LUC

Woolbro Group and Morris Investment

Land West of Station Road, Lingfield
Biodiversity Net Gain
Feasibility Assessment

Final report
Prepared by LUC
July 2023

Woolbro Group and Morris Investment

Land West of Station Road, Lingfield
Biodiversity Net Gain Feasibility Assessment

Version	Status	Prepared	Checked	Approved	Date
1.	**First Issue**	T. Hicks	E. Moseley	E. Moseley	22.07.2022
2.	**Update to include offsite enhancement**	D. Green	D. Green	D. Green	07.07.2023

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EMS566057

bsi. OHSAS 18001 Occupational Health and Safety Management
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Contents

Chapter 1
Introduction

Project Background

1.1 In January 2022, LUC was commissioned by Woolbro Group and Morris Investment to undertake a Biodiversity Net Gain (BNG) Feasibility Assessment of land at the Land West of Station Road, Lingfield (hereafter referred to as 'the Site'). The Site boundary is shown in **Figure A.1, Appendix A**.

1.2 This report presents the results of the BNG feasibility assessment of the outline proposals and is intended to supplement the Ecological Appraisal[1] of the Site, which sets out measures to achieve BNG within the Site.

1.3 The development proposals include the provision of 99 homes with associated car parking, landscaping and ecological enhancements. An outline scheme is presented within **Appendix B: Landscape Strategy Plan**.

Purpose of this Assessment

1.4 In accordance with the National Planning Policy Framework (NPPF)[2] proposals should seek to demonstrate Biodiversity Net Gain (BNG). The NPPF states plans 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'.

1.5 The Environment Act 2021 sets out that a mandatory minimum biodiversity net gain of 10% will be required for all Town & Country Planning Act (TCPA) projects from winter 2023.

1.6 There is no existing requirement for BNG within the current Tandridge District Core Strategy[3], however this requirement is outlined within the emerging Our Local Plan 2033[4], which includes the following policy:

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[1] LUC (2022). *The Old Cottage, Lingfield. Ecological Appraisal.* LUC, London
[2] Ministry of Housing, Communities and Local Government (2021). *National Planning Policy Framework*. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2
[3] Tandridge District Council. *Tandridge District Core Strategy (adopted October 2008)*. Available at: https://www.tandridge.gov.uk/Planning-and-building/Planning-strategies-and-policies/Current-and-adopted-planning-policies/Core-strategy
[4] Tandridge District Council. *Our Local Plan: 2033 (emerging)*. Available at: https://www.tandridge.gov.uk/Planning-and-building/Planning-strategies-and-policies/Local-Plan-2033-emerging-planning-policies/Local-Plan-2033

Policy TLP35: Biodiversity, Ecology and Habitats

"…Proposals for development at any given site should ensure there is net gain in biodiversity…."

1.7 This assessment has examined baseline ecological information and current landscape proposals to identify the current BNG provision, any risk in achieving BNG and identify further actions required to secure BNG through the proposals.

1.8 Whilst the process of BNG does consider the Site's value to locally relevant protected species and nearby Designated Sites, potential impacts and planning requirements for these ecological receptors have been considered separately in the detailed Ecological Appraisal[1].

1.9 BNG data should be considered part of the iterative process of calculation and design alteration. This report provides an BNG feasibility assessment for design as of 22nd July 2022 (drawing number: 7324_100), therefore should not be considered valid for any subsequent design revisions.

1.10 This report has been prepared for the exclusivity of Woolbro Group and Morris Investment. No part of this report should be considered as legal advice.

Chapter 2
Methodology

Defra Biodiversity Metric 3.1

2.1   Calculations have been carried out in cognisance of Biodiversity Net Gain: Good Practice Principles for Development guidance[5] and BS 8683: Process for Designing and Implementing Biodiversity Net Gain[6]. Full calculations were undertaken through the Defra 3.1 Metric[7].

2.2   The metric approach is the established method for calculating BNG and provides a quantitative approach to losses and gains resulting from development or land management changes. The metric approach compares the pre-development baseline against the project proposals, accounting for any habitat loses, gains, impacts and enhancements.

2.3   BNG is being delivered within the red line boundary as indicated in the landscape proposals in **Appendix C, Figure 1,** and within two offsite areas located to the east of the Site and indicated within at **Tables C24 and C25 in Appendix B.**

2.4   Whilst the Defra Metric 3.1 is the default approach to calculating BNG, it should not be considered a complete tool in assessing BNG and therefore professional judgement has been used where appropriate. Where professional judgement has been used, this is outlined in the text and additional references, where required, are provided.

2.5   The BNG assessment has been carried out by Tom Hicks BSc Qualifying Member of CIEEM, David Green MCIEEM and Ella Moseley BSc MCIWEM CWEM C.Env.

Baseline Habitat Assessment

2.6   The Site was subject to an Extended Phase 1 Habitat Survey which included detailed mapping of habitats within the Site. The Extended Phase 1 Habitat Survey was carried out by Tom Hicks on 12th January 2022 and is reported on separately[1]. Weather conditions were sunny and cold.

2.1   To calculate the ecological baseline unit for the Site the following data and assessments were collated:

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[5] Baker J., Hoskins R. and Butterworth T. (2019). *Biodiversity Net Gain. Good practice principles for development: A practical guide*. Ciria, London.

[6] The British Standards Institute. (2021). *BS 8683: Process for designing and implementing biodiversity net gain – Specification*. BSI, London

[7] Natural England (2021). *Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide*. Natural England, York.

- Phase 1 Habitat classifications were converted to UK Habitat Classification Habitat types through the Metric 3.1 conversion tool and assigned a pre-set distinctiveness value, indicative of the inherent 'value' of these habitats.

- The area (hectares) of each habitat and length of linear habitats (km) within the application boundary was calculated from Phase 1 Habitat mapping using ESRI ArcMap. The Extended Phase 1 Habitat Map, including BNG parcels for habitat and linear features are presented in **Figures A.1** and **A.2**.

- Habitats were subject to a 'condition assessment'[8]. The 'condition' of the habitat is considered a measure of habitat quality and measures the 'working-order' against the optimal potential of habitat type. Assessment criteria cover broad habitat types therefore further clarification is provided and professional judgement used to assign condition where appropriate.

- Each habitat was subject to a Strategic Significance assessment based on its position within the landscape, this includes consideration of local plans, Supplementary Planning Documents and Guidance and local partnership publications to identify local priorities for targeting biodiversity.

- Baseline inputs (as detailed above) were entered into the Defra 3.1 Metric to calculate baseline 'biodiversity units' for the Site.

