LIZARD
Landscape Design and Ecology

BIODIVERSITY NET GAIN STATEMENT

The Pavilion, Mackley Field, Small Dole

On behalf of: Hopegar Properties Ltd

Client:	Hopegar Properties Ltd			
Project:	The Pavilion, Mackley Field, Small Dole			
Reference:	LLD2983-ECO-REP-002-00-BNG			
Revision:	**Date:**	**Author**	**Proof**	**Approved**
00	28/11/2024	Will Mills ACIEEM MSci (Hons)	Catherine O'Reilly MCIEEM	Catherine O'Reilly MCIEEM

Disclaimer:

The information provided within this report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

This report is intended for the sole use of the Client and their agents in accordance with the agreement under which our services were performed. Unauthorised communication, reproduction or usage of this report by any party other than the aforementioned is prohibited. No liability is accepted by Lizard Landscape Design and Ecology for any use of this report, other than for the purposes for which it was originally prepared and provided. This report does not constitute legal advice. No warranty, express or implied, is made as to the advice in this report or any other service provided by us.

Validity:

This report is valid for 18 months from the date of the final survey visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, to inform whether surveys should be updated.

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. office@lizardlandscape.co.uk W. lizardlandscapeecology.com

Contents

		Page No.
1.0	Introduction	01
2.0	Methodology	02
3.0	Results	04
4.0	Conclusion	07
5.0	References	08

FIGURES

Figure No.01 – Baseline Habitat Plan

Figure No.02 – Proposed Habitat Plan

APPENDICES

Appendix A – Condition Assessment for Existing Habitats

Appendix B – Target Condition Assessment for Proposed and Enhanced Habitats

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. office@lizardlandscape.co.uk W. lizardlandscapeecology.com

1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology has been commissioned to provide a Biodiversity Net Gain Statement for The Pavilion, Mackley Field, Small Dole. This report has been written with due regard to best practice guidance for ecological report writing (CIEEM, 2017) and the Biodiversity Net Gain: Good Practice Principles for Development (CIEEM, 2019) and the Biodiversity Net Gain User Guide (DEFRA, 2023).

1.2 The development does not appear to qualify under any exemption and will therefore be subject to the standard Biodiversity Gain condition.

Site Overview

1.3 The survey area covers c. 0.08 Ha of existing buildings, grassland and footpath located within Mackley Field. The site is bound to the north by modified grassland, the west by residential properties, and east by a small pocket of deciduous woodland and industrial buildings to the south.

Surrounding Landscape

1.4 The surrounding landscape is semi-rural in nature, consisting of a matrix of residential buildings, arable fields, farm and patches of woodland interspersed by hedgerows, streams and ponds/lakes.

Development Proposals

1.5 It is understood that the proposals include the demolition of the existing building on site and the construction of a new community building with a small associated parking area.

2.0 METHODOLOGY

2.1 Assigning Strategic Significance

2.1.1 Due to the lack of Local Nature Recovery Strategy (LNRS) within East Sussex, strategic significance has been assessed as per table 8 of the User Guide (DEFRA, 2023). This included assessing whether the site was located within a Biodiversity Opportunity Area (BOA) or Area of Outstanding Natural Beauty (AONB), as well as examining the local plan for any specific targets regarding creation or retention of certain habitat types.

2.1.2 Where sites were found to be located within any designated area, such as an AONB, policy statement and management plans for the relevant area were examined. High strategic significance was then assigned to any habitat identified as a priority within these documents.

2.1.3 For any sites not located within a designated area, habitats were generally assigned low strategic significance, unless they were considered to provide important ecological linkages in which case they were assigned medium strategic significance.

2.2 Biodiversity Net Gain Assessment

2.2.1 A baseline habitat assessment in accordance with the UK Habitats Classification Manual (UKHabs Ltd., 2023) was undertaken on the 19th of July 2023 by Will Mills ACIEEM. Given the small size of the site and low ecological value of the existing habitats on site an updated site visit was not deemed necessary. Therefore, the baseline data is considered to be an accurate reflection of the ecological value of the site.

2.2.2 All area based and linear habitats were mapped on site with the aid of aerial imagery and topographical survey where available. The condition of habitats was assessed in accordance with *The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology* (DEFRA, 2023).

2.2.3 The habitats, their condition and strategic importance were input into the Statutory Biodiversity Metric Calculation Tool (DEFRA, 2023). The area of habitats which would be retained or enhanced based upon the current proposals was also added to the calculator. This allowed the existing baseline value and loss of biodiversity units to be established.

