

Land North of Highover Farm, Hitchin

BDW North Thames

Outline Landscape and Ecological Management Plan

Pursuant to Condition 21 of Outline Proposal 18/01154/OP

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1. Introduction

- 1.1 Ecology Solutions was commissioned in April 2025 by BDW North Thames to complete an Outline Landscape and Ecological Management Plan (OLEMP) for the land north of Highover Farm, Hitchin (see Plan ECO1).
- 1.2 The proposed outline application for this development, with all matters reserved other than access, comprises residential led development of up to 700 dwellings of use class C3 (dwellings), approximately 500 sqm of neighbourhood-level facilities (use classes A1, A2, A3, A4, A5), a new 2FE primary school, open space, play space, green infrastructure, and associated accesses (vehicular, pedestrian and cycle), including a new primary access off Stotfold Road with limited access off High Dane.
- 1.3 The development will be delivered in four phases, as detailed in Section 4 of this document.
- 1.4 The planning application for the development was submitted to North Hertfordshire District Council in April 2018, the outcome of which was the conditional planning permission granted in November 2024 (reference: 18/01154/OP) subject to the following planning conditions.
- 1.5 Condition 21 of the conditional decision notice requires the production of an OLEMP:

No development apart from enabling works, and those associated with Phase 0 strategic infrastructure works (comprising the physical construction of the spine road and drainage infrastructure, but excluding the planning and landscape establishment of those features) shall take place on the site until an outline landscape and ecological management plan (OLEMP) has been submitted to, and approved in writing by, the local planning authority.

The OLEMP shall be informed by the Environmental Impact Assessment and the latest version of the biodiversity metric, having regard to the approved metric submitted with the outline application, and should include the following:

- a) measures to protect and enhance retained features (noting commitments secured at the outline application stage)
- b) identification of opportunities to create new biodiversity assets and links to existing off site ecological networks.
- c) a demonstration of how the above measures contribute to the achievement of a 10% minimum biodiversity net gain target for the overall development site, based on the approved metric (or an up to date statutory net gain metric), and
- d) a framework management and maintenance strategy.

Prior to or concurrent with the first reserved matters submitted in each subsequent phase (identified in condition 5 phasing and delivery plan) a LEMP for that phase, prepared in accordance with the approved OLEMP, shall be submitted to and approved by the local planning authority. The LEMP shall also include:

- a) Description, areas and evaluation of features to be managed, marked on plans for that phase
- b) Aims and objectives of management
- c) Demonstration of how the above measures contribute to the achievement of the minimum 10% net gain target for the overall development and what the percentage is in that phase

- d) Appropriate management options for achieving target condition for habitats as described in the approved metric
- e) Details of the make, model, and location of a minimum of integrated bat and swift boxes in appropriate buildings has been supplied to and approved by the Local Planning Authority. These should be clearly marked on plans. Boxes shall be fully installed prior to occupation and retained as such thereafter.
- f) Confirm that all planting comprised in the approved details of landscaping shall be carried out in the first planting season following the commencement of each phase of the development (or within such extended period as may first be agreed in writing with the Local Planning Authority). Any planting removed, dying or becoming seriously damaged or diseased within five years of planting shall be replaced within the first available planting season thereafter with planting of similar size and species unless the Local Planning Authority gives written consent for any variation
- g) Details of the body or organisation responsible for implementation of the plan
- h) Details of the legal and funding mechanism(s) by which the long-term implementation of the plan will be secured by the developer with the management body(ies) responsible for its delivery. The plan shall also set out (where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme. The approved plan will be implemented in accordance with the approved details for a minimum of 30 years to deliver the required condition of habitats created
- i) The monitoring methodology and frequency in respect of the retained, created and/or enhanced habitats. The monitoring reports shall be submitted to the local planning authority in writing in accordance with the methodology and frequency specified in the approved LEMP for that phase. The created and/or enhanced habitat specified in the approved LEMP for that phase shall be managed and maintained in accordance with the approved LEMP for that phase.

The approved plan will be implemented in accordance with the approved details.

Reason: To conserve and enhance biodiversity in accordance with the NPPF and North Hertfordshire Local Plan Policy NE4.

- 1.6 Condition 13 of the conditional decision notice requires the production of an Open Space Management and Maintenance Scheme:

Prior to or concurrent with the first reserved matters submitted in each phase identified in Condition 5 Phasing and Delivery a detailed Open Space Management and Maintenance Scheme for the management and maintenance of all areas of open space (to include parks, greenways, allotments, play areas, informal open space, semi-natural green space, public squares) shall be submitted to and agreed in writing by the Local Planning Authority and implemented in accordance with an agreed timetable and approved phasing strategy. Details to be submitted shall include:

- a) Details of landscape management and maintenance plans;
- b) Details of planting, grass cutting, weeding and pruning;
- c) Management of sustainable urban drainage features;
- d) Management of biodiversity enhancements;
- e) Inspection, repair and maintenance of all hard landscaping and structures;
- f) Management, monitoring and operational restrictions; and
- g) Maintenance and planting replacement programme for the establishment period of landscaping.

The open spaces provided shall be retained for their intended purpose and in accordance with the approved management plan unless otherwise agreed in writing by the local planning authority.

Reason: To ensure adequate open space and amenity provision as per North Hertfordshire Local Plan Policy NE6.

Purpose of this Report

- 1.7 This document sets out the management of areas of landscaping, including the features of ecological interest, due to be retained and created within the entire site, and describes the management strategies to be implemented over 30 years after project completion to align with requirements pertaining to Biodiversity Net Gain. This document will address the requirements of Condition 21, and will, in addition, underpin the overarching requirements of Condition 13, where overlap with the Open Space Management Scheme occurs.
- 1.8 Ecology Solutions have liaised with Golby and Luck Landscape Architects ensuring that the landscape scheme and maintenance and management of the site realise the objectives of this OLEMP from an ecology and nature conservation perspective. The OLEMP has been written to ensure that the proposed development achieves a minimum of 10% net gain in biodiversity.
- 1.9 This OLEMP has been written in accordance with BS 42020:2013 Section 11.1, with reference to published guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM)¹ and in accordance with Natural England guidelines for protected species.
- 1.10 The document is set out as follows:
 - Ecological baseline and evaluation of important features within the site;
 - Objectives of the report in order to maximise the ecological potential of features due to be retained within the site and to establish a public open space network for public use and enjoyment;
 - Phasing Strategy; and
 - Management prescriptions in order to achieve objectives and ensure a minimum of 10% net gain in biodiversity is attainable. These include any monitoring requirements.

¹ CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* Version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

2. Ecological Baseline and Evaluation

- 2.1 An extended Phase 1 habitat survey was previously undertaken of the site in 2014 and 2016 by WSP and updated in July 2019 by Tyler Grange Group Limited. The results of this survey are detailed within the Biodiversity Offsetting Metric², dated January 2023, and are summarised below. Ecology Solutions have been involved with the site since May 2023. Targeted surveys have been undertaken, including habitat surveys and protected species surveys in respect of bats, breeding birds, common reptiles, Great Crested Newts *Triturus cristatus* and Badger *Meles meles* by Ecology Solutions in 2023. An updated Biodiversity Net Gain Metric was produced by Ecology Solutions in 2025³. An updated walkover survey to assess the status of protected species on-site was undertaken in November 2025.
- 2.2 The site is approximately 35ha in size and comprises mostly farmed arable land, with smaller areas of semi-natural habitat, including grassland, hedgerows, trees and a pond. It is bordered to the east by Stotfold Road, a rail line to the west, and a residential area of Hitchin to the south.
- 2.3 Further details on habitats are provided within the WSP Preliminary Ecological Appraisal⁴ and in the Tyler Grange Biodiversity Offsetting Metric.

Bats

- 2.4 The site has been recorded as supporting foraging and dispersing bats with a number of species having been recorded including Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Nathusius' Pipistrelle *Pipistrellus nathusii*, Noctule *Nyctalus noctula*, Brown Long-eared Bat *Plecotus auritus*, Leisler's bat *Nyctalus leisleri*, Myotis *Myotis* sp. and Barbastelle *Barbastella barbastellus*. The buildings to the immediate south-east of the site boundary have been surveyed for roosting bats with a high level of activity but no roosts recorded. A number of trees within the site have been assessed as supporting moderate roosting potential, albeit with no confirmed roosts having been identified. The site is considered to be of local value for bats.

Badgers

- 2.5 For animal welfare reasons, Badgers are considered within a separate confidential document.

Hedgehogs

- 2.6 No evidence of Hedgehog was recorded during the site surveys. The site contains suitable habitat for Hedgehog foraging and dispersal, although this is unlikely to be at densities that are notable outside of the local area.

² Tyler Grange Group Limited (2023) *Biodiversity Impact Assessment Calculation*

³ Ecology Solutions (2025). *Statutory Biodiversity Metric*. 11467:Statutory Biodiversity Metric.vf

⁴ WSP (2018) *Proposed Development Site at Hitchin, Hertfordshire. Preliminary Ecological Appraisal Report*

Birds

- 2.7 The site supports a diverse assemblage of farmland bird species and specifically supports a population of Corn Bunting *Emberiza calandra*, Yellowhammer *Emberiza citrinella*, Linnet *Carduelis cannabina*, and Skylark *Alauda arvensis*. These species are of conservation concern, being in national decline, and are red list species. The bird assemblage on site, and specifically the Corn Bunting population, are considered to be of district value.

Reptiles

- 2.8 The grassland habitats across the site, but principally those tied to the western boundary and associated railway corridor, have been shown to support a moderate Common Lizard *Zootoca vivipara* population. The site is considered to be of local value for common reptiles.

Amphibians

- 2.9 A single pond is present in the south of the site, however surveys in 2016 and 2023 have confirmed absence of Great Crested Newts. Similarly, no Great Crested Newts were recorded within the only other pond within 500m of the site, and no records were returned by the desk study with 2km of the site boundary. Hence it is concluded that the site does not support any populations of Great Crested Newt.

Invertebrates

- 2.10 A limited assemblage of common and widespread invertebrates has been identified within the site with no habitat considered to be of particular importance for this group. Local records suggest the presence of Small Blue *Cupido minimus* and Small Heath *Coenonympha pamphilus pamphilus* butterflies, Cinnabar Moth *Tyria jacobaeae*, and Pantaloon Bee *Dasypoda hirtipes* in close proximity to the north of the site, however it is considered unlikely the site is the primary habitat for these species given the limited habitats in the north. The site and habitats therein are considered to be of only site value to invertebrates / entomology.

3. Management Objectives

- 3.1 The aim of the OLEMP is to provide a long-term (i.e. 30 year) management plan for the entire site to ensure the development achieves a minimum 10% net gain in biodiversity aligning with adopted and emerging policy and legislation.
- 3.2 Defining a set of objectives is central to the effectiveness of the aim, given that it is intended to provide a framework that will safeguard existing nature conservation interest and provide guidance on enhancement and future management.
- 3.3 Specific objectives for the conservation of particular species or groups and particular habitats of nature conservation interest are set out in the relevant sections to follow. The nature of these objectives has been guided by the principles set out in UK and European wildlife legislation, notably the Wildlife & Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. Furthermore, the formulation of these objectives has also been influenced by national and local biodiversity and conservation targets, as set out in the UK Post-2010 Biodiversity Framework, the Hertfordshire Biodiversity Action Plans (BAPs) and the Hertfordshire Local Nature Recovery Strategy⁵ (LNRS), published on the 24 November 2025.
- 3.4 The overarching objectives for nature conservation are as follows:
 - Objective 1: To retain ecologically valuable habitats to safeguard the benefits these for biodiversity;
 - Objective 2: To secure the implementation and establishment of the proposed landscaping scheme to secure wildlife and ecological benefits, providing demonstrable net gains to the quality and value of the habitats on-site, and for public use and enjoyment; and
 - Objective 3: To ensure that the site is capable of supporting a similar, or greater, complement of species, where this is compatible with the above objectives.
- 3.5 The overarching objectives for open space management are as follows:
 - Objective 4: To establish a functional and attractive public open space network that contributes to the visual amenity of the site and enjoyment by users.
- 3.6 The various measures described in the following sections, are illustrated on Plan ECO3.

⁵ Hertfordshire Nature Recovery Partnership (2025). *Local Nature Recovery Strategy*.

4. Phasing and Implementation

- 4.1 The development will be delivered in four phases, as described in the Site-wide Phasing and Delivery Plan⁶.
- 4.2 The phasing of development at Highover Farm will support the delivery of a comprehensive, sustainable and well-connected new community. The phasing strategy has been based on the following principles as set out in the Strategic Masterplan Framework:
 - To utilise existing infrastructure to minimise disruption and disturbance due to site clearance and construction activity, with the construction access and activity being taken from Stotfold Road;
 - To encourage new residents to adopt more sustainable modes of transport from the outset by construction the new primary street (The Avenue) with supporting bus, walking and cycling infrastructure before any housing is occupied;
 - Advanced structural landscaping, shrub and tree planting to enable early establishment of green infrastructure; and
 - Delivery of a mix of housing type and tenure within each phase.
- 4.3 A brief description of the planned phases, in particular how they impact landscape and open space management, is provided below.
- 4.4 Phase 0 consists of highway and drainage infrastructure, including the spine road, and the construction of the Sustainable Drainage Systems (SuDS) in the north of the site (Hitchin Meadows).
- 4.5 Phase 1 construction will include the creation of residential parcels in the east of the site, along with creation of Hitchin Meadows, Stotfold Linear Park, and part of Dane Walk.
- 4.6 Phase 2 will consist of the northern residential parcel, the school site (anticipated to be completed under a separate Reserved Matters (RM)), and the northern section of Icknield Linear Park.
- 4.7 Phase 3 will incorporate the western residential parcel, as well as the Threshing Barn Green, Highover Park, and the allotment area.
- 4.8 Phase 4, the final phase of the development, will consist of the construction of the southernmost residential parcels, as well as creation of a central pocket park.
- 4.9 Each of the above phases will be dealt with under a separate RM, each requiring a detailed LEMP with updated BNG figures detailing the contributions of each Phase towards the overall achievement of a +10% net gain, as the landscaping of each new phase is produced in detail.

⁶ Rapleys LLP (September 2025). *Site-wide Phasing and Delivery Plan – Highover Farm, Hitchin*. 503/55/1/SWPDP

5. Management Measures

- 5.1 Management prescriptions and monitoring requirements have been described below, in relation to each of the objectives. A detailed management and monitoring scheduled will be provided in the subsequent phased LEMPs.
- 5.2 Habitat creation and management prescriptions, together with monitoring requirements have been described below, in relation to each of the three objectives.
- 5.3 Once the habitats establish and mature, opportunities for wildlife within the site will be enhanced over time. Hence the ecological value of the site will gradually improve over time.

