

# EISAI EML Warehouse Expansion Biodiversity Net Gain Assessment

Eisai Manufacturing Limited

November 2023

## Quality information

Prepared by	Checked by	Verified by	Approved by
EB Graduate Ecologist	GCD Senior Biodiversity Net Gain Consultant	LD Technical Director	MM Project Director

## Revision History

Revision	Revision date	Details	Authorized	Name	Position
1	February 2023	First Draft	Yes	Matt McBrien	Project Director
2	November 2023	Second submission accounting for increased BNG target of 10% BNG.	Yes	Matt McBrien	Project Director

### Prepared for:

Eisai Manufacturing Limited

### Prepared by:

AECOM Limited  
12 Regan Way  
Nottingham  
NG9 6RZ  
United Kingdom

[aecom.com](http://aecom.com)

© 2023 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client Eisai Manufacturing Limited in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

## Table of Contents

1.	Introduction .....	1
1.1	Site Description.....	1
1.2	Proposed Development .....	1
1.2.1	National Legislation .....	1
1.2.2	Local Planning Policy.....	1
1.2.3	Minimum BNG Requirement.....	2
2.	Methodology .....	2
2.1	Biodiversity Metric 3.1.....	2
2.1.1	Baseline Data .....	2
2.1.2	Post-Development Data.....	3
2.1.3	Strategic Significance .....	3
2.1.4	BNG Best Practice Principals .....	4
2.1.5	Assumptions .....	4
2.1.6	Constraints or limitations .....	4
3.	Results.....	4
3.1	Baseline Habitats .....	4
3.1.1	Baseline Habitat Units .....	4
3.2	Post-Development Habitats .....	5
3.2.1	Post-Development Habitat Units.....	5
3.3	Summary of Results.....	6
3.3.1	Trading Rules .....	6
3.3.1.1	Summary Of Changes by Broad Habitat Types .....	6
4.	Recommendations .....	7
4.1	High-Level Enhancement Recommendations.....	7
4.1.1	Enhancement Opportunities – Within Planning Boundary .....	7
4.1.2	Enhancement Opportunities – Wider EISAI Site.....	8
5.	Conclusion .....	9
	Appendix A Baseline Habitat Plan .....	10
	Appendix B Post-Development Habitat Plan .....	11
	Appendix C Habitat Classification Conversions .....	12
C.1	Phase 1 Habitat to UKHab Conversion.....	12
C.2	Landscape Plan to UKHab Conversion.....	12
	Appendix D Condition Assessment Rationale .....	13
D.1	On-Site Habitats.....	13
D.2	Off-Site Habitats.....	13
	Appendix E Strategic Significance Rationale .....	14
	Appendix F BNG Best Practice Principals.....	15
	Appendix G Baseline Habitat Descriptions.....	16
	Appendix H Habitat Management Required to Achieve Target Condition .....	17
	Appendix I Biodiversity Metric 3.1 Calculation .....	19
	Table 1. Baseline Area-Based Habitats .....	5
	Table 2. Retained Area-Based Habitats .....	5
	Table 3. Created Area-Based Habitats .....	6
	Table 4. Summary of Results .....	6
	Table 5. Trading Rules Summary .....	6
	Table 6. Change by Broad Area-Based Habitat Type.....	7
	Table 7. Additional units required to achieve BNG .....	7
	Table 8. On-Site Area-Based Habitat Recommendations.....	8
	Table 9. Off-Site Area-Based Habitat Recommendations.....	9

# 1. Introduction

AECOM Ltd. was commissioned by Eisai Manufacturing Limited (hereafter referred to as the 'Client') to undertake a Biodiversity Net Gain (BNG) assessment at Hatfield Business Park Campus on Mosquito Way, Hatfield, Hertfordshire, AL10 9SN (hereafter referred to as the 'Site'). The assessment is intended to inform the Client of the potential impacts on biodiversity during the proposed expansion of the existing Eisai warehouse facility onto surrounding land (hereafter referred to as the 'Proposed Development'), and to support the planning application. The central Ordnance Survey (OS) National Grid Reference for the Site is TL 21501 08876.

The BNG assessment has been undertaken to quantify the overall effect of the Proposed Development upon the Site's biodiversity value. This is achieved by comparing the Site's Baseline habitat value with that of the Proposed Development. Calculations consider the level of proposed habitat loss, retention, enhancement and/or creation delivered by the Proposed Development and are measured using Natural England's Biodiversity Metric 3.1<sup>1</sup> in accordance with the accompanying guidance<sup>2</sup> and best practice principles<sup>3</sup>. The report sets out the results of the BNG assessment including the methodology in Section 2, the results in Section 3, and the conclusions in Section 4.

## 1.1 Site Description

The Site, indicated by the planning boundary on the 'Baseline Plan' (Appendix A), is approximately 1.48 ha in size and comprises a mixture of developed and vegetated areas. The developed areas include the car parks, connecting roads and footpaths. The landscaped areas include amenity grassland in central areas, scattered young trees throughout the Site and introduced shrub planting lining the boundaries of the Site. An area of moss and lichen was also found on topsoil behind the introduced shrub that borders a security fence around the Site parameter.

The surrounding area to the north and east is primarily built up, consisting of commercial and industrial premises along with residential blocks and houses to the east. The western boundary of the site runs adjacent to a major highway A1(M).

## 1.2 Proposed Development

The Proposed Development (presented in the 'Post-Development Plan' Appendix B) involves the expansion of the EISAI facility warehouse building into on-site hardstanding areas within the redline boundary (RLB). The Proposed Development will extend the hardstanding to meet the existing carparks on southeast and southwest of the existing building. The Proposed Development will also include the creation of areas of amenity grassland, a mixture of decorative and screening planting, named a 'MOOS garden' and the planting of 51 trees.

### 1.2.1 National Legislation

It is government policy that planning decisions should minimise impacts on and provide net gain for biodiversity (National Planning Policy Framework 2021)<sup>4</sup>. In addition, the Environment Act 2021 includes provisions to make BNG a mandatory requirement within the planning system in England requiring all relevant developments<sup>5</sup> to achieve  $\geq 10\%$  net gain in biodiversity units relative to the Site's Baseline biodiversity value, it is anticipated the secondary legislation mandating the need for  $\geq 10\%$  net gain will be in place in early 2024.

