grassland creation within the site (see Figure 2).

Hedgehog Crossings

- 4.4.10** The development will include provisions for hedgehog in order to maintain connectivity between the site and neighbouring gardens that could provide habitat of value to hedgehog. To achieve this, two small holes (approximately 13cm x 13cm) will be created in any permanent fencing on the eastern boundary of the site. The creation of the small holes for hedgehogs is proposed using specifically designed gravel boards.

Wildlife Sensitive Lighting Strategy

- 4.4.11** Lighting for the development will be designed as per best practice guidance (BCT and Institute of Lighting Professionals, 2018). Methods of achieving this would include:
- Establishing a dark corridor along the eastern and southern boundary of the site;
 - Preventing or minimizing the lighting of areas proposed for habitat creation and ecological enhancement within the site; and
 - Minimizing overall lighting levels within the site.
- 4.4.12** The following measures will be implemented at the site to achieve the above objectives:
- Any lighting will not be directed towards the eastern or southern boundary of the site,
 - Lighting will be located or directed away from any ecological enhancements for the benefit of roosting bats, nesting birds and invertebrates (see Figure 2);
 - Lights that emit a broad spectrum of light with a high UV component should be avoided; and
 - Hoods or louvers will be fitted to lights to minimise light spillage; and passive low level lighting will be installed in preference to standard high level continuous street lighting.
- 4.4.13** Where lighting cannot be avoided within the site (security lighting or for safety at emergency exits), measures to minimise the duration of lighting will be taken. This can be achieved with the use of lighting set on motion-sensors and short timings (such as less than 1 minute).

4.5 Proposed Schedule

- 4.5.1** All proposed habitats to be created as part of the development should be completed at a suitable time of year, (as specified in section 4.3 and 4.4) once the site layout has been completed as part of the construction phase of the development.
- 4.5.2** All ecological enhancements outlined in section 4.4 should be installed at the end of the construction phase of the development when construction based disturbance has ceased.

4.6 Compliance and Monitoring

Compliance

- 4.6.1** A compliance check should be undertaken by a suitably qualified ecologist within 12 months of the completion of the development. The aim of the compliance check will be to determine whether the ecological enhancements and habitat creation have been completed as per the BNG and Ecological Enhancements Plan, outlined in this section.
- 4.6.2** The results of the compliance check should be reported and shared between all stakeholders of the development including EBC to ensure transparency, with any remedial actions outlined.

Monitoring & Maintenance

- 4.6.3** Monitoring and maintenance will be undertaken for all retained and newly created habitats outlined within the BNG and Ecological Enhancement Plan. The aim of the on-going monitoring is to ensure that the retained and newly created habitats achieve and remain in the desired condition criteria outlined in Table 10 Appendix II for the period outlined in section 4.7.
- 4.6.4** All monitoring and maintenance as well as any remedial action required will be reported and shared among the stakeholders of the development.

4.7 Responsibility

- 4.7.1** Responsibility for implementation of the BNG and Ecological Enhancement Plan, as well as for its continuation throughout the 30-year minimum period, will be placed with the land owner. The land owner will ensure that the management undertaken at the site complies with this document (and takes precedence over alternative or future updated document or landscaping plans) in order to ensure proper establishment and long-term condition.

- 4.7.2** Arun Ecology Ltd will be able to advise on any specific questions or queries in regard to any issues concerning ecology or nature conservation which may arise.

5. Biodiversity Net Gain Principles

5.1 Background

- 5.1.1** This section outlines the delivery of BNG for the proposed development against the BNG Good Practice Principles for Development (CIEEM, CIRIA, IEMA , 2016), a set of ten guiding principles for delivering BNG in the UK.

5.2 Evaluation

- 5.2.1** Table 8 lists each of the BNG good practice principles and provides a statement on how each has been applied as part of the BNG assessment for the proposed development.
- 5.2.2** In our professional judgment the development meets all criteria set out under the ten principles of BNG and provides provisions that are proportionate for the size of the site and scale of the development.

