



Countryside Properties

Himley Village

Biodiversity Strategy

June 2021

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by FPCR Environment and Design Ltd on behalf of Countryside Properties Ltd, and details a high level strategy for ecological enhancements of at Site known as Himley Village to the north west of Bicester (central Grid Reference: SP 56112 23405).

Figure 1: Site Boundary



- 1.2 The work has been produced to discharge condition 10 of outline planning permission for mixed use development (Application No. 14/02121/OUT), which requires discharge prior to the submission of any reserved matters applications. Condition 10 reads as follows:

10. Prior to the submission of the first reserved matters application, a Bio Diversity Strategy for the site shall be submitted to and approved in writing by the Local Planning Authority. Each reserved matter application shall be accompanied by a statement setting out how the proposed development will contribute to achieving the Bio Diversity Strategy and net biodiversity gain. The development shall be carried out in accordance with the approved Bio Diversity Strategy.

Reason: To secure net biodiversity gain in accordance with Policies Bicester 1 and ESD10 of the Cherwell Local Plan 2011-2031 and Government guidance contained within the Eco Towns PPS and National Planning Policy Framework. This information is required prior to the commencement of any development as it is fundamental to the acceptability of the scheme.

- 1.3 This document provides a summary of the strategy across the site in order to deliver a quantifiable net gain in biodiversity, and includes an outline of the protection, enhancement and creation of habitat across the scheme. It will act as a high-level framework which further reporting, management plans, and method statements will reference and operate within.
- 1.4 As each phase is brought forward more detailed documentation will be provided in the form of -
- Updated Ecological Appraisal providing an updated baseline of ecological value, and specific protected species considerations relevant to that phase.

- Landscape & Habitat Management Plans (LHMP's) prescribing the detailed management of proposed habitat to be created.
 - Detailed Biodiversity Impact Assessments (BIA's) based on landscaping drawings and mitigation / enhancement proposed.
- 1.5 The requirement for project to secure a net gain in biodiversity is outlined in local and national policy. A metric developed by Defra (Version 2.0¹) is used to quantify biodiversity value of existing and proposed habitats based on a variety of criteria.

2.0 BACKGROUND

Baseline Condition

- 2.1 The Site is c.87ha in extent and is located within farmland to the west of the town of Bicester. An initial Phase 1 habitat survey was undertaken in 2010, with a range of faunal surveys being undertaken subsequently to inform the Environmental Impact Assessment supporting the outline planning application for the wider 'North West Bicester Eco Development', within which this scheme is found.

Habitats

- 2.2 The site was found to comprise predominantly of arable farmland, with a single improved grassland field divided by a species rich native hedgerow. Other habitat includes a strip of young native broadleaf woodland along the eastern boundary, a complex of farm buildings, and three ponds.
- 2.3 In the wider area mixed farmland predominates, interspersed with towns and villages. The M40 Motorway runs roughly north-south c.500m to the west, with dense development of Bicester to the East.

Fauna

- 2.4 A range of dedicated faunal surveys were carried out on the wider site including invertebrates, great crested newts (GCN), breeding and winter birds, bats, dormice, water voles, otters, and badgers. Results relevant to this site include the presence of a breeding population of GCN within the on-site waterbodies and also the identification of roosting bats within buildings associated with Himley farm.

¹ <http://publications.naturalengland.org.uk/publication/5850908674228224> - Accessed 25/06/2021.

3.0 TARGET AREAS

Built Environment

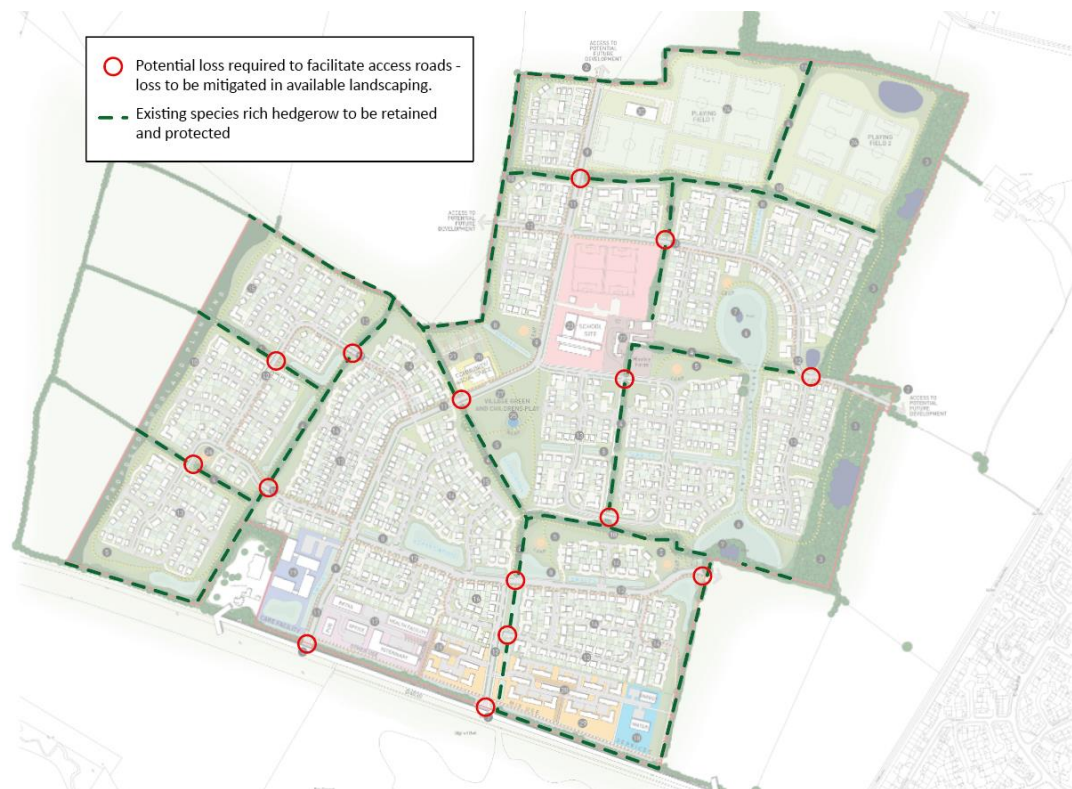
- 3.1 Areas of built environment offer potential for incorporation of faunal habitat in the form of integral bat and bird boxes. The exact numbers and specifications of these boxes will be laid out in the Landscape & Habitat Management Plans (LHMP's) for each phase but will generally cater for a range of common urban fringe bird species, such as starling, swift, and house sparrow.
- 3.2 Roosting features will provide new potential roosting locations for common and widespread crevice dwelling bat species such as common and soprano pipistrelle.
- 3.3 In order to maintain connectivity for hedgehog across new residential gardens, garden boundaries should be installed with either a continuous c.15cm gap, or else regular 15x15cm 'hedgehog holes', to allow navigation by this species across the site.
- 3.4 The lighting scheme for the site will be designed to minimise light spill onto adjacent high value habitats such as hedgerows and woodland, so as not to prejudice their use by nocturnal wildlife. The lighting strategy should be designed to consider the best practice guidance set out by the Bat Conservation Trust and the Institute of Lighting Professionals in 2018, 'Bats and Artificial Lighting in the UK'².
- 3.5 The planting of avenues of trees along roads will provide further connective function through the site for wildlife, in particular birds.
- 3.6 Areas of public open space will be designed where possible to provide a dual function of public amenity and biodiversity value. Boundaries of playing fields will be seeded with a locally relevant seed mix and managed appropriately to increase species diversity along hedges.
- 3.7 The combination of public open space, allotments and attenuation features will form a network of green space through the development that will facilitate the movement of urban wildlife.