### 1.2.2 Local Planning Policy

The Welwyn Hatfield Borough Council Local Plan 2016-2036<sup>6</sup> contains Policy SADM 16 - Ecology and Landscape which states:

---

<sup>1</sup> [Biodiversity Metric 3.1](#)

<sup>2</sup> [The Biodiversity Metric 3.1 – User Guide & Technical Supplement](#)

<sup>3</sup> [Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide.](#)

<sup>4</sup> [National Planning Policy Framework.](#)

<sup>5</sup> All development within the scope of the Town & Country Planning Act

<sup>6</sup> [Welwyn Hatfield Local Plan 2016-2036.](#)

*“Proposals will be expected to maintain, protect, conserve and enhance biodiversity, the structure and function of ecological networks and the ecological status of water bodies. All developments that are not otherwise exempt will be required to deliver a measurable biodiversity net gain of at least 10%.”*

### 1.2.3 Minimum BNG Requirement

Therefore, at a minimum, the Proposed Development will be seeking to achieve a net gain  $\geq 10\%$  in biodiversity to align with the guidance set out in the Welwyn Hatfield Borough Council Local Plan 2016-2036<sup>6</sup>.

## 2. Methodology

### 2.1 Biodiversity Metric 3.1

The BNG assessment involves making a comparison between the biodiversity value of habitats present within the Site prior to development (i.e., the Baseline) and the predicted biodiversity value of habitats following the completion of the development (i.e., Post-development). The comparison is made in terms of ‘biodiversity units’, with a ‘biodiversity metric’ providing the mechanism to allow biodiversity values to be calculated and compared.

Biodiversity Metric 3.1<sup>1</sup> calculates the overall loss or gain of biodiversity of development projects by assessing the distinctiveness (i.e., type of habitat and its value), condition, extent, and strategic significance of habitats on site pre- and Post-development, including both permanent and temporary land-take areas. To achieve biodiversity net gain, the biodiversity unit score must have a Post-development score higher than the Baseline score.

When calculating the Post-development biodiversity units, the metric includes a series of standard ‘risk multipliers’ to account for the inherent risk of creating and restoring habitats, the time taken to establish habitats and the location of the mitigation in relation to the habitats lost on site. The risk multipliers have the effect of reducing the value of the proposed habitats, which means larger areas, habitats of higher distinctiveness, and/or condition are required to mitigate for losses and achieve net gain.

The metric assesses and generates separate outputs for area-based habitats (measured in habitat units) and linear based habitats, including hedgerows (measured in hedgerow units) and rivers (measured in river units). To claim a net gain in biodiversity, there must be an increase across all habitats, hedgerow and river units, the units cannot be summed to give an overall biodiversity unit value i.e., an increase in habitat and hedgerow units cannot be used to offset a loss in river units.

The information required to undertake the calculation is described below.

#### 2.1.1 Baseline Data

Phase 1 habitat data collected by AECOM in July 2022<sup>7</sup> (hereafter referred to as the ‘Baseline’) have been utilised to determine the Site’s Baseline area-based habitats. The Phase 1 habitat data collected did not document any linear habitats such as hedgerows or rivers and streams as being present within the Site. The ‘Baseline’ habitats were converted from standard Phase 1 Habitat types<sup>8</sup> to UKHab Classification categories<sup>9</sup> (Appendix C.1) before being digitised in Geographic Information System (GIS) to provide area measurements of each habitat type.

All Baseline habitats defined within the Site were assigned a condition using the condition assessment criteria outlined in the Biodiversity Metric 3.1 guidance documents<sup>2</sup> by a qualified ecologist. Further justifications of habitat condition scores are provided in Appendix D.1. The data was aggregated and entered into the metric to calculate the Baseline’ biodiversity units.

<sup>7</sup> AECOM (2022). EISAI Facility Expansion, Hatfield – Preliminary Ecological Appraisal.

<sup>8</sup> [Handbook for Phase 1 habitat survey - a technique for environmental audit.](#)

<sup>9</sup> [The UK Habitat Classification System.](#)

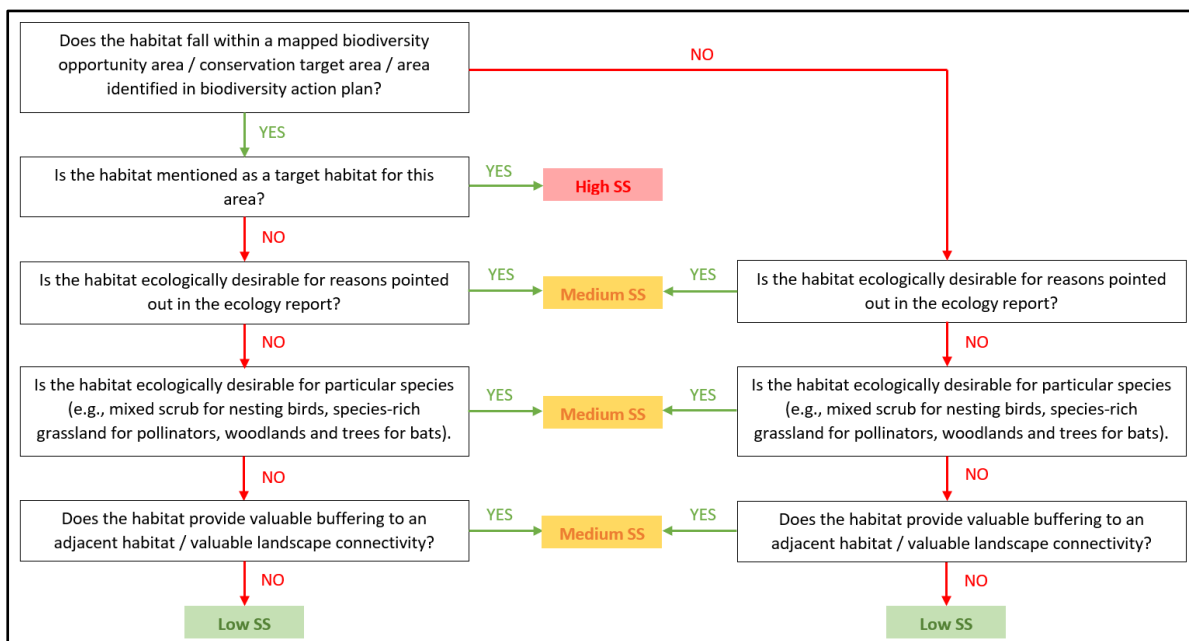
## 2.1.2 Post-Development Data

The Landscape Plan<sup>10</sup> has been used to determine the extent and type of habitats to be lost, retained and/or created Post-development. Habitats in the Landscape Plan<sup>11</sup> were converted to UKHab Classification categories (Appendix C.2) before being digitised into GIS to produce the 'Post-Development Plan' (Appendix B). Target condition scores for the proposed habitats were selected in accordance with Biodiversity Metric 3.1 guidance documents<sup>2</sup> using professional judgement to ensure the condition scores selected were realistic. The data was utilised to predict the Post-development biodiversity units.