Table 7 – Application of the BNG Principles to the development.

Biodiversity Net Gain Principles		Met or not met	Justification
Principle 1 - Apply the Mitigation Hierarchy.	Avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	Met	- The mitigation hierarchy at the time of the BNG assessment has been applied and documented in this report; - Where possible the retention of baseline habitat within the site has been considered; and - Where it was not possible to avoid impacts to baseline habitats within the site as part of the development, compensatory habitat of equal or higher distinctiveness and that exceeds the condition of baseline habitats is provided within the site. As such this avoids the need to offset biodiversity losses off-site.
Principle 2 - Avoid losing biodiversity that cannot be offset by gains elsewhere.	Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve No Net Loss or Net Gain.	Met	No irreplaceable habitats or habitats of principle importance were recorded during the Preliminary Ecological Appraisal undertaken at the site (Arun Ecology, 2022). The nearest land parcel of irreplaceable habitat, ancient woodland, was located 0.3km from the site. No habitats of high distinctiveness are present within the site and all habitats recorded within the site are of low strategic significance and do not connect to any designated sites, irreplaceable habitats or habitats of principle importance.
Principle 3 - Be inclusive and equitable.	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible, and	Met	- EBC have consulted on the development and have requested an ecological enhancement plan including a BNG calculation for the proposed landscaping plans. - The results of the BNG calculations and the BNG and Ecological Enhancement Plan outlined in this report will be submitted to EDC for review

	share the benefits fairly among stakeholders.		and approval in-line with conditions 13 of the decision notice 03/07/2023 for the development (Planning ref: F/22/94159). • Cordage 13 Limited on behalf of their client Eastway Estates Limited have consulted Arun Ecology Ltd on the delivery of BNG within the site as part of the development. • Compliance with the BNG and Ecological Enhancement Plan will be reported and communicated between the appointed ecological consultant and all stakeholders of the development (including the client, any party representing the client and EBC). • The BNG and Ecological Enhancement Plan has been reviewed and accepted by the landowner. On-going monitoring of the site will be commissioned by the land owner and feedback actioned.
Principle 4 - Address risks	Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	Met	• The difficulty in creating new habitats and delay in reaching the target condition has been accounted for by the post development multiplier and is reflected in the final BNG score generated by the Biodiversity Metric 4.0. • The habitats to be created as part of the development all have low final difficulty of creation scores in the Biodiversity Metric 4.0. Furthermore, the final target conditions for habitats is calculated to be achievable in a relatively short timescale, ranging from 2-5 years. • The habitats and target conditions are realistic to the site and the methodology for habitat creation and on-going monitoring outlined in the BNG and Ecological Enhancement Plan conforms to industry best practice guidelines. • The BNG and Ecological Enhancement Plan sets out on-going monitoring to ensure the successful establishment of habitats and to address risks dynamically.

Principle 5 - Make a measurable Net Gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	Met	- The final landscaping plans as part of the development achieve an overall net gain of +23.41% for habitat units and +31.17% for hedgerow units, exceeding the 10% threshold for BNG. - The development includes the creation of new habitats such as other neutral grassland, mixed scrub and hedgerows that will contribute to nature conservation within an urban area.
Principle 6 - Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when: - Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses - Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation. - Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels - Enhancing existing or creating new habitat. - Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.	Met	- The baseline habitat data was collected by a local suitably qualified ecologist using the UK Habitat Classification System within 12 months of undertaking the BNG assessment. The data was subject to a quality assurance process (see Arun Ecology, 2022) and will be made available for EBC to review. - The habitat compensation provided within the site meets the threshold for habitat area lost, habitat trading rules outlined in the Biodiversity Metric 4.0 and in all cases is either of similar or better value habitat to the baseline habitats recorded within the site (see tables 9 and 10 in Appendix I and Appendix II). - All habitat creation as part of the development can commence without any time delays. - The development provides new habitat that exceeds the biodiversity value of baseline habitat within the site. Provided in combination with ecological enhancements such a low impact lighting strategy and the habitat provisions for species there be a dark corridor on the eastern and southern boundary of the site. Furthermore, this will connect the new habitats within the site to a network of garden habitats to the south and east of the site.

