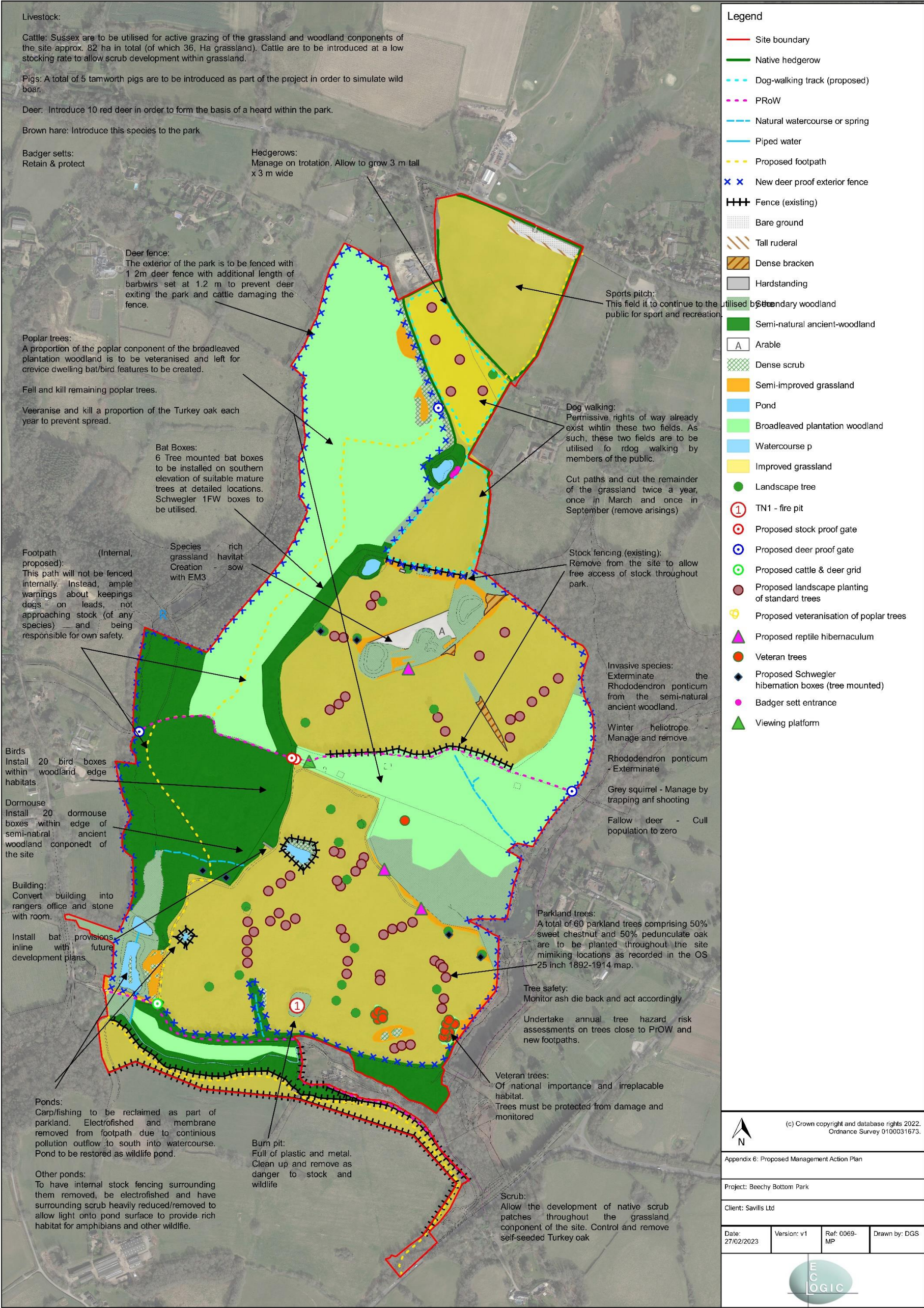




Vincent Pro Bat Box

Material: Wood

Width: 180 mm
Height: 720 mm
Depth: 235 mm
Weight: 4.1 kg

Position: In a south facing location, minimum of 3 m above ground level.

**Schwegler 2F Double Front Panel**

Material: Woodcrete

Diameter: 160 mm
Height: 330 mm
Weight: 4.1 kg

Position: In a south facing location, minimum of 3 m above ground level.

**Schwegler 2FN**

Material: Woodcrete

Diameter: 160 mm
Height: 360 mm
Weight: 4.3 kg

Position: In a south facing location, minimum of 3 m above ground level.

**Chavenage Bat Box**

Material: Wood

Width: 380 mm
Height: 180 mm
Depth: 100 mm
Weight: 1.2 kg

Position: In a south facing location, minimum of 3 m above ground level.



Vivara Pro Barcelona Woodstone Open Nest Box

Suitable for wren, robin, pied wagtail and blackbird
Material: Woodstone

Height: 240 mm
Width: 190 mm
Depth: 175 mm

Position: Externally, at a minimum height of 3 m



Vivara Pro Seville 32mm Woodstone Nest Box

Suitable for: House sparrow, blue & great tit, nuthatch
Material: Woodstone

Height: 310 mm
Width: 200 mm
Depth: 200 mm
Weight: 6.9 kg

Position: Externally, at a minimum height of 3 m



Eco Sparrow Tower

Suitable for: House sparrow and individual blue & great tits
Material: Recycled LDPE plastic & FSC certified OSB

Height: 650 mm
Width: 170 mm
Depth: 170 mm
Weight: 2.8 kg

Position: Externally, at a minimum height of 2 m



Hibernaculum

Size: >2 m long x 0.5 m deep

Materials: Logs, branches, tree roots, inert hardcore, building rubble, rocks and bricks

Location:

- Create in marginal habitats adjacent to both low, open vegetation and dense vegetation
- Underground elements should be avoided on wet ground at risk of flooding

Creation:

- Line the base with sand &/ gravel to improve drainage
- Loosely back fill the void, placing the bricks, rocks, hardcore and rubble close to the bottom to prevent the structure collapsing
- Ensure timber and rubble protrudes from the edges of the structure to provide natural crevice entrances, which lead deeper into the structure
- Cover the pile with soil to 0.5 m in height and place on the turf removed to dig the void or sow with wildflower seed.



Appendix G4: Ansty Garden Community BNG Assessment



Building B, Lords Wood Barns, Petworth, West Sussex, GU28 9BS.

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Biodiversity Impact Calculation

Beechy Bottom Parkland Reserve, Haywards Heath

Author: Rozel Hopkins MSci (Hons)

Reviewed by: Owen Crawshaw BSc (Hons), MCIEEM

18th October 2023

Project No: P2831

The Ecology Co-operation Ltd
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Company number: 8905527



Document Control

Issue No	Author	Reviewer	Issue Date	Additions/alterations	Notes
Draft – Revision 0	RH	OC	18/10/23	N/A	

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Report Summary

1. The Ecology Co-operation was commissioned by Fairfax Ltd to undertake a Biodiversity Impact Calculation for the proposed creation of a parkland reserve, to include significantly improved public access and instigation of a long-term management and rewilding regime at Beechy Bottom Parkland Reserve, Haywards Heath. These calculations used the Biodiversity Metric 4.0, to quantify net change in biodiversity after the restoration of the habitats on site.

2. It is estimated that the proposed scheme at this site will result in the loss of:

- 0.12ha of g1c bracken;
- 0.21ha of u1c artificial unvegetated, unsealed surface;
- 0.01ha of u1b developed land; sealed surface;
- 0.09ha of g3c other neutral grassland – good condition;
- 0.29ha of g4 modified grassland – poor condition;
- 0.05ha of w1f lowland mixed deciduous woodland – poor condition;
- 0.11ha of w1f lowland mixed deciduous woodland – moderate condition;
- 0.23ha of w1g other woodland; broadleaved – poor condition;
- 0.06ha of w1g other woodland; broadleaved – moderate condition;
- 0.04km of h2a5 (11) species-rich native hedgerow with trees – good condition;
- 0.01km of h2a5 (11) species-rich native hedgerow with trees – moderate condition.

3. It is estimated that the proposed development scheme at this site will retain:

- 0.02ha of u1b developed land; sealed surface;
- 0.09ha of h3a blackthorn scrub - good condition;
- 0.05ha of h3h mixed scrub - moderate condition;
- 0.03ha of h3h mixed scrub - moderate condition;
- 1.41ha of g3c other neutral grassland - good condition;
- 6.22ha of g4 modified grassland - poor condition;
- 0.13ha of r1 (41) pond (non-priority habitat) - moderate condition;
- 1.87ha of lowland mixed deciduous woodland - good condition;
- 4.14ha of lowland mixed deciduous woodland - moderate condition;
- 3.77ha of other woodland; broadleaved - moderate condition;
- 0.57km of h2a6 native hedgerow - poor condition;
- 0.7km of h2a5 (11) species-rich native hedgerow with trees - good condition;
- 0.29km of h2a5 (11) species-rich native hedgerow with trees - moderate condition;
- 0.17km of w1 (34) ecologically valuable line of trees - good condition;
- 0.07km of w1 (34) ecologically valuable line of trees - moderate condition.

4. It is estimated that the proposed development scheme at this site will enhance:

- 21.85ha of w (26) wood-pasture and parkland in moderate condition to good condition;



- 15.51ha of w (26) wood-pasture and parkland in poor condition to good condition;
- 2.58ha of g4 modified grassland in moderate condition to g3c other neutral grassland in moderate condition;
- 4.18ha of g4 modified grassland in poor condition to g3c other neutral grassland in moderate condition;
- 0.36ha of r1 (41) ponds (non-priority habitat) in poor condition to moderate condition;
- 10.24ha of w1f lowland mixed deciduous woodland in poor condition to moderate condition;
- 23.26ha of w1g other woodland; broadleaved in poor condition to moderate condition;
- 3.65ha of w1g other woodland; broadleaved in moderate condition to good condition;
- 2.58ha of w1f lowland mixed deciduous woodland in moderate condition to good condition;
- 0.57km of h2a6 native hedgerow in poor condition to moderate condition.