Biodiversity Net Gain

- 5.4 A separate Statutory Biodiversity Metric has been provided, and this sets out the target conditions for each retained, created and enhanced habitat that will occur as a result of the proposed development. Management prescriptions set out below have been chosen to ensure that these target conditions are met. A summary of the expected Biodiversity Net Gains is detailed below in Table 5.1.

Table 5.1. Summary of DEFRA Biodiversity Metric results

On-site Baseline	Habitat Units	90.42
	Hedgerow Units	18.51
	River Units	0.00
On-site Post Intervention	Habitat Units	101.71
	Hedgerow Units	23.23
	River Units	0.00
Total Net Unit Change	Habitat Units	11.29
	Hedgerow Units	4.72
	River Units	0.00
Total Net Percentage Gain	Habitat Units	12.49%
	Hedgerow Units	25.47%
	River Units	0.00%

Objective 1: To retain ecologically valuable habitats to safeguard the benefits for biodiversity

- 5.5 Following the mitigation hierarchy, consideration has been given to the retention of habitat wherever possible. A small area of other neutral grassland in the south of the site near to the pond will be retained, as will the majority of the existing hedgerows on-site, in particular the hedgerows along the eastern boundary of the site, as well as portions of the internal hedgerows.
- 5.6 In addition to habitat retention, enhancement of habitats will be undertaken as part of the gain in habitat units. This will include enhancing the condition of areas of modified grassland, other neutral grassland, and the on-site pond, as well as enhancement of the bramble scrub area to mixed scrub and enhancing the northernmost area of crop planting to an arable field margin mixture suitable targeted to supporting farmland birds and rare arable plants.

- 5.7 The net gain in habitat units will be largely achieved through the conversion of the majority of the arable fields, an ecologically low value habitat, to newly created other neutral grassland, mixed scrub, native trees and native species-rich hedgerow, SuDS, an area of allotments, and amenity grassland, in addition to the proposed urban infrastructure and vegetated gardens.

Objective 2: To secure the implementation and establishment of the proposed landscaping scheme to secure wildlife and ecological benefits, providing demonstrable net gains to the quality and value of the habitats on-site, and for public use and enjoyment

Amenity Meadow and Rough Grassland

- 5.8 An area in the southwest of the site will be retained and enhanced as other neutral grassland through overseeding with a wildflower grass mix. Additionally, new areas of other neutral grassland will be established throughout the site, particularly in the new Hitchin Meadows area in the north of the site, as well as in the Icknield and Stotfold Linear Greenways and within the Highover Park green space.
- 5.9 Two different wildflower grass mixes will be used across the site (see Appendix 4) to create a variety of habitats across the site. The majority of the other neutral grassland areas will be sown with a mixture such as Emorsgate EM6 for Chalk and Limestone Soils (see Table 5.2), or similar, given the underlying soil type. Grassland edges, in particular bordering other habitats such as areas of scrub, will be sown instead with a rough grassland mixture such as Emorsgate EM10 Tussock Meadow Mixture (see Table 5.3), or similar, to create graded edges to the meadow habitats on-site. The majority of the other neutral grassland will be subject to a relaxed rotational management regime aiming to maintain species richness and develop a varied structure to the grassland.

Table 5.2. Emorsgate EM6 Meadow Mixture for Chalk and Limestone Soils

Other Neutral Grassland Seed Species		Percentage Composition
Yarrow	<i>Achillea millefolium</i>	0.8
Kidney Vetch	<i>Anthyllis vulneraria</i>	0.4
Common Knapweed	<i>Centaurea nigra</i>	2
Greater Knapweed	<i>Centaurea scabiosa</i>	1
Wild Carrot	<i>Daucus carota</i>	1
Dropwort	<i>Filipendula vulgaris</i>	0.1
Hedge Bedstraw	<i>Galium album</i>	1
Lady's Bedstraw	<i>Galium verum</i>	0.7
Horseshoe Vetch	<i>Hippocrepis comosa</i>	0.1
Rough Hawkbit	<i>Leontodon hispidus</i>	0.1
Oxeye Daisy	<i>Leucanthemum vulgare</i>	0.9
Musk Mallow	<i>Malva moschata</i>	1.5
Black Medic	<i>Medicago lupulina</i>	0.4
Wild Marjoram	<i>Origanum vulgare</i>	0.2
Ribwort Plantain	<i>Plantago lanceolata</i>	1
Hoary Plantain	<i>Plantago media</i>	1
Salad Burnet	<i>Poterium sanguisorba</i>	2.4
Cowslip	<i>Primula veris</i>	1.1
Selfheal	<i>Prunella vulgaris</i>	2
Meadow Buttercup	<i>Ranunculus acris</i>	0.9
Yellow Rattle	<i>Rhinanthus minor</i>	0.4

Other Neutral Grassland Seed Species		Percentage Composition
Bladder Campion	<i>Silene vulgaris</i>	1
Common Bent	<i>Agrostis capillaris</i>	6
Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	3
Quaking Grass	<i>Briza media</i>	4
Glaucous Sedge	<i>Carex flacca</i>	0.5
Crested Dogtail	<i>Cynosurus cristatus</i>	40
Sheep's Fescue	<i>Festuca ovina</i>	8
Red Fescue	<i>Festuca rubra</i>	16
Smaller Cat's-tail	<i>Phleum bertolonii</i>	3.5

Table 5.3. Emorsgate EM10 Tussock Meadow Mixture

Other Neutral Grassland Seed Species		Percentage Composition
Yarrow	<i>Achillea millefolium</i>	0.8
Agrimony	<i>Agrimonia eupatoria</i>	0.6
Lesser Burdock	<i>Actium minus</i>	0.2
Common Knapweed	<i>Centaurea nigra</i>	2
Greater Knapweed	<i>Cenaurea scabiosa</i>	1
Wild Carrot	<i>Daucus carota</i>	2
Wild Teasel	<i>Dipsacus fullonum</i>	1.6
Meadowsweet	<i>Filipendula ulmaria</i>	0.6
Hedge Bedstraw	<i>Galium album</i>	1.8
Meadow Cranesbill	<i>Geranium pratense</i>	0.4
Field Scabious	<i>Knautia arvensis</i>	0.8
Meadow Vetchling	<i>Lathyrus pratensis</i>	0.4
Oxeye Daisy	<i>Leucanthemum vulgare</i>	1.6
Musk Mallow	<i>Malva moschata</i>	0.4
Ribwort Plantain	<i>Plantago lanceolata</i>	1.8
Salad Burnet	<i>Poterium sanguisorba</i>	0.8
Red Campion	<i>Silene dioica</i>	1.2
Tufted Vetch	<i>Vicia cracca</i>	0.4
Bladder Campion	<i>Silene vulgaris</i>	1.6
Common Bent	<i>Agrostis capillaris</i>	4
Meadow Foxtail	<i>Alopecurus pratensis</i>	8
Grey Sedge	<i>Carex divulva ssp divulsa</i>	4
Crested Dogtail	<i>Cynosurus cristatus</i>	24
Cocksfoot	<i>Dactylis glomerata</i>	4
Sheep's Fescue	<i>Festuca ovina</i>	4
Slender-creeping Fescue	<i>Festuca rubra ssp rubra</i>	16
Smaller Cat's-tail	<i>Phleum bertolonii</i>	8
Tall Fescue	<i>Schedonorus arundinaceus</i>	8

- 5.10 The other neutral grassland in the Highover Park area in the south of the site falls into an area of mapped actions under the Hertfordshire LNRS, with the action to create more good quality neutral grassland. Hence the strategic significance multiplier has been applied for this area.
- 5.11 It is expected that the enhanced areas of other neutral grassland would be able to meet a 'Good' condition when assessed against condition criteria. The created areas of other neutral grassland, on the other hand, will be managed to a variety of conditions based on the most-likely achievable goal for each area of grassland. For example, a 1m margin of meadow grassland bordering hardstanding and paths has been set aside to meet a 'Poor' condition, as these areas will be under closer management such as regular mowing and likely to be impacted by regular footfall.

A small number of parcels will be subject to a less formal management regime but are still likely to be impacted by footfall due to small parcel size – these areas are likely to reach a 'Moderate' condition. The remaining areas will be managed through a relaxed regime focussed on biodiversity benefits of the habitat and are in larger parcels reducing the edge effects of disturbance – these areas will target a 'Good' condition. As such, the created grassland would achieve 34.87 habitat units, and the enhanced grassland a total of 10.45 habitat units.

Nutrient Stripping

- 5.12 Given the current agricultural land use, it is considered that the fields will require management in the form of forced nutrient stripping prior to the seeding of wildflower grassland.
- 5.13 This will involve the seeding of a high yielding cereal crop without the addition of any fertiliser for one year. These sacrificial crops should be removed from site once they have grown.
- 5.14 Following harvesting of the sacrificial crops, the fields will then be deep ploughed (inversion ploughing), to invert the typically nutrient poor subsoils with the more nutrient rich topsoil. The depth of the deep plough will be determined by the depth of the baseline arable topsoil; however, this is expected to be in the region of 300mm.
- 5.15 This process will create a nutrient poor growing medium, suitable for wildflower grassland seeding.
- 5.16 In the event that there is any time lapse between grassland seeding and the deep plough exercise, the fields will be kept free of any vegetation growth through repeated shallow ploughing and / or spraying, through the sensitive use of glyphosate-based chemicals.
- 5.17 Before the deep plough exercise, a relevant consultant should be contacted to ensure that there is no risk of disturbing potentially sensitive archaeological remains.

Initial Aftercare and Long-term Management and Maintenance

- 5.18 In the first year following the establishment, the sward will be mowed to a height of 40 to 60mm once in mid-March, late August and mid-October. All material will be removed directly after it has been cut to prevent nutrient enrichment, aside from the late August cut which will be left for seven days to allow for seed dispersal, before being removed. These cuts aim to control weed growth and suppress any faster growing grass species.
- 5.19 From year 2 onwards, areas of meadow grassland will be cut 40 to 60mm in August after the wildflowers have flowered. These cuts should be undertaken on a rotational basis whereby 80% of the grassland is cut in weekly 20% sections while the remaining 20% will be left to stand throughout winter before being cut in March. If required, additional cuts to 40 to 60mm can be applied in November and February should soil fertility results in significant growth over winter. The grassland will not be cut between April and July inclusive to ensure that the plants are given the opportunity to flower.

- 5.20 Following any grassland maintenance all arisings will be left in situ for one to seven days to allow seed release and ensure the continued renewal of the floristic diversity of the site. The arisings will then be turned and removed to prevent nutrient enrichment at the detriment to floristic diversity.
- 5.21 Areas of tussocky grassland will require minimal maintenance once established. Unwanted weeds may need control over time through selective scything and targeted removal. In addition, scrub and bramble development should be controlled by cutting the tussocky areas on a rotational basis every 2-3 years between October and February so that no more than half of the tussocky area is cut in any one year.
- 5.22 Tables 4.4 – 4.8 below set out the management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period, for the meadow and rough grassland in 'Good', 'Moderate' and 'Poor' condition.

Table 5.4. Good Condition ONG Condition Management

New Other Neutral Grassland (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
0	N/A	- Seeding a sacrificial crop, without the addition of fertiliser, to be removed from site once grown. - Deep plough to approximately 300mm to bring nutrient poor subsoil to surface.	Reducing nutrient levels of soil to allow for future maintenance of species richness.	0	N/A
1	N/A	- Sow native wildflower seed across created areas to allow a species-rich sward to establish. - Sow to provided requirements including soil preparation. - Spot treat undesirable species with selective herbicide. - Check on the establishment of a diverse mixture of native species.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	N/A
2	12.52	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Single 'Hay' cut applied after flowering with arising left for 1-7 days to allow for seed to be shed to maintain diversity.	- Control undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	12.52	Poor
5	22.51	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Check for any nutrient enrichment and amount of coarse grass species but management as above should seek to allow for rich forb element to develop. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required.	- Minimum of 9 native species per square metre. >20% habitat area composed of wildflowers. <30% of grassland covered by Perennial Ryegrass and White Clover combined. - Diverse range of native species managed to prevent any one species becoming dominant. - No invasive non-native species. - Bare ground and signs of damage cover <5% of total area.	9.99	Moderate
10	28.25	- Check on the establishment of a diverse mixture of native species. - Check for any nutrient enrichment and indicator species. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. - Tussocky grassland cut on a rotational basis every 2-3 years.	- Minimum of 10 native species per square metre. <5% cover of creeping thistle, docks and nettle (high soil fertility indicators).	5.74	Good

New Other Neutral Grassland (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		- Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide.			
20	28.25	- Check on the establishment of a diverse mixture of native species - Check for any nutrient enrichment and indicator species - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. - Tussocky grassland cut on a rotational basis every 2-3 years - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide.	- Minimum of 10 native species per square metre <5% cover of creeping thistle, docks and nettle (high soil fertility indicators)	0	Good
30	28.25	- Check on the establishment of a diverse mixture of native species - Check for any nutrient enrichment and indicator species - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. - Tussocky grassland cut on a rotational basis every 2-3 years - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide.	- Minimum of 10 native species per square metre <5% cover of creeping thistle, docks and nettle (high soil fertility indicators)	0	Good

Table 5.5. Moderate Condition ONG Condition Management

New Other Neutral Grassland (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
0	N/A	- Seeding a sacrificial crop, without the addition of fertiliser, to be removed from site once grown. - Deep plough to approximately 300mm to bring nutrient poor subsoil to surface.	Reducing nutrient levels of soil to allow for future maintenance of species richness.	0	N/A

New Other Neutral Grassland (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	N/A	- Sow native wildflower seed across created areas to allow a species-rich sward to establish. - Sow to provided requirements including soil preparation. - Spot treat undesirable species with selective herbicide. - Check on the establishment of a diverse mixture of native species.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	N/A
2	2.42	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Single 'Hay' cut applied after flowering with arising left for 1-7 days to allow for seed to be shed to maintain diversity.	- Control of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	2.42	Poor
5	4.35	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Check for any nutrient enrichment and amount of coarse grass species. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required.	- Minimum of 9 native species per square metre. >20% habitat area composed of wildflowers. <30% of grassland covered by Perennial Ryegrass and White Clover combined. - Diverse range of native species managed to prevent any one species becoming dominant. - No invasive non-native species. - Bare ground and signs of damage cover <5% of total area.	1.93 l	Moderate
10	4.35	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Check for any nutrient enrichment and amount of coarse grass species. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required.	- Minimum of 9 native species per square metre. >20% habitat area composed of wildflowers. <30% of grassland covered by Perennial Ryegrass and White Clover combined. - Diverse range of native species managed to prevent any one species becoming dominant. - No invasive non-native species. - Bare ground and signs of damage cover <5% of total area.	0	Moderate
20	4.35	Check on the establishment of a diverse mixture of native species.	- Minimum of 9 native species per square metre. >20% habitat area composed of wildflowers.	0	Moderate