Principle 7 - Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).	Met	- The BNG contribution resulting from the development exceeds the 10% net gain threshold. This is achieved primarily through the creation of new habitats that would not otherwise be possible without intervention, for example, the creation of other neutral grassland and new hedgerow and mixed scrub habitats. - The development includes habitat compensation and enhancement above and beyond simple reinstatement, by providing habitat of similar or higher distinctiveness and of better condition. - The development includes provisions that include artificial habitat enhancements such as swift boxes, starling boxes, bat boxes and solitary bee boxes for the wider benefit of biodiversity.
Principle 8 - Create a Net Gain legacy	Ensure Net Gain generates long-term benefits by: - Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity; - Planning for adaptive management and securing dedicated funding for long-term management; - Designing Net Gain for biodiversity to be resilient to external factors, especially climate change; and - Mitigating risks from other land uses Avoiding displacing harmful activities from one location to another. Supporting local-level management of Net Gain activities	Met	- Cordage 13 Limited on behalf of their client Eastway Estates Limited have been involved with incorporating BNG into the design of the development. - The landowner will enter into an agreement to secure BNG within the site for a 30 year period. The agreement will be to implement the BNG and Ecological Enhancement Plan for the defined period. - The design of the development separates the main commercial activities of the site from almost all areas of habitat creation. This will ensure that any potentially harmful activities will not impact the newly created habitats, allowing them to establish and persist within the site.

Principle 9 - Optimise sustainability	Optimise sustainability, prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	Met	The development makes a measurable and an additional BNG contribution within a small site. The development includes provisions for sustainable travel such as cycling sheds and provides a commercial (social-economic) opportunity and provision to the local community. As such the sustainability contribution, given the size of the site will be proportionate for the development.
Principle 10 - Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	Met	- Biodiversity net gain activities will be communicated firstly, through the Biodiversity and Ecological Enhancement Plan outlined in section 4 of this report. The report will be made available on the EBC planning portal and be open to comment from planning officers and members of the public. - Post development BNG compliance and monitoring will be reported and communicated between all stakeholders related to the development and its determination.

6. Legislation and Planning Policy

6.1 Background

- 6.1.1** The purpose of this section is to evaluate the legislation and planning policy known to be a material consideration to the development based upon the desk study survey and the field survey results.

6.2 Biodiversity Net Gain and Ecological Enhancement

- 6.2.1** The following legislation is relevant to the development:

- The Environmental Act, 2021;
- National Planning Policy Framework, 2021;
- Eastleigh Borough Council Local Plan, 2022.

- 6.2.2** A summary of the relevant legislation and planning policy in context of the development is provided below. Full details of the UK legislation and planning policy and offences that are relevant to the qualifying features in this section are detailed in Appendix III.

Biodiversity Net Gain

- 6.2.3** The proposed landscaping plan as part of the development will achieve an overall net gain for habitats and hedgerow biodiversity units above the threshold of 10% set under the Environmental Act, 2021. The net gain for biodiversity is also achieved in-line with the principles of BNG and rules set out under the Biodiversity Metric 4.0. The development will therefore, be compliant with the legislation and planning policy requiring developments to achieve a measurable net gain for biodiversity.
- 6.2.4** The BNG and Ecological Enhancement plan, if followed will ensure that the development remains compliant with the legislation and planning policy relevant to BNG.

Ecological Enhancements

- 6.2.5** The proposed ecological enhancements within the site as part of the development are proportionate to the size of the site and scale of the development. Therefore the

development will be compliant with the national and local planning policy outlining the requirement for ecological enhancements for the benefit of biodiversity.

