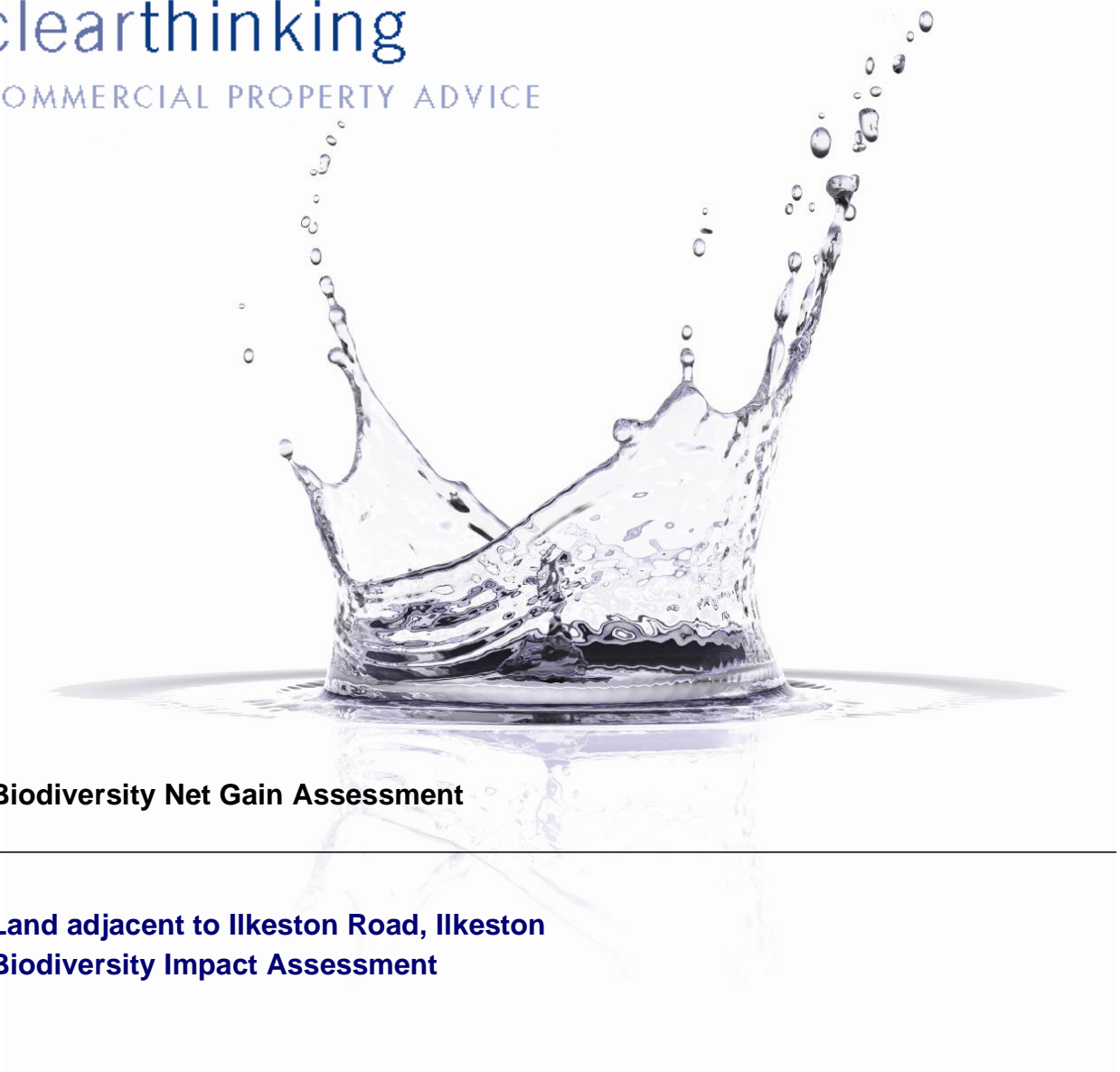


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COMMERCIAL PROPERTY ADVICE



Biodiversity Net Gain Assessment

Land adjacent to Ilkeston Road, Ilkeston Biodiversity Impact Assessment

On Behalf Of:

Wulff Assessment Management Ltd

Prepared By:

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Ecological Appraisal

Land adjacent to Ilkeston Road, Ilkeston
Biodiversity Impact Assessment

Main Contributors

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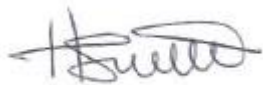
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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This report provides a summary of the Biodiversity Net Gain Calculations conducted for land adjacent to Ilkeston Road, Ilkeston, Derbyshire hereafter named 'site', by Harris Lamb Property Consultancy (HLPC) in 2023. The Biodiversity Impact Calculation has been completed using the DEFRA V3.1 biodiversity metric calculator drawing on guidance for Biodiversity Offsetting^{1,2,3,4}.