5. Post intervention, it is predicted that the following habitats will be created:

- 0.75ha of u1b developed land; sealed surface;
- 0.43ha of u1c artificial unvegetated, unsealed surface;
- 0.1832ha (5 individuals) of urban trees (medium size) - moderate condition.

6. The following habitat losses are not included within the calculations, as they constitute a loss of irreplaceable habitat area:

- 0.08ha of w (26) wood-pasture and parkland in moderate condition (Grassland 2);
- 0.05ha of w (26) wood-pasture and parkland in poor condition (Grassland 3).

7. The Biodiversity Impact Calculation has demonstrated that the proposed scheme predicts a likely net gain of 177.39 habitat units (18.04%). The linear feature calculation for the proposed scheme indicates a likely net gain of 0.21 hedgerow units (0.89%).

8. The current scheme does not satisfy the trading rules of the Biodiversity Metric 4.0. The calculation has identified a 0.97 unit deficit for 'High Distinctiveness' linear habitat.

9. The calculations outlined within this report has been produced in light of the Habitat & Ecological Restoration Management Plan by Tardorna Consulting Limited and the most up-to-date illustrative landscape layout from Davies Landscape Architects provided to The Ecology Co-op in September 2023. Any changes to these plans will result in a need for the Biodiversity Metric to be updated accordingly.



CONTENTS PAGE

1 INTRODUCTION	1
1.1 Purpose of the Report.....	1
1.2 Background.....	2
1.3 Policy & Legislation	6
2 METHODOLOGY	7
2.1 Data Sources	8
3 RESULTS.....	8
3.1.1 Existing Habitats Assessment.....	8
3.1.2 Habitat Losses and Gains.....	10
4 FINAL RESULTS	12
4.1 Conclusions	12
APPENDIX 1 – Habitat Condition Assessment Pro-formas	13



1 INTRODUCTION

1.1 Purpose of the Report

There is a movement in planning policy and legislation towards a requirement for all new developments to pursue opportunities for securing measurable 'net gains' in biodiversity following the release of an updated National Planning Policy Framework¹ by the Department of Housing, Communities and Local Government. A mandatory value of 10% net gain for all developments has now also been outlined within the Environment Act 2021².

This document includes a baseline 'Biodiversity Impact Calculation' (BIC) for the proposed creation of a public reserve. This will see a significant increase to public access and the instigation of a long-term management and rewilding regime at a site called Beechy Bottom, Haywards Heath. The proposals include the establishment of pedestrian and cycle tracks, with new pedestrian and cycle access points off Cuckfield Road to the south and Staplefield Road to the north, and the addition of two wooden viewing platforms. The proposals, if approved, would lead to the creation of the 'Beechy Bottom Parkland Reserve', which is dedicated to creating a resource of value for the public through 'access to nature' and also seeks to target both significant biodiversity net gain and target value for specific high value habitats and protected and notable species.

The calculation utilises the Biodiversity Metric 4.0 and assigns 'biodiversity units' to the pre-existing habitats contained within the site and those that are predicted to be lost, restored and/or created under the proposed new management of the area. This allows an objective comparison to be made between the existing biodiversity value of a given site and the predicted biodiversity value in the 30-year period, with the net change in biodiversity value subsequently quantified. Any units provided through the creation of the park will be used to offset net loss from the housing development Land East of Ansty³.

The purpose of this document is to present the findings of the BIC based on the most up-to date existing habitat survey information, most up-to-date illustrative landscape layout from Davies Landscape Architects (revision 2131-DLA-DR-L-07) and the Habitat and Ecological Restoration Management Plan from Tardorna Consulting Ltd⁴.

The results of the BIC are deemed accurate for the most recent illustrative layout, issued to The Ecology Co-op in September 2023.

This report was commissioned and produced at the request of Fairfax Ltd.

¹ HM Government (2023). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

² HM Government (2021). Environment Act 2021. Available online at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

³ The Ecology Co-op (2023). *Biodiversity Impact Calculation – Land East of Ansty*.

⁴ Tardorna Consulting Ltd (2023). Habitat & Ecological Restoration Plan 0069_RevA.



1.2 Background

The site measures 103.21ha in area according to GIS mapping and the majority of the site comprises two large fields of historic parkland habitat which have mostly been managed as modified grassland and mixed broadleaved plantation woodland. Some areas of ancient semi-natural woodland remain to the west of the fields. In addition, three fields of short mown modified grassland lie at the north of the main parkland areas, the northernmost of which is managed as a sports field. Five ponds are located around the site; two woodland ponds artificially connected to each other, two field ponds and one further woodland pond to the north of the parkland. Copyhold stream runs along the west and southern boundaries of the site.

The site has been subject to an ecological and habitat assessments, including surveys for badgers *Meles meles* and roosting bats. These are detailed in a Habitat & Ecological Restoration Management Plan by Tardorna Consulting Limited⁵. This document also outlines the proposed parkland restoration of the majority of the site for the next 25 years under a minimal-input and soft-touch grazing regime, as well as initial woodland management of the surrounding blocks. Two dog-walking fields of grassland meadows will be created at the north of the site. The northernmost field will be retained as a sports pitch. In order for the above habitats to be secured under the Environment Act's legal timeframe requirement, the habitats will need to be managed as above for an additional 5 years, to achieve the 30 year management period as minimum, though this would be during a simple 'maintenance' phase that follows all habitats present reaching their target condition.

Habitats (UKHab) within the site and along the site boundaries are shown in Figure 1, these include:

- g1c bracken
- u1c artificial unvegetated, unsealed surface
- u1b developed land; sealed surface
- h3a blackthorn scrub
- h3h mixed scrub
- w (26) wood-pasture and parkland
- g3c other neutral grassland (including g3c5 *Lolium-Cynosurus* neutral grassland)
- g4 modified grassland
- r1 (41) pond (non-priority habitat)
- w1f lowland mixed deciduous woodland
- w1g other woodland; broadleaved
- h2a6 native hedgerow
- h2a5 species-rich native hedgerow with trees
- w1 (34) ecologically valuable line of trees

The parkland character plan produced by Davies Landscape Architects, shown in Figure 2, and Appendix 2 in Tardorna Consulting Ltd's Habitat & Ecological Restoration Management Plan⁵ provided the framework to map the proposed habitats for the site and led into the production of the UKHab map shown in Figure 3.

⁵ Tardorna Consulting Ltd (2023). Habitat & Ecological Restoration Plan 0069_RevA.

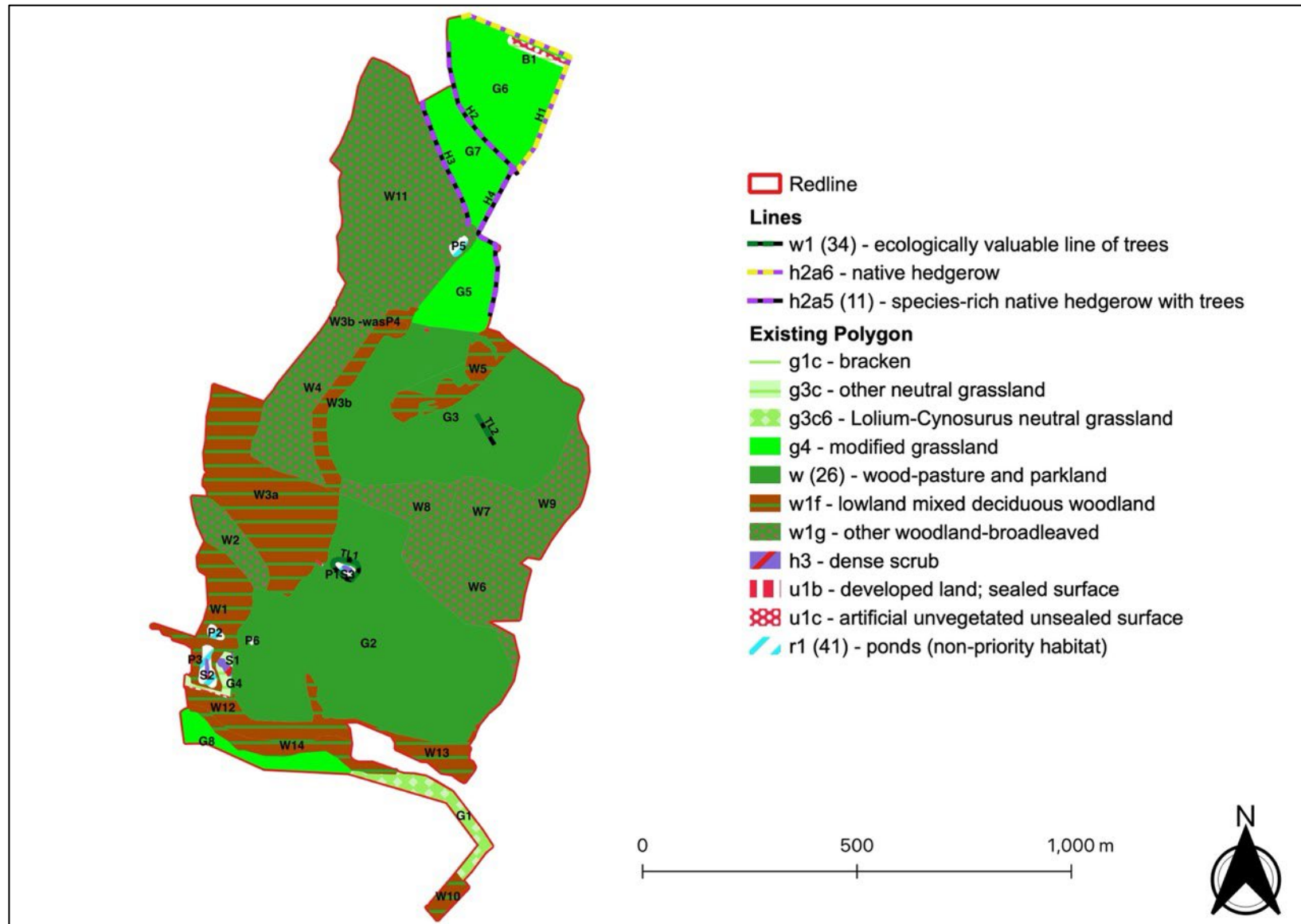


Figure 1. A UKHab map showing existing habitats within the site. The site boundary is indicated with a red line. Produced using QGIS software, version 3.28.5 – Firenze.