Habitats

Hedgerows

- 3.8 Hedgerows on site are species rich, providing high quality established habitat, and a network of green infrastructure of value for facilitating the movement of wildlife across the site. The vast majority of hedgerows on Site will be retained and incorporated into public open space. Retained hedgerows will be protected to BS 5837:2012. Where removal is required species rich native hedgerow will be planted within available landscaping as compensation.
- 3.9 The areas to be lost, and planned compensation will be outlined in the Landscape & Habitat Management Plan produced for each phase. This information will then be used to inform a detailed Biodiversity Impact Assessment (BIA), within which net gain calculations we will carried out.

² <https://cdn.bats.org.uk/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?mtime=20181113114229>

Figure 2: Hedgerow Retention and Mitigation

Woodland

- 3.10 Existing dense plantation woodland found along the eastern boundary will be for the most part retained and protected through development to BS:5837 2012. This young native planting will be entered into a management regime which aims to maximise its biodiversity value, this will include the creation of ponds within the woodland surrounded by grassland, and areas managed to develop into scattered scrub.
- 3.11 Along the western boundary a new strip of native woodland will be created. Public access will be formalised to direct footfall and minimise degradation by trampling, and the use of thicket forming native scrub will create sheltered areas free from human disturbance.
- 3.12 Management of the existing and newly created habitat will be outlined in the LHMP produced for the relevant phase / phases of the development, with a commitment to management for a period of c.30 years.

Ponds

- 3.13 As well as the retention of existing ponds on site, several new ponds will be incorporate in the masterplan area along the eastern and northern boundaries, which will provide biodiversity hotspots, as well as delivering high biodiversity value, these will act as 'stepping stone habitat' for amphibian movement across the site.
- 3.14 Where ponds are created / retained public access will be limited and formalised to prevent degradation and ensure maximal biodiversity value.

Protected Species

Great crested newt

- 3.15 Ponds on site have been confirmed as supporting the protected species great crested newt (GCN). In order to ensure compliance with the relevant legislation, the site will be entered into a district licencing scheme which will ensure the anticipated impacts on this species will be adequately mitigated by targeting habitat creation to areas offsite which will maximise the positive impact on GCN conservation on a population level. The onsite populations will be protected through working to a great crested newt method statement. This will outline a strategy by which the development can proceed whilst minimising impacts to the onsite population of GCN.
- 3.16 Following discussion with NatureSpace changes to the masterplan have been proposed in order to provide higher value habitat for GCN, to ensure connectivity (north – south) through the local landscape, and to maintain the viability of on-site populations. Roads which have the potential to sever north-south connectivity will be designed to be permeable to amphibians – avoid dropped kerbs, use of gully pots, and with a level profile to adjacent verges.

Bats

- 3.17 Bat roosts have previously been identified within buildings associated with Himley Farm. Prior to any works required to these buildings, bat surveys will be required to assess the status of roosting bats and determine the requirement for a European Protected Species Mitigation Licence (EPSML) from Natural England. Surveys would need to be undertaken between May and September (inclusive) with at least some surveys being undertaken prior to August.

Figure 3: Protected Species Provisions

4.0 BIODIVERSITY NET GAIN

- 4.1 Proposals have been put forward and incorporated into the masterplan in order that the site can meet the requirements for a ‘net gain’ in biodiversity as outlined in the NPPF. This includes the incorporation of new habitat corridors and green space which will be managed to maximise biodiversity value.
- 4.2 As each reserved matters application is brought forward a separate detailed BIA will be carried out to ensure that the net gain within each phase are in line with the wider strategy for achieving a gain across the site.
- 4.3 The Biodiversity Impact Assessment (BIA) for the masterplan (see appendix A) provides a provisional strategy for habitat creation which will allow the development to deliver a net gain in biodiversity. This plan is subject to changes as the details of the layout of future phases are determined and will be shaped to some extent by the requirements of protected species licensing and associated commitments to species specific habitat creation.