7. Conclusion

7.1 Summary

- 7.1.1** The proposed landscaping plans for the development will result in a +23.41% of habitat units and +31.17% of hedgerow units at the site. The net gain will be achieved in-line with all of the ten core principles of BNG. The development will therefore be compliant with the relevant legislation and planning policy relevant to BNG and Ecological Enhancements. As such, condition 13 in the decision notice for the development will be met in principle, subject to implementation of the BNG and Ecological Enhancement Plan.

8. Bibliography

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- 8.1.4** BSI Group (2013), BS42020 – a code of practice for biodiversity in planning and development. The British Standards Institution. (Online) Available at <http://www.bsigroup.com/LocalFiles/enGB/biodiversity>. Accessed April 2022.
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- 8.1.9** PLC Architects Ltd (2022) Proposed Site Plan (Drawing ref: 2237.100. 103 Bournemouth Road, Southampton.
- 8.1.10** Natural England (2023) Joint Publication JP039. The Biodiversity Metric 4.0 Technical Annex 2 – Technical Information. Defra Group. Available at <http://publicationsnaturalengland.org.uk> (Natural England Access to Evidence).
- 8.1.11** UK Habs (2023) UK Habitat Classification Version 2.0 (at <http://www.ukhab.org>).

Appendix I – Baseline Habitat Condition Assessment

Table 8 – Condition assessment of baseline habitats within the site using the Biodiversity Metric 4.0 – Technical Annex 1.

Baseline habitat	Condition assessment criteria	Criteria met	Condition assessment	Summary
Habitats				
Modified grassland (all parcels within site)	a) There are 6-8 vascular plant species per m ² present, including at least 2 forbs.	No	Poor	- Criteria a) is not met. Up to 4-5 vascular plants were typically recorded within the modified grassland per m² with 3-4 forbs typically being found. The condition assessment only allows poor condition to be determined for modified grassland habitat if criteria A is not met. - Criteria b not met. The sword height was quite uniform for the modified grassland habitat. - Criteria c, d and e met. No bramble present within grassland, only on boundaries (representing a change in broad habitat type). Physical damage absent and no bare ground recorded during the UK habitat classification survey. All three parcels within the site meet the same criteria.
	b) Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No		
	c) Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area.	Yes		
	d) Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes		

	e) Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)	Yes		
Mixed scrub	a) At least 80% of scrub is native, and there are at least three native woody species, with no single species comprising more than 75% of the cover (except hazel juniper (<i>Juniperus communis</i>), sea buckthorn (<i>Hippophae rhamnoides</i>) or box (<i>Buxus sempervirens</i>), which can be up to 100% cover)).	No	Poor	- Criteria a) not met, non-native species made up over 20% of the mixed scrub habitat. - Criteria b) not met. The age range of the shrubs present is uniform with little to no seedlings or saplings recorded. The mixed scrub is predominantly choked by bramble and non-native shrubs and shaded by a mature ash and the adjacent cypress sp. treeline. - Criteria c. not met. Non-native plant species present which make up greater than 5% area cover in the stand. - Criteria d) and e) not met. The mixed scrub does connect to the modified grassland habitat and a treeline however, they do not create a well-developed edge reflecting the urban setting of the site. There are no clearings, glides or rides present within the mixed scrub habitats, with no sheltered edges present.
	b) Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No		
	c) There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA4) and species indicative of sub-optimal condition make up less than 5% of ground cover.	No		
	d) The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	No		
	e) There are clearings, glades or rides present within the scrub, providing sheltered edges.	No		
Bramble Scrub	Bramble scrub is automatically assigned as poor condition habitat.	n/a	Poor	N/A
Hedgerows				
Line of trees	a) At least 70% of trees are native species.	No	Poor	Criteria a) not met. The mature trees that form part of the treeline are dominated by cypress sp. with >70% cover.
	b) Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	Yes		

