

BIODIVERSITY IMPACT ASSESSMENT

LAND OFF LEIGH LANE, BURY

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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2023 by Abode Architecture, to carry out a Biodiversity Impact Assessment of land off Leigh Lane, Bury (O.S. grid reference: SD 78125 11151 – see Figure 1). The proposed development site currently comprises an area of bare ground with scattered trees and spoil heaps. The site is bordered by woodland and agricultural land in all directions. Elton Brook and a number of reservoirs lie approximately 35m south of the site.
- 1.2 A Biodiversity Impact Assessment is required to provide a measurement of the predicted changes in biodiversity units and demonstrate if the site will be in net gain or net loss as a result of the proposed development.

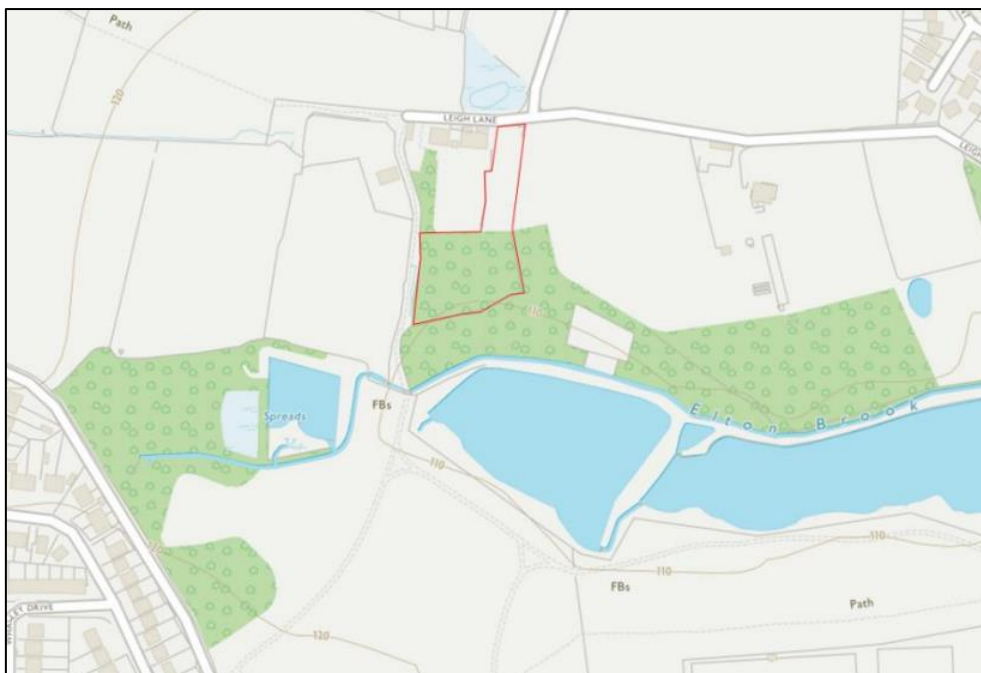


Figure 1 showing the redline boundary of the site

Description of Development

- 1.3 The site is the subject of a planning application for the construction of two dwellings with access and parking.

Biodiversity in Planning

- 1.4 Biodiversity is a material consideration, and Local Planning Authorities (LPAs) have a requirement to consider biodiversity and protected species when determining planning applications. Section 15 of the National Planning Policy Framework (July 2021) gives specific reference to minimising the impacts of development on biodiversity. Local and Neighbourhood plans also provide guidance towards protecting and enhancing biodiversity, including priority habitats and notable species.

2.0 METHODOLOGY

Phase 1 Habitat Survey

- 2.1 A Phase 1 Habitat survey was undertaken to JNCC standards (JNCC, 2010). The site was walked, and each habitat was assigned a Phase 1 habitat category. Species lists were taken at locations of botanical interest. All botanical nomenclature follows Stace, 2019. The preliminary survey was carried out on 14th January 2022 by Joe Walters (Ecologist).
- 2.2 There were no constraints to the survey of the site. All habitats were accessible and all plants identifiable.

DEFRA Biodiversity Metric 3.1 Calculation

- 2.3 Predicted changes in biodiversity units were calculated using DEFRA Metric 3.1 Auditing and accounting for biodiversity calculation tool.
- The onsite habitat baseline calculations were measured on MapInfo GIS software using the Phase 1 Habitat map (see Appendix A).
 - The Phase 1 habitat classifications were translated to UKHab classification using the translation tool in the Biodiversity Metric.
 - Habitat conditions were assessed using the habitat condition sheets excel document.
 - The strategic significance of habitats was determined by assessing if the habitat is ecologically desirable within the location or whether it is identified within a local strategy.
 - The Urban Tree Helper tool within the metric was used to calculate the area of trees.
 - The areas to be retained or enhanced were calculated using the Proposed External Works Plan.
 - The site proposed habitats and associated scores are calculated using measurements and information provided by Nicola Jane Landscape Design (see Appendix B), as well as over-laying site plans onto the MapInfo GIS software and taking area measurements.
- 2.4 The predicted change in biodiversity units was calculated by determining the difference between the baseline unit values and the post-development unit values. This is combined with any off-site gains or losses to give a final Biodiversity Unit Value for the scheme.