## 2.1.3 Strategic Significance

Metric 3.1 requires that the strategic significance (hereafter referred to as 'SS') of all Baseline and Post-development habitats be defined. SS refers to strategic locations for local biodiversity and nature improvements, identified within local planning policies. The process of how the SS of a habitat is assessed is shown in Figure 1.

Figure 1. Strategic Significance Guidance



As part of this assessment, the following relevant documents were reviewed to determine the SS of the habitats on the Site:

- Welwyn Hatfield Borough Council Local Plan 2016-2036<sup>6</sup>
- Eisai Facility Expansion, Hatfield - Preliminary Ecological Appraisal<sup>7</sup>
- Sustainable Hertfordshire Strategy 2020<sup>11</sup>
- Hertfordshire Pollinator Strategy 2019-2024<sup>12</sup>
- Hertfordshire Biodiversity Action Plan (2nd Edition, 2006)<sup>13</sup>
- Bat Conservation Trust- Core Sustainance Zones and habitats of importance for designing Biodiversity Net Gain for bats<sup>14</sup>

Please see detailed information in Appendix E on how strategic significance has been assigned.

<sup>10</sup> AECOM (2022) 60681916-ACM-XX-XX-DR-L-006002. EML Facility Expansion Landscape Proposal.

<sup>11</sup> [Core Strategy Section 5 General Policies \(hertfordshire.gov.uk\)](https://www.hertfordshire.gov.uk/core-strategy-section-5-general-policies)

<sup>12</sup> [HCC Pollinator Strategy \(hertfordshire.gov.uk\)](https://www.hertfordshire.gov.uk/hcc-pollinator-strategy)

<sup>13</sup> [Biodiversity Action Plan | Herefordshire Wildlife Link \(wordpress.com\)](https://www.wordpress.com/biodiversity-action-plan-herefordshire-wildlife-link)

<sup>14</sup> [Core Sustainance Zones Explained 04.02.16.pdf \(bats.org.uk\)](https://www.bats.org.uk/core-sustenance-zones-explained-04.02.16.pdf)

## 2.1.4 BNG Best Practice Principals

Justification for how the BNG Principals have been applied during this net gain assessment is provided in Appendix F.

## 2.1.5 Assumptions

In undertaking the calculation, the following assumptions have been made:

- The Landscape Plan<sup>11</sup> shows that a 'MOOS garden' will be created. The figure used to display this habitat shows flat ground with a mix of specialised soils. As there is a recommendation within the PEA, it has been assumed this has been implemented to offset the loss of the area of moss near the security gate. There is no direct conversion to UKHab classification for a moss garden, we have therefore used professional judgment to categorise this habitat as 'Sparsely vegetated land - Ruderal/Ephemeral'. Due to the potentially unique nature of this habitat the target condition has been increased to 'Good'.
- Scots pine trees (*Pinus Sylvestris*) have been included within the S2 planting mix on the Landscape Plan<sup>11</sup>. All Scots pine trees (*Pinus Sylvestris*) have the potential to reach 30-90 cm diameter at breast height (dbh), and therefore have been classed as medium trees for the metric calculation.
- Habitats created as part of the Proposed Development will be subject to appropriate ongoing management and monitored to ensure correct establishment and growth, and that remedial action will be taken if this does not proceed as expected to achieve the target conditions in the specified timeframes according to the metric.

## 2.1.6 Constraints or limitations

The following limitations also apply:

- The total area of the Site is 1.476 ha. The total area of the Post-development data (1.478 ha) differs from this by 0.002 ha. This difference is caused by the rounding of areas of individual habitats within the dataset to two decimal places by the metric. This has a negligible impact on the assessment as a whole; and
- All habitat areas and lengths have been measured manually using ArcGIS based on the Phase 1 Habitat Plan and the Landscape Plan<sup>11</sup>, as such habitat areas are approximations only.

# 3. Results

## 3.1 Baseline Habitats

The Site covers a total area of 1.476 ha. The habitats identified on Site vary in ecological value, ranging from 'Very Low' to 'Medium' distinctiveness. The most dominant habitats on site include 'Grassland – Modified Grassland' and 'Urban – Developed Land; Sealed Surface'. No linear habitats were present on site. The Baseline Plan is provided in Appendix A.

As outlined in Section 2.1.3, SS has been assigned to all Baseline habitats present within the Site. 'Medium' SS has been assigned to 'Urban – Urban Tree' due to the PEA report<sup>8</sup> identifying them as potentially providing foraging habitat for bats. 'Low' SS has been assigned to all remaining Baseline habitats, including 'Urban – Developed land; sealed surface', 'Urban – Introduced Shrub', 'Sparsely Vegetated Land – Ruderal/Ephemeral' and 'Grassland – Modified Grassland', due to these habitats having negligible ecological significance.

Detailed descriptions of each Baseline habitat can be found in Appendix G.

### 3.1.1 Baseline Habitat Units

The Baseline biodiversity value for area-based habitats are provided in Table 1. In total, the Baseline biodiversity value of the habitats present was calculated as 4.75 habitat units.

**Table 1. Baseline Area-Based Habitats**

Habitat Type (UKHab)	Area (ha)	Distinctiveness	Condition	SS	Habitat Units
Urban – Developed Land; Sealed Surface	0.567	V. Low	N/A - Other	Low	0.00
Urban – Introduced Shrub	0.167	Low	Poor	Low	0.33
Sparsely Vegetated Land – Ruderal/Ephemeral	0.072	Low	Moderate	Low	0.29
Grassland – Modified Grassland	0.670	Low	Moderate	Low	2.68
Urban – Urban Tree	0.330	Medium	Poor	Medium	1.45
<b>Total</b>	<b>1.476*</b>	-	-	-	<b>4.75</b>

\*Urban tree areas are excluded from total area to prevent double counting of area; however, the unit contributions are included within the habitat unit total.