5.0 APPENDIX A – MASTERPLAN BIA



June 2021

Biodiversity Impact Assessment Report

9776 – Himley Village, Bicester (Masterplan Site)

FPCR Environment and Design Ltd. were commissioned by Countryside Properties Ltd. to design a green infrastructure (GI) layout and undertake a biodiversity offsetting assessment of the Illustrative Landscape Masterplan (P20-3215_14 REV E Site Wide Illustrative Masterplan) for the proposed development of Himley Village, Bicester.

This report summarises the calculations and provides details regarding any assumptions made to inform this assessment.

Background

Current proposals for site comprise the development of up to 1,700 residential dwellings (Class C3), a retirement village (Class C2), flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2FE) (Class D1). Such development to include provision of strategic landscape, provision of new vehicular, cycle and pedestrian access routes, infrastructure and other operations (including demolition of farm buildings on Middleton Stoney Road).

Methodology

The BIA calculations completed on the scheme have been calculated in accordance with the DEFRA Biodiversity Metric 2.0 Calculation Tool Beta Test Final.

Results of the phase 1 habitat survey undertaken in 2020 and 2021 by FPCR Environment & Design Ltd, previous phase 1 habitat surveys and reporting undertaken in 2010 and 2014 and the Illustrative Landscape Masterplan (P20-3215_14 REV E Site Wide Illustrative Masterplan) were used for this assessment.

The development site was mapped and divided into existing habitat criteria. Habitats were defined using the UK Habitat Classification with further information providing habitat area, distinctiveness and condition, which are used to calculate the value of each habitat.

The condition assessments were undertaken using the relevant Condition Assessment Criteria within the DEFRA Biodiversity Metric 2.0 Technical Supplement, Beta Edition¹.

¹ I. Crosher, S. Gold, M. Heaver *et al.* (2019) *The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: technical supplement (Beta version, July 2019)*. Natural England. Online. Available at: <http://publications.naturalengland.org.uk/publication/5850908674228224> [Accessed 14.12.20]

Full details of the calculation methodology are provided in Biodiversity Metric 2.0 – User Guide².

Biodiversity Impact Assessment (BIA)

Existing Habitats

As identified by phase 1 habitat surveys undertaken in 2010, 2014, 2020 and 2021, the site was dominated by arable land. Other habitats included improved grassland, broadleaved plantation woodland, broadleaved scattered trees, buildings, hardstanding, lawns and planting, orchard, dense/continuous scrub and three ponds.

The biodiversity units for each habitat on the site have been calculated and are presented in Table 1. Justifications for condition scores are detailed below.

Table 1: Biodiversity Units: Existing On-Site Habitats

Habitat	BIA Habitat Type	Area (ha)	Condition	Biodiversity Units	Area Retained (ha)	Area Enhanced (ha)	Area Lost (ha)
Arable	Cropland – Cereal crops	71.61	N/A - Agricultural	143.22	0	0	71.61
Improved Grassland	Grassland – Modified grassland	13.12	Poor	26.24	0.21	0	13.12
Dense / Continuous scrub	Heathland and shrub – Mixed scrub	0.06	Poor	0.24	0.04	0	0.02
Hardstanding	Urban – Developed land; sealed surface	0.54	N/A - Other	0	0.18	0	0.54
Buildings	Urban – Developed land; sealed surface	0.1	N/A - Other	0	0.06	0	0.1
Broadleaved Plantation Woodland	Woodland and forest – Other woodland; broadleaved	4.32	Poor	17.28	0	3.35	0.97
Gardens (Lawn and Planting)	Urban – Vegetated garden	0.11	Poor	0.22	0.02	0	0.11
Orchard	Urban - Orchard	0.18	Poor	0.72	0	0	0.18
Ponds	Lakes – Ponds (Priority Habitat)	0.08	Moderate	0.96	0.08	0	0
Scattered Trees	Woodland and forest – Other woodland; broadleaved	0.15	Poor	0.60	0.15	0	0
Totals:				189.48	0.74	3.35	86.18

² I. Crosher, S. Gold, M. Heaver *et al.* (2019) *The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: User Guide (Beta version, July 2019)*. Natural England. Online. Available at: <http://publications.naturalengland.org.uk/publication/5850908674228224> [Accessed 14.12.20]

Arable (Cropland – Cereal crops)

No assessment is required.

Improved Grassland (Grassland – Modified grassland)

Located within the centre of the site were a small number of improved grassland field parcels separated by fence lines. At the time of survey, a number of these were horse grazed and other horse grazed on a rotational basis.

DEFRA 2.0 Condition Assessment – Grassland Habitat Types

Condition Assessment Feature	Assessment
1. The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitats classifications and what is visible on site.	Yes – area is clearly recognisable and corresponds to what is described.
2. The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat [i.e., as described by either the Phase 1 habitat Classification of the UK Habitat Classification], with species typical of the habitats representing a significant majority of the vegetation.	No – due to the management we assume no characteristics as a priority habitat.
3. Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency.	No – due to the management we assume none to be present.
4. Undesirable species and physical damage is below 5% cover	No – due to the management we assume physical damage and undesirable species is above 5% of the area.
5. Cover of bare ground less than 10% (including localised areas, for example, rabbit warrens).	Yes – no extensive areas of bare ground identified.
6. Cover of bracken is less than 20% and cover of scrub and bramble habitats is less than 5%.	Yes – due to the management we assume very little bracken or scrub to be present.

In accordance with the guidance provided within the Technical Supplement the grassland fails three of the six condition criteria and the condition criteria has been set at 'Poor'.

Grassland surveys undertaken in 2010 in order to support the outline planning application identified none of the grasslands within the site would we classified as Section 41 (NERC Act) habitats.