Personnel and Timing

- 2.5 Hollie Ainley (Ecologist) carried out the calculations and assessment in February 2023. Hollie is an experienced ecologist and trained in biodiversity impact assessment.

3.0 RESULTS

Existing Habitats

- 3.1 The current Baseline habitats provide 30.32 Habitat units. See below for the condition assessment of each habitat and Appendix C for the full results of the Baseline Habitat units.

Baseline Habitat units

Sparsely Vegetated Land – Ruderal/Ephemeral

- 3.2 The dominant habitat within the site is tall, ruderal vegetation which covers 0.44ha. The area was previously recorded as bare ground during January 2022. This habitat is Sparsely Vegetated Land – Ruderal/Ephemeral in the UKHab classification. This habitat comprises extensive areas of invasive non-native species and is of low distinctiveness. Although the site is located within the Cyrus Ainsworth's Nurseries & Parkers Lodges Site of Biological Importance (SBI). This habitat is not representative of the notifiable features (open water and woodland) and is therefore considered to be of low strategic significance. The habitat is in poor condition as fails all 3 assessment criteria and (see Table 1). The ruderal/ephemeral scores 0.88 habitat units.

Table 1 showing the condition assessment of the Ruderal														
Extensively colonised by Himalayan Balsam <i>Impatiens glandulifera</i> and Japanese Knotweed <i>Reynoutria japonica</i> . Other ruderal species include Redshank <i>Persicaria maculosa</i> , Nettle <i>Urtica dioica</i> and Rosebay Willowherb <i>Chamaenarion angustifolia</i> .														
The scores below show pass 'P' or fail 'F' for each criterion or 'NA' for any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.														
Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	TOTAL
Result	F	F	F	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Are any criteria non-negotiable? (Y/N) If Yes are they passed?			Yes – not passed				Condition (Good/Moderate /Poor):			Poor				

Scattered Trees (Urban - Urban Tree)

- 3.3 Scattered trees are found across the site. This habitat is Urban – urban trees in the UKHab classification. Fifty-five trees were input into the calculator; 25 medium and 30 large. The trees have an equivalent total area of 3.2081ha.
- 3.4 This habitat is of medium, distinctiveness and high strategic significance. It is in moderate condition as it passes 4 of the 6 criteria (see Table 2). The scattered trees score 29.44 habitat units.

Table 2 showing the condition assessment of the scattered trees

Species comprise Pedunculate Oak <i>Quercus robur</i> , Beech <i>Fagus sylvatica</i> , Hawthorn <i>Crataegus monogyna</i> , Ash <i>Fraxinus excelsior</i> , Sycamore <i>Acer pseudoplatanus</i> , Silver Birch <i>Betula pendula</i> , Horse Chestnut <i>Aesculus hippocastanum</i> , Goat Willow <i>Salix caprea</i> , White Poplar <i>Populus alba</i> , Leyland Cypress <i>Cupressus leylandii</i> , Hazel <i>Corylus avellana</i>														
The scores below show pass 'P' or fail 'F' for each criterion or 'NA' for any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.														
Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	TOTAL
Result	P	F	F	P	P	P	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N					Condition (Good/Moderate /Poor):			Moderate					

Baseline Hedgerow Units

- 3.5 There is a 140m (0.014km) length of defunct native hedgerow on the site. This is a habitat of low distinctiveness and low strategic significance. The habitat is assessed as being in poor condition as it fails both attributes in functional groups B, C and D (see Table 3). The hedgerow scores 0.03 hedgerow units. See Appendix D for the full details.

Table 3 Showing the condition assessment of the defunct native hedgerow														
The scores below show pass 'P' or fail 'F' for each criterion or 'NA' for any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.														
Criterion	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	C11	C12	C13	TOTAL
Result	P	F	F	F	F	F	F	F	N/A	N/A	N/A	N/A	N/A	1
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N/A					Condition (Good/Moderate /Poor):			Poor					

Baseline River Units

- 3.6 There are no aquatic habitats present on site, therefore no habitat units exist.

Proposed Post Development Habitats

Retained and Enhanced Habitats – see Appendix D for full details

Sparsely Vegetated Land - Ruderal

- 3.7 The proposals include the retention of an area of ruderal habitat surrounding the newly created pond which covers 0.04 ha totalling 0.08 habitat units.

Urban – Urban Tree

- 3.8 The proposals include the retention of 47 scattered trees across the site. This is equal to an area of 2.8ha and 25.76 habitat units.

Native Hedgerow

- 3.9 The proposals include the retention of all the hedgerow currently present on site which retains a total of 0.03 hedgerow units. See Appendix G for full details.

Habitat Creation

- 3.10 The proposed landscape plans for the site provide 2.34 habitat units. See below for a description and proposed final condition of each habitat and Appendix E for the full details.

Urban - Developed; Sealed Surface

- 3.11 Hardstanding and the two new dwellings will be located to the south of the site, calculated to be approximately 0.12ha, which is Urban - Developed land; sealed surface in the UKHab classification. Condition is not applicable for this habitat. The developed land scores zero habitat units.