## 3.2 Post-Development Habitats

The proposed Landscape Plan<sup>11</sup> includes provision of several habitats including 'Grassland – Modified grassland', 'Sparsely vegetated land – Ruderal/Ephemeral', 'Urban – Introduced shrub' and 'Urban – Urban Tree'. The habitats identified on Site Post-development vary in ecological value, ranging from 'Very Low' to 'Medium' distinctiveness.

A total of 0.576 ha of Baseline habitats are proposed to be retained (as detailed in Table 2), with the remainder of Post-development habitats being created. The proposed habitats to be created or retained are shown on the Post-development Plan in Appendix B.

As outlined in Section 2.1.3, SS has been assigned to all Post-development habitats proposed within the Landscape Plan<sup>11</sup>. Baseline and Post-development habitats are identical and thus SS has not changed from the Baseline values, please refer to the Baseline SS data.

The high-level management prescriptions required for the created habitats to reach their target condition in the specified timeframe is provided in Appendix H.

### 3.2.1 Post-Development Habitat Units

The Post-Development biodiversity value of the habitats (retained and created) was calculated as 3.08 Post-development units for retained habitats was calculated as 1.43 habitat units, (Table 2) and Post-development units for created habitats was calculated as 1.71 habitat units (Table 3).

**Table 2. Retained Area-Based Habitats**

Habitat Type (UKHab)	Area (ha)	Distinctiveness	Condition	SS	Habitat Units
Grassland – Modified Grassland	0.058	Low	Moderate	Low	0.23
Sparsely Vegetated Land – Ruderal/Ephemeral	0.041	Low	Moderate	Low	0.16
Urban – Developed Land; Sealed Surface	0.319	V. Low	N/A - Other	Low	0.00
Urban – Introduced Shrub	0.159	Low	Poor	Low	0.32
Urban – Urban Tree	0.163	Medium	Poor	Medium	0.72
<b>Total</b>	<b>0.577*</b>	-	-	-	<b>1.43</b>

\*Urban tree areas are excluded from total area to prevent double counting of area; however, the unit contributions are included within the habitat unit total.



**Table 3. Created Area-Based Habitats**

Habitat Type (UKHab)	Area (ha)	Distinctiveness	Target Condition	SS	Time to target condition (yrs)	Habitat Units
Grassland – Modified Grassland	0.167	Low	Moderate	Low	1	0.32
Sparsely Vegetated Land – Ruderal/Ephemeral	0.044	Low	Good	Low	5	0.22
Urban – Developed Land; Sealed Surface	0.616	V. Low	N/A - Other	Low	0	0.00
Urban – Introduced Shrub	0.074	Low	Poor	Low	1	0.14
Urban – Urban Tree	0.305	Medium	Moderate	Medium	27	1.03
<b>Total</b>	<b>0.901*</b>	-	-	-	-	<b>1.71</b>

\*Urban tree areas are excluded from total area to prevent double counting of area; however, the unit contributions are included within the habitat unit total.

### 3.3 Summary of Results

All Baseline habitats and habitats created and retained are present within the accompanying metric assessment for the Proposed Development (Appendix I).

A summary of the results is shown in Table 4. Based on the current Post-Development Plan, the Proposed Development is predicted to result in a net loss of 1.61 habitat units (-33.89%).

**Table 4. Summary of Results**

Habitat Type	Baseline	Post-Development	Total Net Unit Change	Total Net % Change
Habitat Units	4.75	3.14	-1.61	-33.89%

#### 3.3.1 Trading Rules

The trading rules within the metric are a set of rules that try to prevent the 'trading down' of habitat distinctiveness. Under the trading rules losses of habitat are to be compensated for on a "like for like" or "like for better" basis.

The trading rules within the Metric are currently satisfied for 'Medium' distinctiveness habitat and not satisfied for 'Low' distinctiveness Habitat. This is due to a loss of modified grassland. (see Table 5). In order to satisfy the trading rule for 'Low' distinctiveness habitats, the loss of modified grassland must be sufficiently offset through the creation of habitats with higher distinctiveness, or by increasing the area of proposed low distinctness habitats.

**Table 5. Trading Rules Summary**

Distinctiveness Group	Trading Rule	Trading Satisfied?
Medium	Same broad habitat or a higher distinctiveness habitat required	Yes
Low	Same distinctiveness or better habitat required	No

##### 3.3.1.1 Summary Of Changes by Broad Habitat Types

Table 6 shows the overall change in broad habitat types. There is an overall loss to 'Grassland' habitats. There is an overall gain for 'Urban' and 'Sparsely Vegetated Land'. The habitat types that are being lost are of 'Low' distinctiveness, and these are not currently being sufficiently offset by the creation other habitats of equal or higher distinctiveness; therefore, overall losses to 'Grassland' have contributed to the failure of trading rules and the net loss of biodiversity units for the Site.

**Table 6. Change by Broad Area-Based Habitat Type**

Habitat group	Baseline		Post-Development		Change	
	Existing area	Existing value	Proposed area	Proposed value	Area change	Unit change
Grassland	0.67	2.68	0.22	0.55	-0.45	-2.13
Urban	1.06	1.79	1.64	2.20	0.57	0.42
Sparsely Vegetated Land	0.07	0.29	0.09	0.38	0.01	0.10

## 4. Recommendations

Based on the results of the assessment further habitat mitigation is required in order to achieve a net gain in biodiversity to align with the guidance set out in the Local Plan<sup>6</sup> as well as to satisfy the trading rules. In accordance with best practice, the delivery of habitat enhancement measures should be designed to mitigate for the impacts of the Proposed Development by following the mitigation hierarchy (avoid, minimise and mitigate as a last resort) and contribute to local ecological priorities.

The Baseline habitat units on the Site are 4.75 area-based habitat units, meaning that the Proposed Development would need to provide a minimum of 5.23 area-based habitat units (see Table 7) to achieve  $\geq 10\%$  BNG. This equates to an additional 2.09 area-based habitat units.

**Table 7. Additional units required to achieve BNG**

Area/Linear Units	On-site Baseline	On-site post-intervention	Total net unit change	Total net % change	Units required to achieve $\geq 10\%$ BNG
Habitat units	4.75	3.14	-1.61	-33.89%	+2.09

### 4.1 High-Level Enhancement Recommendations

#### 4.1.1 Enhancement Opportunities – Within Planning Boundary

Recommendations for enhancement should focus on both increasing the unit score whilst also satisfying the trading rules. As detailed below and within Table 8, the following enhancements include a combination of two recommendations based on planting larger trees, and substituting habitats currently proposed within the Landscape plan<sup>11</sup> with higher distinctiveness habitats. When combined, the four recommendations achieve the target BNG percentage and satisfy all trading rules.