	c) One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	No		- Criteria b) met. The tree canopy is continuous and no gaps recorded along the entire length. - Criteria c) not met. The treeline is dominated by cypress sp. that is of uniform age, is in good condition and is of poor ecological value to vertebrates and invertebrates. The single sycamore tree is generally in good condition and does not have features of ecological value. - Criteria d) not met. The treeline is bordered by hardstanding on its north aspect and a residential property to the south. - Criteria e) met. The mature trees that form part of the treeline are in good overall condition and there is little to no evidence of ill health or damage.
	d) There is an undisturbed naturally-vegetated strip of at least 6m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice.	No		
	e) 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.	Yes		
Ornamental non-native hedgerow	The hedgerow is assumed to be comprised entirely of garden privet. Therefore, No condition assessment is required as the condition is fixed at poor for ornamental or non-native hedgerows.	Yes	Poor	The privet sp. recorded during the PEA is assumed to be garden privet a non-native species. Therefore, the hedgerow is automatically quality qualified as poor condition.

Appendix II – Post Development Target Condition Assessment.

Table 9 – Target condition assessment of proposed habitat creation to be included within the agreed site plan.

Proposed habitat	Condition assessment criteria	Criteria met	Target condition	Summary
Habitats				
Other neutral grassland	a) The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present.	Yes	Moderate	- To meet the target moderate condition 3 - 5 condition criteria must be met, including essential criterion A. In our professional judgement all criteria including criteria A can be met in the creation of the other neutral grassland habitat. - Criteria a) can be met. The proposed seed mix includes 33 different species with a composition that closely matches the other neutral grassland habitat type. It also includes indicator species as per the UK Habitat Classification definition. This should easily exceed the 9-15 species per m2 as specified in the UKHab Classification for other neutral grassland if the BNG and Ecological Enhancement Plan is followed. It is also likely that other neutral grassland indicators (grasses and forbs) will naturally colonise the site under the proposed management. - Criteria b) unlikely to be met. This criteria is unlikely to be met due to the size of the grassland being small and the practicality of management likely to result in a more uniform cuts and growth. - The BNG and ecological enhancement management plan includes management and on-going monitoring and maintenance that will ensure criteria, c, d and e are met.
	b) Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No		
	c) Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Yes		
	d) Cover of bracken (<i>Pteridium aquilinum</i>) is less than 20% and cover of scrub (including bramble) is less than 5%.	Yes		
	e) Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed."	Yes		

Mixed scrub	a) At least 80% of scrub is native, and there are at least three native woody species, with no single species comprising more than 75% of the cover (except hazel, common juniper (<i>Juniperus communis</i>), sea buckthorn (<i>Hippophae rhamnoides</i>) or box (<i>Buxus sempervirens</i>), which can be up to 100% cover).	Yes	Moderate	- Criteria a) will be met. The proposed mixed scrub habitat will be comprised entirely of native species. There will be at least three native woody species and no one species will make up more than 75% of the habitats cover. - It will not be possible to meet criteria b) initially as the mixed scrub planting will be uniform in age. The on-going monitoring and maintenance of the mixed scrub outlined in the BNG and Ecological Enhancement Plan will provide some future opportunity to establish different age ranges. - Criteria c) will be met. All species proposed in the mixed scrub habitat creation will be native species. The BNG and Ecological Enhancement Plan will ensure the management and removal of non-native species. - Criteria d) will be met. The mixed scrub will be adjacent to other neutral grassland and hedgerow habitats. - Criteria e) will not be met. Due to the size of the site, there is insufficient space to create, clearings, glades or rides that will be of ecological value without removing significant ecological value from the site.
	b) Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No		
	c) There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA4) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Yes		
	d) The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes		
	e) There are clearings, glades or rides present within the scrub, providing sheltered edges.	No		

Table 10 – Target condition of proposed hedgerow habitats to be included within the agreed site plan (see Figure 2).