¹ DEFRA Biodiversity Metric 3.1 (Dec 2022) – Calculation tool
<http://publications.naturalengland.org.uk/file/6376815433351168>

² DEFRA Biodiversity Metric 3.1 (April 2022) habitat condition assessment sheets with instructions
<http://publications.naturalengland.org.uk/file/5631620555210752>

³ DEFRA Biodiversity Metric 3.1 (April 2022) User Guide
<http://publications.naturalengland.org.uk/file/6593707725029376>

⁴ DEFRA Biodiversity Metric 3.1 (April 2022) Technical Supplement
<http://publications.naturalengland.org.uk/file/4679356076261376> [accessed 17/11/2022]

2.0 HABITAT BASELINE

2.1.1 To aid the biodiversity calculations and to determine if a net gain can be achieved on site, the habitats present on site have been mapped as detailed within the PEA report (HLPC, May 2022) and the UK Habitat Classifications have been determined, as shown in the plan in Appendix 1. The habitats are shown in Table 1 below.

Table 1. Habitats present on the proposed development site – May 2022

Habitat	Area/Length	Distinctiveness	Condition
Other neutral grassland	9.26 ha	Medium	Poor
Mixed scrub	0.78 ha	Medium	Poor
Bramble scrub	0.017ha	Medium	N/A
Other woodland; broadleaved	0.32 ha	Medium	Moderate
Pond	0.032 ha	High	Poor
Native hedgerow with trees	0.38km	Medium	Moderate
Native hedgerow	0.270km	Low	Moderate
Ornamental hedgerow	0.06km	Low	Poor
Trees	0.036 ha	Medium	Moderate

2.1.2 Each identified habitat type has then been entered into the DEFRA Metric Version 3.1 and assigned a condition based upon a condition assessment undertaken on site at the time of the survey. The DEFRA metric spreadsheet uses 'Habitat Distinctiveness' and 'Habitat Condition' to calculate the overall score of each habitat expressed in biodiversity units per hectare. This overall score is then multiplied by the number of hectares of that habitat type that will be lost to provide a figure of biodiversity units that need to be compensated for.

2.1.3 Based upon the above habitats recorded on site the on-site baseline score as presented within the Defra Metric 3.1 is 43.37 habitat units and 4.18 hedgerow units as shown below in Table 2.

Table 2. On-site baseline biodiversity score

On Site Baseline	<i>Habitat Units</i>	43.37
	<i>Hedgerow Units</i>	4.18

3.0 POST-DEVELOPMENT EVALUATION

3.1 Baseline Results

- 3.1.1 The development will require land take of neutral grassland and mixed scrub habitat with the loss of a single field tree and some amounts of native hedgerow and native hedgerow with trees to form the new accesses off Ilkeston Road and Sowbrook Lane.
- 3.1.2 A DEFRA metric (v 3.1) calculation has been undertaken and should be read in conjunction within this report. The figures provided for post development are based upon a habitat creation scenario where a measurable biodiversity net gain is achieved through enhancement of retained habitats and the creation of habitats within the development boundary thereby employing the mitigation hierarchy on site.
- 3.1.3 The post-development habitat measurements have been taken from the indicative landscape masterplan, provided by RDC (drawing no. RDC1146-002) which provides significant areas of open greenspace within the development which can be retained, enhanced or replaced with higher value habitats to ensure a biodiversity net gain is achieved. The post development habitats outlined in the scenario can be accommodated within the available greenspace as shown on the masterplan and this is considered to represent a realistic and achievable proposal for the development.
- 3.1.4 An indicative landscape plan showing habitats required to achieve net gain is shown in Appendix 2. The key principals of achieving the required biodiversity gain include retention of neutral grassland areas for incorporation into the greenspace areas such as around the pond to the north-western portion of the site to compliment areas of existing habitat and strengthen the habitat quality of these areas. Hedgerows will be retained to site boundaries and brought back into management. Native hedgerows will be enhanced through native species gap planting, hedge laying and by

planting standard trees where they do not currently exist within the hedgerow. Hedgerow loss on the southern boundary will be replaced with planting of native hedgerow with trees, it is unlikely that the entirety of this hedgerow will be removed as part of the development, but it is included as such as a worse-case-scenario. The section of ornamental non-native hedge planting in the south-west of the site will be replaced with native hedgerow planting with trees.