##### **Recommendation 1: Creation of other neutral grassland instead of modified grassland.**

- Currently 0.167 ha of 'Grassland – Modified Grassland' is proposed to be created on-site, it is recommended that at least 0.067 ha of this grassland is enhanced through over seeding and future management to meet the definition of the more distinctive and diverse 'Grassland – Other Neutral Grassland'. This increases the BNG score by +0.33 habitat units (-33.89%  $\rightarrow$  -27.17%).

##### **Recommendation 2: Replaced proposed 'Small' urban trees with 'Medium' urban trees.**

- It is recommended that five of currently proposed on-site 'Urban – Urban trees', are adjusted from a 'Small' sized tree species (<30 cm dbh at maturity) to a 'Medium' sized tree species (30 – 90 cm dbh at maturity). This recommendation is subject to the Site not being restricted by underground services that might prevent the planting of larger trees or restrict their growth. This will still involve the planting of 51 Urban trees in total as specified within the Landscape Plan<sup>11</sup>. This increases the BNG score by +0.54 habitat units (-27.17%  $\rightarrow$  -15.64%).

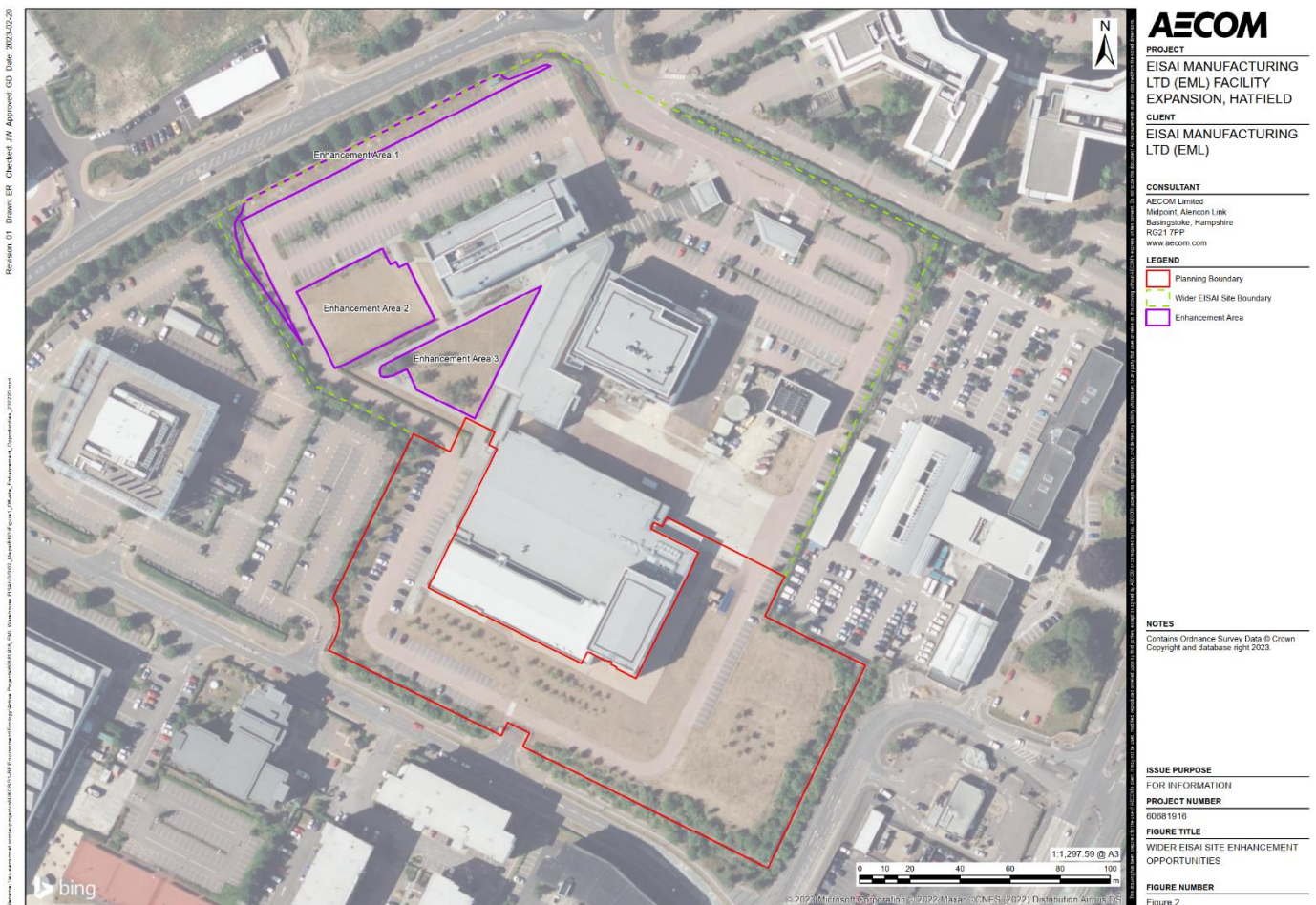
**Table 8. On-Site Area-Based Habitat Recommendations**

Habitat Recommendation	Habitat Unit Contribution	BNG Uplift
Recommendation 1: Creation of 'Grassland - Other Neutral Grassland' instead of 'Grassland – Modified Grassland'.	+0.33	-33.89% → -27.17%
Recommendation 2: Provision of 10 'Medium' sized urban trees in place of 10 'Small' urban trees (total provision of trees remains 51).	+0.54	-27.17% → -15.64%
<b>Total</b>	<b>+0.87</b>	<b>-33.89% → -15.64%</b>

### 4.1.2 Enhancement Opportunities – Wider EISAI Site

Due to limited opportunities for enhancement within the planning boundary, a call with the Client took place on 9<sup>th</sup> January 2023 to discuss opportunities for habitat enhancement in the wider EISAI business site. These discussions highlighted that suitable grassland areas are available for enhancement. Following discussions with the AECOM ecologist that surveyed the wider EISAI landownership as part of the Phase 1 Habitat survey<sup>8</sup>, three grassland enhancement areas with Client’s land ownership have been identified as being suitable for further enhancement, see Figure 2.