Figure 2. The proposed layout plan for Beechy Bottom Parkland Reserve, modified from Davies Landscape Architects. Issued September 2023, drawing number 2131-DLA-DR-L-07-S02.

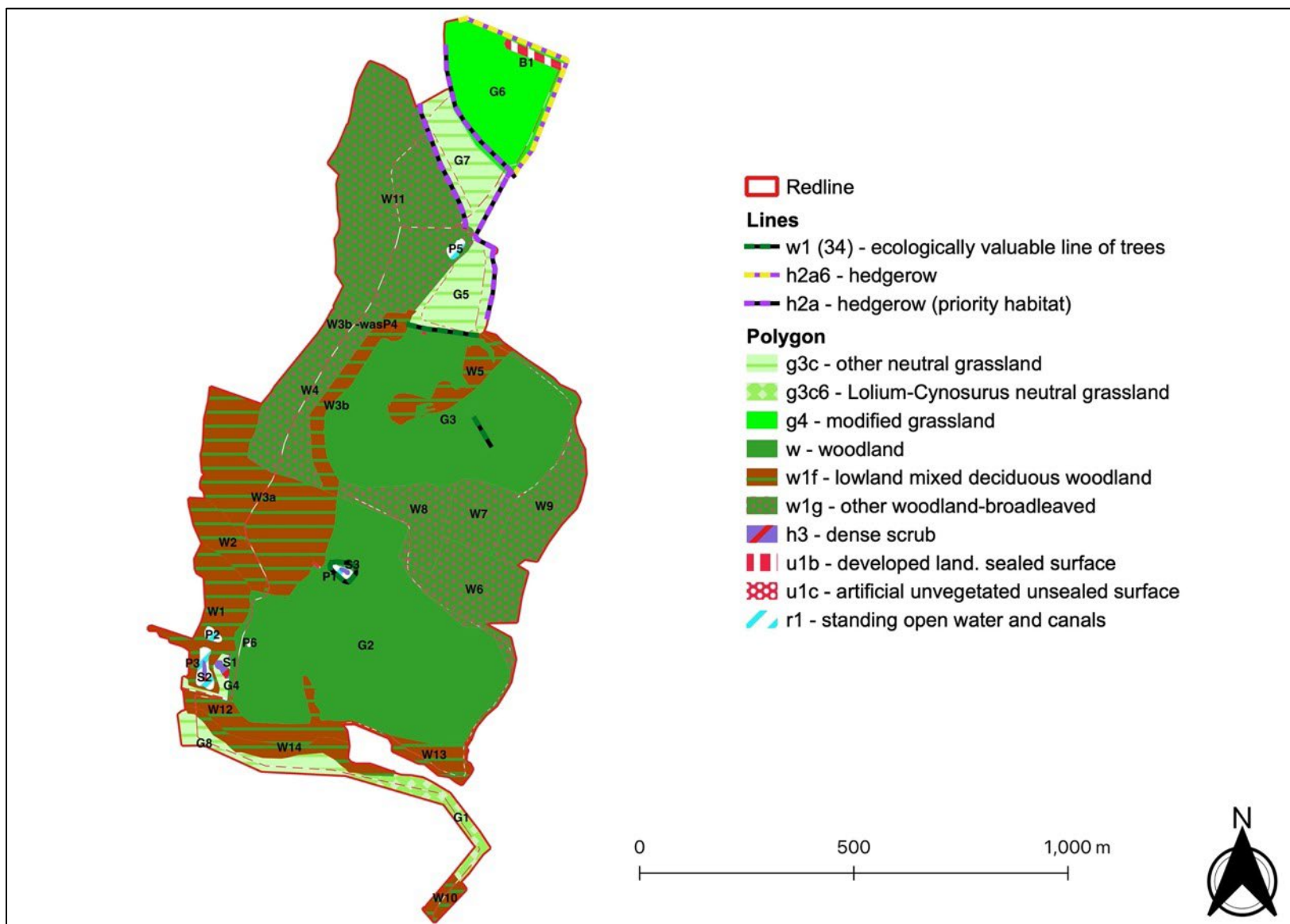


Figure 3. A UKHab map showing proposed habitats within the site. The site boundary is indicated with a red line. Produced using QGIS software, version 3.28.5 – Firenze.



1.3 Policy & Legislation

NPPF (2023)

The NPPF sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regards to the operation of the planning system.

Paragraph 174b, states that council policies should;

- *"promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."*

Paragraph 175d, states that when determining planning applications, authorities should:

- Refuse permission *"if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for"*
- Encourage *"opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity."*

Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system⁶.

In accordance with the NPPF, it is important that developments should contribute to local policies that enhance the natural environment by:

- minimising impacts on existing biodiversity and habitats and designated features
- establishing coherent ecological networks that are more resilient to current and future pressures
- providing net gains in biodiversity and habitats, wherever possible

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

⁶ HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.



Local Policy

Policy DP38 (Biodiversity) of the current Mid-Sussex District Plan 2014-2031 from Mid Sussex District Council⁷ notes that it will ensure development:

- “Contributes and takes opportunities to improve, **enhance, manage and restore biodiversity** and green infrastructure so there is **a net gain in biodiversity** [...];
- Protects existing biodiversity, so there is **no net loss of biodiversity**;
- Unavoidable damage to biodiversity should be **offset through enhancements** and mitigation measures.
- Minimises habitat and species fragmentation and maximises opportunities to **enhance and restore ecological corridors** to connect natural habitats and increase coherence and resilience; and
- Promotes the **restoration, management and expansion of priority habitats** in the district.”

2 METHODOLOGY

This Biodiversity Impact Calculation uses the Biodiversity Metric 4.0 Calculation Tool published by Natural England⁸. This uses the Government Biodiversity Metric developed by DEFRA (‘the Biodiversity Metric’) to calculate ‘habitat units’ and ‘hedgerow units’ by multiplying the area (ha) or lengths (km), ‘distinctiveness’ (habitat type), ‘condition’ (quality), and strategic significance (location in relation to the authority’s local strategy) of each habitat parcel.

The calculation provides a negative value to the biodiversity units where habitat is being directly lost. Where habitats are enhanced or created on-site, or off-site, the calculation gives a positive value but adds risk factors that account for uncertainty - difficulty in creating new habitats and time delays while they establish; habitats that are more difficult to restore or that will take a long time to reach a set target condition will score lower and therefore make a smaller positive contribution.

Where on-site gains are equal to or larger than the losses, the project is deemed to have neutral biodiversity impact or biodiversity ‘net gain’ respectively.

It should be noted that the Biodiversity Metric does not allow for ‘trading down’; one of the key principles in measuring biodiversity net losses or gains is that habitats of high ecological importance cannot be offset by the creation of larger areas of habitats with lower value. The Biodiversity Metric 4.0 Calculation Tool includes a ‘trading down correction’ that deducts the number of biodiversity units that are not accounted for through the creation of equivalent high distinctiveness habitats than that lost. For example, the loss of a small area of lowland meadow priority habitat (very high distinctiveness) will not be offset by a larger area of modified grassland (low distinctiveness) and will only be offset by an equivalent area of habitat of the same distinctiveness or higher.

⁷ Mid-Sussex District Council (2018) Mid-Sussex District Plan 2014-2031. Available online at: <https://www.midsussex.gov.uk/planning-building/mid-sussex-district-plan/>.

⁸ Natural England (2023) The Biodiversity Metric 4.0 – Calculation Tool. Available online at: <http://publications.naturalengland.org.uk/publication/6049804846366720>



2.1 Data Sources

This calculation uses the most up to date survey information using botanical data and specific condition assessments gathered on 20th and 21st July, 19th and 22nd September and 4th October 2023. The areas of each habitat category were measured using GIS mapping tools (QGIS). Condition assessments were made in accordance with the condition assessment sheets within The Biodiversity Metric 4.0 Technical Annex 1⁹. Applying the precautionary principle, a presumption for the higher condition was used where there was any uncertainty in the condition of existing habitats.

Aerial imagery of the site was overlaid by the proposed habitat creation plan to obtain the areas of the proposed habitats to be created under the Habitat & Ecological Restoration Management Plan and parkland character plan (see Figure 2). The Biodiversity Metric 4.0 uses a separate calculator spreadsheet for linear features. This works under the same principles but replaces areas of habitat with linear length of a feature. The hedgerow units generated for linear features are not equivalent or interchangeable with biodiversity calculations for areas of habitat.

The Biodiversity Metric 4.0 uses a separate calculator spreadsheet for linear features. This works under the same principles as above but replaces areas of habitat with linear length of a feature. The hedgerow units generated for linear features are not equivalent or interchangeable with biodiversity calculations for areas of habitat.

3 RESULTS

3.1.1 Existing Habitats Assessment

A summary of habitats and condition assessments are provided in Table 1 and Table 2. Full results of condition assessments for habitats which require it (using the Biodiversity Metric 4.0 condition assessment pro-forma) are provided in Appendix 1.