3.1.5 The pond which is currently on site and in poor condition holding little water and being dominated by 100% bullrush *Typha latifolia* swamp will be enhanced as part the development to restore this priority habitat and the SUDS features planned as part of the development will be designed to function as semi-natural ponds to hold permanent water during base conditions and will be planted to maximise their biodiversity value. Additional enhancements will be included around the ponds such as basking banks and hibernacula to enhancements the site for grass snake which have been recorded on site.

3.1.6 Areas of new scrub planting, native hedgerow and tree planting will be included to off-set the small losses resulting from the development and extensive tree planting will be undertaken to all areas of open space around the site to provide further enhancement resulting in a significant increase in tree cover.

Table 3. Outline biodiversity enhancements proposals for Ilkeston Road

Summary of Habitats to be Retained, Enhanced or Created - Ilkeston Road, Ilkeston								
Retained			Enhanced			Created		
Habitat	Area/length	Target condition	Habitat	Area/length	Target condition	Habitat	Area/length	Target Condition
			Native Hedgerow with Trees	0.38km	Good			
			Native Hedgerow	0.27km	Good			
Broadleaved woodland	0.317 ha	Mod						
			Neutral Grassland	2.362 ha	Poor-Mod			
			Mixed Scrub	0.746 ha	Poor-Good			
			Pond	0.032 ha	Poor-Good			
						Developed land	2.995Ha	N/A
						Modified grassland	3.459 ha	Mod
						Ponds	0.311 ha	Mod
						Mixed Scrub	0.146 ha	Good
						Native hedgerow with trees	0.250km	Mod
						Urban trees	1.217 ha	Mod

3.1.7 The above example demonstrates that biodiversity net gain can be achieved on site with enhancements and habitat creation accommodated within the areas of public open and green space designed into the development. The proposed enhancements have been chosen to compliment and strengthen areas of retained green space and retain connectivity across the site and to adjacent habitats such as the Nutbrook Canal corridor. The habitat creation and enhancement scenario presented within this report meets the needs of the development by providing areas of lower quality harder wearing amenity grassland for inclusion in formal areas of space such as play areas around the development, whilst retaining and enhancing areas of higher quality habitats. Table 4 below shows the percentage and unit change in biodiversity if these measures were put in place and managed accordingly with the scheme gaining a 10.55% increase in biodiversity units and a 56.15% increase in hedgerow units..

Table 4. Headline results detailing the net biodiversity % and unit change

On-site baseline	Habitat units	43.37
	Hedgerow units	4.18
	River units	0.00
On-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	47.95
	Hedgerow units	6.53
	River units	0.00
On-site net % change (including habitat retention, creation & enhancement)	Habitat units	10.55%
	Hedgerow units	56.15%
	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)	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 & enhancement)	Habitat units	4.58
	Hedgerow units	2.35
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.55%
	Hedgerow units	56.15%
	River units	0.00%