Hedgerow condition criteria	Hedgerows	
	Hedgerow 1 (Retained hedgerow – See H1 Figure 2)	Hedgerow 2 and 3 (see H2 and H3 Figure 2)
A1) The average height is >1.5m.	Hedgerow 1 is comprised entirely of garden privet, a non-native species. Therefore, no condition assessment is required as the condition is fixed at poor for ornamental or non-native hedgerows. There is no enhancement planned for this hedgerow as part of the development.	- Criteria A1) will be met. The newly planted hedgerows once established will maintained at a height >1.5m. - Criteria A2) will be met. The newly planted hedgerows once established will be maintained at a height >1.5 m width. - Criteria B1) will be met. The target condition for the hedgerows once established is for there to be no gap between the ground and the base of the hedgerow. - Criteria B2) will be met. There will be no gaps in the newly planted hedgerows along its entire length. - Criteria C1) will be met. There will be undisturbed ground in the form of other neutral grassland on at least one side of each of the of the hedgerows. - Criteria C2 will be met. The BNG and Ecological Enhancement Plan will ensure the target habitat – other neutral grassland is established and maintained adjacent to the hedgerow. - Criteria D1) will be met. The newly planted hedgerows will consist of a species rich mix of native species. The adjacent ground will comprised of a native seed mix to establish other neutral grassland habitat. - Criteria D2) will be met. The BNG and Ecological Enhancement Plan sets out appropriate management for the hedgerow.
A2) The average width of woody growth estimated at the widest point of the canopy >1.5m.		
B1) Gap between ground and base of Canopy <0.5m along >90% of length.		
B2) Gaps <10% total length, with no canopy gaps >5m.		
C1) >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length (present on at least one side of the hedgerow).		
C2) Undesirable vegetation indicating enrichment dominates <20% (nettles/cleavers/docks etc.).		
D1) >90% of hedgerow/undisturbed ground is free of invasive non-native and neophyte species.		
D2) >90% of hedge/ground is free of damage caused by human activities (pollution, manure, rubble, excessive hedge cutting etc.)		
Condition	Poor	Moderate

Appendix III – Legislation and Planning Policy

8.2 Background

8.2.1 This section provides a summary of the legislation and planning policy that could be relevant to the development. Where possible we have limited this section to the areas relevant to this report. This means the legislation and planning policy outlined below is not included in its entirety.

8.2.2 This section does not constitute legal advice, and only, represents the interpretation and professional judgement of the ecologists named in this report, on the legislation and planning policy relevant to the development.

8.3 The Environmental Act, 2021

8.3.1 The Environmental Act, 2021 gained royal ascent on the 9th November, 2021. The act is wide ranging and broadly has the following aim:

‘a bill to make provision about targets, plans and policies for improving the natural environment, for statements and reports about environmental protection; for the office of environmental protection; about waste and resource efficiency; about air quality; for the recall of products that fail to meet environmental standards, about water, about nature and biodiversity; for conservation covenants; about the regulation of chemicals, and for connected purposes’.

Nature and Biodiversity

8.3.2 Part 6 – Sections 98-101 of the act outline provisions for biodiversity gain in planning.

8.3.3 Schedule 14 makes provision for biodiversity gain to be a condition of planning permission in England.

8.3.4 Schedule 14 states that, the biodiversity gain objective is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the on-site habitat by at least the relevant percentage.

8.3.5 It goes on to state that the biodiversity value attributable to the development is the total of:

- The post development biodiversity value of the on-site habitat;

- The biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development; and
- The biodiversity value of any biodiversity credits purchased for the development.

8.3.6 The relevant percentage is set at 10% for biodiversity gain.

8.3.7 Part 6 – Section 100 of the act outlines provisions by regulation for the secretary of a register of biodiversity gain sites (known as the biodiversity gain site register).

8.3.8 A biodiversity gain site is land where:

- A person is required under the conservation covenant or planning obligation to carry out works for the purpose of habitat enhancement;
- That or another person is required to maintain the enhancement for at least 30 years after the completion of the works; and
- For the purpose of schedule 7A to the Town and Country Planning Act, 1990 the enhancement is made available to be allocated (conditionally or unconditionally, and whether for consideration or otherwise) in accordance with the terms of the covenant or obligation to one or more developments for which planning permission is granted.