Overall, the on-site calculated baseline is 978.94 habitat units and 23.76 hedgerow units.

Table 1. Existing area habitat conditions for Beechy Bottom Parkland Reserve.

Area Habitats			Condition Assessments
Habitat Type in Biodiversity Metric and UK Habitat (UKHab) Classification Code	Location Reference	Area (ha)	
Grassland – bracken (g1c)	Area B1	0.12	N/A
Urban – artificial unvegetated, unsealed surface (u1c)	Unvegetated pathway	0.21	N/A
Urban – developed land; sealed surface (u1b)	All buildings and sealed tarmac	0.03	N/A
Heathland and shrub – blackthorn scrub (h3a)	Scrub S1	0.09	Good
Heathland and shrub – mixed scrub (h3h)	Scrub S2	0.05	Moderate
	Scrub S3	0.03	Good

⁹ Natural England (2023) *Biodiversity Metric 4.0 – Technical Annex 1 – Condition Assessment Sheets and Methodology*. Available online at: <http://publications.naturalengland.org.uk/publication/6049804846366720>



Woodland and forest – wood-pasture and parkland	Field G2	21.93	Moderate
	Field G3	15.56	Poor
Grassland – other neutral grassland (g3c)	Field G1	1.24	Moderate
	Field G4	0.26	Good
Grassland – modified grassland (g4)	Field G5	2.66	Moderate
	Field G6	6.27	Poor
	Field G7	2.88	Poor
	Field G8	1.46	Poor
Lakes – ponds (non-priority habitat) (r1)	Pond 1	0.1	Moderate
	Pond 2	0.1	Poor
	Pond 3	0.24	Poor
	Pond 5	0.12	Poor
	Pond 6	0.02	Poor
Woodland and forest – lowland mixed deciduous woodland (w1f)	Woodland 1	2.6	Poor
	Woodland 3a	7.69	Poor
	Woodland 3b	1.87	Good
	Woodland 5	1.68	Moderate
	Woodland 10	0.44	Moderate
	Woodland 12	2.07	Moderate
	Woodland 13	1.16	Moderate
	Woodland 14	1.48	Moderate
Woodland and forest – other woodland; broadleaved (w1g)	Woodland 2	1.58	Moderate
	Woodland 4	5.32	Poor
	Woodland 6	3.82	Moderate
	Woodland 7	2.08	Moderate
	Woodland 8	2.75	Poor
	Woodland 9	3.06	Poor
	Woodland 11	12.36	Poor



Table 2. Existing linear habitat conditions for Beechy Bottom Parkland Reserve.

Linear Habitats			Condition Assessments
Habitat Type in Biodiversity Metric and UK Habitat (UKHab) Classification Code	Location Reference	Length (km)	
Native hedgerow (h2a6)	Hedgerow H1	0.57	Poor
Species-rich native hedgerow with trees (h2a5 (11))	Hedgerow H2	0.35	Good
	Hedgerow H3	0.3	Moderate
	Hedgerow H4	0.39	Good
	Treeline TL1	0.17	Good
	Treeline TL2	0.07	Moderate

3.1.2 Habitat Losses and Gains

3.1.2.1 Area Habitat Units

It is estimated that the proposed habitat restoration plan at this site will result in the loss of:

- 0.12ha of g1c bracken;
- 0.21ha of u1c artificial unvegetated, unsealed surface;
- 0.01ha of u1b developed land; sealed surface;
- 0.09ha of g3c other neutral grassland - good condition;
- 0.29ha of g4 modified grassland - poor condition;
- 0.05ha of w1f lowland mixed deciduous woodland - poor condition;
- 0.11ha of w1f lowland mixed deciduous woodland - moderate condition;
- 0.23ha of w1g other woodland; broadleaved - poor condition;
- 0.06ha of w1g other woodland; broadleaved - moderate condition;
- 0.04km of h2a5 (11) species-rich native hedgerow with trees - good condition;
- 0.01km of h2a5 (11) species-rich native hedgerow with trees - moderate condition.

It is estimated that the proposed habitat restoration plan at this site will retain:

- 0.02ha of u1b developed land; sealed surface;
- 0.09ha of h3a blackthorn scrub – good condition;
- 0.05ha of h3h mixed scrub – moderate condition;
- 0.03ha of h3h mixed scrub – moderate condition;
- 1.41ha of g3c other neutral grassland – good condition;
- 6.22ha of g4 modified grassland – poor condition;
- 0.13ha of r1 (41) pond (non-priority habitat) – moderate condition;
- 1.87ha of lowland mixed deciduous woodland – good condition;
- 4.14ha of lowland mixed deciduous woodland – moderate condition;
- 3.77ha of other woodland; broadleaved – moderate condition;

It is estimated that the proposed habitat restoration plan at this site will enhance:

- 21.85ha of w (26) wood-pasture and parkland in moderate condition to good condition;
- 15.51ha of w (26) wood-pasture and parkland in poor condition to good condition;
- 2.58ha of g4 modified grassland in moderate condition to g3c other neutral grassland in moderate condition;



- 4.18ha of g4 modified grassland in poor condition to g3c other neutral grassland in moderate condition;
- 0.36ha of r1 (41) ponds (non-priority habitat) in poor condition to moderate condition;
- 10.24ha of w1f lowland mixed deciduous woodland in poor condition to moderate condition;
- 23.26ha of w1g other woodland; broadleaved in poor condition to moderate condition;
- 3.65ha of w1g other woodland; broadleaved in moderate condition to good condition;
- 2.58ha of w1f lowland mixed deciduous woodland in moderate condition to good condition;

Post-intervention, it is estimated that the following habitats will be created:

- 0.75ha of u1b developed land; sealed surface;
- 0.43ha of u1c artificial unvegetated, unsealed surface;
- 0.1832ha of urban trees (five individuals of medium size) – moderate condition.

The above created habitats are estimated with the assumptions that the footpaths will be formed of 1.5m areas of unsealed materials and that the cycle paths will be formed of a more formalised 2m wide routes.

The following habitat losses are not included within the calculations, as they constitute a loss of irreplaceable habitat area:

- 0.08ha of w (26) wood-pasture and parkland in moderate condition (Grassland 2);
- 0.05ha of w (26) wood-pasture and parkland in poor condition (Grassland 3).

As irreplaceable habitats cannot be accounted for in the metric and in accordance with Natural England advice, bespoke compensation to address these specific losses will need to be agreed with the local planning authority.

3.1.2.2 Linear Habitat Units

It is estimated that the proposed habitat restoration plan at this site will result in the loss of:

- 0.04km of h2a5 (11) species-rich native hedgerow with trees – good condition;
- 0.01km of h2a5 (11) species-rich native hedgerow with trees – moderate condition.

It is estimated that the proposed habitat restoration plan at this site will retain:

- 0.57km of h2a6 native hedgerow – poor condition;
- 0.7km of h2a5 (11) species-rich native hedgerow with trees – good condition;
- 0.29km of h2a5 (11) species-rich native hedgerow with trees – moderate condition;
- 0.17km of w1 (34) ecologically valuable line of trees – good condition.
- 0.07km of w1 (34) ecologically valuable line of trees – moderate condition.

It is estimated that the proposed habitat restoration plan at this site will enhance:

- 0.57km of h2a6 native hedgerow in poor condition to moderate condition



4 FINAL RESULTS

The overall results of the calculations are presented in Table 3. Please refer to the Biodiversity Metric 4.0 – Calculation Tool supplied with this document (submitted separately) for full details of the calculation.

Table 3. Headline results of the Biodiversity Impact Calculation for the proposed habitat restoration at Beechy Bottom Parkland Reserve.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	177.39
	Hedgerow units	0.21
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	18.04%
	Hedgerow units	0.89%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Table 4. Trading summary linear habitat results of the Biodiversity Impact Calculation for the proposed habitat restoration at Beechy Bottom Parkland Reserve.

High Distinctiveness				High Distinctiveness Summary	
Habitat group	On-site unit change	Off-site unit change	Project wide unit change		
Species-rich native hedgerow with trees	-0.97	0.00	-0.97	High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Species-rich native hedgerow - associated with bank or ditch	0.00	0.00	0.00	High Distinctiveness Deficit to be offset by trading up	-0.97
Native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	Higher Distinctiveness surplus units minus any high distinctiveness deficit	-0.97
	-0.97	0.00	-0.97		

4.1 Conclusions

The Biodiversity Impact Calculation, using the Biodiversity Metric 4.0, has demonstrated that the proposed scheme will result in a likely net gain of **177.39 habitat units (18.04%)**.

The linear feature calculation for the proposed scheme results in a likely net gain of **0.21 hedgerow units (0.89%)**.

The current scheme does not satisfy the trading rules within the Biodiversity Metric 4.0 for linear habitats. The calculation has identified a 0.97 unit deficit for 'High Distinctiveness' linear habitat.

It is likely that the proposed net gains will need to be secured by a conservation covenant or other suitable agreement, which commit future management of the site to the details provided within the Habitat & Ecological Restoration Management Plan and a suitable monitoring programme as appropriate will need to be agreed to ensure the delivery of the target habitat conditions.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.