4.0 ADDITIONAL ENHANCEMENTS

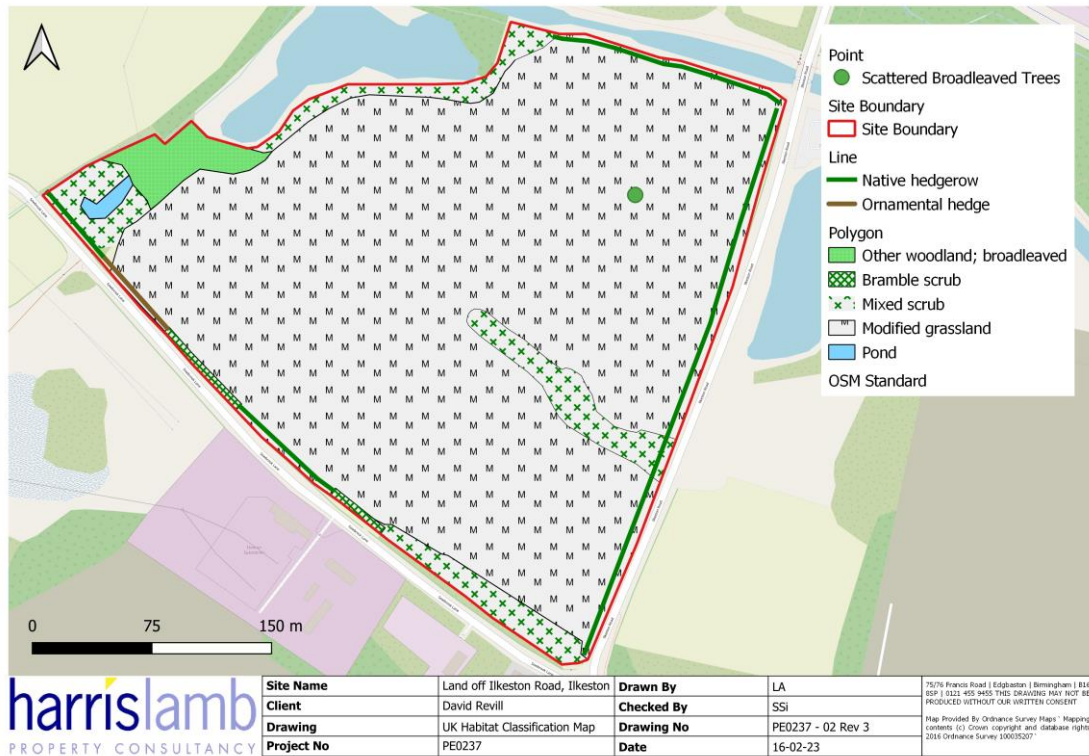
- 4.1.1 The aim of this report is to demonstrate that biodiversity net gain can be achieved on site and based upon the DEFRA metric calculations presented within this report, the scheme has potential to achieve a 10% net gain which can be delivered wholly in site.
- 4.1.2 In addition to the biodiversity enhancements delivered on site, additional enhancement is proposed off-site as part of a proposed skylark mitigation scheme. The skylark mitigation scheme will provide improvement to approximately 2.4 ha of grassland which has been calculated to deliver around 20 additional biodiversity units through the enhancement of grassland habitats. Detailed proposals for the skylark mitigation scheme are outlined in Ilkeston Road Skylark Mitigation Proposals, (HLPC, Dec 2022).
- 4.1.3 In addition to the calculated improvements which are all habitats based, a number of wider enhancements will be incorporated into the development for the benefit of local species including birds, bats, reptiles and amphibians.
- 4.1.4 The two attenuation basins are planned on site which will be designed to ensure they function as semi-natural ponds by holding water in between flood storage events to provide additional high quality pond habitat for the site and surrounding area. This will be of benefit to local amphibians and reptiles including grass snake which have been recorded on site.
- 4.1.5 Habitat features will be incorporated into the development and hibernacula, refugia piles and compost piles will be included around the enhanced pond located to the north west of the site. This will provide egg laying areas and sheltering opportunities for grass snake.
- 4.1.6 Bird nesting boxes and bat boxes will be provided around the development for a range of bat and bird species that are known to the present within the wider area, with the adjacent canal, ponds and site habitats providing high quality foraging habitat.

5.0 CONCLUSION

- 5.1.1 Assuming the scheme delivers the habitats outlined within this report or a scheme of similar quality, it is considered feasible that the scheme will achieve a measurable biodiversity net gain which can be delivered wholly on site.
- 5.1.2 Additional enhancement for wildlife can be achieved through pond creation, hibernacula creation, bird and bat box installation, as well as off-site mitigation and enhancements for skylark which will also deliver additional biodiversity gains which have been estimated using the DEFRA metric to be around 20 biodiversity units.
- 5.1.3 A detailed landscape design and planting scheme should be agreed with the LPA which demonstrates biodiversity net gain can be achieved and should be accompanied by a Biodiversity Enhancement & Management Plan setting out the measures that will be taken to manage and monitor the new habitats over the long term.

6.0 APPENDICES

6.1.1 Appendix 1: UK Habitat Classification Map



6.1.2 Appendix 2: Indicative Assumed Landscape Plan