New Other Neutral Grassland (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		- Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Check for any nutrient enrichment and amount of coarse grass species. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required.	<30% of grassland covered by Perennial Ryegrass and White Clover combined. - Diverse range of native species managed to prevent any one species becoming dominant. - No invasive non-native species. - Bare ground and signs of damage cover <5% of total area.		
30	4.35	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Check for any nutrient enrichment and amount of coarse grass species. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required.	- Minimum of 9 native species per square metre. >20% habitat area composed of wildflowers. <30% of grassland covered by Perennial Ryegrass and White Clover combined. - Diverse range of native species managed to prevent any one species becoming dominant. - No invasive non-native species. - Bare ground and signs of damage cover <5% of total area.	0	Moderate

Table 5.6. Poor Condition ONG Condition Management

New Other Neutral Grassland (Poor)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
0	N/A	- Seeding a sacrificial crop, without the addition of fertiliser, to be removed from site once grown. - Deep plough to approximately 300mm to bring nutrient poor subsoil to surface.	Reducing nutrient levels of soil to allow for future maintenance of species richness.	0	N/A
1	N/A	- Sow native wildflower seed across created areas to allow a species-rich sward to establish. - Sow to provided requirements including soil preparation. - Spot treat undesirable species with selective herbicide.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	N/A

New Other Neutral Grassland (Poor)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		Check on the establishment of a diverse mixture of native species.			
2	2.27	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Cut when necessary to a height of 50-75mm.	- Control of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	2.27	Poor
5	2.27	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Cut when necessary to a height of 50-75mm.	- Control undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	Poor
10	2.27	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Cut when necessary to a height of 50-75mm.	- Control undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	Poor
20	2.27	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Cut when necessary to a height of 50-75mm.	- Control undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	Poor
30	2.27	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Cut when necessary to a height of 50-75mm.	- Control undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	Poor

Table 5.7. Enhanced Poor to Good Condition ONG Condition Management

Enhanced Other Neutral Grassland (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	4.23	Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required.	- Control of undesirable species. - Have no more than between 1% and 5% bare earth.	0	Poor

Enhanced Other Neutral Grassland (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		- Spot treat undesirable species with selective herbicide. - Single 'Hay' cut applied after flowering with arising left for 1-7 days to allow for seed to be shed to maintain diversity.	<5% scrub and <20% bracken cover.		
2	4.23	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Single 'Hay' cut applied after flowering with arising left for 1-7 days to allow for seed to be shed to maintain diversity.	- Control of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	Poor
5	4.23	- Increase the diversity of wildlife grassland through control of undesirable species and correct with further sowing if required. - Spot treat undesirable species with selective herbicide. - Single 'Hay' cut applied after flowering with arising left for 1-7 days to allow for seed to be shed to maintain diversity.	- Control of undesirable species. - Have no more than between 1% and 5% bare earth. <5% scrub and <20% bracken cover.	0	Poor
10	8.18	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Check for any nutrient enrichment and amount of coarse grass species but management as above should seek to allow for rich forb element to develop. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required.	- Minimum of 9 native species per square metre. >20% habitat area composed of wildflowers. <30% of grassland covered by Perennial Ryegrass and White Clover combined. - Diverse range of native species managed to prevent any one species becoming dominant. - No invasive non-native species. - Bare ground and signs of damage cover <5% of total area.	3.95	Moderate
20	10.45	- Check on the establishment of a diverse mixture of native species. - Check for any nutrient enrichment and indicator species. - Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide.	- Minimum of 10 native species per square metre. <5% cover of creeping thistle, docks and nettle (high soil fertility indicators).	2.27	Good
30	10.45	- Check on the establishment of a diverse mixture of native species. - Check for any nutrient enrichment and indicator species.	Minimum of 10 native species per square metre.	0	Good

Enhanced Other Neutral Grassland (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		• Single 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. • Control and self-seeded scrub establishment to below 5%. • Spot treat undesirable species with selective herbicide.	• <5% cover of creeping thistle, docks and nettle (high soil fertility indicators).		

SuDS Meadow Grassland Areas

- 5.23 An infiltration basin and an attenuation basin will be created in the Hitchin Meadows area in the north of the site through excavation and seeding with a wildflower grass mix for wet soil. These areas will assist with site drainage.
- 5.24 This habitat will be sown with a wildflower grass mix such Emorsgate EM8: Meadow Mixture for Wet Soils (see Table 5.10), or similar given the underlying soil type, with additional planting of Emorsgate EP1: Pond Edge Mixture (see Table 5.8) in the base of the basin, and planting of stands of grasses (including Tufted Hair-grass *Deschampsia cespitosa*, Snow Rush *Luzula nivea*, and Silver Grass *Miscanthus sinensis* 'Morning Light') and will be subject to a relaxed rotational management regime aiming to maintain species richness and develop a varied structure to the grassland.

Table 5.8. Emorsgate EP1 Pond Edge Mixture

Emorsgate EP1 Pond Edge Mixture		Percentage Composition
Wild Angelica,	<i>Angelica sylvestris</i>	1
Common Knapweed	<i>Centaurea nigra</i>	2.6
Crosswort,	<i>Cruciata laevipes</i>	1
Wild Teasel,	<i>Dipsacus fullonum</i>	1
Hemp Agrimony	<i>Eupatorium cannabinum</i> ,	0.4
Meadowsweet	<i>Filipendula ulmaria</i>	1.2
Water Avens	<i>Geum rivale</i>	0.6
Yellow Flag-iris	<i>Iris pseudacorus</i>	4
Meadow Vetchling	<i>Lathyrus pratensis</i>	0.8
Greater Birdsfoot Trefoil	<i>Lotus pedunculatus</i>	0.8
Gypsywort	<i>Lycopus europaeus</i>	0.2
Corky-fruited Water dropwort	<i>Oenanthe pimpinelloides</i>	0.2
Ribwort Plantain	<i>Plantago lanceolata</i>	1.2
Selfheal	<i>Prunella vulgaris</i>	0.2
Meadow Buttercup	<i>Ranunculus acris</i>	1
Red Campion	<i>Silene dioica</i>	2.8
Ragged Robin	<i>Silene flos-cuculi</i>	1
Common Bent	<i>Agrostis capillaris</i>	4
Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	4
Grey Sedge	<i>Carex divulsa subsp. divulsa</i>	1.6
Crested Dog's-tail	<i>Cynosurus cristatus</i>	34.4
Tufted Hair-grass	<i>Deschampsia cespitosa</i>	1.6
Red Fescue	<i>Festuca rubra</i>	20
Meadow Barley	<i>Hordeum secalinum</i>	4
Rough-stalked Meadow-grass	<i>Poa trivialis</i>	8
Tall Fescue	<i>Schedonorus arundinaceus</i>	2.4

- 5.25 It is expected that the new SuDS will achieve a 'Good' condition when assessed against condition criteria. As such, the created wet grassland would achieve 2.95 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.26 Sowing should occur as per the manufacturer's instructions, ideally in spring or early autumn.
- 5.27 In the first year of management, cutting of annual weeds will be avoided until mid to late summer. This will ensure sown seedlings are protected by annual weeds, which will be beneficial for invertebrates.
- 5.28 The annual weeds will be cut in early August, making way for the young meadow beneath. Any unwanted species such as Docks will be removed, and any arisings taken away from the site. The grassland can then be mown through to the end of March the following year.
- 5.29 Following the initial year, the grassland will be managed to allow for species to grow tall, flower and seed from May through to July / August. A rotational 'hay cut' will then be taken with a scythe, strimmer or tractor mower to a height of around 50mm, and the grass then cut in mid-autumn and again in mid-spring if required.
- 5.30 Following any grassland maintenance all arisings will be left in situ for five days to allow seed release and ensure the continued renewal of the floristic diversity of the site. The arisings will then be turned and removed from site to prevent nutrient enrichment at the detriment to floristic diversity.
- 5.31 The SuDS grassland will be managed to encourage habitat variation, with no more than 80% of the habitat area covered by a single component. To achieve this goal, 20% of the SuDS meadow should be left without cutting each year to create more tussocky grassland and small areas of encroaching scrub / bramble. In addition, areas of standing water and wetter ground should be encouraged.
- 5.32 Litter and rubbish will be removed from the grassland as necessary during the on-going management if the site.
- 5.33 Machines and heavy equipment should be used with care on wet sites to avoid damage to soil and vegetation.
- 5.34 Table 5.9 below sets out the management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period.

Table 5.9. Good Condition SuDS Condition Management

New SuDS (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	1.13	- Sow to provided requirements including soil preparation. - Hand removal of undesirable species. - Check on the establishment of a diverse mixture of native species.	- Reduce the presence of undesirable and non-native species. - Variety of flowering species with pollen sources available most of the year.	1.13	Poor
2	1.13	- Check on the establishment of a diverse mixture of native species. - Hand removal of undesirable species. - Bioswale cut on a rotational basis every 2-3 years.	- Reduce the presence of undesirable and non-native species. - Variety of flowering species with pollen sources available most of the year.	0	Poor
5	2.11	- Check on the establishment of a diverse mixture of native species. - Hand removal of undesirable species. - Rotational 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. 20% of SuDS area left uncut in any one year.	- Reduce the presence of undesirable and non-native species. - Variety of flowering species with pollen sources available most of the year. - Planting is suitable for wetland / riparian habitat.	0.98	Moderate
10	2.95	- Check on the establishment of a diverse mixture of native species. - Hand removal of undesirable species. - Rotational 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. 20% of SuDS area left uncut in any one year.	- Absence of invasive non-native species. - Variety of flowering species with pollen sources available most of the year. - Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0.84	Good
20	2.95	- Check on the establishment of a diverse mixture of native species. - Hand removal of undesirable species. - Rotational 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in	- Absence of invasive non-native species. - Variety of flowering species with pollen sources available most of the year. - Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0	Good

New SuDS (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		late autumn winter and again in spring if required. 20% of SuDS area left uncut in any one year.			
30	2.95	• Check on the establishment of a diverse mixture of native species. • Hand removal of undesirable species. • Rotational 'Hay' cut applied after flowering with arisings left for 1-7 days. Cut the regrowth to around 50mm in late autumn winter and again in spring if required. 20% of SuDS area left uncut in any one year.	• Absence of invasive non-native species. • Variety of flowering species with pollen sources available most of the year. • Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0	Good

Bioswale

- 5.35 SuDS in the form of bioswale ditches will be created in the Stotfold and Icknield Linear Parks in the east and west of the site through excavation and seeding with a marginal pond edge mix. These areas will assist with site drainage.
- 5.36 This habitat will be sown with Emorsgate EM8: Meadow Mixture for wet soils (see Table 5.10), or similar given the underlaying soil type, along with additional planting of stands of grasses (see paragraph 5.24), and stands of marginal species (including Meadowsweet *Filipendula ulmaria*, Yellow Flag Iris *Iris pseudacorus*, Soft Rush *Juncus effusus*, and Water Forget-me-not *Myosotis scorpioides*), and will be subject to a relaxed rotational management regime aiming to maintain species richness and develop a varied structure.

Table 5.10. Emorsgate EM8 Meadow Mixture for Wet Soils

Emorsgate EM8 Meadow Mixture for wet soils		Percentage Composition
Yarrow	<i>Achillea millefolium</i>	2
Agrimony	<i>Agrimonia eupatoria</i>	0.6
Common Knapweed	<i>Centaurea nigra</i>	3.6
Meadowsweet	<i>Filipendula ulmaria</i>	1
Lady's Bedstraw	<i>Galium verum</i>	2
Water Avens	<i>Geum rivale</i>	0.2
Meadow Vetchling	<i>Lathyrus pratensis</i>	0.5
Rough Hawkbit	<i>Leontodon hispidus</i>	0.1
Oxeye Daisy	<i>Leucanthemum vulgare</i>	1.2
Birdsfoot Trefoil	<i>Lotus corniculatus</i>	0.1
Greater Birdsfoot Trefoil	<i>Lotus pedunculatus</i>	0.4
Ribwort Plantain	<i>Plantago lanceolata</i>	3.2
Cowslip	<i>Primula veris</i>	0.2
Selfheal	<i>Prunella vulgaris</i>	0.1
Meadow Buttercup	<i>Ranunculus acris</i>	0.4
Yellow Rattle	<i>Rhinanthus minor</i>	1.4
Common Sorrel	<i>Rumex acetosa</i>	1.2
Great Burnet	<i>Sanguisorba officinalis</i>	1.0
Ragged Robin	<i>Silene flos-cuculi</i>	0.3
Devil's-bit Scabious	<i>Succisa pratensis</i>	0.1
Tufted Vetch	<i>Vicia cracca</i>	0.4
Common Bent	<i>Agrostis capillaris</i>	4
Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	4
Grey Sedge	<i>Carex divulsa</i> subsp. <i>divulsa</i>	1.6
Crested Dog's-tail	<i>Cynosurus cristatus</i>	34.4
Tufted Hair-grass	<i>Deschampsia cespitosa</i>	1.6
Red Fescue	<i>Festuca rubra</i>	20
Meadow Barley	<i>Hordeum secalinum</i>	4
Rough-stalked Meadow-grass	<i>Poa trivialis</i>	8
Tall Fescue	<i>Schedonorus arundinaceus</i>	2.4

- 5.37 It is expected that the new bioswales will achieve a 'Good' condition when assessed against condition criteria. As such, the created bioswales would achieve 1.74 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.38 Sowing should occur as per the manufacturer's instructions, ideally in spring or early autumn.
- 5.39 In the first year of management, cutting of annual weeds will be avoided until mid to late summer. This will ensure sown seedlings are protected by annual weeds, which will be beneficial for invertebrates.
- 5.40 Variation in structure will be achieved by cutting back sections of vegetation every 2-3 years in rotation, between September and November. Dense stands of single species (e.g. Yellow Flag-iris) may benefit from selective thinning. Machines and heavy equipment should be used with care on wet sites to avoid damage to soil and vegetation.
- 5.41 Litter and rubbish will be removed from the grassland as necessary during the on-going management if the site.
- 5.42 Table 5.11 below sets out the management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period.