APPENDIX 1 – Habitat Condition Assessment Pro-formas

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS													
Date	22/09/2023			Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)					Baseline				
Surveyor name	Libby Morris			Unique polygon reference(s)					G1				
Project / development name	Beechy Bottom Reserve			Metric 4.0 habitat type					Other neutral grassland				
Onsite or offsite?	Onsite			Condition sheet used					Grassland – med, high and v. high				
Habitat description													
Dominated by sweet vernal <i>Anthoxanthum odoratum</i> with the following other species recorded; perennial rye <i>Lolium perenne</i>, Yorkshire fog <i>Holcus lanatus</i>, common bent <i>Agrostis capillaris</i>, annual ryegrass <i>Lolium multiflorum</i>, cocksfoot grass <i>Dactylis glomerata</i>, red fescue <i>Festuca rubra</i>, germander speedwell <i>Veronica chamaedrys</i>, meadow buttercup <i>Ranunculus acris</i>, creeping buttercup <i>R. repens</i>, clustered dock <i>Rumex conglomeratus</i>, nodding thistle <i>Carduus nutans</i>, creeping thistle <i>Cirsium arvense</i>, common knapweed <i>Centaurea nigra</i>, dandelion <i>Taraxacum officinale</i> agg., red clover <i>Trifolium pratense</i>, cut-leaved cranesbill <i>Geranium dissectum</i>, lesser trefoil <i>Trifolium dubium</i>, hairy tare <i>Vicia hirsuta</i>, white clover <i>Trifolium repens</i>, broad-leaved dock <i>Rumex obtusifolius</i>, ragwort <i>Jacobaea vulgaris</i>, cuckoo flower <i>Cardamine pratensis</i>, autumn hawkbit <i>Scorzonera autumnalis</i>, common mouse-ear <i>Cerastium fontanum</i>, common fleabane <i>Pulicaria dysenterica</i>, tufted vetch <i>Vicia cracca</i>, common sorrel <i>Rumex acetosa</i> and ground ivy <i>Glechoma hederacea</i>.													
													
Allocate pass 'P' or fail 'F'. For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.													
Criterion	A	B	C	D	E	F							TOTAL
Result	Y	Y	Y	Y	Y	Y							7/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – passed criteria A and F						Condition (Good/Moderate/Poor):			Good			



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	22/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	G4
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other neutral grassland
Onsite or offsite?	Onsite	Condition sheet used	Grassland – med, high and v. high

Habitat description

Perennial rye, crested dog's-tail *Cynosurus cristatus*, Yorkshire fog, common bent, sweet vernal grass, annual rye grass and cock's-foot grasses, soft rush *Juncus effusus* and pendulous sedge *Carex pendula*. Forbs recorded included creeping buttercup, creeping thistle, common knapweed, broad-leaved dock, birds-foot trefoil, meadow buttercup, creeping cinquefoil, white clover, red clover, imperforate St John's-wort *Hypericum maculatum*, cow parsley *Anthriscus sylvestris*, ground ivy, common nettle *Urtica dioica*, common hogweed *Heracleum sphondylium*, spear thistle *Cirsium vulgare* and common sorrel.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F								TOTAL
Result	Y	Y	Y	N	Y	Y								6/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – passed criteria A and F					Condition (Good/Moderate/Poor):			Good					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline											
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	G5											
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Modified grassland											
Onsite or offsite?	Onsite	Condition sheet used	Grassland - low											
Habitat description														
Perennial rye-dominated grassland with rough meadow-grass <i>Poa trivialis</i>, meadow foxtail <i>Alopecurus pratensis</i>, annual ryegrass, cocks-foot and common bent also recorded. Forbs identified included common mouse-ear, marsh cudweed <i>Gnaphalium uliginosum</i>, creeping buttercup, common ragwort, greater plantain <i>Plantago major</i>, broad-leaved dock, clustered dock <i>Rumex conglomeratus</i>, creeping thistle, white clover, scentless mayweed <i>Tripleurospermum inodorum</i> and bristly oxtongue <i>Helminthotheca echioides</i>.														
														
Allocate pass 'P' or fail 'F'. For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	Y	Y	Y	Y	Y	Y							6/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – failed criterion A						Condition (Good/Moderate/Poor):		Moderate					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline											
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	G6											
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Modified grassland											
Onsite or offsite?	Onsite	Condition sheet used	Grassland - low											
Habitat description														
Shortly-mown grass sports pitch of solely perennial rye and annual ryegrass.														
														
Allocate pass 'P' or fail 'F'.														
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	N	N	N	N	Y	Y							2/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – failed criterion A						Condition (Good/Moderate/Poor):		Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	G7
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Modified grassland
Onsite or offsite?	Onsite	Condition sheet used	Grassland - low

Habitat description

Former arable land reseeded within perennial ryegrass and dominated by this and creeping buttercup. Occasional Yorkshire fog detected as well as annual ryegrass and common bent. Forbs identified included Shepherd's purse *Capsella bursa-pastoris*, doves-foot cranesbill *Geranium molle*, bristly oxtongue, prickly sow-thistle *Sonchus asper*, common ragwort, nettle, daisy *Bellis perennis*, fleabane, smooth cat's-ear *Hypochaeris glabra*, common groundsel *Senecio vulgaris* and germander speedwell.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	Y	N	Y	N	Y	Y							4/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – failed criterion A						Condition (Good/Moderate/Poor):		Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	G8
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Modified grassland
Onsite or offsite?	Onsite	Condition sheet used	Grassland - low

Habitat description

Field of perennial ryegrass and annual ryegrass with creeping buttercup, birds-foot trefoil *Lotus corniculatus* and creeping thistle.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	Y	N	N	N	Y	Y							3/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – failed criterion A						Condition (Good/Moderate/Poor):	Poor						



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	19/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Dan Bennett & Rozel Hopkins	Unique polygon reference(s)	G2
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Wood-pasture and parkland
Onsite or offsite?	Offsite – using onsite data and available resources from MAGIC and OS mapping	Condition sheet used	Wood-pasture and parkland

Habitat description

Area of managed grassland with average sward height of 10cm. Dominated by grasses with an average 5 species/m² of abundant sweet vernal, frequent meadow foxtail, Yorkshire fog and red fescue and rare cocksfoot and common bent. Forbs identified included germander speedwell, hairy tare, lesser stitchwort, broad-leaved dock, meadow buttercup, common vetch *Vicia sativa* and silver weed *Potentilla anserina*. There are pockets of veteran sweet chestnut *Castanea sativa* trees scattered across the grassland and various mature native trees scattered in the grassland. Small patches of mixed scrub are located on the southern boundary of the woodland.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H						TOTAL
Result	Y	Y	N	N	Y	Y	N	Y						5/8
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – passed criterion A						Condition (Good/Moderate/Poor):		Moderate					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	19/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Dan Bennett & Rozel Hopkins	Unique polygon reference(s)	G3
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Wood-pasture and parkland
Onsite or offsite?	Offsite – using onsite data and available resources from MAGIC and OS mapping	Condition sheet used	Wood-pasture and parkland

Habitat description

Area of managed grassland with average sward height of 10cm. Dominated by grasses with an average 5 species per m² of abundant sweet vernal, frequent meadow foxtail, Yorkshire fog and red fescue and rare cocksfoot and common bent. Forbs identified included germander speedwell, hairy tare, lesser stitchwort, broad-leaved dock, meadow buttercup, common vetch and silver weed. There are pockets of veteran sweet chestnut trees scattered across the grassland and various mature native trees scattered in the grassland. Small patches of mixed scrub are located on the southern boundary of the woodland.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H						TOTAL
Result	N	N	N	N	Y	Y	N	Y						3/8
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – failed criterion A						Condition (Good/Moderate/Poor):		Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	22/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	S1
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Blackthorn scrub
Onsite or offsite?	Onsite	Condition sheet used	Scrub

Habitat description

Blackthorn *Prunus spinosa* scrub located in amongst Grassland 4 (G4). Frequent silver birch *Betula pendula*, occasional bramble *Rubus fruticosus* and holly *Ilex aquifolium* and rare hawthorn *Crataegus monogyna* also seen.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E									TOTAL
Result	Y	Y	Y	Y	Y									5/5
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N					Condition (Good/Moderate/Poor):			Good					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	22/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	S2
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Mixed scrub
Onsite or offsite?	Onsite	Condition sheet used	Scrub

Habitat description

Scrub located in the centre of Pond 3 (P3) comprising of silver birch, hazel *Corylus avellana*, buddleia *Buddleja davidii*, blackthorn, pendulous sedge, dog rose *Rosa canina*, bramble and horse chestnut. Inaccessible due to pond but viewed with binoculars.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E									TOTAL
Result	Y	Y	N	Y	Y									4/5
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N					Condition (Good/Moderate/Poor):			Moderate					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	22/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	S3
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Mixed scrub
Onsite or offsite?	Onsite	Condition sheet used	Scrub

Habitat description

Scrub located in the centre of Pond 1 (P1) comprising of downy birch *Betula pubescens*, goat willow *Salix caprea*, another willow *Salix* species, pendulous sedge, bramble and hawthorn. Some willows are mature trees. Inaccessible due to pond but viewed with binoculars.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E									TOTAL
Result	Y	Y	Y	Y	Y									5/5
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N					Condition (Good/Moderate/Poor):			Good					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	20/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	P1
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Pond (non-priority habitat)
Onsite or offsite?	Onsite	Condition sheet used	Pond

Habitat description

Pond bordered by mature tree lines with scrub in the centre.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I					TOTAL
Result	N	Y	Y	Y	Y	Y	Y	N	N					6/9
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	None						Condition (Good/Moderate/Poor):		Moderate					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	20/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	P2
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Pond (non-priority habitat)
Onsite or offsite?	Onsite	Condition sheet used	Pond

Habitat description

Woodland fishing pond with scrub in the centre, artificially connected to Pond 3 and stream.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	Y	Y	N	N	N	N							2/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	None						Condition (Good/Moderate/Poor):		Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	20/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	P3
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Pond (non-priority habitat)
Onsite or offsite?	Onsite	Condition sheet used	Pond

Habitat description

Woodland fishing pond with scrub in the centre, artificially connected to Pond 2 and stream.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	Y	Y	N	N	N	N							2/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	None						Condition (Good/Moderate/Poor):		Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	22/09/2023 & 04/10/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	P5
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Pond (non-priority habitat)
Onsite or offsite?	Onsite	Condition sheet used	Pond