Proposed Development

2.2   The same process was repeated for the final proposals, as detailed below:

- The loss of baseline habitats (both polygon and linear data) was calculated by overlaying the footprint of the proposals onto the Phase 1 Habitat mapping using ESRI ArcMap. Using this method, the area of loss to each habitat block was determined.

- Proposals were reviewed to identify habitats created, retained and enhanced. Proposed habitats were subject to condition, connectivity and strategic significance assessments.

- Where a new habitat or existing habitat has been created or enhanced, additional consideration has been given towards the time taken for habitats to establish and reach target condition (temporal multiplier) and the

difficulty of habitat re-creation (difficulty multiplier). Both temporal and difficulty multipliers were taken from the Defra Technical Guidance and User Guide[7,8].

2.3   Collated data and assessments were entered into the Defra 3.1 Metric to calculate a biodiversity unit score for the proposal.

Data Summary and Discussion

2.4   The Defra 3.1 Metric presents a detailed summary of the resultant biodiversity unit change, separated by habitat type.

2.5   For terrestrial habitats, a single biodiversity unit change has been provided (i.e., the overall total). However, caution has been applied when interpreting this number. It is important to note that the process of BNG should considered habitat types in isolations, and any unit losses or grains should be considered in detail on a like-for-like basis for each habitat group / priority habitat type.

2.6   The discussion also considers the wider context of the planning application, surrounding landscape and socio-economic values of the development as well as considering how the development contributes towards nature conservation priorities at the local, regional and national levels. This approach is guided by Principles 6 and 9 of Biodiversity Net Gain Good Practice Principles[5].

Limitations

2.7   The Extended Phase 1 Habitat survey was undertaken outside the optimal season (April to September) for habitat surveys and many floral species will not have been in flower. However, given the common and widespread nature of the habitats present, this is unlikely to present a significant constraint to the survey. Furthermore, surveys undertaken by LUC in 2017[9] and 2020[10] recorded habitats and species consistent with the findings of this report.

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[8] Natural England (2021). B*iodiversity metric 3.1: Auditing and accounting for biodiversity – Technical Supplement. Natural England, York.*
[9] LUC (2017). *The Old Cottage, Lingfield. Ecological Appraisal.* LUC, London

[10] LUC (2020). *The Old Cottage, Lingfield. Ecological Appraisal.* LUC, London

Chapter 3
Biodiversity Net Gain Calculations

Baseline Assessment Inputs

All Habitats

3.1   The Site lies c. 50m west of a Biodiversity Opportunity Area (BOA). Therefore, Strategic Significance was fixed at Medium (Location ecologically desirable but not in local strategy) for all area and linear habitats which were considered likely to be used by mobile species of the BOA, including birds and bats.

Area Habitats

3.2   **Table 3.1** provides a summary of the baseline assessment inputs for area habitats. Full condition assessment proformas are provided within **Appendix C.**

Table 3.1: Summary of Baseline Assessment Inputs for Area Habitats

Polygon	Area (Ha)	JNCC Phase 1 Classification	UKHABS Classification	Condition	Proforma Table
1	0.55	Poor semi-improved neutral grassland	Modified Grassland	Poor	**C.2**
2	0.08	Dense Scrub	Mixed scrub	Moderate	**C.1**
3	0.08	Semi-natural Broadleaved Woodland	Lowland mixed deciduous woodland	Moderate	**C.5**
4	0.08	Hard standing	Developed land; sealed surface	N/A	**C.9**
5	0.01	Dense Scrub	Mixed scrub	Moderate	**C.1**
6	0.09	Dense Scrub	Mixed scrub	Good	**C.4**
7	0.05	Tall ruderal	Other neutral grassland	Poor	**C.6**
8	1.58	Poor semi-improved neutral grassland	Modified Grassland	Poor	**C.2**
9	0.05	Bare Ground	Vacant/derelict land/ bareground	Poor	**C.12**
10	0.18	Tall ruderal with scattered scrub	Other neutral grassland	Poor	**C.11**
11	0.14	Tall ruderal	Other neutral grassland	Poor	**C.7**
12	0.14	Dense Bracken	Bracken	N/A	**C.8**
13	3.18	Poor semi-improved neutral grassland	Modified Grassland	Poor	**C.3**
14	0.14	Tall ruderal	Other neutral grassland	Poor	**C.7**
T1	0.15	Scattered trees	Other woodland; broadleaved	Moderate	**C.10**
T2	0.06	Scattered trees	Other woodland; broadleaved	Moderate	**C.10**
T3	0.06	Scattered trees	Other woodland; broadleaved	Moderate	**C.10**

Hedgerow Habitats

3.3 **Table 3.2** provides a summary of the baseline assessment inputs for linear habitats. Full condition assessment proformas are provided within **Appendix C.**

Table 3.2: Summary of Baseline Assessment Inputs for Hedgerow Habitats

Line	Length (km)	JNCC Phase 1 Classification	UKHABS Classification	Condition	Proforma Table
1	0.05	Species-poor intact hedgerow	Native Hedgerow	Good	**C.13**
2	0.07	Species-poor intact hedgerow	Native Hedgerow	Good	**C.14**
3	0.06	Species-poor intact hedgerow	Native Hedgerow	Good	**C.15**
4	0.04	Species-poor intact hedgerow	Native Hedgerow	Moderate	**C.16**
5	0.17	Species-poor intact hedgerow	Native Hedgerow	Good	**C.14**
6	0.04	Species-poor defunct hedgerow	Native Hedgerow	Good	**C.17**
7	0.18	Species-poor intact hedgerow	Native hedgerow - associated with bank or ditch	Good	**C.18**
8	0.15	Dry ditch			
9	0.2	Species-poor intact hedgerow	Native Hedgerow	Good	**C.19**
10	0.02	Species-poor defunct hedgerow	Native Hedgerow	Poor	**C.20**
11	0.26	Species-poor intact hedgerow	Native hedgerow - associated with bank or ditch	Poor	**C.21**
12	0.11	Species-poor intact hedgerow	Native Hedgerow	Moderate	**C.22**
13	0.11	Species-poor intact hedgerow	Native Hedgerow	Good	**C.14**
14	0.04	Species-poor defunct hedgerow	Native Hedgerow	Poor	**C.20**
15	0.08	Species-poor intact hedgerow	Native Hedgerow	Moderate	**C.23**
16	0.05	Species-poor intact hedgerow	Native Hedgerow	Moderate	**C.24**

Proposal Assessment Inputs

3.4 Full calculations taken directly from the 3.1 Metric are provided in **Appendix D**. Results are outlined and discussed in detail below.