Dense/Continuous Scrub (Heathland and Shrub – Mixed Scrub)

Two small areas of dense/continuous scrub were present, one area located to the west of pond P2 and the other area located between a hardstanding track and arable field.

DEFRA 2.0 Condition Assessment – Scrub Habitat Type

Condition Assessment Feature	Assessment
1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover).	No – bramble accounts for more than 75% of cover
2. There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs.	No – homogenous age range and structure
3. Pernicious weeds and invasive species make up less than 5% of the ground cover.	Yes
4. The shrub has a well-developed edge with un-grazed tall herbs.	Yes
5. There are many clearings and glades within the scrub.	No – scrub area is too small and is too dense for clearings and glades to form

In accordance with the guidance provided within the Technical Supplement the stand is not indicative of scrub of high environmental value and fails to meet three of five criteria so is classified as 'Poor'.

Buildings and Hardstanding (Urban – Developed Land; sealed surface)

No assessment is required.

Broadleaved Plantation Woodland (Woodland and forest – Other woodland, broadleaved)

Two strips of broadleaved woodland had recently been established (c.25-35 years ago as noted by previous survey work) along the eastern site boundary. Previous survey work has noted a diverse mix of native broadleaved species and a ground flora layer dominated by common grasses and ruderal herbs associated with nutrient rich soils. The woodland did not support a diverse or valuable ground flora and none of the woodlands would be classified as Section 41 (NERC Act) habitat.

DEFRA 2.0 Condition Assessment – Woodland Types

Condition Assessment Feature	Assessment
1. This should be an area of trees with complete canopy cover.	No – Phase 1 survey identified non-complete canopy cover.
2. Native species are dominant. Non-native and invasive species account for less than 10% of the vegetation cover	Yes – species lists from previous survey work and 2021 survey work indicate no non-native or invasive tree species planting.
3. A diverse age and height structure of the trees.	No – all tree species planted at the same time.
4. Free from damage [Bark stripping; Browse line; Damage shoot tips] (in the last five years) from stock or wild mammals with less than 20% of vegetation being browsed.	Yes – woodland is fenced off.

Condition Assessment Feature	Assessment
5. There should be evidence of successful (i.e. not browsed off before it gets well established) tree regeneration such as seedlings, saplings and young trees	No - no evidence of a seedling / sapling layer identified.
6. Standing and fallen dead wood of over 20 cm diameter are present including fallen large dead branches/stems and stumps.	No –no evidence of deadwood identified.
7. Wetland habitat if they exist within the wood has little sign of drainage or channel straightening.	No – no wetland habitats identified.
8. The area is protected from damage by agricultural and other adjacent operations	Yes – woodland is fenced off.
9. There should be no evidence of inappropriate management (e.g. deep ruts, animal poaching or compaction).	Yes – woodland is fenced off.
10. Invasive non-native plants are below 5% (see list below).	Yes – species lists from 2021 survey and previous survey work indicate no non-native or invasive tree species planting.
11. No signs of significant nutrient enrichment present.	No – 2021 survey and previous surveys report ground layer typical of nutrient enriched soils.
12. More than 3 different native trees and 3 shrub species in an average 10 m radius.	Yes – 2021 survey and previous survey reports this is a diverse mix of native broadleaved trees and shrubs.

In accordance with the guidance provided within the Technical Supplement the broadleaved plantation woodland fails to meet six of twelve criteria so is classified as 'Poor'.

Gardens (Urban – Vegetated garden)

No assessment is required.

Orchard (Urban – Orchard)

A small garden orchard supporting a number of fruiting tree species was present within the south of the site.

DEFRA 2.0 Condition Assessment – Orchard Habitat Type

Condition Assessment Feature	Assessment
1. There should be between 50 and 150 fruit or nut trees per hectare.	Yes
2. There should be an absence of scrub growing between or up the trees.	No – orchard is currently unmanaged as a result of dwelling adjacent associated with the ownership now uninhabited. Scrub species identified within the orchard.

Condition Assessment Feature	Assessment
3. At least 80% of the trees should be free from damage caused by browsing, bark stripping or rubbing on non-adjusted ties.	Yes – no evidence of any of these.
4. The average height of the grass should be between 5cm and 30cm.	No – due to lack of management the grass sward is more than 30cm.
5. There should be less than 5% cover of bare ground, injurious weeds or scrub.	No – due to lack of management, scrub cover is more than 5%.

In accordance with the guidance provided within the Technical Supplement the orchard fails to meet three of five criteria so is classified as 'Poor'.

Ponds (Lakes – Ponds (Priority Habitat)

Three ponds were present within the site. Pond P1 and P2 was surveyed in 2020 as part of the extended phase 1 habitat survey. No access to survey pond P3 was available so assessment was reliant from photographs taken as part of the phase 1 survey in 2014.

DEFRA 2.0 Condition Assessment – Pond Habitat Type

Condition Assessment Feature	Assessment		
	Pond P1	Pond P2	Pond P3
1. Are of good water quality, with clear water (substrate can be seen) and no obvious sign of pollution in the water body.	No – substrate cannot be seen	No – substrate cannot be seen	No – substrate cannot be seen
2. The water body should have semi natural riparian land for at least 10m from the pond edge.	No – less than 10m	No – less than 10m	No – less than 10m
3. Non-woodland ponds should be dominated by plants, be they submerged or floating (not dominance of duckweed is a sign of eutrophication).	No – woodland pond	No – woodland pond	No – large amounts of open water present
4. Non-woodland ponds [i.e. that have always been open] should not be shaded more than 50%.	No – woodland pond	No – woodland pond	Yes
5. Many ponds will be fishless, those which naturally contain fish should not be stocked and should contain a native fish assemblage.	Yes – no evidence of fish present	Yes – no evidence of fish present	Yes – no evidence of fish present
6. Ponds should not be artificially connected to other waterbodies, e.g. ditches.	No – connected to a ditch	Yes – no connection	Yes – no connection
7. Pond water levels should be able to fluctuate naturally throughout the year.	Yes	Yes	Yes
8. Non-native species should be absent.	Yes	Yes	Yes
9. Less than 10% of the pond should be covered with duckweed or filamentous algae.	Yes	Yes	Yes

In accordance with the guidance provided within the Technical Supplement the ponds fail to meet a number of criteria so are classified as 'Moderate'.