Habitat description

Woodland pond



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G							TOTAL
Result	N	Y	N	Y	Y	Y	Y							3/7
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	None						Condition (Good/Moderate/Poor):				Moderate			



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	22/09/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	P6
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Pond (non-priority habitat)
Onsite or offsite?	Onsite	Condition sheet used	Pond

Habitat description

Pond bordered by mature scrub of silver birch and hawthorn scrub with bramble, dog rose and beech *Fagus sylvatica* also recorded. Lots of dead and dying silver birch recorded.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I					TOTAL
Result	N	Y	N	Y	Y	Y	Y	N	N					5/9
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	None						Condition (Good/Moderate/Poor):		Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W1
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Mixed broadleaved woodland with dense ground layer, with abundant common nettle. Tree species include ash *Fraxinus excelsior* (most appear to have ash dieback), beech, hazel, oak *Quercus robur*, elder *Sambucus nigra*, hawthorn, blackthorn, alder *Alnus glutinosa*, holly, field maple *Acer campestre* and yew *Taxus baccata*. Within the northern extent there is cherry laurel *Prunus laurocerasus* and *Rhododendron ponticum*. Ground flora includes abundant common nettle, frequent cow parsley, occasional wood meadow-grass *Poa nemoralis*, cleavers *Galium aparine* and rare false brome *Brachypodium sylvaticum*, greater stitchwort *Stellaria holostea*, wood speedwell *Veronica montana*, wood sedge *Carex sylvatica*, primrose *Primula vulgaris*, remote sedge *Carex remota*, wood anemone *Anemone nemorosa*, bugle *Ajuga reptans*, wood avens *Geum urbanum*, broad buckler *Dryopteris dilatata*, lesser celandine *Ficaria verna*, ground ivy, male fern *Dryopteris filix-mas*, red campion *Silene dioica*, rough meadow grass, hedge woundwort *Stachys sylvatica*, lady fern *Athyrium filix-femina*, dog's mercury *Mercurialis perennis*, pendulous sedge, opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium*, enchanters nightshade *Circaea lutetiana* and hairy wood rush *Luzula acuminata*.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	1	3	3	2	2	2	2	2	1	1	2	25/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):				Poor			



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris	Unique polygon reference(s)	W2
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Old downy birch and hornbeam *Carpinus betulus* plantation woodland. Dense canopy and therefore limited understorey. Trees are of a uniform age.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	3	2	3	3	2	3	1	3	2	1	2	29/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Moderate				



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W3a
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Broadleaved mixed woodland with diverse ground layer. Hazel, field maple, silver birch, willow, hornbeam, beech, horse chestnut, sweet chestnut *Castanea sativa*, sycamore *Acer pseudoplatanus*, ash and English elm *Ulmus procera*. Becomes dominated by sycamore to the north. Bluebell *Hyacinthoides non-scripta*, wood anemone, false brome, germander speedwell, herb Robert *Geranium robertianum*, pendulous sedge, remote sedge *Carex remota*, wood sedge, bugle, dog's mercury, male fern, enchanter's nightshade, wood speedwell, wood violet *Viola odorata*, wood meadow-grass.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	3	2	3	2	2	2	2	2	1	1	1	2	25/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):				Poor			



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W3b
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Woodland with similar composition to W3a but better management, with more mature and young trees, deadwood and less disturbance overall. Areas dominated by bramble.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	3	2	3	3	3	3	2	3	2	2	1	3	3	33/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):				Good			

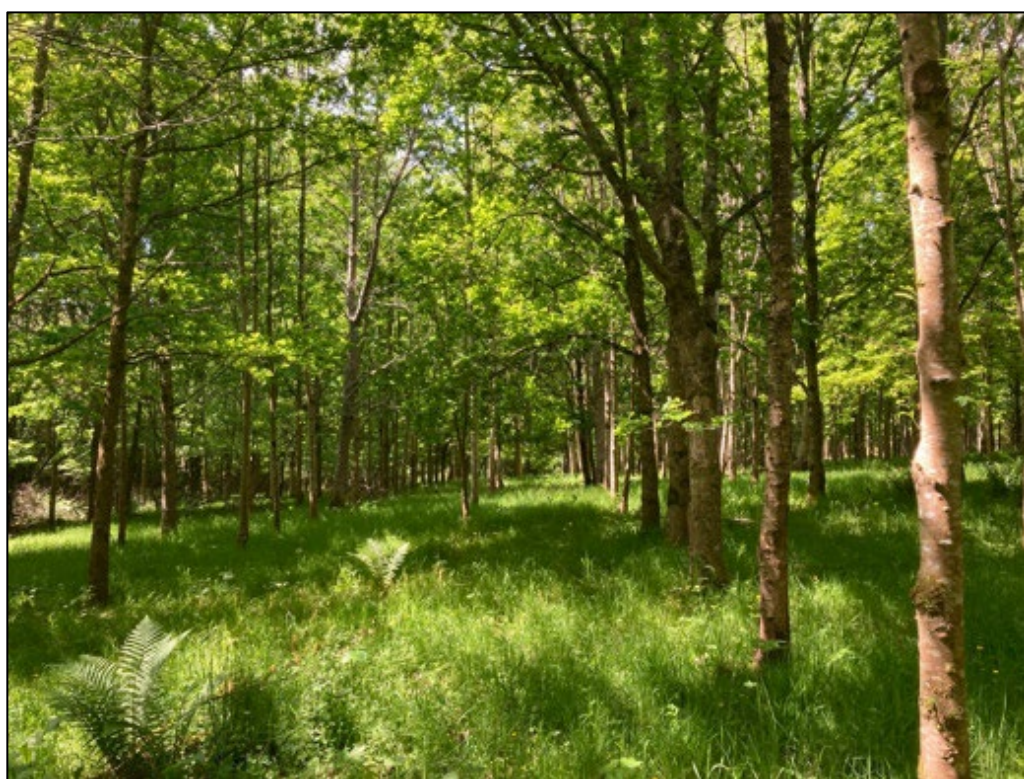


CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W4
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Plantation woodland with ash (dieback is present), sycamore, oak and sweet chestnut. Cherry *Prunus* sp. and poplar *Populus* sp. also present. Understorey comprised of wood meadow-grass, rough meadow-grass, germander speedwell and wood avens.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	1	2	3	2	3	1	2	2	1	1	1	1	1	21/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N					Condition (Good/Moderate/Poor):			Poor					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W5
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Field maple and ash-dominant woodland with English oak, hawthorn, sweet chestnut and holly also recorded. One veteran field maple tree identified. Ground flora comprised of dense bramble and nettle, boarded by bracken *Pteridium aquilinum* and English bluebell.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	3	2	3	3	3	3	3	2	1	2	2	1	3	27/39

Are any criteria non-negotiable? (Y/N)
If Yes are they passed?

N

Condition
(Good/Moderate/Poor):

Moderate



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	20/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W6
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Woodland of goat willow, sycamore, English oak, wild cherry *Prunus avium*, silver birch and hawthorn. Ground flora dominated by bramble and bracken with soft rush, perennial rye and sparse mosses also recorded.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	1	3	3	3	3	1	2	2	2	1	1	2	3	27/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Moderate				



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	20/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline											
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W7											
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved											
Onsite or offsite?	Onsite	Condition sheet used	Woodland											
Habitat description														
English oak and silver birch-dominated plantation woodland, with sycamore and hawthorn also recorded. Small stream running through the centre of the parcel, where hawthorn begins to dominate. Ground flora included bracken, bramble and soft rush. Gipsywort <i>Lycopus europaeus</i> , water mint <i>Mentha aquatica</i> and pendulous sedge recorded close to the stream.														
 														
Allocate pass 'P' or fail 'F'.														
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	3	3	3	2	1	3	2	2	1	2	3	29/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):		Moderate					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 – AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W8
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

English oak plantation woodland, with one veteran oak seen in the centre of the site. Sycamore also dominates in some areas, with hawthorn recorded occasionally. Wild cherry and holly recorded in the southern sections, alongside a conifer species. Ground flora included bracken, bramble, pendulous sedge, grey sedge *Carex divulsa*, germander speedwell and nettle.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	1	2	2	2	2	3	1	2	1	2	2	24/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Poor				



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	20/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W9
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Hawthorn-dominated woodland with sycamore, holly, beech, English oak, field maple, alder, common lime *Tilia x europaea* and horse chestnut also recorded. Silver birch trees dominate towards the north. Some veteran oaks identified as well as fallen deadwood. Rare amounts of rhododendron detected. Ground flora was dominated by bramble and pendulous sedge with bracken, field horsetail, ivy, enchanted nightshade, wild strawberry *Fragaria vesca*, wood spurge *Euphorbia amygdaloides* and wood melick *Melica uniflora* also recorded.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	1	2	1	2	3	1	1	3	1	1	2	2	3	23/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Poor				



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	04/10/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline											
Surveyor name	Libby Morris	Unique polygon reference(s)	W10											
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland											
Onsite or offsite?	Onsite	Condition sheet used	Woodland											
Habitat description														
Hawthorn, blackthorn, ash, English oak and sycamore species with ground flora of enchanter's nightshade, ground ivy, bracken, nettle, bramble and dog's mercury.														
														
Allocate pass 'P' or fail 'F'. For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	2	2	3	2	2	3	1	3	2	2	2	28/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):		Moderate					



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W11
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Other woodland; broadleaved
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Plantation woodland of ash, English oak, goat willow *Salix caprea*, sweet chestnut likely planted within the last 20 years. Ground layer remnant of neutral grassland with abundant Yorkshire fog and nettle, common fleabane, pendulous sedge, cleavers and ragwort. Ash dieback evident.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	1	2	3	2	3	1	2	1	1	1	1	2	1	21/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):				Poor			



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline											
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W12											
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland											
Onsite or offsite?	Onsite	Condition sheet used	Woodland											
Habitat description														
Mixed broadleaf woodland dominated by silver birch with elder, English oak, blackthorn, horse chestnut, hawthorn, beech, ash, wild cherry and holly also recorded. Ground flora recorded included false brome, pendulous sedge, bush vetch, ground ivy, nettle, bracken, common hogweed, germander speedwell and wood avens.														
 														