Retained Habitats

Area Habitats

3.5 The area habitats retained within the Site are summarised in **Tables 3.3**.

Table 3.3: Retained Area Habitats

Habitat Type	Baseline Area (ha)	Retained Area (ha)	% Retained
Other woodland; broadleaved (scattered trees)	0.27	0.27	100
Modified Grassland	5.31	0.00	0
Other neutral grassland	0.51	0.00	0
Mixed scrub	0.18	0.00	0

Habitat Type	Baseline Area (ha)	Retained Area (ha)	% Retained
Bracken	0.14	0.00	0
Developed land; sealed surface	0.08	0.01	0
Lowland mixed deciduous woodland	0.08	0.00	0
Vacant/derelict land/ bareground	0.05	0.00	0
Modified Grassland	5.31	0.00	0

Hedgerow Habitats

3.6 The hedgerow habitats retained within the Site are summarised in **Tables 3.3**

Table 3.4: Retained Hedgerow Habitats

Habitat Type	Baseline Length (km)	Retained Length (km)	% Retained
Native Hedgerow	1.04	0.58	56
Native hedgerow - associated with bank or ditch	0.44	0.12	27

Created Habitats

3.7 Habitats created on-site on detailed within **Table 3.15**.

Table 3.5: Created Habitats

Habitat Type	Created Area / Length	
	(ha)	(km)
Habitat		
Developed land; sealed surface	0.84	-
Developed land; sealed surface	2.38	-
Vegetated garden	1.01	-
Other neutral grassland	0.57	-
Other neutral grassland	1.17	-
Bioswale	0.08	-

Habitat Type	Created Area / Length	
	(ha)	(km)
Sustainable urban drainage feature	0.17	-
Urban Tree	0.28	-
Hedgerow		
Native hedgerow	-	0.17
Native hedgerow with trees	-	0.23

Area Habitats

3.8 The proposed development will include 3.39ha of private houses and gardens. This habitats are classified as Developed land; sealed surface habitat and Vegetated garden respectively. A condition assessment is Not Applicable for Developed land; sealed surface and fixed at Poor for Vegetated garden. A ratio of 70:30 was applied for private houses to gardens, resulting in 2.38ha of Developed land; sealed surface and 1.01ha of vegetated gardens.

3.9 The proposed development will also include 0.84ha of hardstanding roads, paths and a Local Equipped Area for Play (LEAP) which are classified as Developed land; sealed surface. A condition assessment is Not Applicable for this habitat.

3.10 0.57ha of neutral grassland will be created in the north of the Site. The grassland will be seeded with a hay meadow mix and managed sympathetically through infrequent mowing. It is expected that species rich sward will develop over time. This habitat parcel has a target condition of Good.

3.11 1.17ha of neutral grassland will be created around the peripheries of the Site. The grassland will be seeded with a hay meadow mix but managed for public amenity through frequent mowing. This habitat parcel has a target condition of Moderate.

3.12 A new attenuation basin and two swales will be constructed covering a total area of 0.17ha and 0.08ha respectively. These will be managed for wildlife benefit and therefore has a target condition of Good.

3.13 The proposals also include the provision of 70 urban trees which equates to 0.28ha using the Defra 3.1 Street Tree Helper. These trees will be managed with aesthetics in mind and will be degraded by disturbance and trampling and therefore has a target condition of Poor.

3.14 0.23km of native hedgerow will be planted around the peripheries of the Site. These hedgerows will be managed

sympathetically through an annual cut but will be subject to disturbance and limited in height and width. These hedgerows have a target condition of Moderate.

3.15 0.17km of native hedgerow with trees will be planted around the peripheries of the Site. These hedgerows will be managed sympathetically through an annual cut but will be subject to disturbance and limited in height and width. These hedgerows have a target condition of Moderate.

Enhanced Habitats

Area Habitats

3.16 The proposed on-site area habitats enhancements are detailed within **Table 3.6**.

Table 3.6: Enhanced Area Habitats

Baseline Habitat Type	Proposed Enhancement	Area (ha)
Mixed scrub	Enhanced condition	0.04
Lowland mixed deciduous woodland	Enhanced condition	0.08

3.17 Mixed scrub will be enhanced to Good condition through improved management including introducing a rotational cutting regime to create clearings.

3.18 Woodland will be enhanced to Good condition through laurel control, planting native shrub species, selective thinning of trees, creation of deadwood habitat and litter removal.

Hedgerow Habitats

3.19 The proposed on-site hedgerow habitats enhancements are detailed within **Table 3.7**.

Table 3.7: Enhanced Hedgerow Habitats

Baseline Habitat Type	Proposed Enhancement	Length (km)
Native Hedgerow	Enhanced condition	0.22
Native Hedgerow - Associated with bank or ditch	Enhanced condition	0.22

3.20 The proposals include the enhancement 0.44km of hedgerows in Good condition. This will be achieved by planting native hedgerow species to infill gaps, sowing a native hedgerow seed mix at its base and relaxing cutting This will decrease the number of gaps in the hedgerow and increase species diversity at the hedgerow base.

Chapter 4
Discussion

On-site Net Change Results

4.1   The mitigation and enhancement set out within this document includes the greatest possible on-site enhancement within the parameters of the outline application. The outcome of the on-site BNG assessment is:

- **A net gain** of 1.05 habitat units which is a **5.31% increase** from the baseline units.

- **A net gain** of 1.92 hedgerow units which is a **20.25% increase** from the baseline units.

4.2   The key influential factors to the BNG calculations for habitat units was the replacement of extensive areas of semi-improved grassland with built development and loss of hedgerows. Project wide unit changes for each habitat group are summarised in **Table 4.1**.

Table 4.1: Unit Change by Area Habitat Group

Habitat Group	Project Wide Unit Change
High Distinctiveness	
Woodland and forest	+0.09
Medium Distinctiveness	
Grassland	+10.57
Heathland and scrub	1.47
Urban	+0.86
Low Distinctiveness	
Grassland	11.99
Urban	+2.99

4.3   In addition, trading rules were not satisfied as summarised in **Table 4.2** below.

Table 4.2: Trading Summary

Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Bespoke compensation likely to be required	Yes
High	Same habitat required	Yes
Medium	Same broad habitat or a higher distinctiveness habitat required	No
Low	Same distinctiveness or better habitat required	Yes

4.4 Trading rules which are applied by the metric require that any loss of habitat is replaced on a 'like for like' or 'like for better' principle. The scheme is not satisfying the trading rules due to the loss of mixed scrub. Creation and/or enhancement of scrub, or a higher distinctiveness habitat, is required to satisfy the trading rules.