Table 5.11. Good Condition Bioswale Condition Management

New Bioswale (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	1.25	• Sow to provided requirements including soil preparation. • Hand removal of undesirable species. • Check on the establishment of a diverse mixture of native species.	• Reduce the presence of undesirable and non-native species. • Variety of flowering species with pollen sources available most of the year.	1.25	Moderate
2	1.25	• Check on the establishment of a diverse mixture of native species. • Hand removal of undesirable species. • Bioswale cut on a rotational basis every 2-3 years.	• Reduce the presence of undesirable and non-native species. • Variety of flowering species with pollen sources available most of the year.	0	Moderate
5	1.74	• Check on the establishment of a diverse mixture of native species. • Hand removal of undesirable species. • Bioswale cut on a rotational basis every 2-3 years.	• Absence of invasive non-native species. • Variety of flowering species with pollen sources available most of the year. • Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0.49	Good
10	1.74	• Check on the establishment of a diverse mixture of native species. • Hand removal of undesirable species. • Bioswale cut on a rotational basis every 2-3 years.	• Absence of invasive non-native species. • Variety of flowering species with pollen sources available most of the year. • Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0	Good
20	1.74	• Check on the establishment of a diverse mixture of native species. • Hand removal of undesirable species. • Bioswale cut on a rotational basis every 2-3 years.	• Absence of invasive non-native species. • Variety of flowering species with pollen sources available most of the year. • Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0	Good
30	1.74	• Check on the establishment of a diverse mixture of native species. • Hand removal of undesirable species. • Bioswale cut on a rotational basis every 2-3 years.	• Absence of invasive non-native species. • Variety of flowering species with pollen sources available most of the year. • Varied vegetation structure, with no single habitat component accounting for more than 80% of the total area.	0	Good

Retained Pond

- 5.43 The existing pond within the Highover Park area will be retained and enhanced through planting of marginal and aquatic vegetation.
- 5.44 The margins of these ponds shall be planted with Emorsgate EP1 Pond Edge Mixture or similar, providing a diverse a diverse range of native marginal vegetation. Species present within this seed mix are listed in Table 5.10.
- 5.45 Additionally, native aquatic planting to complement this marginal planting will include the species listed in Table 5.12 below. This planting will, once established, aim to cover at least 50% of the pond surface, and provide a wide range of niches for invertebrate and amphibian species.

Table 5.12. Marginal and Aquatic Vegetation Species

Pond and Ditch Aquatic Planting Species	
Water Plantain	<i>Alisma plantago-aquatica</i>
Lesser Water-plantain	<i>Baldellia ranunculoides</i>
Mare's-tail	<i>Hippuris vulgaris</i>
Water-violet	<i>Hottonia palustris</i>
Frogbit	<i>Hydrocharis morsus-ranae</i>
Soft Rush	<i>Juncus effusus</i>
Hard Rush	<i>Juncus inflexus</i>
Water Mint	<i>Mentha aquatica</i>
White Water Lily	<i>Nymphaea alba</i>
Royal Fern	<i>Osmunda regalis</i>
Pillwort	<i>Pilularia globulifera</i>
Lesser Spearwort	<i>Ranunculus flammula</i>
Water-cress	<i>Rorippa nasturtium-aquaticum</i>
Common Club-rush	<i>Schoenoplectus lacustris</i>
Branched Bur-weed	<i>Sparganium erectum</i>
Water-soldier	<i>Stratiotes aloides</i>
Greater Reedmace	<i>Typha latifolia</i>
Brooklime	<i>Veronica beccabunga</i>

- 5.46 The pond falls into an area of mapped actions under the Hertfordshire LNRS with the action to enhance, expand and link up existing ponds. Hence the strategic significance multiplier has been applied for this area.
- 5.47 It is expected that the new pond would be able to meet a 'Good' condition when assessed against condition criteria. As such, the pond would achieve 0.62 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.48 During the first year after seeding any weed growth is to be regularly cut back in order to promote the development of the marginal perennial vegetation. After establishment, a varied vegetation structure can then be achieved by cutting back small sections of the vegetation on a two-to-three-year rotational basis between

September and November. Additionally, to prevent the marginal planting from colonising in adjacent wildflower grassland areas their seed heads may be removed, as required.

- 5.49 Heavy machinery should be avoided in close proximity to the ponds, when possible, to avoid damage to the soil and vegetation.
- 5.50 Filamentous algae and pondweed should be manually removed as required to ensure that they do not reach an above 10% coverage to the detriment of aquatic planting.
- 5.51 All aquatic planting should also be manually trimmed as needed to ensure that species richness is maintained, avoiding any single species from becoming dominant. Any leaf fall will also need to be removed. Trimming of aquatic planting should be limited to no more than 50% of the pond per year and should be performed on a rotational basis.
- 5.52 Arisings should initially be placed adjacent to the pond for one day to allow for any animals present in the vegetation to return to the pond, before being removed.
- 5.53 The management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period is set out in Table 5.13 below.

Table 5.13. Enhanced Poor to Good Condition Pond Condition Management

Enhanced Pond (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
0	0.27	- Weed growth cut back regularly as required. - Seeding and planting of marginal and submerged planting.	- No artificial pipework draining water into pond. - Water levels can change naturally throughout the year. - No artificial fish stock. - Absence of invasive species. <50% of water surface shaded by adjacent vegetation.	0	Poor
1	0.27	- Weed growth cut back regularly as required. - Seeding and planting of marginal and submerged planting.	- No artificial pipework draining water into pond. - Water levels can change naturally throughout the year. - No artificial fish stock. - Absence of invasive species. <50% of water surface shaded by adjacent vegetation.	0	Poor
2	0.27	- Weed growth cut back regularly as required. - Seeding and planting of marginal and submerged planting.	- No artificial pipework draining water into pond. - Water levels can change naturally throughout the year. - No artificial fish stock. - Absence of invasive species. <50% of water surface shaded by adjacent vegetation.	0	Poor
5	0.49	- Cut back sections of marginal planting on a two-to-three-year rotational basis. - Removal of filamentous algae and pondweed. - Establishment of marginal planting and other neutral grassland in a 10m buffer around the pond edge. - Establishment of emergent, submerged or floating plants to reach at least 50% coverage.	- Design is for wildlife rather than SuDS. <10 cover of Duckweed and filamentous algae.	0.22	Moderate
10	0.62	- Cut back sections of marginal planting on a two-to-three-year rotational basis. - Removal of filamentous algae and pondweed. - Establishment of marginal planting and other neutral grassland in a 10m buffer around the pond edge. - Establishment of emergent, submerged or floating plants to reach at least 50% coverage.	- Clean water with no obvious signs of pollution. - Approximately half of pond area where <3m deep is covered in variety of emergent, submerged and floating vegetation. - Semi-natural habitat (at least medium distinctiveness) surrounding pond for at least 10m.	0.13	Good

Enhanced Pond (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
20	0.62	• Cut back sections of marginal planting on a two-to-three-year rotational basis. • Spot treat weeds with herbicide suitable for use near aquatic environment. • Removal of filamentous algae and pondweed. • Establishment of marginal planting and other neutral grassland in a 10m buffer around the pond edge. • Establishment of emergent, submerged or floating plants to reach at least 50% coverage.	• Clean water with no obvious signs of pollution. • Approximately half of pond area where <3m deep is covered in variety of emergent, submerged and floating vegetation. • Semi-natural habitat (at least medium distinctiveness) surrounding pond for at least 10m.	0	Good
30	0.62	• Cut back sections of marginal planting on a two-to-three-year rotational basis. • Spot treat weeds with herbicide suitable for use near aquatic environment. • Removal of filamentous algae and pondweed. • Establishment of marginal planting and other neutral grassland in a 10m buffer around the pond edge. • Establishment of emergent, submerged or floating plants to reach at least 50% coverage.	• Clean water with no obvious signs of pollution. • Approximately half of pond area where <3m deep is covered in variety of emergent, submerged and floating vegetation. • Semi-natural habitat (at least medium distinctiveness) surrounding pond for at least 10m.	0	Good

Amenity Grassland

- 5.54 A number of open spaces across the site will comprise of modified / amenity grassland, both in amenity areas and roadside verges. The grassland will offer a durable habitat and enhance the appearance and ecological interest of the site.
- 5.55 Two grass mixes will be used across the amenity grassland on-site, creating areas suitable for different uses, as well as creating variation for different invertebrate niches. The more formally managed of these areas will be planted with the Medallion Turf by Rolawn Ltd or similar, consisting of fine-leaved fescue and ryegrass cultivars, whilst the more relaxed areas will be seeded with the Emorsgate EL1 Flowering Lawn mix or similar (see Table 5.14).

Table 5.14. Emorsgate EL1 Flowering Lawn Mixture

Modified Grassland Seedling Species		Percentage Composition
Kidney Vetch	<i>Anthyllis vulneraria</i>	1
Betony	<i>Betonica officinalis</i>	1
Common Knapweed	<i>Centaurea nigra</i>	1.6
Hedge Bedstraw	<i>Galium album</i>	1
Lady's Bedstraw	<i>Galium verum</i>	1.6
Oxeye Daisy	<i>Leucanthemum vulgare</i>	1.4
Birdsfoot Trefoil	<i>Lotus corniculatus</i>	0.2
Black Medick	<i>Medicago lupulina</i>	0.6
Ribwort Plantain	<i>Plantago lanceolata</i>	2.4
Cowslip	<i>Primula veris</i>	1
Selfheal	<i>Prunella vulgaris</i>	1.2
Meadow Buttercup	<i>Ranunculus acris</i>	1.6
Bladder Campion	<i>Silene vulgaris</i>	1
Dandelion	<i>Taraxacum officinale</i>	0.4
White Clover	<i>Trifolium repens</i>	4
Common Bent	<i>Agrostis capillaris</i>	8
Crested Dogtail	<i>Cynosurus cristatus</i>	28
Red Fescue	<i>Festuca rubra</i>	24
Smaller Cat's-tail	<i>Phleum bertolonii</i>	4
Smooth-stalked Meadow-grass	<i>Poa pratensis</i>	16

- 5.56 The created areas of modified grassland, on the other hand, will be managed to a variety of conditions based on the most-likely achievable goal for each area of grassland. The majority of the new modified grassland will target a 'Poor' condition, in particular any grassland bordering residential areas and footpaths, or areas set aside for amenity purposes, such as the playing fields of the proposed school, as these areas will be under closer management such as regular mowing and likely to be impacted by footfall. The remaining parcels of modified grassland are in larger parcels, or in areas with less expected footfall, and as such will target a 'Moderate' condition. The created grassland is expected to achieve 10.52 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.57 Sowing should occur as per the manufacturer's instructions, ideally in spring or early autumn.

- 5.58 Mow newly sown flowering lawns regularly (every 7 -10 days during growing season) throughout the first year of establishment. Cut to a height of 40-60mm, removing cuttings if dense. This will gradually develop a good sward structure, help maintain balance between faster growing grasses and slower developing wildflowers, and control annual weeds. Large perennial weeds such as docks should be dug out by hand.
- 5.59 These areas will have a formal aesthetic. The grass will be cut when it reaches 75 mm long back to a length of 35 mm, approximately three times per year in March, August and October. The grassland in areas designated as targeting a 'Poor' condition, grass cutting will occur as necessary, to maintain a sward height of between 25 – 75mm. Where it is considered appropriate for the intended use of the grassland, mowing can be relaxed in May to allow for flowering, with cutting resumed after 4-8 weeks.
- 5.60 Heavy quantities of grass cuttings will be collected and removed.
- 5.61 Where necessary, reinstatement by seeding will be undertaken where establishment is unsuccessful.
- 5.62 The management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period is set out in Tables 4.15. and 4.16. below.

Table 5.15. Moderate Condition Modified Grassland Condition Management

New Modified Grassland (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	0.97	- Sow to provided requirements including soil preparation. - Mow regularly (every 7-10 days during growing season) to control weeds.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	0.97	Poor
2	0.97	- Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	0	Poor
5	1.75	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm. - Mowing relaxed in May for 4-8 weeks to allow for flowering.	- A minimum of 6 plant species per square metre. <20% bracken cover. - Control undesirable species.	0.78	Moderate
10	1.75	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm. - Mowing relaxed in May for 4-8 weeks to allow for flowering.	- A minimum of 6 plant species per square metre. <20% scrub and <20% bracken cover. - Control undesirable species.	0	Moderate
20	1.75	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm. - Mowing relaxed in May for 4-8 weeks to allow for flowering.	- A minimum of 6 plant species per square metre. <20% scrub and <20% bracken cover. - Control undesirable species.	0	Moderate
30	1.75	- Check on the establishment of a diverse mixture of native species. - Control and self-seeded scrub establishment to below 5%. - Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm.	- A minimum of 6 plant species per square metre. <20% scrub and <20% bracken cover. - Control undesirable species.	0	Moderate

New Modified Grassland (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		Mowing relaxed in May for 4-8 weeks to allow for flowering.			

Table 5.16. Poor Condition Modified Grassland Condition Management

New Modified Grassland (Poor)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	8.77	- Sow to provided requirements including soil preparation. - Mow regularly (every 7-10 days during growing season) to control weeds.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	8.77	Poor
2	8.77	- Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	0	Poor
5	8.77	- Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	0	Poor
10	8.77	- Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	0	Poor
20	8.77	- Spot treat undesirable species with selective herbicide. - Cut when necessary to maintain a sward height of 25-75mm.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover.	0	Poor
30	8.77	Spot treat undesirable species with selective herbicide.	- Reduce the presence of undesirable species. - Have no more than between 1% and 5% bare earth. <20% scrub cover	0	Poor

New Modified Grassland (Poor)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		Cut when necessary to maintain a sward height of 25-75mm			

Field Margin – Farmland Bird Habitat

- 5.63 An area in the north of the Hitchin Meadows will be established as compensatory farmland bird habitat. This area will provide suitable foraging and nesting opportunities for farmland birds such as Corn Bunting and Skylark which the site baseline is known to support. The habitat will be planted with a grass species mix like CSS10 / FCB Wild Bird Food Mixture – Finch & Corn Bunting AB9 or similar (see Table 5.17).

Table 5.17. Farmland Bird Habitat Species

Mixture Specification		Percentage Composition
Spring Barley	<i>Hordeum vulgare</i>	50
Spring Triticale	<i>X Triticosecale</i>	30
Sunflower	<i>Helianthus annuus</i>	7
Red Millet	<i>Eleusine coracana</i>	5
White Millet	<i>Panicum miliaceum</i>	5
Quinoa	<i>Chenopodium quinoa</i>	3

- 5.64 The new farmland bird habitat has no applicable condition assessment when assessed against condition criteria, and as such, would achieve 0.4 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.65 The plant mix should be sown as per manufacturer instructions, with ground preparation and sowing occurring each year.
- 5.66 Planting should be left uncut during the Summer, Autumn and Winter, until at least the 15 February each year to ensure that they can set seed to feed farmland birds during the 'hungry gap'.

Mixed Scrub

- 5.67 Parcels of mixed scrub will be planted across the site, including through enhancement of part of the Bramble scrub located in the Threshing Barn Green area.
- 5.68 Parcels of mixed scrub will have slightly different compositions depending on their location (i.e. a thornless mix near to LEAP play areas). The species used across the site are shown in Table 5.18. below.