Scattered Trees (Woodland and forest – Other woodland, broadleaved)

A small area of scattered trees was present located to the west of pond P2, located within a corner of an arable field.

DEFRA 2.0 Condition Assessment – Woodland Types

Condition Assessment Feature	Assessment
1. This should be an area of trees with complete canopy cover.	No – not a complete canopy cover.
2. Native species are dominant. Non-native and invasive species account for less than 10% of the vegetation cover	Yes
3. A diverse age and height structure of the trees.	No
4. Free from damage [Bark stripping; Browse line; Damage shoot tips] (in the last five years) from stock or wild mammals with less than 20% of vegetation being browsed.	Yes – none evident
5. There should be evidence of successful (i.e. not browsed off before it gets well established) tree regeneration such as seedlings, saplings and young trees	No
6. Standing and fallen dead wood of over 20 cm diameter are present including fallen large dead branches/stems and stumps.	Yes – some deadwood present
7. Wetland habitat if they exist within the wood has little sign of drainage or channel straightening.	No – none present
8. The area is protected from damage by agricultural and other adjacent operations	No – no protected barriers present.
9. There should be no evidence of inappropriate management (e.g. deep ruts, animal poaching or compaction).	No – former badger sett identified now utilised as a rabbit warren
10. Invasive non-native plants are below 5% (see list below).	Yes
11. No signs of significant nutrient enrichment present.	No – ground layer vegetation evident of nutrient enrichment
12. More than 3 different native trees and 3 shrub species in an average 10 m radius.	No – not enough tree cover

In accordance with the guidance provided within the Technical Supplement the woodland fails to meet a number of criteria so is classified as 'Poor'.

Habitat Creation and Enhancement

The following section outlines the key habitats to be created on site and provides the evidence for the condition scores they receive within the metric calculations. Proposed habitats within plots are included within the figures but have been listed under separate headings to allow for easier traceability.

All enhanced and created habitats will be subject to long term management in accordance to a management plan.

The proposed onsite mitigation and their conditions are presented in Table 2 and are illustrated in Figure 1.

Table 2: Biodiversity Units: Proposed Created, Retained and Enhanced On-site Habitats and Target Conditions

Habitat	BIA Habitat	Area (ha)	Target Condition	Biodiversity Units
Broadleaved plantation woodland (Enhanced)	Woodland and forest – Other woodland; broadleaved	3.35	Poor to Moderate	18.66
Ponds (Retained)	Lakes – Ponds (Non-Priority Habitat)	0.08	Moderate	0.96
Dense/Continuous Scrub (Retained)	Heathland and shrub – Mixed scrub	0.04	Poor	0.16
Scattered Trees (Retained)	Woodland and forest – Other woodland; broadleaved	0.15	Poor	0.60
Improved Grassland (Retained (Himley Farm))	Grassland – modified grassland	0.21	Poor	0.42
Hardstanding (Retained (Himley Farm))	Urban – Developed land, sealed surface	0.18	N/A	0
Buildings (Retained (Himley Farm))	Urban – Developed land, sealed surface	0.06	N/A	0
Gardens (Retained (Himley Farm))	Urban – Vegetated garden	0.02	Poor	0.04
Attenuation basins and swales and bankside vegetation	Urban – Sustainable urban drainage feature & Grassland – Other neutral grassland	1.46 & 1.5	Moderate & Moderate	3.52 & 8.40
Allotments	Urban - Allotments	0.33	Poor	1.27
Amenity Grassland	Urban – Amenity Grassland	12.49	Poor	24.11
Buildings/hardstanding not associated with dwellings, LEAPs & NEAPs	Urban – Developed land, sealed surface	1.03	N/A - Other	0
Dwellings and Associated Hardstanding	Urban – Developed land, sealed surface	15.1	N/A - Other	0
Gardens	Urban – Vegetated garden	16.37	Poor	31.59

Habitat	BIA Habitat	Area (ha)	Target Condition	Biodiversity Units
Employment Area	Urban – Developed land, sealed surface	4.21	N/A - Other	0
Mixed Scrub	Heathland and shrub – Mixed scrub	1.59	Good	14.87
Newt Area	Heathland and shrub – Mixed scrub	2.32	Good	21.70
Ponds	Lakes – Ponds (Non-Priority Habitat)	0.32	Moderate	3.45
Road / Pavement Network	Urban – Developed land, sealed surface	11.45	N/A - Other	0
Species Rich Meadow Grassland	Grassland – Other neutral grassland	6.00	Moderate	33.61
Mixed Scrub	Heathland and shrub – Mixed scrub	0.82	Moderate	5.90
Sports Fields	Urban – Amenity Grassland	8.86	Poor	17.10
Tussock Forming Grassland	Grassland – Other neutral grassland	0.97	Moderate	5.43
Broadleaved Plantation Woodland	Woodland and forest – Other woodland; broadleaved	1.36	Moderate	2.50
Total				194.29

Broadleaved Plantation Woodland (Woodland and forest – other woodland; broadleaved)

Approximately 3.35ha of the broadleaved plantation woodland located along the eastern site boundary will be retained and enhanced. The target habitat for this habitat is 'moderate'. It is considered that with appropriate management this condition can be achieved in 15 years. Approximately 1.36ha of the broadleaved plantation woodland will be established located along the western site boundary. The target habitat for this habitat is 'moderate'. It is considered that with appropriate management this condition can be achieved in 30 years.