Achieving >10% Biodiversity Net Gain

4.5 It is not considered feasible to achieve BNG of over 10% within the current parameters of the outline application. Therefore, potential opportunities to provide BNG of over 10% include:

- **Scheme modification:** Decreasing housing density and associated hard standing whilst retaining a greater number of existing natural features for subsequent enhancement would result in significant improvement to the BNG assessment.

- **Off-site habitat creation and enhancement:** Creating or enhancing habitat outside of the application boundary is considered a viable route to achieving BNG. Target habitats should include grassland and woodland. This option is considered in more detail below and feasible options have been included in the updated Metric 3.1 in **Appendix D**.

- **Compensation through a habitat bank.** A financial contribution to a third party habitat bank / BNG provider could be considered.

Offsite Habitat Enhancement

4.6 Discussion within the project team has identified the following suitable parcels of land in close proximity to the Site where it is feasible to implement and secure ecological enhancement of existing habitat:

- Off-site woodland (0.46ha).

- Off-site grassland (0.19ha)

4.7 These land parcels are indicated alongside their corresponding condition assessments and photographs in **Appendix C: Offsite Habitat Enhancement Areas (Tables C24 and C25)**.

Ensuring Deliverance

4.8 To ensure BNG of >10% is delivered, it is required that habitat creation and enhancement measures (both on and offsite) are secured through an appropriate mechanism, such as a Section 106 and/or a Section 117 of the Environment Act (a conservation covenant). Any such agreement would be expected to include details of the following:

- Deliverance may be secured through a Construction and Environment Management Plan (CEMP), which will detail how the final landscaping and ecological enhancements will be delivered within the Site.

- Management may be secured through a development of Landscape and Ecology Management Plan (LEMP).

  - The LEMP should include specific measurable targets linked to target habitat condition.

  - Monitoring may be required as part of the LEMP to ensure that created and enhanced habitats are reaching their target condition.

Conclusion

4.9 When the proposed offsite habitat enhancements are included, the overall change in BNG is:

- **A net gain of 2.18 habitat units which is a 11.04% increase from the baseline units.**

- **A net gain of 1.92 hedgerow units which is a 20.25% increase from the baseline units.**
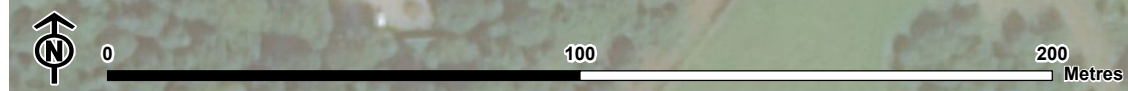
Appendix A

Phase 1 Habitat Survey with Polygon and Line References

- **Figure A.1: Phase 1 Habitat Survey (area habitats)**
- **Figure A.2: Phase 1 Habitat Survey (linear habitats)**

Land West of Station Road, Lingfield
Woolbro Group and Morris Investment

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Figure A.1: Phase 1 Habitat Survey (area habitats)

Site boundary

Phase 1 habitat

- Scattered trees
- A1.1 Semi-natural broadleaved woodland
- A2.1 Dense scrub
- B6 Poor semi-improved neutral grassland
- C1.1 Dense bracken
- C3.1 Tall ruderal
- C3.1 Tall ruderal/A2.2 scattered scrub
- J4 Bare ground
- Hard standing

Map scale 1:1,600 @ A3

0   100   200
Metres

WOOLBRO MORRIS

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CB:VG EB:llott_J LUC FIGA1_11169_r0_Phase1_area_202201261 03/03/2022
Source: LUC

Figure A.2: Phase 1 Habitat Survey (linear habitats)

Legend

Site boundary

Phase 1 linear feature

J2.6 Dry ditch

J2.2.2 Species-poor defunct hedgerow

J2.1.2 Species-poor intact hedgerow

Map scale 1:1,600 @ A3

Appendix B
Landscape Strategy Plan

LEGEND

▬▬▬	Site boundary
■	Existing vegetation retained
▬▬	Existing hedgerow retained
●	Proposed tree (indicative)
▪▪▪▪	Existing footpath
■	Indicative SUDS with wet wildflower planting
⬭	Indicative LEAP location
■	Public open space
■	Wildflower planting with mown paths as appropriate
▪▪▪	Proposed footpath
■	Development parcels (including private gardens)
⬬	Proposed hedgerow planting

Continuation of tree avenue planting provides legibility and allows views over footpath and public open space

Tree avenue continues to Northern parcel providing legibility

Swale areas with marginal planting contributing to biodiversity

Avenue of trees framing views to church

'Village green' More formal green area framed with planting

Avenue planting framing views to Oasthouse

Parkland planting drawing Lingfield Park into site

Retention of existing boundary hedgerows and enhancement with new planting where required

SUDS attenuation basin with appropriate wet / marginal planting contributing to biodiversity

A	Layout updates	BC	30/06/2022
REV.	DESCRIPTION	APP.	DATE

LDA DESIGN

PROJECT TITLE
LAND AT THE OLD COTTAGE, STATION ROAD, LINGFIELD

DRAWING TITLE
Landscape Strategy Plan

ISSUED BY	Oxford	T: 01865 887 050	
DATE	June 2022	DRAWN	TB
SCALE@A3	1:2,000	CHECKED	BC
STATUS	Final	APPROVED	BC

DWG. NO 7324_100

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.

© LDA Design Consulting Ltd. Quality Assured to BS EN ISO 9001 : 2015

Sources Ordnance Survey

0 ▬▬▬▬▬ 100m

North

Appendix C

Baseline Condition Assessment Proformas

Area Habitats

Table C.1: Dense Scrub (Parcels 2 and 5)

JNCC PH1 Classification	A2.1 Dense scrub		Distinctiveness	Medium
UKHABS Classification	Heathland and shrub - Mixed scrub		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Scrub		Area	2 – 0.08Ha 5 – 0.01Ha
Limitations	None		Polygon	2, 5
Habitat Description	Dense scrub dominated by blackthorn reaching c.4m in height. Hawthorn also present frequently.			
Criterion	Condition Assessment Criteria		Result	Rationale
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).		Pass	Diverse range of species noted.
2	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.		Pass	Varied age range noted.
3	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.		Pass	No INNS or undesirable species noted.
4	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).		Pass	There was developed edge albeit limited in extent.
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.		Fail	Scrub dense with no clearings, glades or rides.
Are any criteria non negotiable? (Y/N)	N	Total		4 of 5
If Yes are they passed?	n/a	Condition		Moderate
Suggested enhancement interventions to improve condition score	Increase edge extent and allow grass to grow longer. Introduce a rotational cutting regime to create clearings.			

