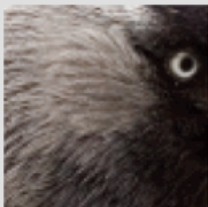


Frog Hall Farm, Biodiversity Net Gain Feasibility Assessment

February 2024





Who we are:

Baker Consultants is an ecology and sustainability consultancy. We work in terrestrial, freshwater and marine environments, providing a range of services to industry, government, developers, public services and utilities.

Baker Consultants comprises a highly experienced team of professional ecologists. We do wildlife surveys - but they are only the first steps in the process for most projects. We are also involved in ecological assessment, environmental law, biodiversity management and design planning.

We don't just work with wildlife, because we know that communication with clients, design teams and conservation bodies is the key to project success.

Explaining the implications of survey data, and interpreting legislation, policy and best practice is one of our strengths. We help decisions to be made and actions taken, allowing constraints to be kept to a minimum and project risks to be managed.

Our approach is scientific, pragmatic and creative.

Alongside tried and tested methods, we seek to innovate, introduce clients to new ways of thinking and always deliver sound commercial awareness. You will find us honest and approachable, but we're not afraid to be robust and challenging - or to ask difficult questions.

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That's not the whole story.

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Client	Helen and Henry Fisher
Project	Frog Hall Farm
Report title	Biodiversity Net Gain Feasibility Report
File reference	<u>1486.03</u>
Project Manager	Kelly Clark
Contact details	k.clark@bakerconsultants.co.uk

	Name	Position	Date	Metric File Reference
Author	Jed Weaver	Ecologist	27/02/2024	1468.03 calc 01 JWKC
Reviewed	Kelly Clark	Associate Director	29/02/24	

Revised

Baker Consultants Ltd
Cromford Station
Cromford Bridge
Matlock
Derbyshire DE4 5JJ
info@bakerconsultants.co.uk
www.bakerconsultants.co.uk
01629 593958

Company No. 6702156

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Where field investigations have been carried out, these have been restricted to the agreed scope of works and carried out to a level of detail required to achieve the stated objectives of the services. Natural habitats and species distributions may change over time and further data should be sought following any significant delay from the publication of this document.

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1 Executive Summary

1.1 Background

- 1.1.1 This report provides a biodiversity net gain (BNG) assessment for the proposed development at Frog Hall Farm, Sheepy Magna, related to proposals to repurpose the site for permanent residential use. This report has been prepared based on detailed ecological surveys to support the calculations, which make use of the Defra Statutory Biodiversity Metric calculator (File ref: 1486.03 calc 01 JWKC.xlsm).
- 1.1.2 Post-development calculations have been undertaken based upon the Landscape Management Plan provided by David Hickie and Associates (Version 3, 2023).
- 1.1.3 The proposed scheme is subject to a mandatory 10% BNG under the Environment Act 2021. The purpose of this report is to assess the impacts of the current landscape plans on the unit value of the site, and identify if the required 10% net gain can be achieved on-site.

1.2 Conclusions

- 1.2.1 The conclusion of this report is that a 72.40% **net gain for habitats**, and a 54.44% **net gain for hedgerows** is realised. As such, the proposed development achieving the required level of net gain is considered feasible. This is due to the lack of the presence of valuable habitat on site and therefore no loss. The development also proposes adequate areas of greenspace, including species-rich grasslands, lawns and tree/hedgerow planting.

2 Introduction

2.1 Site Description

- 2.1.1 Frog Hall Farm, Sheepy Magna, Leicestershire, CV9 3QX is centred on OSNGR SK 30643 00918.
- 2.1.2 The surveyed area consists of the farm buildings with associated hard-standing, areas of modified grassland with trees to the east of the farm buildings and a modified pasture grassland field to the south of the farm buildings. The access track runs along the eastern and northern boundaries of this field, with an associated line of immature trees along it's western boundary. A hedgerow with trees runs along the western boundary of the site.

Figure 1. Site boundary



2.2 Proposed Development

- 2.2.1 The proposed development consists of the construction of a single dwelling on the site of the extant farmyard and associated buildings that will be demolished. The dwelling is to be supported by associated lawns and hedging, as well as a pond, species-rich meadow grassland, and hedgerow and tree creation within the wider site boundary.