DEFRA 2.0 Condition Assessment – Woodland Types

Condition Assessment Feature	Assessment (Retained & Enhanced Area)	Assessment (Established Area)
1. This should be an area of trees with complete canopy cover.	Yes – ever maturing woodland will create a complete canopy cover.	Yes – planting structure will ensure complete canopy cover established.
2. Native species are dominant. Non-native and invasive species account for less than 10% of the vegetation cover	Yes – Already dominated by native species	Yes – planting will ensure native species dominant.

Condition Assessment Feature	Assessment (Retained & Enhanced Area)	Assessment (Established Area)
3. A diverse age and height structure of the trees.	Yes – selected felling of standards and subsequent regeneration will ensure a diverse age range and height structure.	Yes – planting of different species and management will ensure.
4. Free from damage [Bark stripping; Browse line; Damage shoot tips] (in the last five years) from stock or wild mammals with less than 20% of vegetation being browsed.	Yes – woodland is already fenced off and will continued to be fenced off to prevent damage arising.	Yes – will be protected from stock
5. There should be evidence of successful (i.e. not browsed off before it gets well established) tree regeneration such as seedlings, saplings and young trees	Yes – management will ensure tree regeneration occurs by selective felling and encouraging seedling and saplings	Yes – management will ensure tree regeneration
6. Standing and fallen dead wood of over 20 cm diameter are present including fallen large dead branches/stems and stumps.	Yes – deadwood from selectively felled trees will be left in situ.	Yes – management will ensure
7. Wetland habitat if they exist within the wood has little sign of drainage or channel straightening.	Yes – stepping stone ponds are proposed within the woodland belt.	No
8. The area is protected from damage by agricultural and other adjacent operations	Yes – area will be continued to be fenced off	Yes – area will be fenced off
9. There should be no evidence of inappropriate management (e.g. deep ruts, animal poaching or compaction).	Yes – management will ensure.	Yes – management will ensure.
10. Invasive non-native plants are below 5% (see list below).	Yes – management will ensure.	Yes – management will ensure.
6. No signs of significant nutrient enrichment present.	No – soil already shows evidence of nutrient enrichment through ground flora. Would be difficult to reverse.	No – soil present is agricultural land which nutrient enrichment would be difficult to reverse.
7. More than 3 different native trees and 3 shrub species in an average 10 m radius.	Yes – already present.	Yes – planting structure will ensure.

Attenuation Basins and Swales (Urban – Sustainable Urban Drainage System)

Attenuation basins and swales are not likely to permanently hold water but may hold water for long periods of time. They will be sown with an appropriate wildflower seed mix such as Emorsgate EM8 – Meadow mixture for wetlands. With appropriate management it is considered that the artificially created and planted feature will provide a source of pollen and nectar for a wide range of invertebrates. The target condition of this habitat is set at 'Moderate' in three years.

DEFRA 2.0 Condition Assessment – Urban Habitat Types

Condition Assessment Feature	Assessment
1. Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added which in turn has led to a low nutrient environment.	No
2. The site contains some vegetation. This will comprise of early successional communities consisting mainly of stress-tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of (a) annuals, or (b) mosses/liverworts, or (c) lichens, or (d) ruderals, or (e) inundation species, or (f) open grassland, or (g) flower-rich grassland, or (h) heathland.	Yes – area will include early successional communities including (a), (b), (d) and (e)
3. The site contains unvegetated, loose bare substrate and pools may be present and desirable.	Yes – unvegetated areas and pools will be present as a result of semi-permanent water
4. The site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)–(h) above plus bare substrate or pools.	Yes

Allotments (Urban – Allotments)

A single allotment area comprising a small number of allotments is proposed within the development. Allotments are only likely to achieve ‘poor’ condition and will only take a single year to achieve.

DEFRA 2.0 Condition Assessment – Urban Habitat Types

Condition Assessment Feature	Assessment
1. Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added which in turn has led to a low nutrient environment.	Yes – soil is highly likely to be disturbed, removed or modified.
2. The site contains some vegetation. This will comprise of early successional communities consisting mainly of stress-tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of (a) annuals, or (b) mosses/liverworts, or (c) lichens, or (d) ruderals, or (e) inundation species, or (f) open grassland, or (g) flower-rich grassland, or (h) heathland.	No - none likely to be established
3. The site contains unvegetated, loose bare substrate and pools may be present and desirable.	Yes – unvegetated areas will be present

Condition Assessment Feature	Assessment
4. The site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)–(h) above plus bare substrate or pools.	No

Urban – Amenity Grassland

Amenity public open space located throughout the proposed scheme and the sports fields located in the north will be sown with an amenity seed mix. It is anticipated that all amenity grassland would likely be intensively managed therefore only likely to meet 'Poor' condition.

The seeded areas of amenity grassland will be sown with Emorsgate EG22 Strong Lawn and Grass Mixture.

DEFRA 2.0 Condition Assessment - Grassland

Condition Assessment Feature	Assessment
1. The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitats classifications and what is visible on site.	No
2. The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat [i.e. as described by either the Phase 1 habitat Classification of the UK Habitat Classification], with species typical of the habitats representing a significant majority of the vegetation.	No
3. Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency.	No
4. Undesirable species and physical damage is below 5% cover	Yes / likely No for sports pitches.
5. Cover of bare ground less than 10% (including localised areas, for example, rabbit warrens).	Yes – management will ensure.
6. Cover of bracken is less than 20% and cover of scrub and bramble habitats is less than 5%.	Yes – management will ensure.