Table C.2: Poor semi-improved neutral grassland (Parcels 1 and 8)

JNCC PH1 Classification	B6 Poor semi-improved neutral grassland		Distinctiveness	Low
UKHABS Classification	Grassland – Modified Grassland		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (low distinctiveness)		Area (Ha)	1 – 0.55 8 – 1.58
Limitations	None		Polygon	1, 8
Habitat Description	Dominant species include Yorkshire fog, cock's-foot, perennial rye-grass, meadow foxtail and rough meadow-grass. False-oat grass was recorded as being locally frequent. In general the grassland was structurally poor, lacking diversity in the sward height, and it is likely that historically it has been regularly managed through mowing and grazing. The sward was also noticeably poor in terms of herb diversity with species being restricted to those associated with improved grasslands, including frequent creeping buttercup, common sorrel and dandelion, and occasional broad-leaved dock and creeping thistle.			

Criterion	Condition Assessment Criteria	Result	Rationale
1	There must be 6-8 species per m². If a grassland has 9 or more species per m² it should be classified as a moderate distinctiveness grassland habitat type. **NB - this criterion is non-negotiable for achieving moderate condition.**	Fail	Less than 6 species per m².
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass	Sward height was slightly varied.
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass	Scrub present but mapped in distinct polygon.
4	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	Pass	No damage noted.
5	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail	No bare ground noted.
6	Cover of bracken less than 20%.	Pass	No bracken noted.
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Pass	Broad-leaved dock and creeping thistle occasional but less than 5%

Are any criteria non negotiable? (Y/N)	Yes	Total	5 of 7
If Yes are they passed?	No	Condition	Poor
Suggested enhancement interventions to improve condition score	Mowing regime could be relaxed to allow a more diverse community to establish. Localised areas of bare ground could be created using hand tools.		

Table C.3: Poor semi-improved neutral grassland (Polygon 13)

JNCC PH1 Classification	B6 Poor semi-improved neutral grassland	Distinctiveness	Low
UKHABS Classification	Grassland – Modified Grassland	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (low distinctiveness)	Area (Ha)	3.18
Limitations	None	Polygon	13
Habitat Description	Species-poor semi-improved neutral grassland as per parcels 1 and 8 but with addition of localised patches dominated by false-oat grass beginning to succeed towards a more rank and structurally diverse sward in the centre of the Site.		

Criterion	Condition Assessment Criteria	Result	Rationale
1	There must be 6-8 species per m². If a grassland has 9 or more species per m² it should be classified as a moderate distinctiveness grassland habitat type. **NB - this criterion is non-negotiable for achieving moderate condition.**	Fail	Less than 6 species per m².
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass	Sward height was moderately varied.
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass	Scrub present but mapped in distinct polygon.
4	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	Pass	No damage noted.
5	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass	Bare ground c.1% due to rabbit warrens and moles.
6	Cover of bracken less than 20%.	Pass	No bracken noted.
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Pass	Broad-leaved dock and creeping thistle occasional but less than 5%

Are any criteria non negotiable? (Y/N)	Yes	Total	**6 of 7**
If Yes are they passed?	**No**	Condition	**Poor**
Suggested enhancement interventions to improve condition score	Mowing regime could be relaxed to allow a more diverse community to establish. Localised areas of bare ground could be created using hand tools.		

Table C.4: Dense Scrub (Polygon 6)

JNCC PH1 Classification	A2.1 Dense scrub		Distinctiveness	Medium
UKHABS Classification	Heathland and shrub - Mixed scrub		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Scrub		Area (Ha)	0.09
Limitations	None		Polygon	6
Habitat Description	Dense scrub dominated by blackthorn and hawthorn.			

Criterion	Condition Assessment Criteria		Result	Rationale
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).		Pass	Blackthorn, hawthorn and bramble noted.
2	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.		Pass	Varied age range noted.
3	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.		Pass	No INNS or undesirable species noted.
4	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).		Pass	Edge well developed.
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.		Pass	Small ride along western edge of scrub.
Are any criteria non negotiable? (Y/N)	N	Total	5 of 5	
If Yes are they passed?	n/a	Condition	Good	
Suggested enhancement interventions to improve condition score	Introduce a rotational cutting regime to create clearings and increase diversity.			

Table C.5: Semi-natural Broadleaved Woodland (Polygon 3)

JNCC PH1 Classification	A1.1 Semi-natural broadleaved woodland	Distinctiveness	High
UKHABS Classification	Woodland and forest - Lowland mixed deciduous woodland	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Woodland	Area (Ha)	0.08
Limitations	None	Polygon	3
Habitat Description	Canopy dominated by oak with occasional ash. Scrub layer comprised abundant hazel, frequent bramble and rarely laurel. Ground flora included abundant ivy and common nettle with rarely fern.		

Criterion	Indicator	Condition Description	Score	Rationale
1	Age distribution of trees	Three age classes present	Good (3 points)	-
2	Wild, domestic and feral herbivore damage	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Moderate (2 points)	Browsing pressure significant in around 30% of woodland
3	Invasive plant species	Rhododendron or laurel present, or other invasive species > 10% cover	Poor (1 point)	Laurel present.
4	Number of native tree species	Three to four native tree or shrub species found across woodland parcel	Moderate (2 points)	Three native species noted.
5	Cover of native tree and shrub species	> 80% of canopy trees and >80% of understory shrubs are native	Good (3 points)	Only a very small amount of laurel noted.
6	Open space within woodland	21- 40% of woodland has areas of temporary open space	Moderate (2 points)	Historic pond is open and accounts for around 30%
7	Woodland regeneration	All three classes present in woodland; trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	Good (3 points)	-
8	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback	Good (3 points)	Only minor amount of tree mortality
9	Vegetation and ground flora	No recognisable NVC community	Poor (1 point)	Poor ground flora assemblage
10	Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland	Good (3 points)	-
11	Veteran trees	No veteran trees present in woodland	Poor (1 point)	Mature trees present but no veterans.
12	Amount of deadwood	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Poor (1 point)	Deadwood very limited
13	Woodland disturbance	More than 1 ha of nutrient enrichment and/or more than 20% of woodland area has damaged ground	Poor (1 point)	High levels of enrichment and litter recorded.