2.3 Study Scope

- 2.3.1 Baker Consultants was commissioned by Helen and Henry Fisher to carry out a BNG assessment of the site using the Statutory Metric based upon the current landscaping plans, and to assess the potential for Biodiversity Net Gain to be delivered by the development. To inform this assessment, Baker Consultants have undertaken a baseline survey in June 2021 and updated in September 2023, to map the extent of habitats within the site, as well as the condition of these habitats.

3 Methods

3.1 Data Collection

- 3.1.1 The Habitat Survey ¹ was carried out by David Goddard BSc MCIEEM on the 29th June 2021, and updated on the 21st September 2023 by Kelly Clark BSc MCIEEM.
- 3.1.2 During the walkover survey the vegetation types and habitats present were described, mapped and their condition was assessed using the parameters listed in the Statutory Biodiversity Metric -Technical Annex 12.

3.2 Biodiversity Net Gain Assessment

- 3.2.1 To obtain a baseline biodiversity score the following information was entered onto the Defra Statutory Biodiversity Metric Calculator, in line with standard guidance^{3,4}:
- Habitat types (including distinctiveness) and area or length measurements (ha / km);
 - The ecological condition (Appendix 4) of each habitat parcel according to the Statutory Biodiversity Metric -Technical Annex, and;
 - The strategic significance of each habitat parcel, determined by reference to the Local Nature Recovery Strategy (if applicable) and Local Planning Policy.
- 3.2.2 To obtain a post development biodiversity score the landscape management plan was reviewed. The following details were entered onto the calculator:
- The area of proposed retained and created habitats including hardstanding, associated infrastructure and ecological enhancements;
 - The proposed ecological condition of post-development habitats, and;
 - The strategic significance of post-development habitats.
- 3.2.3 The difference between pre- and post-development scores provides the percentage net gain or loss in biodiversity unit value for the proposed development.

¹ UKHab Ltd (2023). *UK Habitat Classification Version 2* (at <https://ukhab.org/>)

² Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology (2023)

³ Defra (2024). *The Statutory Biodiversity Metric User Guide*

⁴ Baker, J. *et al.* (2019) *Biodiversity net gain. Good practice principles for development. Part A: A practical guide*

4 Results

4.1 On-site Baseline Conditions

Habitat Summary

- 4.1.1 The following summary description should be viewed alongside the BNG Defra Statutory Calculation spreadsheet for the site (BC ref. 1486.03 calc 01 JWKC, dated February 2024). The condition assessments for each habitat is set out in Appendix 4 but summarised below.
- 4.1.2 Baseline on-site area habitats with unit value are generally limited to modified grasslands, either associated with previous garden space of the extant house, or the southern field, which comprised of Italian rye. The grasslands are in 'poor' ecological condition due to lack of species diversity (less than 6 species).
- 4.1.3 Linear features of unit value are limited to a recently planted line of trees to the west of the current access road, and an established native hedgerow with trees that form part of the western boundary. The lines of trees is in 'moderate' ecological condition due to being native, healthy and within undisturbed ground. The hedgerow is of 'good' ecological condition as it passes all criteria listed in Appendix 4 apart from the fact it is within nutrient-enrich vegetation.
- 4.1.4 Rural trees are present across the site of varying ecological condition based upon their age, structure, and connectivity.
- 4.1.5 The remaining site area is comprised of the extant farm buildings, and associated hardstanding infrastructure and access.
- 4.1.6 A baseline habitat plan is provided in Appendix 2, as well as a Habitat Distinctiveness Map, which highlights the areas of the site that have the most biodiversity value in the Metric. For baseline habitat condition assessments, see Appendix 4.

Summary of Ecological Significance

- 4.1.7 No habitats present on site are listed in any Local Nature Recovery Strategy or within Local Planning Policy, and therefore all habitats have been assessed as being of 'low' strategic significance.

Baseline Biodiversity Value Assessment

- 4.1.8 The baseline biodiversity value of the site is 6.06 habitat units (Table 1) and 1.89 hedgerow units (Table 2).