Table 5.18. Native Scrub Species

Native Mixed Scrub Species	
Field Maple	<i>Acer campestre</i>
Black Alder	<i>Alnus glutinosa</i>
Silver Birch	<i>Betula pendula</i>
Hornbeam	<i>Carpinus betulus</i>
Dogwood	<i>Cornus sanguinea</i>
Hazel	<i>Corylus avellana</i>
Hawthorn	<i>Crataegus monogyna</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Crab Apple	<i>Malus sylvestris</i>

Native Mixed Scrub Species	
Cherry	<i>Prunus avium</i>
Blackthorn	<i>Prunus spinosa</i>
Oak	<i>Quercus robur</i>
Dog-rose	<i>Rosa canina</i>
Guelder-rose	<i>Viburnum opulus</i>
Scotch Broom	<i>Cytisus scoparius</i>
European Spindle	<i>Euonymus europaeus</i>
Holly	<i>Ilex aquifolium</i>
Privet	<i>Ligustrum vulgare</i>
Buckthorn	<i>Rhamnus cathartica</i>
Beach Rose	<i>Rosa rugosa</i>

- 5.69 The new and enhanced mixed scrub habitat will target a 'Good' condition when assessed against condition criteria. As such, the new mixed scrub would achieve 16.26 habitat units, and the enhanced mixed scrub will achieve 0.19 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.70 Mixed scrub planting will be undertaken during the autumn, winter or spring. Young shrubs will be triple staked with a timber cross bar and soft string ties and protected from herbivory damage. Stakes and guards may be removed when no longer required (3-5 years after planting).
- 5.71 Undesirable species, including in the ground flora of the mixed scrub habitats, will be removed by hand as required.
- 5.72 Management works will aim to ensure that this habitat retains its species-rich nature. Should any individual scrub species be found to be outcompeting its neighbouring scrub planting, said species will be cut back, as required, to maintain the relative abundances of the species present. Pruning and trimming works should also ensure that this planting retains a 'scrubby' appearance, preventing the progression of scrub to woodland.
- 5.73 Cuts will be undertaken on a rotational basis (informed by ongoing monitoring) to deliver a mix of ages of specimens throughout the scrub parcel. The scrub will abut the species-rich grassland which is to be created, and a scalloped edge can be introduced maximising ecological niches to be created as part of the edge habitat. As part of the aforementioned cutting regime, targeted glade creation will be undertaken once the scrub has become established.
- 5.74 Dead wood produced through these management works will, where possible, be retained as an ecological feature at the base of an area of mixed scrub or species-rich native hedgerow to offer new habitat for saproxylic invertebrates and Hedgehogs.
- 5.75 The management of mixed scrub planting is to occur outside the bird nesting season (March to August inclusive), or within this period only after a Suitably Qualified Ecologist (SQE) has undertaken checks to ensure no nesting birds are present. Ideally, the best time for arboricultural management is during January and early February as this allows fruit / berry-bearing scrub to offer food resource for birds throughout autumn, into winter, while still avoiding the bird nesting season.

- 5.76 The management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period is set out in Tables 5.19. and 5.20. below.

Table 5.19. Good Condition Mixed Scrub Condition Management

New Mixed Scrub (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	7.47	- Planting during autumn, winter or spring. - Monthly removal of undesirable species by hand where required.	- No invasive non-native species. <5% cover of non-native ground cover.	7.47	Poor
2	7.47	- Monthly removal of undesirable species by hand where required. - Scrub management to be undertaken outside of bird nesting season.	- No invasive non-native species. <5% cover of non-native ground cover.	0	Poor
5	12.95	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland. - Any species found to be outcompeting other scrub species will be cut back as required. - Scrub management to be undertaken outside of bird nesting season. - Replacement of failed scrub by infilling with native species.	- At least 3 native woody species, with no single species making up more than 75% of the total area. - Non-native species make up <20% of total canopy. - Signs of new seedlings and young shrubs alongside more mature shrubs.	5.48	Moderate
10	16.26	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland. - Any species found to be outcompeting other scrub species will be cut back as required. - Creation of glades and scalloped edges. - Scrub management to be undertaken outside of bird nesting season.	- Well-developed edge habitat with adjacent semi-natural habitats. - Glade / ride creation within the scrub blocks, with sheltered edges. - Seedlings, saplings, young and mature shrubs are all present.	3.31	Good
20	16.26	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland - Any species found to be outcompeting other scrub species will be cut back as required - Maintenance of glades and scalloped edges - Scrub management to be undertaken outside of bird nesting season	- Well-developed edge habitat with adjacent semi-natural habitats. - Well maintained glades and rides within the scrub blocks with sheltered edges. - Seedlings, saplings, young and mature shrubs are all present.	0	Good
30	16.26	Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland.	Well-developed edge habitat with adjacent semi-natural habitats.	0	Good

New Mixed Scrub (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		- Any species found to be outcompeting other scrub species will be cut back as required. - Maintenance of glades and scalloped edges. - Scrub management to be undertaken outside of bird nesting season.	- Well maintained glades and rides within the scrub blocks with sheltered edges. - Seedlings, saplings, young and mature shrubs are all present.		

Table 5.20. Enhanced (N/A Bramble Scrub to Good) Mixed Scrub Condition Management

Enhanced Mixed Scrub (Bramble Scrub condition N/A to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	0.08	- Infill planting during autumn, winter or spring. - Monthly removal of undesirable species by hand where required.	- No invasive non-native species. <5% cover of non-native ground cover.	0	Poor
2	0.08	- Monthly removal of undesirable species by hand where required. - Scrub management to be undertaken outside of bird nesting season.	- No invasive non-native species. <5% cover of non-native ground cover.	0	Poor
5	0.14	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland. - Any species found to be outcompeting other scrub species will be cut back as required. - Scrub management to be undertaken outside of bird nesting season. - Replacement of failed scrub by infilling with native species.	- At least 3 native woody species, with no single species making up more than 75% of the total area. - Non-native species make up <20% of total canopy. - Signs of new seedlings and young shrubs alongside more mature shrubs.	0.06	Moderate
10	0.19	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland. - Any species found to be outcompeting other scrub species will be cut back as required.	- Well-developed edge habitat with adjacent semi-natural habitats. - Grade / ride creation within the scrub blocks, with sheltered edges.	0.05	Good

Enhanced Mixed Scrub (Bramble Scrub condition N/A to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		- Creation of glades and scalloped edges. - Scrub management to be undertaken outside of bird nesting season.	Seedlings, saplings, young and mature shrubs are all present.		
20	0.19	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland. - Any species found to be outcompeting other scrub species will be cut back as required. - Creation of glades and scalloped edges. - Scrub management to be undertaken outside of bird nesting season.	- Well-developed edge habitat with adjacent semi-natural habitats. - Well maintained glades and rides within the scrub blocks with sheltered edges. - Seedlings, saplings, young and mature shrubs are all present.	0	Good
30	0.19	- Scrub cut on a rotational basis to deliver variation in age structure and prevent succession to woodland. - Any species found to be outcompeting other scrub species will be cut back as required. - Creation of glades and scalloped edges. - Scrub management to be undertaken outside of bird nesting season.	- Well-developed edge habitat with adjacent semi-natural habitats. - Well maintained glades and rides within the scrub blocks with sheltered edges. - Seedlings, saplings, young and mature shrubs are all present.	0	Good

Individual Trees

- 5.77 A total of 716 new native and non-native trees will be planted in appropriate locations throughout the site to bolster the green infrastructure within the site (see Table 5.21.).

Table 5.21. Tree Species

Native Species	
Silver Birch	<i>Betula pendula</i>
Black Alder	<i>Alnus glutinosa</i>
Oak	<i>Quercus robur</i>
White Willow	<i>Salix alba</i>
Crack Willow	<i>Salix fragilis</i>
Hawthorn	<i>Acer campestre</i>
Hornbeam	<i>Carpinus betulus</i>
Whitebeam	<i>Sorbus aria</i>
Wild Service Tree	<i>Sorbus torminalis</i>
Small-leaved Lime	<i>Tilia cordata</i>
Crab Apple	<i>Malus sylvestris</i>
Rowan	<i>Sorbus aucuparia</i>
Non-native Species	
Copper Beech	<i>Fagus sylvatica</i> 'Purpurea'
Sweetgum	<i>Liquidambar styraciflua</i>
Callery Pear	<i>Pyrus calleryana</i> 'Chanticleer'
Sweet Cherry cultivar	<i>Prunus avium</i> 'Plena'
Black Birch	<i>Betula nigra</i>
Lebanese Wild Apple	<i>Malus trilobata</i>
Juneberry	<i>Amelanchier</i> 'Ballerina'
Serviceberry	<i>Amelanchier arborea</i> 'Robin Hill'
Magnolia	<i>Magnolia Kobus</i> 'Isis'
Whitebeam cultivar	<i>Sorbus aria</i> 'Magnifica'
Upright Cherry	<i>Prunus</i> 'Amanogawa'
Hupeh Crab Apple	<i>Malus hupehensis</i>

- 5.78 The new tree planting will target a 'Moderate' condition when assessed against condition criteria. As such, the individual trees combined would achieve 8.91 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.79 Planting of new trees will be undertaken during the autumn, winter or spring, with subsequent monitoring required in order to identify any potential gaps where plants have not survived.
- 5.80 Arboricultural management will be carried out by a qualified arboriculturist outside the bird nesting season (March – August inclusive) to avoid any potential offence, or after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present.

- 5.81 New planting shall be inspected monthly for the first two years to ensure that they are straight, upright, healthy, not diseased or damaged, or dead. After the first two years, trees can be inspected annually if found to be establishing well.
- 5.82 Any basal or epicormic growth shall be removed. Regular watering will occur weekly during the main growing season (May to August inclusive) and only as required outside these months. Any newly planted trees which die should be replaced in the following early spring or late autumn with the same species to the same specification and quality.
- 5.83 Trees will be triple staked with timber cross bar and soft ties and be protected with 600mm spiral Rabbit guards. When no longer necessary, typically after three to five years, guards and stakes may be removed from the planting.
- 5.84 A weed-free ring (500 mm) will be maintained around each tree planted for the first five years to reduce competition from weed-species for light and nutrients. This can be achieved by maintaining a layer of bark mulch (75mm settled depth) around the base of each tree. Regular health checks of the trees will also be undertaken during periods of dry weather, to ensure that the trees are not affected by drought. Trees planted within grass shall be fitted with mower / strimmer guards or mulched with a 500 mm diameter circle as above.
- 5.85 Necessary tree works within the development site shall be undertaken as required in accordance with BS 3998 to remove inward growing, crossing, rubbing, dead or damaged branches.
- 5.86 The management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period is set out in Table 5.22 below.

Table 5.22. Moderate Condition Urban Trees Condition Management

New Urban Trees (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	N/A	- Planting undertaken during autumn, winter and spring - Arboricultural management undertaken outside of the bird nesting season.	Protected from damage by human activities.	0	N/A
2	N/A	Arboricultural management undertaken outside of the bird nesting season.	Protected from damage by human activities.	0	N/A
5	N/A	Arboricultural management undertaken outside of the bird nesting season.	Protected from damage by human activities.	0	N/A
10	8.17	- Arboricultural management undertaken outside of the bird nesting season. - Check for good annual growth and healthy crowns. - Maintain vegetation at the base of the tree, covering at least 20% of the canopy area.	>20% of canopy is oversailing vegetation. - Protected from damage by human activities.	8.17	Poor
20	8.17	- Arboricultural management undertaken outside of the bird nesting season. - Check for good annual growth and healthy crowns. - Maintain vegetation at the base of the tree, covering at least 20% of the canopy area.	>20% of canopy is oversailing vegetation. - Protected from damage by human activities.	0	Poor
30	8.91	- Arboricultural management undertaken outside of the bird nesting season. - Maintain vegetation at the base of the tree, covering at least 20% of the canopy area. - Check for good annual growth and healthy crowns.	>20% of canopy is oversailing vegetation. - Protected from damage by human activities. - Tree can grow to at least 75% of its expected canopy area (i.e. has enough space, is not pruned regularly). - Ecological niches are present (e.g. ivy, dead wood, cavities, loose bark).	0.74	Moderate

Naturalised Bulbs (Bare Ground)

- 5.87 Small areas of bulb planting will be established in the Hitchin Meadows area, associated with the mixed scrub parcels and the wildflower meadow. The species to be used for this habitat are shown in Table 5.23. below.

Table 5.23. Bulb Species

Bulb Species		Density (/m ²)
Balkan Anemone	<i>Anemone blanda</i>	10
Snowdrop	<i>Galanthus nivalis</i>	10
Native Bluebell	<i>Hyacinthoides non-scripta</i>	10
Garden Grape Hyacinth	<i>Muscari armeniacum</i> 'Blue Spire'	10

- 5.88 The new bulb planting will target a 'Moderate' condition when classed as bare ground and assessed against condition criteria. As such, the habitat would achieve 0.04 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.89 Bulb planting should take place according to manufacturer's instructions, ideally in spring, autumn or winter.
- 5.90 During the first year of growth, watering should take place on a regular basis during the growing season. In subsequent years, watering can take place as required, particularly during periods of drought.
- 5.91 Undesirable species, including weeds and non-native invasive species, should be removed by hand as required.
- 5.92 Geophytes will be left uncut for a period of 4 weeks after flowering. The bulbs can be cut along with the adjacent meadow habitat for the remainder of the year. Bulbs can be left in the ground all year round.
- 5.93 The management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period is set out in Table 5.24 below.

Table 5.24 Moderate Condition Bare Ground Condition Management

New Bare Ground – Bulb Planting (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	0.02	- Planting as per manufacturer's instructions, during autumn, winter or spring. - Regular watering during the growing period. - Removal of undesirable species by hand, as required. - Geophytes will be left uncut for a period of 4 weeks after flowering. Bulbs will be left in the ground all year round.	<5% cover of Invasive non-native species.	0.02	Poor
2	0.02	- Removal of undesirable species by hand, as required. - Geophytes will be left uncut for a period of 4 weeks after flowering. Bulbs will be left in the ground all year round.	<5% cover of Invasive non-native species.	0	Poor
5	0.04	- Removal of undesirable species by hand, as required. - Geophytes will be left uncut for a period of 4 weeks after flowering. Bulbs will be left in the ground all year round. - Check on the establishment of a diverse mixture of flowering species.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0.02	Moderate
10	0.04	- Removal of undesirable species by hand, as required. - Geophytes will be left uncut for a period of 4 weeks after flowering. Bulbs will be left in the ground all year round. - Check on the establishment of a diverse mixture of flowering species.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0	Moderate
20	0.04	- Removal of undesirable species by hand, as required. - Geophytes will be left uncut for a period of 4 weeks after flowering. - Check on the establishment of a diverse mixture of flowering species. Bulbs will be left in the ground all year round.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0	Moderate
30	0.04	- Removal of undesirable species by hand, as required. - Geophytes will be left uncut for a period of 4 weeks after flowering. Bulbs will be left in the ground all year round. - Check on the establishment of a diverse mixture of flowering species.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0	Moderate

Introduced Shrub

- 5.94 Several areas of ornamental planting will be established across the site, largely associated with the housing parcels and play areas. Planting will include both native and non-native species (see Table 5.25).