Are any criteria non negotiable? (Y/N)	N	Total	**26 of 39**
If Yes are they passed?	n/a	Condition	**Moderate**
Suggested enhancement interventions to improve condition score	Control laurel. Plant native shrub. Selective thinning of trees. Creation of deadwood habitat. Litter removal.		

Table C.6: Tall Ruderal (Polygon 7)

JNCC PH1 Classification	C3.1 Tall ruderal		Distinctiveness	Medium
UKHABS Classification	Other neutral grassland		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (medium, high & very high distinctiveness)		Area (Ha)	0.05
Limitations	None		Polygon	7
Habitat Description	Fringing interface between the taller scrub and grassland dominated common nettle.			

Criterion	Condition Assessment Criteria	Result	Rationale
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Fail	Homogenous stand of common nettle
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	Sward height was all higher than 7cm
3	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail	No bare ground noted
4	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass	Scrub adjacent but mapped separately
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Fail	Dominated by common nettle

Are any criteria non negotiable? (Y/N)	No	Total	1 of 5
If Yes are they passed?	N/A	Condition	Poor
Suggested enhancement interventions to improve condition score	Diversify species through planting and control of common nettle. Introduce rotational cutting regime to diversify vegetation structure.		

Table C.7: Tall Ruderal (Parcels 11 and 14)

JNCC PH1 Classification	C3.1 Tall ruderal		Distinctiveness	Medium
UKHABS Classification	Other neutral grassland		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (medium, high & very high distinctiveness)		Area (Ha)	11 – 0.14 14 – 0.14
Limitations	None		Polygon	11 and 14
Habitat Description	Dense bracken and common nettle.			
Criterion	Condition Assessment Criteria		Result	Rationale
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.		Fail	Dense stand of common nettle and bracken.
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.		Fail	Sward height was all higher than 7cm
3	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.		Fail	No bare ground noted
4	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.		Fail	More than 20% cover of bracken
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.		Fail	Dominated by common nettle
Are any criteria non negotiable? (Y/N)	No	**Total**	**0 of 5**	
If Yes are they passed?	N/A	**Condition**	**Poor**	
Suggested enhancement interventions to improve condition score	Diversify species through planting. Control of common nettle and bracken. Introduce rotational cutting regime to diversify vegetation structure.			

Table C.8: Dense Bracken (Polygon 12)

JNCC PH1 Classification	C1.1 Dense bracken	Distinctiveness	Medium
UKHABS Classification	Grassland - Bracken	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	No assessment required - condition N/A	Area (Ha)	0.14
Limitations	None	Polygon	12
Habitat Description	Dense bracken	**Condition**	**N/A**
Suggested enhancement interventions to improve condition score	Introduce rotational cutting regime to diversify vegetation structure and diversity		

Table C.9: Hardstanding

JNCC PH1 Classification	Hardstanding	Distinctiveness	Very low
UKHABS Classification	Urban - Developed land; sealed surface	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	No assessment required - condition N/A	Area (Ha)	0.08
Limitations	None	Polygon	4
Habitat Description	Hardstanding PRoW	**Condition**	**N/A**
Suggested enhancement interventions to improve condition score	N/A		

Table C.10: Scattered Trees (T1, T2 and T3)

JNCC PH1 Classification	Scattered trees	Distinctiveness	High
UKHABS Classification	Other woodland; broadleaved	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Not appropriate condition sheet. Fixed at 'Moderate'	Area (Ha)	T1 - 0.15[11] T2 - 0.06 T3 - 0.06
Limitations	None	Polygon	3
Habitat Description	T1 - Two oak and one ash tree on the south eastern site boundary. T2 - Two crack willow and one blackthorn trees on eastern boundary. T3 – Two oak trees on southern boundary.	**Condition**	**Moderate**
Suggested enhancement interventions to improve condition score	N/A		

[11] Calculated using RPA within the Site Boundary. Measured from: Tree Constraints Plan produced by SJA Trees. Drawing number: SJA TCP 21673-011. January 2022.

Table C.11: Tall Ruderal with Scattered Scrub (Polygon 10)

JNCC PH1 Classification	C3.1 Tall ruderal/A2.2 scattered scrub	Distinctiveness	Medium
UKHABS Classification	Other neutral grassland	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (medium, high & very high distinctiveness)	Area (Ha)	0.18
Limitations	None	Polygon	10
Habitat Description	Tall ruderal vegetation and scattered bramble scrub.		

Criterion	Condition Assessment Criteria	Result	Rationale
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Fail	Historically likely to resemble UKHab description but tall ruderal now abundant.
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass	Sward height varied
3	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass	Rabbits and moles have created areas of localised bare ground.
4	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Fail	Scrub cover more than 5%
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Fail	Common nettle cover more than 5%.

Are any criteria non negotiable? (Y/N)	No	Total	2 of 5
If Yes are they passed?	N/A	Condition	Poor
Suggested enhancement interventions to improve condition score	Reduce cover of common nettle. Good opportunity for reptile receptor area.		

Table C.12: Bare Ground (Polygon 9)

JNCC PH1 Classification	J4 Bare ground		Distinctiveness	Low
UKHABS Classification	Urban - Vacant/derelict land/ bareground		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (medium, high & very high distinctiveness)		Area (Ha)	0.05
Limitations	None		Polygon	9
Habitat Description	Bare ground used for storage.			

Criterion	Condition Assessment Criteria	Result	Rationale
1	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	Fail	No vegetation recorded
2	There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. **NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife).**	Fail	As above
3	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. **NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).**	Pass	No INNS recorded.

Are any criteria non negotiable? (Y/N)	Yes	**Total**	**1 of 3**
If Yes are they passed?	No	**Condition**	**Poor**
Suggested enhancement interventions to improve condition score	Opportuntiy to create new habitat. Recommend species rich grassland.		

Linear Features

Table C.13: Species-poor defunct hedgerow (Line 1)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow	Distinctiveness	Low
UKHABS Classification	Native Hedgerow	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow	Length (km)	0.05
Limitations	None	Line	1
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.		
Criterion	Condition Assessment Criteria	Result	Rationale
A1. Height	>1.5 m average along length	Pass	-
A2. Width	>1.5 m average along length	Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass	Common nettle and cleavers present but <20%
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Pass	-
Are any criteria non negotiable? (Y/N)	No	**Condition**	Good
If Yes are they passed?	N/A		
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider.		