Commercial Buildings, LEAPs, NEAPs, Dwellings and Associated Hardstanding, Employment Area, Roads and Pavements (Urban: Developed land; sealed surface (building and hardstanding))

No assessment is required.

Gardens (Urban: Vegetated garden)

No assessment is required.

Mixed Scrub and Newt Area (Heathland and Shrub – Mixed Scrub) – Good condition

Extensive areas of mixed scrub are proposed along the northern site boundary, replacing lost broadleaved plantation woodland along the eastern site boundary and within the 'Newt Area'. Due to the extensive areas of these proposed areas, the scrub is likely to achieve 'good' condition and will take approximately seven years.

DEFRA 2.0 Condition Assessment – Scrub Habitat Type

Condition Assessment Feature	Assessment
1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover).	Yes – mixed planting with no single species accounting for more than 75% will be ensured. Species established will include at least three of the following species, hawthorn, blackthorn, elder, dog-rose, bramble, hazel.
2. There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs.	Yes – management will ensure that the scrub is managed with the selective coppicing and subsequent regeneration creating a diverse age range with seeding and sapling regeneration.
3. Pernicious weeds and invasive species make up less than 5% of the ground cover.	Yes – management will ensure.
4. The shrub has a well-developed edge with un-grazed tall herbs.	Yes – the scrub will have a well-developed edge and is surrounded by species rich meadow grassland or tussock forming grassland and/or is fenced off to the general public.
5. There are many clearings and glades within the scrub.	Yes – the large extent of these habitats will create the opportunity for clearings and glades to be established and management will ensure that these remain. Habitat within the clearings should be established through Emorsgate EM2 Standard General Purpose Meadow Mixture and/or Emorsgate EM10 Tussock Mixture seeding.

Ponds (Lakes – Ponds (Non-Priority Habitat)

Four steppingstone ponds are proposed along the eastern site boundary, of which two will be located in broadleaved plantation woodland clearings and surrounded by tussock forming grassland and mixed scrub. All ponds will likely achieve 'moderate' condition in three years.

DEFRA 2.0 Condition Assessment – Pond Habitat Type

Condition Assessment Feature	Assessment
1. Are of good water quality, with clear water (substrate can be seen) and no obvious sign of pollution in the water body.	No – ponds unlikely to hold clear water for substrate to be visible.
2. The water body should have semi natural riparian land for at least 10m from the pond edge.	Yes – all ponds will be buffered with semi-natural riparian land habitat.

Condition Assessment Feature	Assessment
3. Non-woodland ponds should be dominated by plants, be they submerged or floating (not dominance of duckweed is a sign of eutrophication).	No – expanses of open water will occur.
4. Non-woodland ponds [i.e. that have always been open] should not be shaded more than 50%.	Yes – establishment of tussock forming grassland buffer around all ponds will create no shading of more than 50%.
5. Many ponds will be fishless, those which naturally contain fish should not be stocked and should contain a native fish assemblage.	Yes – pond will not be stocked with fish and ponds will be prohibited from public access.
6. Ponds should not be artificially connected to other waterbodies, e.g. ditches.	Yes – pond will not be connected to other waterbodies.
1. Pond water levels should be able to fluctuate naturally throughout the year.	Yes – pond water levels will be allowed to fluctuate.
2. Non-native species should be absent.	Yes – management will ensure.
3. Less than 10% of the pond should be covered with duckweed or filamentous algae.	Yes – management will ensure.

Species Rich Meadow Grassland and Tussock Forming Grassland – (Other neutral grassland)

Approximately 6.00ha of Wildflower grassland creation co-buffering retained hedgerows with mixed scrub is to be sown with a seed mix such as Emorsgate EM2 Standard General Purpose Meadow Mixture whilst Tussock forming grassland will be sown with Emorsgate EM1 Tussock Mixture. Both habitats are targeted to reach 'moderate' condition in 10 years.

DEFRA 2.0 Condition Assessment – Grassland Habitat Types

Condition Assessment Feature	Assessment
1. The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitats classifications and what is visible on site.	Yes – will be easily recognisable as a grassland habitat.
2. The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat [i.e. as described by either the Phase 1 habitat Classification of the UK Habitat Classification], with species typical of the habitats representing a significant majority of the vegetation.	No – unlikely to reach NERC S41 habitat.
3. Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency.	Yes – establishment and management will ensure wildflowers, sedges and other indicator species are present and easily visible through a specific mowing regime promoting flower and seed establishment.

Condition Assessment Feature	Assessment
4. Undesirable species and physical damage is below 5% cover	Yes – management will ensure weeds and invasive species remain >5% of the ground cover.
5. Cover of bare ground less than 10% (including localised areas, for example, rabbit warrens).	Yes – management will ensure
6. Cover of bracken is less than 20% and cover of scrub and bramble habitats is less than 5%.	Yes – management will ensure.

Mixed Scrub (Heathland and Shrub – Mixed Scrub) – Moderate condition

Approximately 0.82ha of mixed scrub is to be established co-buffering retained hedgerows along with species rich meadow grassland. Unlike the other areas of mixed scrub establishment, due to the smaller extents of this scrub establishment, it is only likely to achieve 'moderate' condition and will take 3 years.

DEFRA 2.0 Condition Assessment – Scrub Habitat Type

Condition Assessment Feature	Assessment
1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover).	Yes – mixed planting with no single species accounting for more than 75% will be ensured. Species established will include at least three of the following species, hawthorn, blackthorn, elder, dog-rose, bramble, hazel.
2. There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs.	Yes – management will ensure that the scrub is managed with the selective coppicing and subsequent regeneration creating a diverse age range with seeding and sapling regeneration.
3. Pernicious weeds and invasive species make up less than 5% of the ground cover.	Yes – management will ensure.
4. The shrub has a well-developed edge with un-grazed tall herbs.	Yes – the scrub will have a well-developed edge.
5. There are many clearings and glades within the scrub.	No – due to the limited extent of these areas, clearing and glades unlikely to establish.