Grassland – Modified Grassland

- 3.12 Amenity grassland will cover 0.14ha throughout the site. This is classed as Grassland – Modified grassland under the UKHab classification. The proposed final condition of the grassland is moderate which will take four years to achieve and scores 0.49 habitat units.

Grassland – Other Neutral Grassland

- 3.13 Wildflower grassland will cover 0.08ha throughout the site. This is classed as Grassland – other neutral grassland under the UKHab classification. The proposed final condition of the grassland is moderate which will take five years to achieve and scores 0.54 habitat units.

Urban – Introduced Shrub

- 3.14 Introduced shrub will cover 0.01ha around the dwellings. This is classed as urban – introduced shrub under the UKHab classification. Condition is not applicable for this habitat type and scores 0.02 habitat units.

Lakes – Ponds (non-priority habitat)

- 3.15 A small pond to the south of the site will cover 0.005ha. This is classed as Lakes – Ponds (non-priority habitat) under the UKHab classification. The proposed final condition of the pond is moderate which will take 3 years to achieve and scores 0.04 habitat units.

Heathland and Shrub – Mixed Scrub

- 3.16 Mixed native shrubs will cover 0.04ha. This is classed as Heathland and Shrub – Mixed Scrub under the UKHab classification. The proposed final condition of the scrub is moderate which will take 5 years to achieve and scores 0.27 habitat units.

Urban – Urban Tree

- 3.17 Ten standard trees will be planted covering an area of 0.32ha. This habitat is Urban – Urban Trees in the UKHab classification. The proposed final condition of the trees is moderate which will take 27 years to achieve and scores 0.98 habitat units.

Hedgerow Unit Creation

- 3.18 Native hedgerow will be created on the site totalling 0.4km. The hedgerow will take 5 years to achieve moderate condition, and scores 1.34 hedgerow units. See Appendix H for the full details.

4.0 ASSESSMENT

HABITAT UNITS

- 4.1 The baseline habitat units of the site are calculated to be 30.32. No habitats will be enhanced as part of the proposals. A small area of the ruderal habitat and 47 scattered trees will be retained as part of the proposals, totalling 25.84 units.
- 4.2 The proposed landscaping plans are calculated to provide 2.34 habitat units. The Biodiversity Impact Assessment shows a predicted net loss of 2.14 habitat units (-7.06%).

HEDGEROW UNITS

- 4.3 The baseline hedgerow units are calculated to be 0.03.
- 4.4 The proposed landscaping plans provide 1.36 hedgerow units. The Biodiversity Impact Assessment shows a net gain of 1.33 hedgerow units (4753.31%).

5.0 SUMMARY

- 5.1 The proposed development at Leigh Lane, Bury is predicted to result in a net loss of biodiversity units and a net gain of hedgerow units.
- 5.2 Offsetting would therefore be required if the proposals are to deliver Biodiversity Net Gain to address any residual shortfall, the level and means of which will need to be agreed with the LPA.

APPENDIX A – Phase 1 Habitat Survey Map



APPENDIX B – *Proposed Layout Plan (courtesy of Nicola Jane Landscape Design)*

APPENDIX C – Baseline Habitat Unit Calculation

Ref	Habitats and areas			Distinctiveness		Condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline
	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier		Total habitat units
1	Sparsely vegetated land	Ruderal/Ephemeral	0.44	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	0.88
2	Urban	Urban Tree	3.2	Medium	4	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required (2)	29.44
3												
4												
5												
6												
7												
	Total habitat area		3.64									30.32

APPENDIX D – Baseline Hedgerow Calculation

Baseline ref	UK Habitats - existing habitats			Habitat distinctiveness		Habitat condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline
	Hedge number	Hedgerow type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier		Total hedgerow units
1	1	Native Hedgerow	0.014	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.03
2												
3												
4												
5												
6												
			0.01									0.03

APPENDIX E – Created Habitat Unit Calculation

Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness		Condition		Strategic significance			Temporal multiplier							Difficulty multipliers			Habitat units delivered
			Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Standard time to target condition/years	Habitat created in advance/years	Delay in starting habitat creation/years	Standard or adjusted time to target condition	Final time to target condition/years	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied	
Urban	Developed land: sealed surface	0.1183	V Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0			Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00
Grassland	Modified grassland	0.14	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	4			Standard time to target condition applied	4	0.887	Low	Standard difficulty applied	Low	1	0.49
Grassland	Other neutral grassland	0.0812	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5			Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	0.54
Urban	Introduced shrub	0.012	Low	2	Condition Assessment N/A	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1			Standard time to target condition applied	1	0.966	Low	Standard difficulty applied	Low	1	0.03
Lakes	Ponds (Non- Priority Habitat)	0.005	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3			Standard time to target condition applied	3	0.899	Low	Standard difficulty applied	Low	1	0.04
Heathland and shrub	Mixed scrub	0.0409	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5			Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	0.27
Urban	Urban Tree	0.32	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	27			Standard time to target condition applied	27	0.382	Low	Standard difficulty applied	Low	1	0.98

APPENDIX F – Created Hedgerow Unit Calculation

[illegible]