Table C.14: Species-poor defunct hedgerow (Lines 2, 5 and 13)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow		Distinctiveness	Low
UKHABS Classification	Native Hedgerow		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow		Length (km)	2 - 0.07 5 – 0.17 13 – 0.11
Limitations	None		Line	2, 5, 13
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.			
Criterion	Condition Assessment Criteria		Result	Rationale
A1. Height	>1.5 m average along length		Pass	-
A2. Width	>1.5 m average along length		Pass	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')		Pass	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m		Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)		Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground		Pass	-
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species		Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities		Pass	-
Are any criteria non negotiable? (Y/N)	No		**Condition**	Good
If Yes are they passed?	N/A			
Suggested enhancement interventions to improve condition score	N/A			

Table C.15: Species-poor defunct hedgerow (Line 3)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow	Distinctiveness	Low
UKHABS Classification	Native Hedgerow	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow	Length (km)	0.06
Limitations	None	Line	3
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.		
Criterion	Condition Assessment Criteria	Result	Rationale
A1. Height	>1.5 m average along length	Pass	-
A2. Width	>1.5 m average along length	Fail	Hedge was 1m wide
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Fail	Gaps >0.5m for 50% of length
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass	Common nettle, dock and cleavers present but <20%
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Pass	-
Are any criteria non negotiable? (Y/N)	No	**Condition**	Good
If Yes are they passed?	N/A		
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider. Underplant hedgerow or improve cutting management.		

Table C.16: Species-poor defunct hedgerow (Line 4)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow	Distinctiveness	Low
UKHABS Classification	Native Hedgerow	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow	Length (km)	0.04
Limitations	None	Line	4
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.		
Criterion	Condition Assessment Criteria	Result	Rationale
A1. Height	>1.5 m average along length	Pass	-
A2. Width	>1.5 m average along length	Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass	
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Fail	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Fail	Abundant common nettle.
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail	Frequent litter and damage from foot traffic (cut through).
Are any criteria non negotiable? (Y/N)	No	**Condition**	Moderate
If Yes are they passed?	N/A		
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider. In plant gaps. Control common nettle. Litter management and in plant cut through.		

Table C.17: Species-poor defunct hedgerow (Line 6)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow	Distinctiveness	Low
UKHABS Classification	Native Hedgerow	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow	Length (km)	0.04
Limitations	None	Line	6
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.		
Criterion	Condition Assessment Criteria	Result	Rationale
A1. Height	>1.5 m average along length	Pass	-
A2. Width	>1.5 m average along length	Pass	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Fail	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass	
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Pass	-
Are any criteria non negotiable? (Y/N)	No	**Condition**	Good
If Yes are they passed?	N/A		
Suggested enhancement interventions to improve condition score	In plant gaps in hedgerow.		

Table C.18: J2.2.2 Species-poor defunct hedgerow with J2.6 Dry ditch (Lines 7 and 8)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow J2.6 Dry ditch	Distinctiveness	Medium
UKHABS Classification	Native hedgerow - associated with bank or ditch	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow	Length (km)	0.18
Limitations	None	Line	7
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak. This hedgerow also included a dry ditch and was bordered by a fringe of tall ruderal habitat and localised areas of rank grassland. This hedgerow was approximately 2.5m in height and 2m in width.		

Criterion	Condition Assessment Criteria	Result	Rationale
A1. Height	>1.5 m average along length	Pass	-
A2. Width	>1.5 m average along length	Pass	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Fail	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass	-
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Pass	-

Are any criteria non negotiable? (Y/N)	No	Condition	Good
If Yes are they passed?	N/A		
Suggested enhancement interventions to improve condition score	Underplant hedgerow or improve cutting management. Ditch could be restored and enhanced.		

Table C.19: Species-poor defunct hedgerow (Line 9)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow	Distinctiveness	Low
UKHABS Classification	Native Hedgerow	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow	Length (km)	0.20
Limitations	None	Line	9
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.		

Criterion	Condition Assessment Criteria	Result	Rationale
A1. Height	>1.5 m average along length	Pass	-
A2. Width	>1.5 m average along length	Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass	-
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail	Disturbed and damage caused by adjacent residential gardens.

Are any criteria non negotiable? (Y/N)	No	**Condition**	Good
If Yes are they passed?	N/A		
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider.		

Table C.20: Species-poor defunct hedgerow (Lines 10 and 14)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow		Distinctiveness	Low
UKHABS Classification	Native Hedgerow		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow		Length (km)	10 – 0.02 14 – 0.04
Limitations	None		Line	10 and 14
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.			
Criterion	Condition Assessment Criteria		Result	Rationale
A1. Height	>1.5 m average along length		Fail	-
A2. Width	>1.5 m average along length		Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')		Fail	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m		Fail	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)		Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground		Pass	
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species		Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities		Pass	-
Are any criteria non negotiable? (Y/N)	No		**Condition**	Poor
If Yes are they passed?	N/A			
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider and taller. Underplant hedgerow or improve cutting management. In plant gaps in hedgerow.			

Table C.21: Species-poor defunct hedgerow (Line 11)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow		Distinctiveness	Medium
UKHABS Classification	Native hedgerow - associated with bank or ditch		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow		Length (km)	0.26
Limitations	None		Line	11
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.			
Criterion	Condition Assessment Criteria	Result	Rationale	
A1. Height	>1.5 m average along length	Fail	-	
A2. Width	>1.5 m average along length	Fail	-	
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Fail	-	
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Fail	-	
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)	Pass	-	
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass	-	
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass	-	
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Pass	-	
Are any criteria non negotiable? (Y/N)	No	Condition	Poor	
If Yes are they passed?	N/A			
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider and taller. Underplant hedgerow or improve cutting management. In plant gaps in hedgerow.			

Table C.22: Species-poor defunct hedgerow (Line 12)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow		Distinctiveness	Low
UKHABS Classification	Native Hedgerow		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow		Length (km)	0.11
Limitations	None		Line	12
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak._This hedgerow was more intensively managed by comparison and lacked structural diversity, being approximately 1m high by 0.5m wide, and supporting a relatively sparse growth structure.			
Criterion	Condition Assessment Criteria		Result	Rationale
A1. Height	>1.5 m average along length		Fail	-
A2. Width	>1.5 m average along length		Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')		Pass	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m		Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length:_Measured from outer edge of hedgerow; and_Is present on one side of the hedge (at least)		Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground		Pass	
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species		Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities		Pass	-
Are any criteria non negotiable? (Y/N)	No		**Condition**	Moderate
If Yes are they passed?	N/A			
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider and taller.			