Table 1. Baseline Habitat Units

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline units
Modified grassland	2.2098	Low	Poor	Low	4.42
Developed land; sealed surface	1.0019	Very Low	N/A	Low	0.00
Rural Tree	0.0244	Medium	Poor	Low	0.10
Rural Tree	0.1384	Medium	Moderate	Low	1.11
Rural Tree	0.0366	Medium	Good	Low	0.44
Total Baseline Habitat Units					6.06

Table 2. Baseline Hedgerow Units

Hedgerow Type	Length (km)	Distinctiveness	Condition	Strategic Significance	Baseline units
Line of trees	0.082	Low	Moderate	Low	0.33
Native hedgerow with trees	0.13	Medium	Good	Low	1.56
Total Baseline Hedgerow Units					1.89

4.2 On-site Post-development Conditions

4.2.1 The post-development habitat plan is provided in Appendix 3. This has been based upon the landscaping management plan and associated masterplan shown in Appendix 1. The post-development biodiversity value of the site as assessed is 10.44 habitat units (Table 3) and 2.92 hedgerow units (Table 4).

Table 3. Post Development Habitat Units

Habitat Type	Area (ha)			Distinctiveness	Condition	Strategic Significance	Total units
	Retained	Created	Enhanced				
Modified grassland	0.1965	0.5211		Low	Poor	Low	1.40
Developed land; sealed surface	0.2611	0.3188		Very Low	Poor	Low	0.00
Rural Tree	0.0163			Medium	Poor	Low	0.07
Rural Tree	0.1384	0.1303		Medium	Moderate	Low	1.52
Rural Tree	0.0366			Medium	Good	Low	0.44
Other neutral grassland		1.781		Medium	Poor	Low	6.63
Ornamental pond		0.0071		Low	Poor	Low	0.01
Pond (non-priority)		0.0998		Medium	Poor	Low	0.39
Artificial unvegetated, unsealed surface		0.0263		Very Low	N/A	Low	0.00
Total Post Development Units							10.44 (rounded)

Table 4. Post Development Hedgerow Units

Hedgerow Type	Length (km)			Distinctiveness	Condition	Strategic Significance	Total units
	Retained	Created	Enhanced				
Line of trees	0.082			Low	Moderate	Low	0.33
Native hedgerow with trees	0.13			Medium	Good	Low	1.56
Native hedgerow		0.145		Low	Poor	Low	0.28

Hedgerow Type	Length (km)			Distinctiveness Condition		Strategic Significance	Total units
	Retained	Created	Enhanced				
Species-rich native hedgerow with trees		0.089		High	Moderate	Low	0.75
Total Post Development Units							2.92 (rounded)

4.3 Assumptions and Limitations

4.3.1 At this stage, the results presented above assume the following as set out in Table 5, and in the text below.

Table 5. BNG Post Development Assessment

Metric File Reference	Baseline	Post-Development	Location	Habitat Objectives/Assumptions
A-2, 1.	Developed land; sealed surface Modified grassland 'poor'	Modified grassland 'poor';	Areas of 'lawn' as specified by the Landscape management Plan.	Expected to be sown with a generic amenity grassland mix, and therefore constrained to achieving a maximum habitat distinctiveness of 'Low', and condition of poor due to lack of species diversity, and what is likely to be a homogenous structure due to frequent mowing.
A-2, 2.	Developed land; sealed surface Modified grassland 'poor'	Other neutral grassland 'poor'	Areas of 'parkland' as specified by the Landscape management Plan.	In line with the Landscape Management Plan, to be sown with species-rich and appropriate meadow grassland seed mixtures. Maximum condition of 'poor' is assigned as a worst-case scenario at this stage. The management of the grassland is not understood as it is effectively part of the dwelling grounds and potentially will be used as a lawn rather than an ecologically managed grassland.
A-2, 3.	Developed land; sealed surface	Ornamental pond 'poor'	Within the area of lawn to the north of the proposed residential building.	Assumed at this stage to be a swimming pool.
A-2, 4.	Modified grassland 'poor'	Pond (non-priority) 'poor'	Within the southern 'parkland', nearby to western boundary.	Management will likely reflect a long-term condition of 'poor' if used for fish and wild fowl – rather than managed for wildlife.
A-2, 7.	N/A	Rural trees 'moderate'	Through the proposed development sites available greenspace.	Species planting conforming the landscape management plan, to consist of native species planted with large standards; likely to achieve a dbh of >30cm over 30 years.
B-2, 1.	N/A	Native hedgerow 'poor'	Single-species hedge planting to the north of the proposed residential building.	Beech hedgerow planting. Maximum condition of 'poor' assigned to reflect amenity management, likely to result in a uniform structured hedge.