Table 5.25. Ornamental Species

Ornamental Planting Species	
Japanese Aralia	<i>Fatsia japonica</i>
New Zealand Flax	<i>Phormium</i> 'Yellow Wave', 'Platt's Black', 'Dazzler', 'Jester'
Japanese Sedge	<i>Carex oshimensis</i> 'Everest', 'Evergold'
Small-leaved Alum	<i>Heuchera micrantha</i> 'Palace Purple'
Hebe	<i>Hebe pinguifolia</i> 'Sutherlandii'
Chinese Silver Grass	<i>Miscanthus sinensis</i> 'Klein Fontane', 'Morning Light'
Red-tip Photinia	<i>Photinia x fraseria</i> 'Red Robin'
English Lavender	<i>Lavandula angustifolia</i> 'Hidcote', 'Munstead'
Lily Turf	<i>Liriope muscari</i>
Feathertop	<i>Pennisetum villosum</i>
Star Jasmine	<i>Trachelospermum jasminoides</i>
Brachyglottis	<i>Brachyglottis</i> 'Sunshine'
Creeping Blue Blossom	<i>Ceanothus thyrsiflorus repens</i>
Mexican Orange Blossom	<i>Choisya</i> 'Aztec Pearl', 'Sundance'
Fortune's Spindle	<i>Euonymus fortunei</i> 'Emerald n Gold', 'Emerald Gaiety'
Hebe	<i>Hebe</i> 'Marjorie', 'Mrs Winder', 'Purple Queen'
White Hebe	<i>Hebe albicans</i> 'Red Edge'
Kohuhu	<i>Pittosporum tenuifolium</i> 'Golf Ball', 'Tom Thumb'
Cherry Laurel cultivar	<i>Prunus laurocerasus</i> 'Otto Luyken'
Rosemary	<i>Rosmarinus officinalis</i>
Sweet Dwarf Box	<i>Sarcococca humilis</i>
Japanese Skimmia	<i>Skimmia japonica</i> 'Rubella'
David Viburnum	<i>Viburnum davidii</i>
Japanese Laurel	<i>Aucuba japonica</i> 'Crotonifolia'
White Dogwood	<i>Cornus alba</i> 'Elegantissima'
Ebbing's Silver-berry	<i>Elaeagnus pungens</i> 'Maculata', x <i>ebbingei</i> 'Compacta', 'Viveleg'
Tufted Hairgrass	<i>Deschampsia cespitosa</i>
Evergreen Spindle	<i>Euonymus japonicus</i> 'Jean Hugues'
New Zealand Broadleaf	<i>Griselinia littoralis</i>

- 5.95 The new areas of ornamental planting have no applicable condition when assessed against condition criteria. As such, the habitat would achieve 1.72 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.96 Planting of ornamental species will be undertaken during the autumn, winter or spring, with subsequent monitoring required in order to identify any potential gaps where plants have not survived.
- 5.97 Dead and damaged branches will be removed from plants post-planting. All planted areas will be mulched with 75mm (settled depth) bark mulch.

- 5.98 Ornamental planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.
- 5.99 All dead stems of grasses and perennial species from the previous summer's growth will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site.
- 5.100 Deadheading of herbaceous plants will be undertaken following flowering and when flower heads have died off. This will be done on an annual basis between August and November depending on the species used. All arisings will again need to be removed.
- 5.101 Watering will be required during periods of drought to ensure satisfactory establishment. Watering will be undertaken as required to maintain healthy plant growth.
- 5.102 Monthly checks of plants will be carried out during the first year of establishment for any unsuccessful specimen and bi-monthly thereafter. Where plants are seen to have failed, these will be removed and replaced with an alternative species on the advice of the landscape architect. If particular species are spreading vigorously and are impacting other species establishment or success, then these will be divided, and the excess plant material removed from the development.
- 5.103 Litter and rubbish will be removed from the ornamental planting as necessary during the on-going management of the site.
- 5.104 Any management applied to the shrub species within the ornamental beds will be applied outside of the nesting bird season (March to August inclusive) to avoid any disturbance to nesting birds.

Rain Garden

- 5.105 Several parcels of rain garden will be established across the residential areas of the site, associated with vegetated build-outs. Planting will include False Goat-beard *Astilbe* 'White', Red Bistort *Bistorta officinalis* 'Superba', Slender-tufted Sedge *Carex acuta*, Tufted Hairgrass cultivar *Deschampsia cespitosa* 'Goldtau', and Yellow Flag Iris.
- 5.106 The new parcels of rain garden planting will target a moderate condition when assessed against condition criteria. As such, the habitat would achieve 0.03 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.107 Planting of rain garden species will be undertaken during the autumn, winter or spring, with subsequent monitoring required in order to identify any potential gaps where plants have not survived.
- 5.108 Rain garden planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides,

fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.

- 5.109 All dead stems of grasses and perennial species from the previous summer's growth will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site.
- 5.110 Deadheading of herbaceous plants will be undertaken following flowering and when flower heads have died off. This will be done on an annual basis between August and November depending on the species used. All arisings will again need to be removed.
- 5.111 Watering will be required during periods of drought to ensure satisfactory establishment. Watering will be undertaken as required to maintain healthy plant growth.
- 5.112 Monthly checks of plants will be carried out during the first year of establishment for any unsuccessful specimen and bi-monthly thereafter. Where plants are seen to have failed, these will be removed and replaced with an alternative species on the advice of the landscape architect. If particular species are spreading vigorously and are impacting other species establishment or success, then these will be divided, and the excess plant material removed from the development.
- 5.113 Litter and rubbish will be removed from the ornamental planting as necessary during the on-going management of the site.

Table 5.26 Moderate Condition Rain Garden Condition Management

New Rain Garden (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	0.02	- Planting as per manufacturer's instructions, during autumn, winter or spring. - Regular watering during the growing period. - Removal of undesirable species by hand, as required.	<5% cover of Invasive non-native species.	0.02	Poor
2	0.00	- Removal of undesirable species by hand, as required. - Vegetation will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site. - Deadheading of herbaceous plants will be undertaken following flowering August and November depending on the species used, with all arisings removed.	<5% cover of Invasive non-native species.	0	Poor
5	0.03	- Removal of undesirable species by hand, as required. - Vegetation will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site. - Deadheading of herbaceous plants will be undertaken following flowering August and November depending on the species used, with all arisings removed. - Check on the establishment of a diverse mixture of flowering species.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0.01	Moderate
10	0.03	- Removal of undesirable species by hand, as required. - Vegetation will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site. - Deadheading of herbaceous plants will be undertaken following flowering August and November depending on the species used, with all arisings removed. - Check on the establishment of a diverse mixture of flowering species.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0	Moderate
20	0.03	Removal of undesirable species by hand, as required.	<5% cover of Invasive non-native species.	0	Moderate

		- Vegetation will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site. - Deadheading of herbaceous plants will be undertaken following flowering August and November depending on the species used, with all arisings removed. - Check on the establishment of a diverse mixture of flowering species.	Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.		
30	0.03	- Removal of undesirable species by hand, as required. - Vegetation will be cut back after the winter period (mid to late March) on an annual basis, with all arisings removed and disposed of off-site. - Deadheading of herbaceous plants will be undertaken following flowering August and November depending on the species used, with all arisings removed. - Check on the establishment of a diverse mixture of flowering species.	<5% cover of Invasive non-native species. - Variety of planting suitable for wildlife, e.g. flowering species with pollen sources available most of the year.	0	Moderate

Allotments and Vegetated Garden

- 5.114 An area in the west of the site has been designated to be an allotment area. In addition, a large area of the site has been set aside as vegetated garden, with individual plots designated and extrapolated as per the Phase 1 landscaping plans (see Appendix 4). These habitats are under residential control so do not have management prescribed to them, however, they still contribute to the BNG score for the site.
- 5.115 The new allotments will target a Moderate condition when assessed against condition criteria. As such, the habitat would achieve 1.70 habitat units.
- 5.116 The vegetated gardens have no applicable condition when assessed against condition criteria. As such, the habitat would achieve 11.20 habitat units.
- 5.117 To ensure that the development is successful in achieving these habitat units, residents should be encouraged to maintain the areas under their control in a way that benefits biodiversity, for example to control non-native invasive species, and to keep these areas primarily vegetated.

Non-native and Ornamental Hedgerow

- 5.118 Single species and non-native hedgerows will be planted throughout the development, largely associated with the residential areas. The species included in the ornamental hedgerows are shown in Table 5.27.

Table 5.27. Ornamental Hedgerow Species

Hedgerow Species	
Hornbeam	<i>Carpinus betulus</i>
Ebbing's Silverberry	<i>Elaeagnus x ebbingei</i> 'Compacta' and 'Viveleg'
Evergreen Spindle	<i>Euonymus japonicus</i> 'Jean Hugues'
New Zealand Broadleaf	<i>Griselinia littoralis</i>
Red-tip Photinia	<i>Photinia x fraseri</i> 'Red Robin'
'Instant Hedge'	Native 'Instant Hedgerow' – primarily <i>Crataegus monogyna</i>

- 5.119 The ornamental hedgerows will target a Poor condition when assessed against condition criteria. As such, these hedgerows would achieve 2.35 hedgerow units.

Initial Aftercare and Long-term Management and Maintenance

- 5.120 Planting will be undertaken during the autumn, winter or spring, with subsequent monitoring required in order to identify any potential gaps where plants have not survived.
- 5.121 Watering will be required during periods of drought to ensure satisfactory establishment. Watering will be undertaken as required to maintain healthy plant growth.
- 5.122 Ornamental planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides,

fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.

5.123 Litter and rubbish will be removed from the ornamental planting as necessary during the on-going management of the site.

5.124 Any management applied to the hedge species within the ornamental beds will be applied outside of the nesting bird season (March to August inclusive) to avoid any disturbance to nesting birds.

5.125 Hedgerows will be maintained formally and trimmed when necessary to the required size and to ensure a neat appearance, whilst maintaining the structure of the hedgerow.

Species-rich Native Hedgerow

5.126 New species rich hedgerows will be established across the site, in particular along the Dane's Walk area. The hedgerow planting must utilise a minimum of five native, woody species in order to be classed as species rich within the Biodiversity Metric. The utilisation of fruit bearing species will also heighten the foraging resources for birds and mammals. Once fully established, these hedgerows will also provide new nesting opportunities for birds, and new foraging and dispersal opportunities for bats and small mammals in addition to improving connectivity and green infrastructure across the site.

Table 5.28. Species-rich Native Hedgerow Species

Native Hedgerow Species	
Hazel	<i>Corylus avellana</i>
Hawthorn	<i>Crataegus monogyna</i>
Dogwood	<i>Cornus sanguinea</i>
Holly	<i>Ilex aquifolium</i>
Guelder-rose	<i>Viburnum opulus</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Dog Rose	<i>Rosa canina</i>
Wild Privet	<i>Ligustrum vulgare</i>
Field Maple	<i>Acer campestre</i>

5.127 Additional seeding of a shade tolerant grassland seed mix such as Emorsgate EH1 Hedgerow Mixture EH1 or similar, will occur beneath and directly adjacent to the hedgerow planting. The species assemblage of this seed mix is detailed in Table 5.29 below.

Table 5.29. Emorsgate EH1 species list

Hedgerow Ground Flora Species		Percentage Composition
Agrimony	<i>Agrimonia eupatoria</i>	0.50
Garlic Mustard	<i>Alliaria petiolata</i>	1.00
Cow Parsley	<i>Anthriscus sylvestris</i>	0.50
Lesser Burdock	<i>Arctium minus</i>	1.00
Common Knapweed	<i>Centaurea nigra</i>	2.00
Rough Chervil	<i>Chaerophyllum temulum</i>	0.40

Hedgerow Ground Flora Species		Percentage Composition
Crosswort	<i>Cruciata laevipes</i>	0.80
Wild Carrot	<i>Daucus carota</i>	0.80
Wild Teasel	<i>Dipsacus fullonum</i>	1.50
Meadowsweet	<i>Filipendula ulmaria</i>	0.40
Hedge Bedstraw	<i>Galium album</i>	1.50
Wood Avens	<i>Geum urbanum</i>	0.40
Meadow Crane's-bill	<i>Geranium pratense</i>	0.30
Narrow-leaved Everlasting-pea	<i>Lathyrus sylvestris</i>	1.00
Moon Daisy	<i>Leucanthemum vulgare</i>	1.20
Musk Mallow	<i>Malva moschata</i>	1.00
Wild Marjoram	<i>Origanum vulgare</i>	0.30
Ribwort Plantain	<i>Plantago lanceolata</i>	0.80
Cowslip	<i>Primula veris</i>	0.60
Common Sorrel	<i>Rumex acetosa</i>	0.40
Red Campion	<i>Silene dioica</i>	2.00
Bladder Campion	<i>Silene vulgaris</i>	0.80
Tufted Vetch	<i>Vicia cracca</i>	0.80
Common Bent (w)	<i>Agrostis capillaris</i>	2.40
Sweet Vernal-grass (w)	<i>Anthoxanthum odoratum</i>	1.60
False Brome (w)	<i>Brachypodium sylvaticum</i>	0.80
Crested Dogstail	<i>Cynosurus cristatus</i>	48.00
Tufted Hair-grass (w)	<i>Deschampsia cespitosa</i>	1.60
Red Fescue	<i>Festuca rubra</i>	19.20
Wood Meadow-grass	<i>Poa nemoralis</i>	6.40

5.128 Different lengths of hedgerow planting are expected to reach different conditions depending on their expected outcomes in their location. Some locations where the hedgerow is likely to be maintained more formally, or where the ability to maintain a margin of ground flora adjacent to the hedgerow, the hedgerow will target a Poor condition. The length of hedgerow adjacent to the school playing field will target a Moderate condition, and the remaining hedgerow lengths will target a Good condition. Overall, the new native hedgerow planting is expected to result in a gain of 4.90 hedgerow units.

Initial Aftercare and Long-term Management and Maintenance

- 5.129 Planting will be undertaken during the autumn, winter or spring, with monthly inspections, during which vegetation is checked for signs of disease or damage, between April and September during the first year, and bi-monthly inspections in the second and third years. Following this the hedgerow planting can be inspected annually if it is found to be establishing well. Any specimen which if found to be diseased, damaged or dead should be replaced in the following season with the same species to the same specification and quality.
- 5.130 Tree guards and stakes should be used to protect the new hedgerow planting from damage and increase the survival rate. These shall be removed in May when this initial support is no longer required, typically after three to five years following planting.

- 5.131 Young hedgerow should be watered weekly during the main growing season (May to September inclusive) for the first year following planting to ensure satisfactory establishment and then only when necessary to avoid death during drought conditions.
- 5.132 The management of the hedgerows will aim to ensure a continued dense structure. The hedgerow is to be cut mechanically to a maximum height of two metres to ensure that the structure is not significantly altered to compromise their value for associated wildlife. The hedgerows will be cut on a three-year rotation, so that not all the length is cut in any one year. This will encourage greater availability of winter forage for birds. Where possible, hedgerows will be laid on rotation by an experienced contractor to encourage greater structural diversity.
- 5.133 Any hedgerow management will be undertaken outside of the bird nesting season (March to August inclusive) to avoid any potential offence under the legislation, or within this period only after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present. The best time for hedgerow management is during January and early February after birds have eaten the berries and prior to the bird nesting season.
- 5.134 All dead wood produced through the management works will be retained as an ecological feature at the base of the hedgerow where possible, offering new habitat for saproxylic invertebrates and Hedgehogs.
- 5.135 The shade tolerant grassland seed mix should be subject to a similar management regime to the other neutral grassland.
- 5.136 Tables 5.30, 5.31 and 5.32. below sets out the management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period.