Table C.23: Species-poor defunct hedgerow (Line 15)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow		Distinctiveness	Low
UKHABS Classification	Native Hedgerow		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow		Length (km)	0.08
Limitations	None		Line	15
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.			
Criterion	Condition Assessment Criteria		Result	Rationale
A1. Height	>1.5 m average along length		Fail	-
A2. Width	>1.5 m average along length		Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')		Fail	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m		Pass	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)		Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground		Pass	
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species		Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities		Pass	-
Are any criteria non negotiable? (Y/N)	No	**Condition**	Moderate	
If Yes are they passed?	N/A			
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider and taller. Underplant hedgerow or improve cutting management.			

Table C.24: Species-poor defunct hedgerow (Line 16)

JNCC PH1 Classification	J2.2.2 Species-poor defunct hedgerow		Distinctiveness	Low
UKHABS Classification	Native Hedgerow		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Hedgerow		Length (km)	0.08
Limitations	None		Line	15
Habitat Description	Hedgerows were typically dominated by hazel with abundant bramble, hawthorn, and blackthorn. Occasional to frequently occurring species included sycamore, honeysuckle, yew, privet and oak.			
Criterion	Condition Assessment Criteria		Result	Rationale
A1. Height	>1.5 m average along length		Fail	50% of hedgerow gappy bramble scrub.
A2. Width	>1.5 m average along length		Fail	-
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')		Pass	-
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m		Fail	-
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedge (at least)		Pass	-
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground		Pass	
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species		Pass	-
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities		Pass	-
Are any criteria non negotiable? (Y/N)	No		**Condition**	Moderate
If Yes are they passed?	N/A			
Suggested enhancement interventions to improve condition score	Hedgerow could be allowed to grow wider and taller. In plant gaps in hedgerow.			

Offsite Habitat Enhancement Areas – Baseline Condition Assessment

Table C24: Offsite Woodland

JNCC PH1 Classification	A1.1 Semi-natural broadleaved woodland	Distinctiveness	High
UKHABS Classification	Woodland and forest - Lowland mixed deciduous woodland	Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Woodland	Area (Ha)	0.46
Limitations	None	Polygon	n/a (see below for area plan)
Habitat Description	Semi-natural broadleaved woodland dominated by Ash with frequent beech, pedunculate oak and Norway maple, plus occasional wild cherry, sycamore and broad leaved lime. Understory shrub layer included frequent hazel and occasional hawthorn but was dominated by extensive swathes of mature Rhododendron and snowberry. The ground flora was largely diminished by the effects of introduced species and dumping of litter and garden waste but in several areas it supported a carpet of wild garlic. Deer browsing damage noted and natural regeneration was limited primarily to self-seeded ash and sycamore.		

Criterion	Indicator	Condition Description	Score	Rationale
1	Age distribution of trees	Two age classes present	Moderate (2 points)	
2	Wild, domestic and feral herbivore damage	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Moderate (2 points)	Browsing pressure recorded in around 30% of woodland
3	Invasive plant species	Rhododendron or laurel present, or other invasive species > 10% cover	Poor (1 point)	Rhododendron present.
4	Number of native tree species	Three to four native tree or shrub species found across woodland parcel	Moderate (2 points)	Three native species noted.
5	Cover of native tree and shrub species	> 80% of canopy trees and >80% of understory shrubs are native	Poor (1 point)	Large proportion of non-native shrubs
6	Open space within woodland	21- 40% of woodland has areas of temporary open space	Moderate (2 points)	
7	Woodland regeneration	All three classes present in woodland; trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	Moderate (2 points)	-
8	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback	Moderate (2 points)	Only minor amount of tree mortality
9	Vegetation and ground flora	No recognisable NVC community	Good (3 points)	Recognisable NVC ground flora dominated by wild garlic
10	Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland	Moderate (2 points)	-
11	Veteran trees	No veteran trees present in woodland	Poor (1 point)	Mature trees present but no veterans.
12	Amount of deadwood	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Poor (1 point)	Deadwood very limited

13	Woodland disturbance	More than 1 ha of nutrient enrichment and/or more than 20% of woodland area has damaged ground	Poor (1 point)	High levels of enrichment and litter recorded.
Are any criteria non negotiable? (Y/N)		N	**Total**	**23 of 39**
If Yes are they passed?		n/a	**Condition**	**Poor**
Suggested enhancement interventions to improve condition score		Removal of invasive species including Rhododendron and snowberry. Removal of waste piles. Plant native shrub layer. Selective thinning of trees. Creation of deadwood habitat.		

Area proposed for offsite woodland enhancement

photo 1: offsite woodland proposed for enhancement

Table C25: Offsite Grassland

JNCC PH1 Classification	B6 Poor semi-improved neutral grassland		Distinctiveness	Low
UKHABS Classification	Grassland – Modified Grassland		Strategic Significance	Location ecologically desirable but not in local strategy
Condition Sheet	Grassland Habitat Type (low distinctiveness)		Area (Ha)	0.19
Limitations	None		Polygon	N/a (see plan below)
Habitat Description	Species-poor semi-improved neutral grassland. Regularly mown for private amenity use. Dominated by perennial ryegrass and/or red fescue with locally dominant sweet vernal grass and rough meadowgrass. Herbs included frequent creeping buttercup, ribwort plantain, common cat's ear, creeping thistle, ragwort, mouse-ear chickweed, lesser stitchwort. Species diversity within a given M^2 generally below 6 across entire area, albeit localised patches occur where diversity is greater.			

Criterion	Condition Assessment Criteria	Result	Rationale
1	There must be 6-8 species per m^2. If a grassland has 9 or more species per m^2 it should be classified as a moderate distinctiveness grassland habitat type. **NB - this criterion is non-negotiable for achieving moderate condition.**	Fail	Less than 6 species per m^2 as average across grassland parcel.
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail	Sward height was moderately varied.
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass	Scrub absent
4	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	Pass	No damage noted.
5	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass	Bare ground c.1%
6	Cover of bracken less than 20%.	Pass	No bracken noted.
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Pass	creeping thistle and ragwort present at c.5% but mowing prevents accurate estimate.

Are any criteria non negotiable? (Y/N)	Yes	Total	**5 of 7**
If Yes are they passed?	**No**	Condition	**Poor**
Suggested enhancement interventions to improve condition score	Mowing regime could be relaxed and alternated to allow a more diverse sward and floristic community to establish. Plus introduction of yellow rattle to control grass dominance. Plus scarification and seeding with appropriate lowland meadow mix.		

Area proposed for offsite grassland enhancement:

Photo 2: Off-site grassland proposed for enhancement

Appendix D

The Biodiversity Metric 3.1 Output

Please note that the original Excel document will be provided to the planning authority separately.