Metric File Reference	Baseline	Post-Development	Location	Habitat Objectives/Assumptions
B-2, 2.	N/A	Species-rich native hedgerow with trees 'moderate'	All other hedgerow planting outlined within the Landscape Management Plan.	Diverse and species-rich hedgerow planting, including trees to be planted in double staggered rows. Likely to achieve at least a 'moderate' ecological condition given the proposed structure, may include 'nutrient enriched' ground flora where bordering lawns.
4.3.2	Individual tree loss has been calculated and based upon the updated Arboricultural Assessment of the site (reference: JH0423FROGHALLFM, dated April 2023).			
4.3.3	The habitat creation, enhancement and long-term management will be described in a Habitat Management and Monitoring Plan (HMMP) or equivalent (if required). The implementation of the plan will ensure that the proposed habitats and their condition will be achieved. If the grassland and pond are managed for wildlife, then the post-development assumptions and calculations will be updated to reflect this prior to a management plan being produced.			
4.3.4	Any future Masterplanning and/or landscaping schemes that change areas of greenspace as recommended within this report will result in a proportionate increase/decrease of habitat unit loss on site.			

5 Assessment and Discussion

5.1 Assessment of Feasibility

5.1.1 As currently assessed, the proposed development results in a gain of 4.38 habitat units **(72.20% net gain)**, and a gain of 1.03 hedgerow units **(54.44% net gain)**.

5.1.2 As such, the scheme demonstrates feasibility to achieve the required mandatory net gain on-site (10%), and no consideration of further options is required.

Appendix 1: Landscape Plan

- KEY:
- Proposed Building
 - Existing Building
 - Water
 - Existing trees
 - Proposed trees