Allocate pass 'P' or fail 'F'.														
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	3	2	3	2	3	2	2	2	1	1	1	1	3	26/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Moderate				

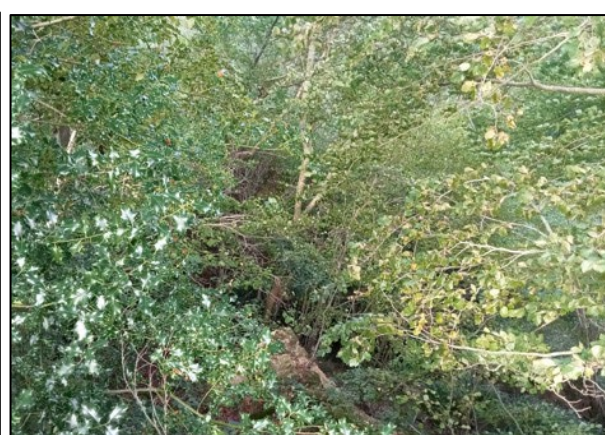


CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023 & 04/10/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W14
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Beech-dominated woodland with hawthorn, English oak, holly, ash, silver birch, horse chestnut, hazel and aspen also recorded. Ground flora comprised of pendulous sedge, spurge laurel, bracken, wood spurge and bramble. Veteran beech tree recorded. Undergoing clearance works in south-western section in October 2023.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	3	3	3	3	2	2	2	2	2	2	3	31/39
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Moderate				



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	21/07/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Baseline
Surveyor name	Libby Morris & Dan Bennett	Unique polygon reference(s)	W15
Project / development name	Beechy Bottom Reserve	Metric 4.0 habitat type	Lowland mixed deciduous woodland
Onsite or offsite?	Onsite	Condition sheet used	Woodland

Habitat description

Mixed broadleaved woodland dominated by nettle. Tree species recorded included beech, hazel, elder, hawthorn, blackthorn, English oak, ash, alder, holly and field maple. Ground flora included, false brome, wood meadow-grass, rough meadow-grass, hairy sedge, wood sedge, broad buckler fern, lesser celandine, ground ivy, male fern, cow parsley, cleavers, red campion, enchanter's nightshade, hedge woundwort, lady fern and dogs' mercury. Ancient woodland indicators present including primrose, pendulous sedge, wood anemone, remote sedge and wood speedwell in low abundance. Undergoing clearance works in south-eastern section in October 2023.



Allocate pass 'P' or fail 'F'.

For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	J	K	L	M	TOTAL
Result	2	2	3	3	3	3	2	2	2	1	1	1	3	28/39

Are any criteria non-negotiable? (Y/N)
If Yes are they passed?

N

Condition
(Good/Moderate/Poor):

Moderate



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - LINEAR HABITATS			
Date		04/10/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)
Surveyor name		Kate Lewis	Baseline
Project / development name		Beechy Bottom	Condition sheet used
Onsite or offsite?		Onsite	Line of trees
Metric 4.0 habitat type			
Line of trees			
Allocate pass 'Y' or fail 'N'.			
Attributes and functional groupings (A, B, C, D and E)		Habitat parcel reference	
		TL1	TL2
A	Native	Y	Y
B	Canopy gaps	Y	N
C	Veteran features and/or ecological niches	Y	Y
D	Undisturbed vegetated strip	Y	Y
E	Healthy condition trees	Y	N
Total		6/6	3/5
Condition - Good (G), Moderate (M) or Poor (P)		Good	Moderate



CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - LINEAR BASED HABITATS					
Date		04/10/2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)		Baseline
Surveyor name		Libby Morris	Condition sheet used		Hedgerow
Project / development name		Beechy Bottom	Onsite or offsite?		Onsite
Allocate pass 'Y' or fail 'N'.					
Attributes and functional groupings (A, B, C, D and E)					
Habitat parcel reference		H1	H2	H3	H4
Metric 4.0 habitat type and description		Native hedgerow – dominated by bramble	Species-rich hedgerow with trees – English oak, bramble, hawthorn, willow species, ivy, field maple, sycamore, hazel, blackthorn, goat willow, dog rose.	Species-rich hedgerow with trees – dominant ash with dog rose, hawthorn, willow species, bramble, English oak, sycamore, field maple and blackthorn.	Species-rich hedgerow with trees – dominated by field maple with hawthorn, hazel, ash, blackthorn, willow species and bramble recorded
A1	Height	N	Y	Y	Y
A2	Width	N	Y	Y	Y
B1	Gap-hedge base	Y	Y	Y	Y
B2	Gap-hedge canopy continuity	Y	Y	Y	Y
C1	Unidisturbed ground and perennial vegetation	N	Y	Y	Y
C2	Nutrient-enriched perennial vegetation	N	N	N	Y
D1	Invasive and neophyte species	Y	Y	Y	Y
D2	Current damage	Y	Y	Y	Y
E1	Tree class	N/A	Y	N	N
E2	Tree health	N/A	Y	N	Y
Total		4/8	9/10	7/10	9/10
Condition - Good (G), Moderate (M) or Poor (P)		Poor	Good	Moderate	Good



Appendix G5: Beechy Bottom Parkland Reserve BNG Assessment



Building B, Lords Wood Barns, Petworth, West Sussex, GU28 9BS.

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Biodiversity Impact Calculation

Beechy Bottom Parkland Reserve, Haywards Heath

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18th October 2023

Project No: P2831

The Ecology Co-operation Ltd
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Company number: 8905527



Document Control

Issue No	Author	Reviewer	Issue Date	Additions/alterations	Notes
Draft – Revision 0	RH	OC	18/10/23	N/A	

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We disclaim responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client, and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.



Report Summary

1. The Ecology Co-operation was commissioned by Fairfax Ltd to undertake a Biodiversity Impact Calculation for the proposed creation of a parkland reserve, to include significantly improved public access and instigation of a long-term management and rewilding regime at Beechy Bottom Parkland Reserve, Haywards Heath. These calculations used the Biodiversity Metric 4.0, to quantify net change in biodiversity after the restoration of the habitats on site.

2. It is estimated that the proposed scheme at this site will result in the loss of:

- 0.12ha of g1c bracken;
- 0.21ha of u1c artificial unvegetated, unsealed surface;
- 0.01ha of u1b developed land; sealed surface;
- 0.09ha of g3c other neutral grassland – good condition;
- 0.29ha of g4 modified grassland – poor condition;
- 0.05ha of w1f lowland mixed deciduous woodland – poor condition;
- 0.11ha of w1f lowland mixed deciduous woodland – moderate condition;
- 0.23ha of w1g other woodland; broadleaved – poor condition;
- 0.06ha of w1g other woodland; broadleaved – moderate condition;
- 0.04km of h2a5 (11) species-rich native hedgerow with trees – good condition;
- 0.01km of h2a5 (11) species-rich native hedgerow with trees – moderate condition.

3. It is estimated that the proposed development scheme at this site will retain:

- 0.02ha of u1b developed land; sealed surface;
- 0.09ha of h3a blackthorn scrub - good condition;
- 0.05ha of h3h mixed scrub - moderate condition;
- 0.03ha of h3h mixed scrub - moderate condition;
- 1.41ha of g3c other neutral grassland - good condition;
- 6.22ha of g4 modified grassland - poor condition;
- 0.13ha of r1 (41) pond (non-priority habitat) - moderate condition;
- 1.87ha of lowland mixed deciduous woodland - good condition;
- 4.14ha of lowland mixed deciduous woodland - moderate condition;
- 3.77ha of other woodland; broadleaved - moderate condition;
- 0.57km of h2a6 native hedgerow - poor condition;
- 0.7km of h2a5 (11) species-rich native hedgerow with trees - good condition;
- 0.29km of h2a5 (11) species-rich native hedgerow with trees - moderate condition;
- 0.17km of w1 (34) ecologically valuable line of trees - good condition;
- 0.07km of w1 (34) ecologically valuable line of trees - moderate condition.

4. It is estimated that the proposed development scheme at this site will enhance:

- 21.85ha of w (26) wood-pasture and parkland in moderate condition to good condition;



- 15.51ha of w (26) wood-pasture and parkland in poor condition to good condition;
- 2.58ha of g4 modified grassland in moderate condition to g3c other neutral grassland in moderate condition;
- 4.18ha of g4 modified grassland in poor condition to g3c other neutral grassland in moderate condition;
- 0.36ha of r1 (41) ponds (non-priority habitat) in poor condition to moderate condition;
- 10.24ha of w1f lowland mixed deciduous woodland in poor condition to moderate condition;
- 23.26ha of w1g other woodland; broadleaved in poor condition to moderate condition;
- 3.65ha of w1g other woodland; broadleaved in moderate condition to good condition;
- 2.58ha of w1f lowland mixed deciduous woodland in moderate condition to good condition;
- 0.57km of h2a6 native hedgerow in poor condition to moderate condition.

5. Post intervention, it is predicted that the following habitats will be created:

- 0.75ha of u1b developed land; sealed surface;
- 0.43ha of u1c artificial unvegetated, unsealed surface;
- 0.1832ha (5 individuals) of urban trees (medium size) - moderate condition.

6. The following habitat losses are not included within the calculations, as they constitute a loss of irreplaceable habitat area:

- 0.08ha of w (26) wood-pasture and parkland in moderate condition (Grassland 2);
- 0.05ha of w (26) wood-pasture and parkland in poor condition (Grassland 3).