Results and Conclusion

Habitats

With the above proposed habitat retention, creation and enhancements, the proposed development results in a **net gain of 4.81** habitat units, equating to an increase of 2.54%.

Appendix A – DEFRA Biodiversity Metric 2.0 Calculations

Headline Results

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On-site baseline	Habitat units	189.48
	Hedgerow units	0.00
	River units	0.00

On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	194.29
	Hedgerow units	0.00
	River units	0.00

Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00

Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00

Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	4.81
	Hedgerow units	0.00
	River units	0.00

Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	2.54%
	Hedgerow units	0.00%
	River units	0.00%

A-1 Site Habitat Baseline

Condense / Show Columns

Condense / Show Rows

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Ref	Habitats and areas			Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Cropland	Cropland - Cereal crops	71.61	Low	N/A - Agricultural	N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	143.22
2	Grassland	Grassland - Modified grassland	13.12	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	26.24
3	Heathland and shrub	Heathland and shrub - Mixed scrub	0.06	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	0.24
4	Urban	Urban - Developed land; sealed surface	0.54	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
5	Urban	Urban - Developed land; sealed surface	0.1	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
6	Woodland and forest	Woodland and forest - Other woodland; broadleaved	4.32	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	17.28
7	Urban	Urban - Vegetated garden	0.11	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.22
8	Urban	Urban - Orchard	0.18	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	0.72
9	Lakes	Lakes - Ponds (Priority Habitat)	0.08	High	Moderate	Low	Area/compensation not in local strategy/ no local strategy	Same habitat required	0.96
10	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.15	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	0.60
11									
12									
13									
14									
15									
Total site area ha			90.27					Total Site baseline	189.48

Retention category biodiversity value								Bespoke compensation agreed for unacceptable losses	Comments	
Area retained	Area enhanced	Area succession	Baseline units retained	Baseline units enhanced	Baseline units succession	Area lost	Units lost		Assessor comments	Reviewer comments
			0.00	0.00	0.00	71.61	143.22		arable	
0.21			0.42	0.00	0.00	12.91	25.82		improved grassland	
0.04			0.16	0.00	0.00	0.02	0.08		dense/continuous scrub	
0.18			0.00	0.00	0.00	0.36	0.00		hardstanding	
0.06			0.00	0.00	0.00	0.04	0.00		buildings	
	3.35		0.00	13.40	0.00	0.97	3.88		broadleaved plantation woodland	
0.02			0.04	0.00	0.00	0.09	0.18		gardens	
			0.00	0.00	0.00	0.18	0.72		orchard	
0.08			0.96	0.00	0.00	0.00	0.00		ponds	
0.15			0.60	0.00	0.00	0.00	0.00		scattered trees	
0.74	3.35	0.00	2.18	13.40	0.00	86.18	173.90			

A-2 Site Habitat Creation

Condense / Show Columns

Condense / Show Rows

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Post development/ post intervention habitats

Proposed habitat	Area (hectares)	Distinctiveness	Condition	Ecological	Strategic significance	Temporal multiplier	Difficulty	Habitat units delivered	Comments	
				Ecological connectivity	Strategic significance	Time to target condition/years	Difficulty of creation category		Assessor comments	Reviewer comments
Urban - Sustainable urban drainage feature	1.46	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	3	Medium	3.52	Swale / Attenuation Basins	
Urban - Allotments	0.33	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	1.27		
Urban - Amenity grassland	12.49	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	24.11		
Urban - Developed land; sealed surface	1.03	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Buildings / LEAPs / NEAPs	
Urban - Developed land; sealed surface	15.1	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Dwellings 48%	
Urban - Vegetated garden	16.37	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	31.59	Gardens 52%	
Urban - Developed land; sealed surface	4.21	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Employment Areas 100%	
Heathland and shrub - Mixed scrub	1.59	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	7	Low	14.87	northern boundaries, eastern boundary in between woodland	
Heathland and shrub - Mixed scrub	2.32	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	7	Low	21.70	Newt Area 100%	
Lakes - Ponds (Non- Priority Habitat)	0.32	High	Moderate	Low	Area/compensation not in local strategy/ no local strategy	3	Low	3.45		
Urban - Developed land; sealed surface	11.45	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Roads	
Grassland - Other neutral grassland	6	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	33.61	Meadow grassland 88%	
Urban - Amenity grassland	8.86	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	17.10	Sports Fields	
Grassland - Other neutral grassland	0.97	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	5.43	Tussock forming grassland	
Heathland and shrub - Mixed scrub	0.82	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	3	Low	5.90	Mixed scrub 12%	
Grassland - Other neutral grassland	1.5	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	8.40	Swale/attenuation basin banks	
Woodland and forest - Other woodland; broadleaved	1.36	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	30	Medium	2.50	western boundary woodland	
Totals	86.18							173.45		


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Key:

- Site Boundary
- Attenuation Basins & Swales
- Allotments
- Amenity Grassland
- Retained & Enhanced Broadleaved Plantation Woodland
- Broadleaved Plantation Woodland Planting
- Residential Development Areas, Roads & Other Hardstanding
- Dense Scrub
- Employment Area
- Newt Area
- Ponds
- Meadow Grassland & Mixed Scrub planting (88:12)
- Mixed Scrub
- Sports Fields
- Tussock Grassland
- Retained Improved Grassland at Himley Farm
- Retained Garden at Himley Farm




 client: Countryside Properties Ltd.
 project: Himley Village, Bicester
 drawing title: PROPOSED HABITAT PLAN
 scale: A3 1:5000
 drawn: MPG/DJR
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 drawing / figure number: **Figure 1**
 rev: -