3 No.
Quercus robur
(English Oak)
3-4mm 65L @
8m ctrs

T13 and T13
to be recomed
as per
Arboricultural
Report
Recommendation

2 No.
Quercus robur
(English Oak)
3-4m 65L @
8m ctrs

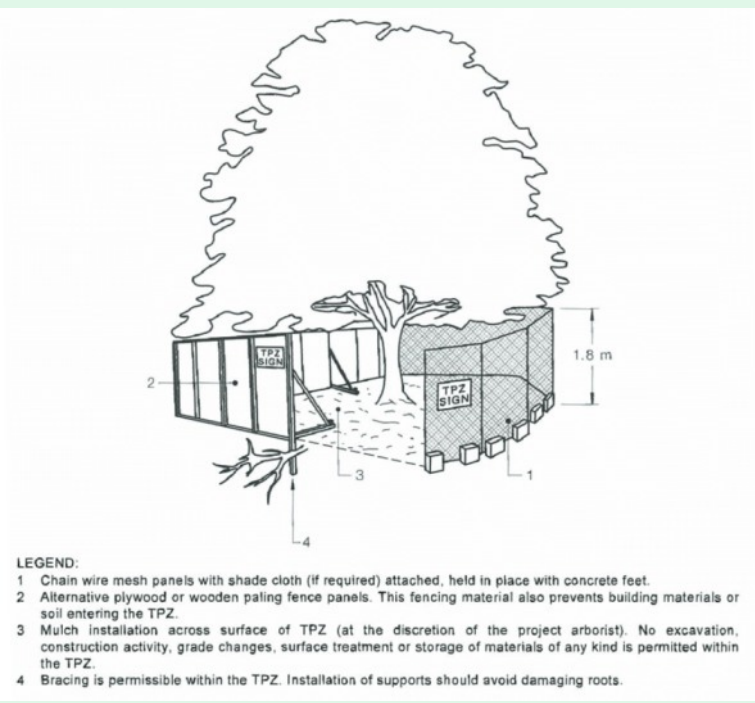
New Timber Post and Rail Fence

Beech Hedging

Tennis Court

Grassland

Group of 3 No. Specimen
Quercus robur
(English Oak)
3-4m 35L



Sculpture

Pool
12x6m

Terrace

Bin Store
in Garage

Courtyard

Lawn

Frog Hall Farm

3 No. Specimen
Fagus sylvatica
(Beech)
4-5m 65L @
8m ctrs

Sculpture

1 No. Specimen
Quercus robur
(English Oak)
3-4m 35L

New HaHa

New HaHa

Tree Protection

New Pond
(45x30m)

1 No. Specimen
Salix babylonica
(Weeping Willow)
3-4m 35L

Group of 3 No. Specimen
Quercus robur
(English Oak)
3-4m 35L

Retained
Open View
for The Bungalow

New Tarmac
Access Track

Parkland

Existing
Hedgerow

Existing
Hedgerow

Parkland

Existing
Hedgerow

Landscape Protection Plan

Proposed Replacement Dwelling

Frog Hall Farm, Crow Lane, Sheepy Magna, CV9 2QX

Drawing No. FH503D 1/250 @A0 22/02/24

David Hickie Associates

Landscape Architecture and Environmental Planning

Appendix 2: Baseline Habitat Plan



Legend

Site Boundary

HABITATS

Developed land; sealed surface

Modified grassland

HEDGEROWS

Line of trees

Native hedgerow with trees

INDIVIDUAL TREES

Existing Large Urban Tree

Existing Medium Urban Tree

Existing Small Urban Tree

A	Rev	Date	Drawn by	Notes
		26/02/2024	JW	Baseline conditions as reflected in September 2023

Project Name: Frog Hall Farm
Project Number: 1486.03
Project Location: Crow Lane, Sheepy Magna

Plan Title: UK Habitat Classification Baseline Habitat Plan

Client: Helen Fisher

Map scale: 1 : 1,400 @A4 Drawn by: JW Date: 26/02/2024

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Satellite imagery provided by Google: ©2024 Google

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Legend

Site Boundary

Baseline Habitat Distinctiveness

Low

V.Low

Baseline Hedgerow Distinctiveness

Medium

Low

A	29/02/2024	JW	Baseline habitat distinctiveness as reflected in September 2023
Rev	Date	Drawn by	Notes

Project Name: Frog Hall Farm

Project Number: 1486.03

Project Location: Crow Lane, Sheepy Magna

Plan Title: Baseline Habitat Distinctiveness Plan

Client: Helen Fisher

Map scale: 1 : 1,400 @A4

Drawn by: JW

Date: 29/02/2024

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Satellite imagery provided by Google: ©2024 Google

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Appendix 3: Post Development Habitat Plan



Legend

Site Boundary

HABITATS

- Artificial unvegetated, unsealed surface
- Developed land; sealed surface
- Modified grassland
- Ornamental lake or pond
- Other neutral grassland
- Ponds (non-priority habitat)

HEDGEROWS

- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Species-rich native hedgerow with trees

INDIVIDUAL TREES

- Proposed Large Urban Tree
- Proposed Medium Urban Tree
- Proposed Small Urban Tree

A	26/02/2024	JW	Based upon LMP - David Hooke Associates
Rev	Date	Drawn by	Notes

Project Name: Frog Hall Farm
Project Number: 1486.03
Project Location: Crow Lane, Sheepy Magna

Plan Title: UK Habitat Classification Proposed Habitat Plan

Client: Helen Fisher

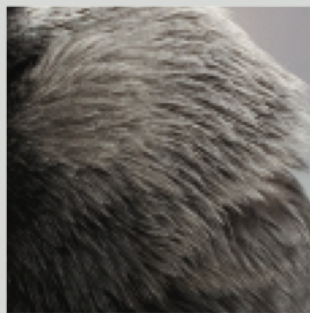
Map scale: 1 : 1,400 @A4 Drawn by: JW Date: 26/02/2024

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Appendix 4: Habitat Condition Assessment Sheets



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