7. The Biodiversity Impact Calculation has demonstrated that the proposed scheme predicts a likely net gain of 177.39 habitat units (18.04%). The linear feature calculation for the proposed scheme indicates a likely net gain of 0.21 hedgerow units (0.89%).

8. The current scheme does not satisfy the trading rules of the Biodiversity Metric 4.0. The calculation has identified a 0.97 unit deficit for 'High Distinctiveness' linear habitat.

9. The calculations outlined within this report has been produced in light of the Habitat & Ecological Restoration Management Plan by Tardorna Consulting Limited and the most up-to-date illustrative landscape layout from Davies Landscape Architects provided to The Ecology Co-op in September 2023. Any changes to these plans will result in a need for the Biodiversity Metric to be updated accordingly.



CONTENTS PAGE

1 INTRODUCTION	1
1.1 Purpose of the Report.....	1
1.2 Background.....	2
1.3 Policy & Legislation	6
2 METHODOLOGY	7
2.1 Data Sources	8
3 RESULTS.....	8
3.1.1 Existing Habitats Assessment.....	8
3.1.2 Habitat Losses and Gains.....	10
4 FINAL RESULTS	12
4.1 Conclusions	12
APPENDIX 1 – Habitat Condition Assessment Pro-formas	13



1 INTRODUCTION

1.1 Purpose of the Report

There is a movement in planning policy and legislation towards a requirement for all new developments to pursue opportunities for securing measurable 'net gains' in biodiversity following the release of an updated National Planning Policy Framework¹ by the Department of Housing, Communities and Local Government. A mandatory value of 10% net gain for all developments has now also been outlined within the Environment Act 2021².

This document includes a baseline 'Biodiversity Impact Calculation' (BIC) for the proposed creation of a public reserve. This will see a significant increase to public access and the instigation of a long-term management and rewilding regime at a site called Beechy Bottom, Haywards Heath. The proposals include the establishment of pedestrian and cycle tracks, with new pedestrian and cycle access points off Cuckfield Road to the south and Staplefield Road to the north, and the addition of two wooden viewing platforms. The proposals, if approved, would lead to the creation of the 'Beechy Bottom Parkland Reserve', which is dedicated to creating a resource of value for the public through 'access to nature' and also seeks to target both significant biodiversity net gain and target value for specific high value habitats and protected and notable species.

The calculation utilises the Biodiversity Metric 4.0 and assigns 'biodiversity units' to the pre-existing habitats contained within the site and those that are predicted to be lost, restored and/or created under the proposed new management of the area. This allows an objective comparison to be made between the existing biodiversity value of a given site and the predicted biodiversity value in the 30-year period, with the net change in biodiversity value subsequently quantified. Any units provided through the creation of the park will be used to offset net loss from the housing development Land East of Ansty³.

The purpose of this document is to present the findings of the BIC based on the most up-to date existing habitat survey information, most up-to-date illustrative landscape layout from Davies Landscape Architects (revision 2131-DLA-DR-L-07) and the Habitat and Ecological Restoration Management Plan from Tardorna Consulting Ltd⁴.

The results of the BIC are deemed accurate for the most recent illustrative layout, issued to The Ecology Co-op in September 2023.

This report was commissioned and produced at the request of Fairfax Ltd.

¹ HM Government (2023). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

² HM Government (2021). Environment Act 2021. Available online at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

³ The Ecology Co-op (2023). *Biodiversity Impact Calculation – Land East of Ansty*.

⁴ Tardorna Consulting Ltd (2023). Habitat & Ecological Restoration Plan 0069_RevA.



1.2 Background

The site measures 103.21ha in area according to GIS mapping and the majority of the site comprises two large fields of historic parkland habitat which have mostly been managed as modified grassland and mixed broadleaved plantation woodland. Some areas of ancient semi-natural woodland remain to the west of the fields. In addition, three fields of short mown modified grassland lie at the north of the main parkland areas, the northernmost of which is managed as a sports field. Five ponds are located around the site; two woodland ponds artificially connected to each other, two field ponds and one further woodland pond to the north of the parkland. Copyhold stream runs along the west and southern boundaries of the site.

The site has been subject to an ecological and habitat assessments, including surveys for badgers *Meles meles* and roosting bats. These are detailed in a Habitat & Ecological Restoration Management Plan by Tardorna Consulting Limited⁵. This document also outlines the proposed parkland restoration of the majority of the site for the next 25 years under a minimal-input and soft-touch grazing regime, as well as initial woodland management of the surrounding blocks. Two dog-walking fields of grassland meadows will be created at the north of the site. The northernmost field will be retained as a sports pitch. In order for the above habitats to be secured under the Environment Act's legal timeframe requirement, the habitats will need to be managed as above for an additional 5 years, to achieve the 30 year management period as minimum, though this would be during a simple 'maintenance' phase that follows all habitats present reaching their target condition.

Habitats (UKHab) within the site and along the site boundaries are shown in Figure 1, these include:

- g1c bracken
- u1c artificial unvegetated, unsealed surface
- u1b developed land; sealed surface
- h3a blackthorn scrub
- h3h mixed scrub
- w (26) wood-pasture and parkland
- g3c other neutral grassland (including g3c5 *Lolium-Cynosurus* neutral grassland)
- g4 modified grassland
- r1 (41) pond (non-priority habitat)
- w1f lowland mixed deciduous woodland
- w1g other woodland; broadleaved
- h2a6 native hedgerow
- h2a5 species-rich native hedgerow with trees
- w1 (34) ecologically valuable line of trees

The parkland character plan produced by Davies Landscape Architects, shown in Figure 2, and Appendix 2 in Tardorna Consulting Ltd's Habitat & Ecological Restoration Management Plan⁵ provided the framework to map the proposed habitats for the site and led into the production of the UKHab map shown in Figure 3.

⁵ Tardorna Consulting Ltd (2023). Habitat & Ecological Restoration Plan 0069_RevA.

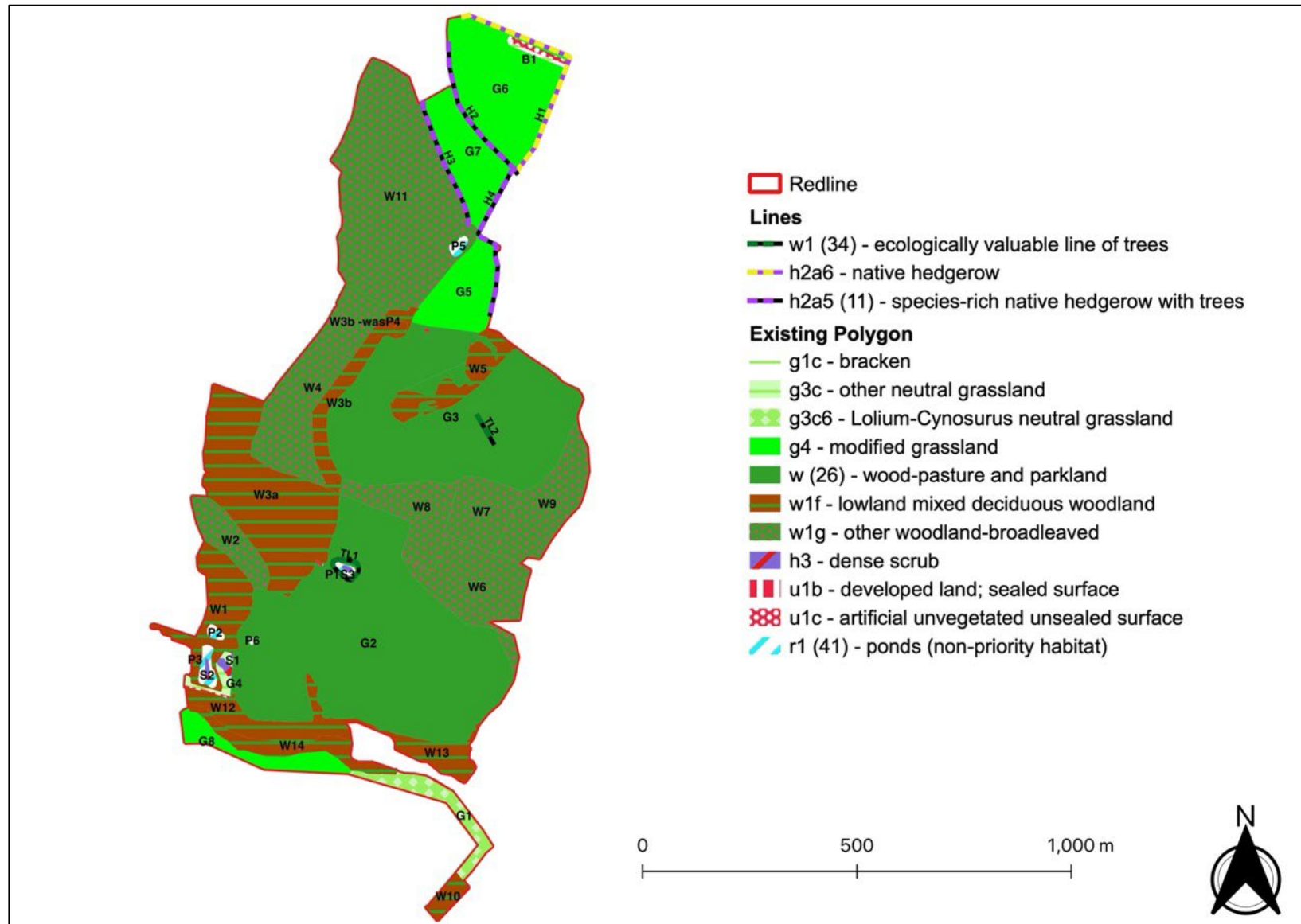


Figure 1. A UKHab map showing existing habitats within the site. The site boundary is indicated with a red line. Produced using QGIS software, version 3.28.5 – Firenze.