**Figure 2. Enhancement Opportunities – Wider EISAI Site (Bing Maps base mapping<sup>15</sup>)**



The UKHab classification of 'Grassland – Modified Grassland' has been assigned to these grassland areas, which collectively cover an approximate area of 0.35 ha. These grassland areas have been assigned 'Poor' condition, see Appendix D.2. In addition to the opportunities mentioned in Section 4.1.1, it is recommended that the following opportunities are considered:

<sup>15</sup> <https://www.bing.com/maps/>

**Recommendation 1: Enhancement of 'Modified Grassland' to form areas of 'Other neutral grassland'.**

- Enhancement of 0.07 ha of 'Grassland – Modified Grassland' to form 'Grassland – Other Neutral Grassland'. Enhancement Area 1 is deemed to be the most suitable location based on location, adjacent habitats, but also factoring in comments from the Client. This increases the BNG score by +0.29 habitat units (-15.64% → -9.46%).

**Recommendation 2: Planting of 8 'Medium' urban trees.**

- Another opportunity is the planting of 8 additional medium sized 'Urban – Urban trees' (30 cm – 90 cm stem diameter at maturity), within the wider site. It is recommended that any of Enhancement Areas 1, 2 and 3 are considered for the potential planting of these trees, subject to these locations being suitable and not restricted by potential underground services. This increases the BNG score by +0.99 habitat units (-9.46% → 11.27%).

**Table 9. Off-Site Area-Based Habitat Recommendations**

Habitat Recommendation	Habitat Unit Contribution	BNG Uplift
Recommendation 1: Enhancement of off-site 'Grassland – Modified Grassland' to form 'Grassland – Other Neutral Grassland'.	+0.29	-15.64% → -9.46%
Recommendation 2: Provision of 8 'Medium' sized urban trees.	+0.99	-9.46% → 11.27%
<b>Total</b>	<b>+1.28</b>	<b>-15.64% → +11.27%</b>

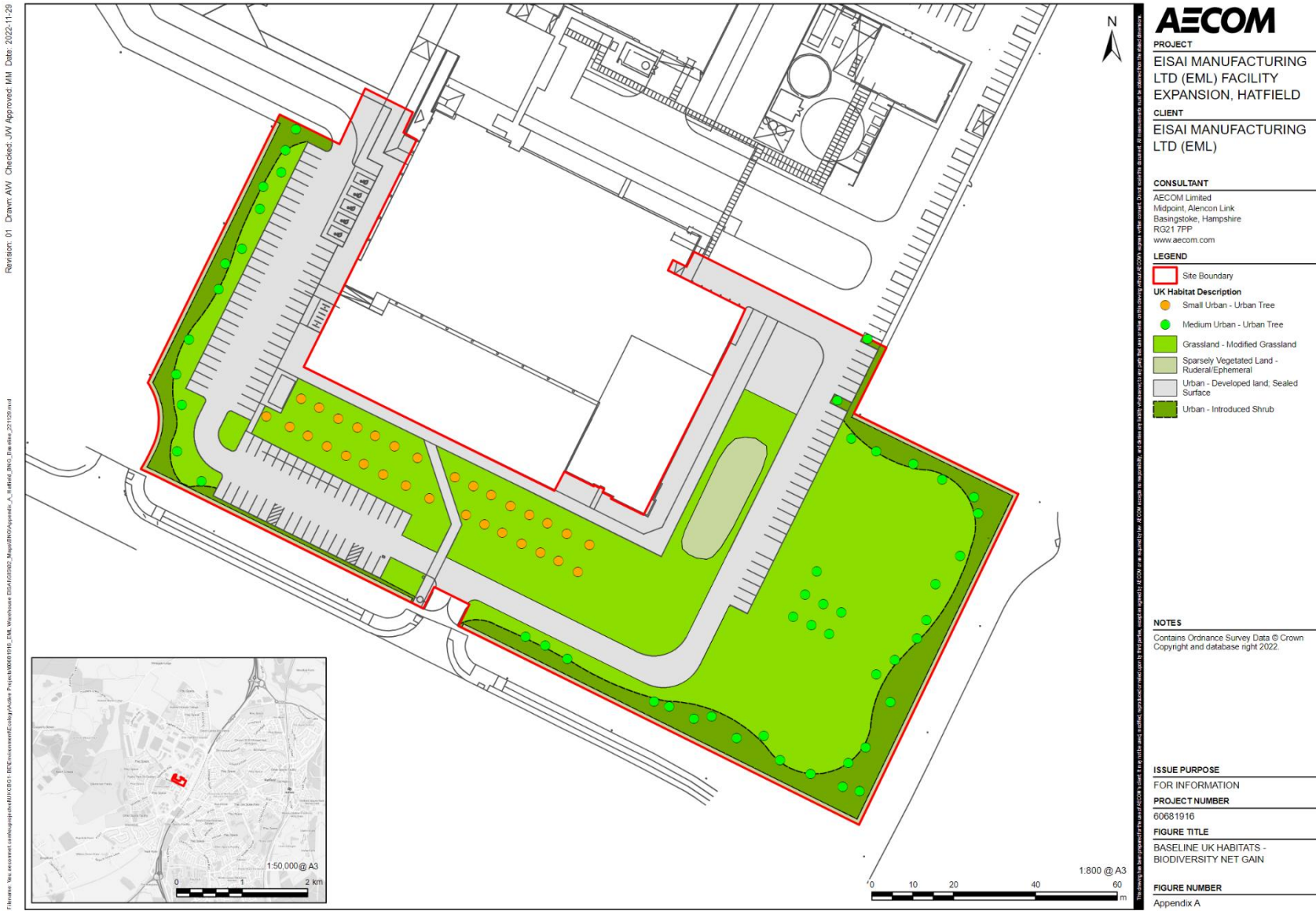
## 5. Conclusion

Based on the current plans for the Site, the Proposed Development is predicted to result in a net loss of 33.89% for area-based habitat units. Opportunities have been proposed in order to meet the minimum BNG target of ≥10% BNG, as set out in the Welwyn Council Local Plan<sup>6</sup>, and to pass trading rules:

These enhancement recommendations provide an indicative pathway for how the required BNG % could be achieved. Implementing these changes would result in the delivery of a net gain of 11.27% and would therefore allow the Proposed Development to meet the required BNG target of ≥10%).