Table 5.30. Good Condition Species-rich Native Hedgerow Condition Management

New Species-rich Native Hedgerow (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	1.31	- Planting of native species with appropriate after care. - Installation of tree guards and stakes.	- Reduce gaps and increase height and width of hedgerow. - Maintain species diversity.	0.8	Poor
2	1.31	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m.	0	Poor
5	2.28	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities.	0.59	Moderate
10	2.28	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities.	0	Moderate
20	2.66	- Maintain the hedgerow to a height of 2m and a width of at least 1.5m. - Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height and width is >1.5m average along length. - Gap between ground and base of canopy <0.5m for >90% of length. >1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.	0.38	Good
30	2.66	- Maintain the hedgerow to a height of 2m and a width of at least 1.5m. - Spot treat any undesirable species with selective herbicide.	- Height and width is >1.5m average along length. - Gap between ground and base of canopy <0.5m for >90% of length.	0	Good

		Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	>1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.		
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Table 5.31. Moderate Condition Species-rich Native Hedgerow Condition Management

New Species-rich Native Hedgerow (Moderate)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	0.8	- Planting of native species with appropriate after care. - Installation of tree guards and stakes.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m.	0.8	Poor
2	0.8	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m.	0	Poor
5	1.39	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities.	0.59	Moderate
10	1.39	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities.	0	Moderate
20	1.39	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities.	0	Moderate
30	1.39	Spot treat any undesirable species with selective herbicide.	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment.	0	Moderate

		Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	>90% of hedgerow and undisturbed ground is free of damage from human activities.		
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Table 5.32. Poor Condition Species-rich Native Hedgerow Condition Management

New Species-rich Native Hedgerow (Poor)					
Year	BNG Unit	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gain / Delivered	BNG
1	0.85	- Planting of native species with appropriate after care. - Installation of tree guards and stakes.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gap between ground and base of canopy <0.5m for >90% of length. - Gaps make up <10% of total length, and none are >5m.	0.85	Poor
2	0.85	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gap between ground and base of canopy <0.5m for >90% of length. - Gaps make up <10% of total length, and none are >5m.	0	Poor
5	0.85	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gap between ground and base of canopy <0.5m for >90% of length. - Gaps make up <10% of total length, and none are >5m.	0	Poor
10	0.85	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gap between ground and base of canopy <0.5m for >90% of length. - Gaps make up <10% of total length, and none are >5m.	0	Poor
20	0.85	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gap between ground and base of canopy <0.5m for >90% of length. - Gaps make up <10% of total length, and none are >5m.	0	Poor

New Species-rich Native Hedgerow (Poor)					
Year	BNG Unit	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gain / Delivered	BNG
30	0.85	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gap between ground and base of canopy <0.5m for >90% of length. - Gaps make up <10% of total length, and none are >5m.	0	Poor

Species-Rich Native Hedgerow with Trees

- 5.137 Two proposed hedgerows on-site will include new standard trees and are classed as hedgerows with trees. These are located in Highover Park and west of the allotments. The species compositions of these hedges will be similar to the Species-rich hedgerows above, with the trees including species listed in Table 5.21.
- 5.138 Additional seeding of a shade tolerant grassland seed mix such as Emorsgate EH1 Hedgerow Mixture EH1 or similar, will occur beneath and directly adjacent to the hedgerow planting. The species assemblage of this seed mix is detailed in Table 5.29.
- 5.139 It is expected that the new hedgerows would be able to meet a 'Good' condition when assessed against condition criteria. As such, the new hedgerows would achieve 1.19 habitat units.

Initial Aftercare and Long-term Management and Maintenance

- 5.140 Planting will be undertaken during the autumn, winter or spring, with monthly inspections, during which vegetation is checked for signs of disease or damage, between April and September during the first year, and bi-monthly inspections in the second and third years. Following this the hedgerow planting can be inspected annually if it is found to be establishing well. Any specimen which if found to be diseased, damaged or dead should be replaced in the following season with the same species to the same specification and quality.
- 5.141 Tree guards and stakes should be used to protect the new hedgerow and tree planting from damage and increase the survival rate. These shall be removed in May when this initial support is no longer required, typically after three to five years following planting.
- 5.142 Young hedgerow should be watered weekly during the main growing season (May to September inclusive) for the first year following planting to ensure satisfactory establishment and then only when necessary to avoid death during drought conditions.
- 5.143 The management of the hedgerows will aim to ensure a continued dense structure. The hedgerow is to be cut mechanically to a maximum height of two metres, whilst avoiding damage to the trees, to ensure that the structure is not significantly altered to compromise their value for associated wildlife. The hedgerows will be cut on a three-year rotation, so that not all the length is cut in any one year. This will encourage greater availability of winter forage for birds. Where possible, hedgerows will be laid on rotation by an experienced contractor to encourage greater structural diversity.
- 5.144 Any hedgerow management will be undertaken outside of the bird nesting season (March to August inclusive) to avoid any potential offence under the legislation, or within this period only after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present. The best time for hedgerow management is during January and early February after birds have eaten the berries and prior to the bird nesting season.

- 5.145 Necessary tree works within the development site shall be undertaken as required in accordance with BS 3998 to remove inward growing, crossing, rubbing, dead or damaged branches.
- 5.146 All dead wood produced through the management works will be retained as an ecological feature at the base of the hedgerow where possible, offering new habitat for saproxylic invertebrates and Hedgehogs.
- 5.147 The shade tolerant grassland seed mix should be subject to a similar management regime to the other neutral grassland.
- 5.148 Tables 4.33 below sets out the management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period.

Table 5.33. Good Condition Species-rich Native Hedgerow with Trees Condition Management

New Species-rich Native Hedgerow with trees (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
1	0.18	- Planting of native species with appropriate after care. - Installation of tree guards and stakes.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m.	0.18	Poor
2	0.18	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m. - At least 90% of hedgerow trees are in a healthy condition (excluding veteran features for wildlife).	0	Poor
5	0.18	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m. - At least 90% of hedgerow trees are in a healthy condition (excluding veteran features for wildlife).	0	Poor
10	0.26	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities. - At least 90% of hedgerow trees are in a healthy condition (excluding veteran features for wildlife).	0.08	Moderate
20	0.27	- Maintain the hedgerow to a height of 2m and a width of at least 1.5m. - Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting). - Arboricultural management undertaken outside of the bird nesting season. - Check for good annual growth and healthy crowns.	- Height and width is >1.5m average along length. - Gap between ground and base of canopy <0.5m for >90% of length. >1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.	0.01	Good

New Species-rich Native Hedgerow with trees (Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
30	0.27	• Maintain the hedgerow to a height of 2m and a width of at least 1.5m. • Spot treat any undesirable species with selective herbicide. • Check for any damage and complete necessary remedial action (including potential replacement / bolster planting). • Arboricultural management undertaken outside of the bird nesting season. • Check for good annual growth and healthy crowns.	• Height and width is >1.5m average along length. • Gap between ground and base of canopy <0.5m for >90% of length. • >1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.	0	Good

Native Hedgerow

- 5.149 Lengths of native hedgerow in poor condition, particularly in the Dane's Walk area of the site, will be enhanced to 'Good' condition through infill planting of native species (see Table 5.28.), and understorey establishment through planting of a shade tolerant seed mix Emorsgate EH1 Hedgerow Mixture or similar (see Table 5.29.).

Initial Aftercare and Long-term Management and Maintenance

- 5.150 Planting will be undertaken during the autumn, winter or spring, with monthly inspections, during which vegetation is checked for signs of disease or damage, between April and September during the first year, and bi-monthly inspections in the second and third years. Following this the hedgerow planting can be inspected annually if it is found to be establishing well. Any specimen which if found to be diseased, damaged or dead should be replaced in the following season with the same species to the same specification and quality.
- 5.151 Tree guards and stakes should be used to protect the new hedgerow planting from damage and increase the survival rate. These shall be removed in May when this initial support is no longer required, typically after three to five years following planting.
- 5.152 Young hedgerow should be watered weekly during the main growing season (May to September inclusive) for the first year following planting to ensure satisfactory establishment and then only when necessary to avoid death during drought conditions.
- 5.153 The management of the hedgerows will aim to ensure a continued dense structure. The hedgerow is to be cut mechanically to a maximum height of two metres to ensure that the structure is not significantly altered to compromise their value for associated wildlife. The hedgerows will be cut on a three-year rotation, so that not all the length is cut in any one year. This will encourage greater availability of winter forage for birds. Where possible, hedgerows will be laid on rotation by an experienced contractor to encourage greater structural diversity.
- 5.154 Any hedgerow management will be undertaken outside of the bird nesting season (March to August inclusive) to avoid any potential offence under the legislation, or within this period only after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present. The best time for hedgerow management is during January and early February after birds have eaten the berries and prior to the bird nesting season.
- 5.155 All dead wood produced through the management works will be retained as an ecological feature at the base of the hedgerow where possible, offering new habitat for saproxylic invertebrates and Hedgehogs.
- 5.156 The shade tolerant grassland seed mix should be subject to a similar management regime to the other neutral grassland.

5.157 Tables 4.34 below sets out the management and monitoring to be completed together with the various incremental increases in the BNG units delivered across the management period.

Table 5.34. Enhanced Poor to Good Condition Native Hedgerow Condition Management

Enhanced Native Hedgerow (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
0	0.3	- Infill planting of native species with appropriate after care. - Installation of tree guards and stakes.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Infill gaps to ensure they make up <10% of total length, and none are >5m.	0	Poor
1	0.3	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m.	0	Poor
2	0.3	- Check of new planting to ensure it established and replace as required. - Spot treat any undesirable species with selective herbicide.	>90% of the hedgerow and undisturbed ground is free of invasive and recently introduced non-native species. - Gaps make up <10% of total length, and none are >5m.	0	Poor
5	0.58	- Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height is >1.5m average along length. <20% cover of species indicative of nutrient enrichment. >90% of hedgerow and undisturbed ground is free of damage from human activities.	0.28	Moderate
10	0.81	- Maintain the hedgerow to a height of 2m and a width of at least 1.5m. - Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height and width is >1.5m average along length. - Gap between ground and base of canopy <0.5m for >90% of length. >1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.	0.23	Good
20	0.81	- Maintain the hedgerow to a height of 2m and a width of at least 1.5m. - Spot treat any undesirable species with selective herbicide.	- Height and width is >1.5m average along length. - Gap between ground and base of canopy <0.5m for >90% of length. >1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.	0	Good

Enhanced Native Hedgerow (Poor to Good)					
Year	BNG Units	Management / Monitoring Prescriptions	Improved Condition Requirements	Units Gained / Delivered	BNG Condition
		Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).			
30	0.81	- Maintain the hedgerow to a height of 2m and a width of at least 1.5m. - Spot treat any undesirable species with selective herbicide. - Check for any damage and complete necessary remedial action (including potential replacement / bolster planting).	- Height and width is >1.5m average along length. - Gap between ground and base of canopy <0.5m for >90% of length. >1m of undisturbed ground with perennial vegetation for >90% of length, along at least one side.	0	Good

Invasive Non-Native Species

- 5.158 No Invasive Non-native Species (INNS) as listed under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) were discovered on-site during the course of any surveys conducted by Ecology Solutions.
- 5.159 If INNS are identified within or immediately adjacent to the site during the proposed works, their removal will follow best practice methodologies and care will be taken to minimise the risk of further spreading them throughout the site. Removed material will be treated as contaminated waste and disposed of at a licenced facility.

Objective 3: To ensure that the site is capable of supporting a similar, or greater, complement of species, where this is compatible with the above objectives

- 5.160 The establishment of new areas of grassland, amenity planting, hedgerows, trees and SuDS will diversify the habitats present at the site and encourage a greater range of wildlife use over the existing situation.
- 5.161 In addition, the retention and enhancement of hedgerows, and the creation of high-quality grassland, particularly in the north of the site, will provide enhanced links with the wider network of arable land and hedgerows surrounding much of the site, and provide an uplift in connectivity in ecological networks in the area. This will directly aid mobile species and support foraging networks.

Bats

- 5.162 The trees in the east of the site that have been identified as possessing bat potential will be mostly retained and protected during the development. In addition, the majority of hedgerows, which are of particular suitability for use by bats for foraging, are being retained or enhanced.
- 5.163 Seven bat boxes will be installed on suitable retained trees across the site, in addition to a further twenty integrated bat boxes installed directly onto new buildings within the site, to provide new roosting opportunities during or post-construction. Models will include Schwegler 1FF Bat Box, Chavenage Cavity Bat Box, and Vivara Pro Build-in Woodstone Bat Box (or similar) (see Plan ECO4 and Appendix 4).
- 5.164 Boxes will be positioned at a minimum height of three metres above ground level, away from significant lighting and orientated in a southern, southeastern, or southwestern direction to provide enough warmth. Once securely mounted onto retained trees and buildings, these bat box models will be virtually maintenance free.
- 5.165 Bat boxes will be checked once per year for the first five years following installation. A suitably qualified and licensed bat worker will ensure bat boxes are still in situ, with arrangement made for replacement if found to be damaged or missing. To limit the likelihood of disturbing any bats, checks should be carried out in February or March, prior to bats occupying the boxes, as they often only use bat boxes in summer and move elsewhere for hibernation roosts.

- 5.166 No future monitoring (after five years) of the bat boxes is considered necessary since no bat roosting sites will be lost as a result of the development.

Hedgehogs

- 5.167 Additional hibernation opportunities will be provided for Hedgehogs through the provision of twenty-five log piles located in sheltered areas of landscaping (see Plan ECO4 and Appendix 5).
- 5.168 These will be established post-construction in a discreet location and should be created from materials sourced on-site during construction where possible.
- 5.169 In addition, Hedgehog gateways will be installed in impermeable boundaries where appropriate, to allow Hedgehogs to forage freely across the site.
- 5.170 No monitoring or management of the log piles will be required.

Badgers

- 5.171 For animal welfare reasons, Badgers are considered within a separate confidential document.