8.3.9 Part 6 – Section 101 states that the secretary of state may make arrangements under which a person who is entitled to carry out the development of any land may purchase a credit from the secretary of state for the purpose of meeting the biodiversity gain objective referred to in schedule 7A to the Town and Country Planning Act, 1990 Schedule 2A of the Planning Act, 2008.

8.3.10 A credit is to be regarded for the purpose of that schedule as having such biodiversity value as is determined under the arrangements.

8.3.11 The arrangements may in particular include arrangements relating to:

- Applications to purchase credits;
- The amount payable in respect of a credit of a given value;
- Proof of purchase;
- Reimbursement for credits purchased for development which is not carried out.

8.4 National Planning Policy Framework (2021)

8.4.1 The National Planning Policy Framework (NPPF, Ministry of Housing Communities and Local Government, 2021) sets out the Governments planning policies for England and how these should be applied. It provides a framework which locally prepared plans for housing and other developments can be produced.

8.4.2 The NPPF supplements Government Circular: Biodiversity and Geological Conservation 06/2005 (Office of the Deputy Prime Minister, 2005).

Conserving and Enhancing the Natural Environment

8.4.3 Paragraph 174 of the NPPF states – planning policies and decisions should contribute to and enhance the natural and local environment by:-

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a matter commensurate with their statutory status or identified quality in the development plan;
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at an unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, where possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

8.4.4 Paragraph 179 States. In order to protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

8.4.5 Paragraph 180 states. When determining planning applications, local planning authorities should apply the following principles:

- a) If significant harm to biodiversity resulting from the development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) Development on land within or outside a SSSI site, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of species scientific interest, and any broader impacts on the national network of SSSI sites.
- c) Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and suitable compensation strategy exists; and
- d) Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

8.4.6 Paragraph 180 States. The following should be given the same protection as habitats sites:

- a) Potential Special Protection Areas and possible Special Areas of Conservation;
- b) Listed or proposed Ramsar sites⁶⁴; and

- Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

8.4.7 Paragraph 181 is also relevant to the development, it states:

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

8.4.8 Paragraph 175 is also relevant stating that, plans should distinguish between the hierarchy of international, national and locally designated sites, allocated land with the least environmental or amenity value, where consistent with other policies in this framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

8.5 Eastleigh Borough Council Local Plan (2022)

8.5.1 Policy DM11 of the Eastleigh Borough Council (EBC) Local Plan (2022) sets out EBCs commitment to protecting biodiversity in the district.

General approach

8.5.2 The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:

- A) protect, conserve and enhance all:
 - 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; and facilitate their adaptation to climate change wherever possible.
- 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).

International Designations

- 8.5.3** 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.
- 8.5.4** 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:
- 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 75 Adopted EBC Local Plan 2022 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.

National and Local Designation

- 8.5.5** 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.

Priority habitats, protected and priority species and the local ecological network

- 8.5.6** 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 or priority species, or on the local ecological network 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, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.

Irreplaceable habitats

- 8.5.7** 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 76 Adopted EBC Local Plan 2022 exists.

Buffers

- 8.5.8** 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.

Surveys

- 8.5.9** 8. Development will not be permitted unless it can be demonstrated that: a. there have been thorough habitat and species surveys; b. the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and c. the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.

8.6 Bibliography – Appendix III

- 8.6.1** EBC (2022) Eastleigh Borough Council Local Plan, 2022.
- 8.6.2** Ministry of Housing, Communities & Local Government (2019) National Planning Policy Framework. (Online) Ministry of housing and Local Government, Fry Building, 2 Marsham Street, London, SW1P 4DF. Accessed April 2022.
- 8.6.3** The Environmental Act, 2021. (Online) Accessed April 2022. Available at <http://legislation.gov.uk>.