The outputs of the metric are dependent on all retained and enhanced habitats meeting the target conditions, subject to the criteria outlined within Natural England's Biodiversity Metric 3.1 User Guide and Technical Note<sup>2</sup>. Habitats would need to be monitored to ensure correct establishment and growth, and remedial action would need to be taken if this does not proceed as expected, otherwise the target conditions used in the calculations may not be met and the predicted biodiversity units might not be achieved.

# Appendix A Baseline Habitat Plan





# Appendix C Habitat Classification Conversions

## C.1 Phase 1 Habitat to UKHab Conversion

Phase 1 habitat classification	UKHab Classification
Hard Standing	Urban – Developed Land; Sealed Surface
Buildings	Urban – Developed Land; Sealed Surface
Introduced Shrub	Urban – Introduced Shrub
Other tall herb and fern – Ruderal	Sparsely Vegetated Land – Ruderal/Ephemeral
Cultivated/ Disturbed Land – Amenity Grassland	Grassland – Modified Grassland
Moss/lichen strip	Sparsely Vegetated Land – Ruderal/Ephemeral
Existing tree	Urban – Urban Tree

## C.2 Landscape Plan to UKHab Conversion

Landscape Plan <sup>11</sup> Classification	UKHab Classification
Asphalt – Pedestrian Loading	Urban – Developed Land; Sealed Surface
Asphalt – Vehicular Loading	Urban – Developed Land; Sealed Surface
PCC Paving	Urban – Developed Land; Sealed Surface
Proposed Palette Storage Area	Urban – Developed Land; Sealed Surface
Proposed Trees – S1	Urban – Urban Tree
Proposed Trees Mix – S2	Urban – Urban Tree
Amenity Grass	Grassland – Modified Grassland
MOOS Garden	Sparsely Vegetated Land – Ruderal/Ephemeral
Screen Planting – Shrub mix 1	Urban – Introduced Shrub
Decorative Planting – Shrub mix 2	Urban – Introduced Shrub

# Appendix D Condition Assessment Rationale

## D.1 On-Site Habitats

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
Urban – Developed land; sealed surface	No assessment required; condition is pre-set.	Phase 1 habitat survey undertaken by AECOM in June 2022	21. Urban	Pre-set	N/A - Other
Urban – Introduced Shrub	No assessment required; condition is pre-set.	Phase 1 habitat survey undertaken by AECOM in June 2022	21. Urban	Pre-set	Poor
Sparsely vegetated land – Ruderal/Ephemeral	Passed conditions 1,2 and 4.	Phase 1 habitat survey undertaken by AECOM in June 2022	20. Sparsely vegetated land	Biodiversity Metric 3.1 condition criteria and assessor professional judgement	Moderate
Grassland – Modified grassland	Passed conditions 1,4,6, and 7.	Phase 1 habitat survey undertaken by AECOM in June 2022	5. Grassland Low	Biodiversity Metric 3.1 condition criteria and assessor professional judgement	Moderate
Urban – Urban tree	Passed conditions 4 and 6..	Phase 1 habitat survey undertaken by AECOM in June 2022	22. Urban Trees	Biodiversity Metric 3.1 condition criteria and assessor professional judgement	Poor

## D.2 Off-Site Habitats

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
Grassland – Modified grassland	Passed conditions 6 and 7.	Phase 1 habitat survey undertaken by AECOM in June 2022	5. Grassland Low	Biodiversity Metric 3.1 condition criteria and assessor professional judgement	Poor



# Appendix E Strategic Significance Rationale

Source	Strategic Significance Information
Herefordshire Biodiversity Action Plan (2 <sup>nd</sup> Edition, 2006) <sup>13</sup>	<p>This document includes habitat types which Herefordshire Council determine as high priority. Habitats include acidic grassland, calcareous grassland, meadows and pasture, green spaces and corridors, hedgerows, ponds, orchards, woodland, wetlands, and heathland.</p> <p>This defines green spaces as “parks, highway and railway verges, churchyards, allotments, village halls and greens, industrial estates, retail parks, river and stream corridors, ‘derelict’ land and gardens.”</p> <p>Whilst these green spaces include the amenity grassland, surrounding ruderal habitat, and shrub it forms no links between other habitats of importance and the area is not within any Local policies.</p> <p><b><u>Application to assessment</u></b> No impact on SS of the habitat.</p>
Welwyn Hatfield Borough Council Local Plan <sup>6</sup>	<p>Policies within the district plan specify that proposals must benefit “natural areas and wildlife corridors” with reference to prioritising specific habitats which are included within the Biodiversity Action Plan (mentioned above).</p> <p>The habitats in this scheme will not be included within the above criteria and thus has no impact on the SS of this Site.</p> <p><b><u>Application to assessment</u></b> No impact on the SS of the habitat.</p>
Eisai Hatfield PEA <sup>7</sup>	<p>The PEA shows that there are several records of roosts within 1km of the Site. All trees and buildings within the RLB have been assessed and deemed unsuitable for roosting bats. The area of tree and scrub are outlined within the PEA as having some value for foraging bats.</p> <p>It is also recommended that trees and shrub should be replaced by like for like habitat. Due to the foraging value medium SS has been assigned to trees.</p> <p><b><u>Application to assessment</u></b> ‘Medium’ SS assigned to urban trees</p>
Bat Conservation Trust- Core Sustenance Zones and habitats of importance for designing Biodiversity Net Gain for bats <sup>14</sup>	<p>“A core sustenance zone (CSZ), as applied to bats, refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost.”</p> <p>Bats were observed foraging and commuting within the red line boundary within the Eisai Hatfield PEA. However, no suitable roosts have been identified within the site or within the buffer area and thus this habitat does not class as a CSZ.</p> <p><b><u>Application to assessment</u></b> No impact on SS of the habitat.</p>