Birds

- 5.172 The compensatory bird habitat in the north of the site will contribute to mitigating some of the ground-nesting bird habitat lost as part of the development.
- 5.173 To provide additional nesting opportunities, a number of bird boxes will be installed at the site post-construction. Ten Woodstone Seville 28mm Bird Boxes, ten Woodstone Seville 32mm Bird Boxes, and one Barn Owl Nest Box will be installed on suitable retained trees. Six Schwegler 1SP sparrow Terraces or similar will be installed into new buildings at suitable locations. In addition, to comply with the LNRS, each new building on-site should have an integrated Swift brick installed into it, for example Schwegler No.17 Swift Brick or similar, to support this local target species.
- 5.174 All bird boxes will be positioned high up on trees / buildings (a minimum height of 2-3m above ground level) and orientated to face north / northeast to provide enough shelter from excessive sunlight. Once securely mounted, these bird box models will be virtually maintenance free and can be used for years without cleaning.
- 5.175 Bird boxes will be checked periodically (once per year in February) for the first five years following installation. A suitably experienced ecologist will ensure bird boxes are still in situ and are not damaged. Checks for signs of structural damage should be undertaken outside the nesting season (March to August inclusive) by a suitably qualified ecologist. Boxes will be replaced if found to be damaged or missing.

Reptiles

- 5.176 The creation of high-quality grassland will provide an uplift in the foraging and basking habitat available for this group. In addition, the creation of log piles as

detailed for Hedgehogs above, will provide additional hibernation opportunities for reptiles.

5.177 No monitoring or management of the log piles will be required.

Invertebrates

5.178 Twelve National Trust CJ Wildlife Apex Insect Houses will be installed in sheltered spots with enough exposure to sunlight to offer new opportunities for invertebrates' post-construction (see Plan ECO4 and Appendix 7). The boxes will be south-facing and require no monitoring or management.

5.179 Further enhancements will be provided through the establishment of log piles, as detailed above for Hedgehogs. These will offer new opportunities for saproxylic species such as Stag Beetle *Lucanus cervus*.

Objective 4: To establish a functional and attractive public open space network that contributes to the visual amenity of the site and enjoyment by users

5.180 The open space network of the site includes public amenity areas that are described above, in particular areas of amenity grassland. Landscape components that are not included in Objective 2, including litter and debris removal, hard landscape and site furniture maintenance, and children's play areas, are covered in the Open Space Management and Maintenance Plan provided by Golby and Luck⁷ (see Appendix 2)

⁷ Golby and Luck (June 2025). *Open Space Management and Maintenance Plan (non-BNG elements)*. Ref: GL2024

6. Implementation and Responsibilities

- 6.1 The Management Entity has ultimate responsibility for the implementation, funding and legal mechanisms of this strategy.
- 6.2 It is the responsibility of the Management Entity to instruct appropriate experienced contractors to establish the various features and habitats proposed, and also to instruct appropriate experienced ecologists and / or landscape contractors to check the work as set out in this management plan, where necessary.
- 6.3 Clear channels between these parties and their associates on the ground will be in operation at all times, by email and telephone as appropriate.
- 6.4 The Landlord Entity will manage and maintain the development and landscaping.

Contractor Responsibilities

- 6.5 All materials used during the development of the site, as well as any operations, will be in accordance with British Standards, Codes of Practice, and legislation.
- 6.6 A review of the management plan will be undertaken every five years and so long as the development exists, to determine its success. If warranted, appropriate remedial actions to the management plan will be undertaken to ensure that the landscaping and ecological aims of the management plan are achieved.

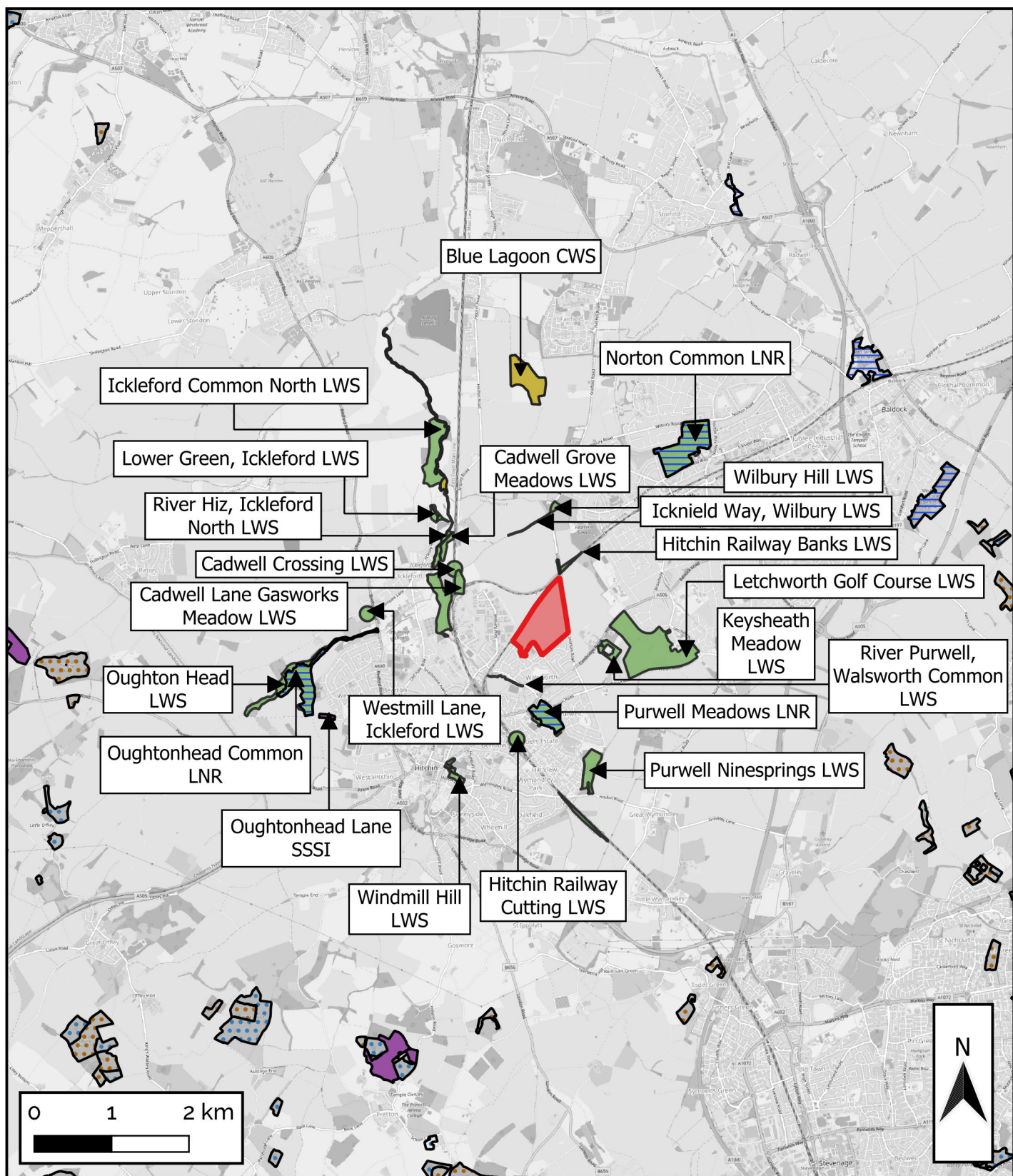
7. Summary and Conclusions

- 7.1 Ecology Solutions was commissioned in April 2025 by BDW North Thames to complete an OLEMP for Phase 1 of the development on land north of Highover Farm, Hitchin.
- 7.2 The proposed outline application for this development, with all matters reserved other than access, comprises residential led development of up to 700 dwellings of use class C3 (dwellings), approximately 500 sqm of neighbourhood-level facilities (use classes A1, A2, A3, A4, A5), a new 2FE primary school, open space, play space, green infrastructure, and associated accesses (vehicular, pedestrian and cycle), including a new primary access off Stotfold Road with limited access off High Dane.
- 7.3 The planning application for the development was submitted to North Hertfordshire District Council in April 2018, the outcome of which was the conditional planning permission allowed in November 2024 (reference: 18/01154/OP).
- 7.4 An extended Phase 1 habitat survey was previously undertaken of the site in 2014 and 2016 by WSP and updated in July 2019 by Tyler Grange Group Limited. The results of this survey are detailed within the Biodiversity Offsetting Metric, dated January 2023, and are summarised below. Targeted surveys have been undertaken, including habitat surveys and protected species surveys in respect of bats, breeding birds, common reptiles, Great Crested Newts and Badger by Ecology Solutions in 2023. An updated Biodiversity Net Gain Metric was produced by Ecology Solutions in 2025. An updated walkover survey to assess the status of protected species on-site was undertaken in November 2025.
- 7.5 The purpose of this report is to address Condition 21 of the planning permission which requires an Outline LEMP. In addition, this report supports the requirements of Condition 13, where relevant overlap with Open Space Management occurs. This document sets out the management of features of ecological interest due to be retained, enhanced and established as part of the development and describes the wildlife enhancements and mitigation strategies to be implemented.
- 7.6 Opportunities for wildlife within the site will be retained and enhanced. Extant wildlife populations have been considered in the design process, and it is considered that these populations will be retained at a favourable conservation status throughout the development's lifetime.
- 7.7 Overall, it is considered that the production of this OLEMP, and by following the habitat creation, enhancement, management and monitoring recommendations in this report, the proposed development will deliver significant ecological enhancements, allowing Condition 21 to be discharged.

Plans

PLAN ECO1

Site Location and Ecological Designations



KEY:

- SITE BOUNDARY
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- LOCAL NATURE RESERVE (LNR)
- BEDS COUNTY WILDLIFE SITE (CWS)
- HERTS LOCAL WILDLIFE SITE (LWS)
- ANCIENT & SEMI-NATURAL WOODLAND
- ANCIENT REPLANTED WOODLAND



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11467: HIGHOVER FARM , HITCHIN

PLAN ECO1: SITE LOCATION AND
ECOLOGICAL DESIGNATIONS

Rev: A
Feb 2026

PLAN ECO₂

Ecological Features

 BAT POTENTIAL TREE

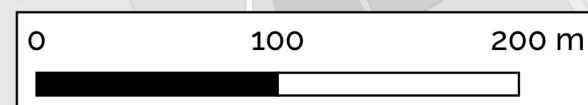
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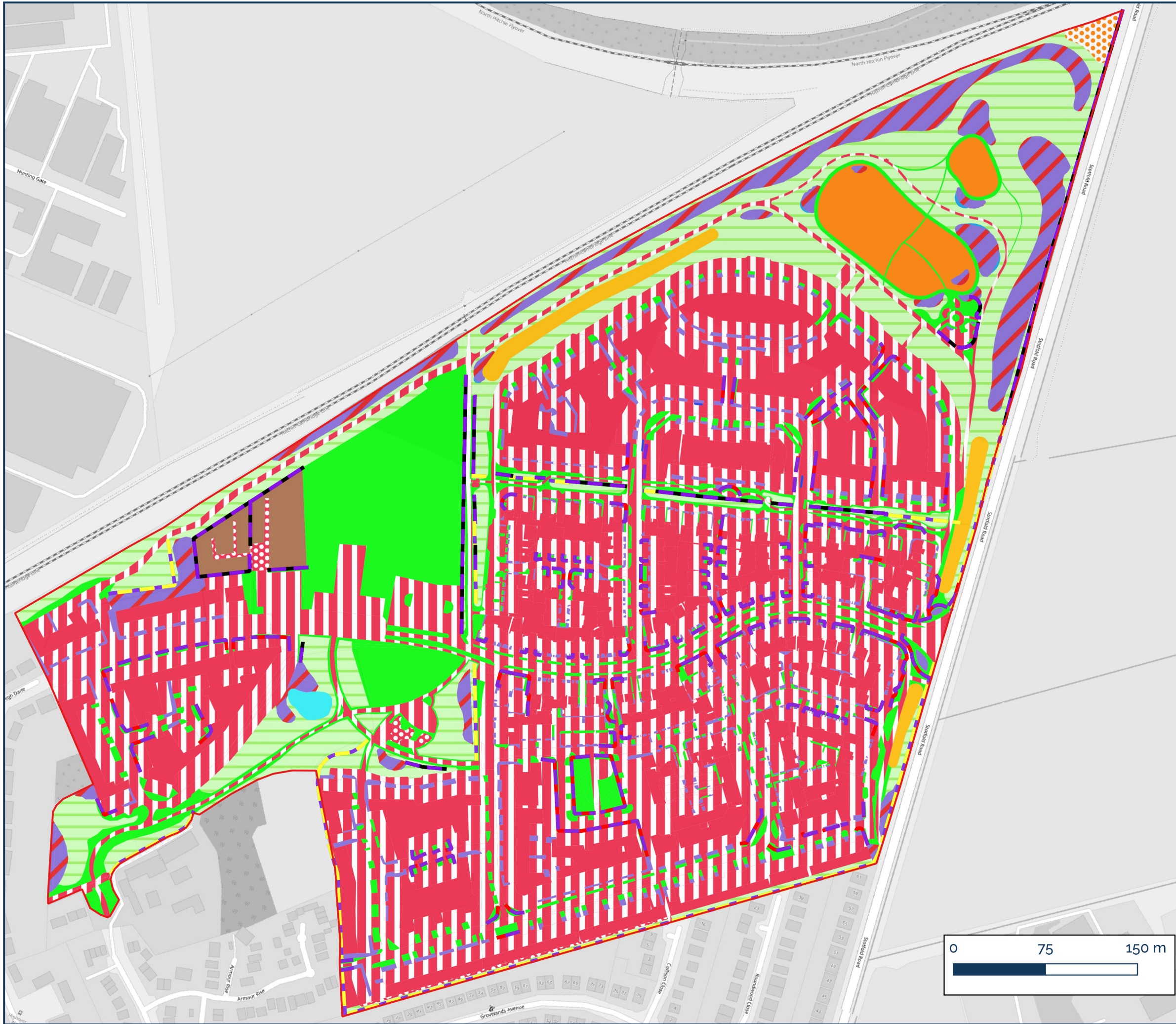
PLAN ECO2: ECOLOGICAL FEATURES

Rev: B
Feb 2026



PLAN ECO₃

Post-development Habitats



KEY:

SITE BOUNDARY

PROPOSED HABITATS

- ALLOTMENTS
- ARABLE FIELD MARGINS GAME BIRD MIX
- ARTIFICIAL UNVEGETATED, UNSEALED SURFACE
- BIOSWALE
- DEVELOPED LAND; SEALED SURFACE
- INTRODUCED SHRUB
- MIXED SCRUB
- MODIFIED GRASSLAND
- OTHER NEUTRAL GRASSLAND
- PONDS (NON-PRIORITY HABITAT)
- RAIN GARDEN
- SUSTAINABLE DRAINAGE SYSTEM
- VEGETATED GARDEN
- BARE GROUND

PROPOSED HEDGEROWS

- NON-NATIVE AND ORNAMENTAL HEDGEROW
- NATIVE HEDGEROW
- NATIVE HEDGEROW WITH TREES
- SPECIES-RICH NATIVE HEDGEROW
- SPECIES-RICH NATIVE HEDGEROW WITH TREES

Individual trees are not detailed on plan - see phased LEMPs for detailed tree placement.



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PLAN ECO3:
POST-DEVELOPMENT HABITATS

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Feb 2026

PLAN ECO4

Landscape and Ecological Management and
Enhancements