# Appendix F BNG Best Practice Principals

Principle	How has this been applied in the assessment
<b>Principle 1: Apply the Mitigation Hierarchy</b>	Most habitats present within the Baseline habitats for the Site were of 'Low' distinctiveness, with only urban trees being of 'Medium' distinctiveness. The mitigation hierarchy has been applied by retaining as much habitat as possible, including most of the introduced shrub present and 40 trees.
<b>Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere</b>	There is no loss of irreplaceable biodiversity due to take place on site.
<b>Principle 3: Be inclusive and equitable</b>	Stakeholder engagement was not necessary for this project.
<b>Principle 4: Address risks</b>	All risks regarding difficulties of achieving net gains for the project have been mitigated for appropriately within this report by means of recommendations on how to incorporate compensatory habitats in to the Proposed Development, which will enable the project to achieve net gains.
<b>Principle 5: Make a measurable Net Gain contribution</b>	Net gains will not be achieved as part of the Proposed Development; however, recommendations have been provided on how this can be achieved.
<b>Principle 6: Achieve the best outcomes for biodiversity</b>	The Local Biodiversity Action Plan <sup>14</sup> names green spaces as priority habitats within Welwyn borough, Herefordshire. These habitats have been incorporated within the recommendations for the Proposed Development, as urban trees and green roofs have been suggested. These recommendations will help to fulfil local ecological priorities and provide biodiversity units.
<b>Principle 7: Be additional</b>	The biodiversity net gain delivered by the 'Proposed development' will exceed the minimum net gain requirement of $\geq 10\%$ as set out in local planning policy advice if the recommendations suggested within this report are implemented.
<b>Principle 8: Create a net gain legacy</b>	A net gain legacy would be achieved on the Site if the recommendations were to be implemented.
<b>Principle 9: Optimise sustainability</b>	A net gain will be achieved if the recommendations provided within this report were to be implemented.
<b>Principle 10: Be transparent</b>	Options for enhancement have been laid out as individual recommendations with detailed breakdowns of unit contributions. Only recommendations which are deemed achievable for the Site have been made.

# Appendix G Baseline Habitat Descriptions

Habitat	Description
Urban – Developed land; sealed surface	The area surrounding the Eisai warehouse is comprised of three large car parks connected via roads with their associated pavement.
Urban – Introduced Shrub	Landscaped areas around the edge of the Eisai site comprise low growing shrubs, mainly hazel ( <i>Corylus avellana</i> ), dogwood (a species of <i>Cornus</i> ) and guelder rose ( <i>Viburnum opulus</i> ).
Sparsely vegetated land – Ruderal/Ephemeral	Mounds of soil containing ruderal plants. There is a narrow pathway around the immediate inside of the security fencing which is walked by the security staff and kept free of weeds. This regime of trampling and weed control has enabled a 1-1.5m wide community of mosses and lichens to establish all the way along the path.
Grassland – Modified grassland	Regularly mown amenity grassland with a moderate diversity of species.
Urban – Urban trees	Young trees are present inside the fenced area and scattered around areas of modified grassland. Typical species included ash ( <i>Fraxinus excelsior</i> ), wild cherry ( <i>Prunus avium</i> ), yew ( <i>Taxus baccata</i> ), field maple ( <i>Acer campestre</i> ), Scots pine ( <i>Pinus sylvestris</i> ), silver birch ( <i>Betula pendula</i> ), hornbeam ( <i>Carpinus betulus</i> ) and willow ( <i>Salix sp.</i> ).

# Appendix H Habitat Management Required to Achieve Target Condition

Habitat type	Target condition and condition criteria	Associated habitat management requirements	Condition score
Urban – Urban tree	<p>Target condition is 'Moderate' in 27 years. The condition criteria are as follows. Passes 3 of 6 criteria</p> <p>The condition criteria for these urban trees are as follows:</p> <ul style="list-style-type: none"> <li>• More than 70% of trees are native species. Fail.</li> <li>• Tree canopy is predominantly continuous with gaps in canopy cover making up &lt;10% of total area and no individual gap being &gt;5 m wide. Fail.</li> <li>• More than 50% of trees are mature or veteran. Fail.</li> <li>• There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain &gt;75% of expected canopy for their age range and height. Pass.</li> <li>• Management regime has encouraged micro habitat sites for birds, mammals and insects e.g., presence of deadwood, cavities or loose bark etc. Pass.</li> <li>• Trees are immediately adjacent to other vegetation, and tree canopies are oversailing vegetation beneath. Pass.</li> </ul>	<p>To meet target condition, it will be necessary to:</p> <ul style="list-style-type: none"> <li>• Carry out planting according to the specification in the Landscape Plan<sup>11</sup></li> <li>• Carry out planting to appropriate standards;</li> <li>• Monitor planting to ensure correct establishment, and take remedial action if growth fails.</li> </ul>	Moderate
Urban – Introduced shrub	Condition is pre-set as poor in the metric.	<p>To meet target condition, it will be necessary to:</p> <ul style="list-style-type: none"> <li>• Carry out planting according to the specification in the Landscape Plan<sup>11</sup>.</li> <li>• Carry out planting to appropriate standards;</li> <li>• Monitor planting to ensure correct establishment, and take remedial action if growth fails.</li> </ul>	Poor
Sparsely vegetated land-Ruderal/Ephemeral	Target condition is 'Good' in 5 years. This condition has been assigned by means of professional judgement to reflect the unique nature and value of the proposed habitat.	<p>To meet target condition, it will be necessary to:</p> <ul style="list-style-type: none"> <li>• Carry out planting according to the specification in the Landscape Plan<sup>11</sup>.</li> <li>• Carry out planting to appropriate standards;</li> <li>• Monitor planting to ensure correct establishment, and take remedial action if growth fails.</li> </ul>	Good

Grassland – Modified  
grassland

Target condition is 'Poor' in one year. The condition criteria are as follows. Passes 4 of 7 criteria but fails essential criteria 1.

The condition criteria for Modified grassland are as follows:

- There must be 6-8 species per m<sup>2</sup>. Fail.
- Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. Fail.
- Some scattered scrub may be present, but scrub account for less than 20% of the total grassland area. Pass
- Physical damage is evident in less than 5% of total grassland area. Pass
- Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens. Fail.
- Cover of bracken less than 20%. Pass.
- There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition<sup>1</sup> and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. Pass

To meet target condition, it will be necessary to:

- Carry out planting according to the specification in the Landscape Plan<sup>11</sup>.
- Carry out planting to appropriate standards;

Monitor planting to ensure correct establishment, and take remedial action if growth fails.

Poor

# Appendix I Biodiversity Metric 3.1 Calculation

Metric to be included as an attachment.

EISAI EML Warehouse Expansion		Return to results menu
Headline Results		
On-site baseline	<i>Habitat units</i>	4.75
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	3.14
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	-33.89%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	-1.61
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	-33.89%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%
Trading rules Satisfied?	No - Check Trading Summary ▲	