2.2.4 The proposed habitats areas and linear habitat lengths was calculated, and target condition determined based upon the existing and proposed management regimes of the site, in consideration with what could realistically be expected to be achieved. Once input into The Biodiversity Metric Calculation, the overall change in value of the site could then be determined.

2.3 Survey Constraints / Considerations

2.3.1 Areas and linear lengths have been rounded to the nearest $10m^2$ and measurements input to the metric using three decimal places. Due to the output of the Metric being displayed to two decimal places, slight imprecision in output may occur.

3.0 RESULTS

3.1 Strategic Significance and Irreplaceable Habitat

3.1.1 The site is not within any ecological designation, such as a *Biodiversity Opportunity Area* or *Nature Improvement Area* and no baseline habitats on site are directly referenced in any local plan or other such document. All baseline and proposed habitats on site have therefore been classified as being of low strategic significance.

3.1.2 There is no irreplaceable habitat within the site.

3.2 Baseline Habitat Value

Habitat Degradation

3.2.1 No habitat degradation had taken place prior to the survey.

On-Site Habitats

3.2.2 The Biodiversity Net Gain (BNG) assessment concluded that the existing baseline biodiversity value of the site was **0.22** Habitat Units, consisting of:

- 0.048 ha of modified grassland in poor condition providing 0.10 habitat units.
- 0.016 ha of individual trees in moderate condition providing 0.13 habitat units.
- 0.023 ha of artificial unvegetated, unsealed surface (condition assessment N/A).
- 0.01 ha of developed land, sealed surface (condition assessment N/A).

3.2.3 A full condition assessment for each existing habitat type is detailed in Appendix A.

3.2.4 All existing artificial unsealed surface, and 0.009ha of modified grassland is to be retained in its current condition, resulting in the retention of 0.03 habitat units.

3.3 Baseline Hedgerow Value

3.3.1 The Biodiversity Net Gain (BNG) assessment concluded that the existing baseline biodiversity value of the site was **0.14** Hedgerow Units, consisting of:

- 0.023 km of species-rich native hedgerow with trees in poor condition providing 0.14 hedgerow units.

3.4 Baseline Watercourse Value

3.4.1 No watercourses are present on site.

3.5 Proposed Habitat Creation

3.5.1 Proposals are to result in the creation of new habitat on site including:

- 0.013 ha of developed land, sealed surface which includes the proposed building.
- 0.003 ha of artificial unsealed unvegetated surface comprised of the slight expansion of the existing footpath.
- 0.009ha of artificial unsealed surface which comprised the proposed area of grass-crete, calculated as 50% retained grassland and 50% new artificial surface.

3.5.2 A full target condition assessment for each proposed habitat creation type is detailed in Appendix B. Proposed habitats would deliver **0.00** habitat units.

3.6 Proposed Habitat Enhancements

3.6.1 Proposals are to result in the enhancement of the following habitat on site:

- 0.024 ha of modified grassland from a poor condition to good condition providing 0.10 habitat units.

3.6.2 A full target condition assessment for each proposed habitat enhancement is detailed in Appendix B.

3.7 Proposed Hedgerow Creation

3.7.1 Proposals are to result in the creation of new hedgerow on site including:

- 0.021 km of species rich native hedgerow in moderate condition to be located towards the north of the parking area, providing 0.16 hedgerow units.

3.7.2 A full target condition assessment for each proposed hedgerow creation type is detailed in Appendix B. Proposed hedgerows would deliver **0.14** hedgerow units.

3.8 Trading Summary

3.8.1 All trading rules have been satisfied.

3.9 Overall Results

3.9.1 Once all retention, enhancement and habitat creation measures are taken into the account, the scheme shall result in **0.25** habitat units, resulting in a net increase of **0.03** units and a **11.72% Biodiversity Net Gain** in Habitat Units. The scheme would also deliver a total of **0.28** hedgerow units, resulting in a net increase of **0.14** units and a **101.87% Biodiversity Net Gain** in Hedgerow Units across the site with all trading rules satisfied.

4.0 CONCLUSION

4.1 Metric calculations have identified that the proposed scheme would result in a +10% Biodiversity Net Gain, therefore complying with the current Local Planning policy.

4.2 To ensure the onsite habitats are managed into the future, a suitable management plan shall need to be produced. This shall include management prescriptions for new habitat areas including aspects such as mowing regimes, which shall ensure the target conditions are achieved.

5.0 REFERENCES

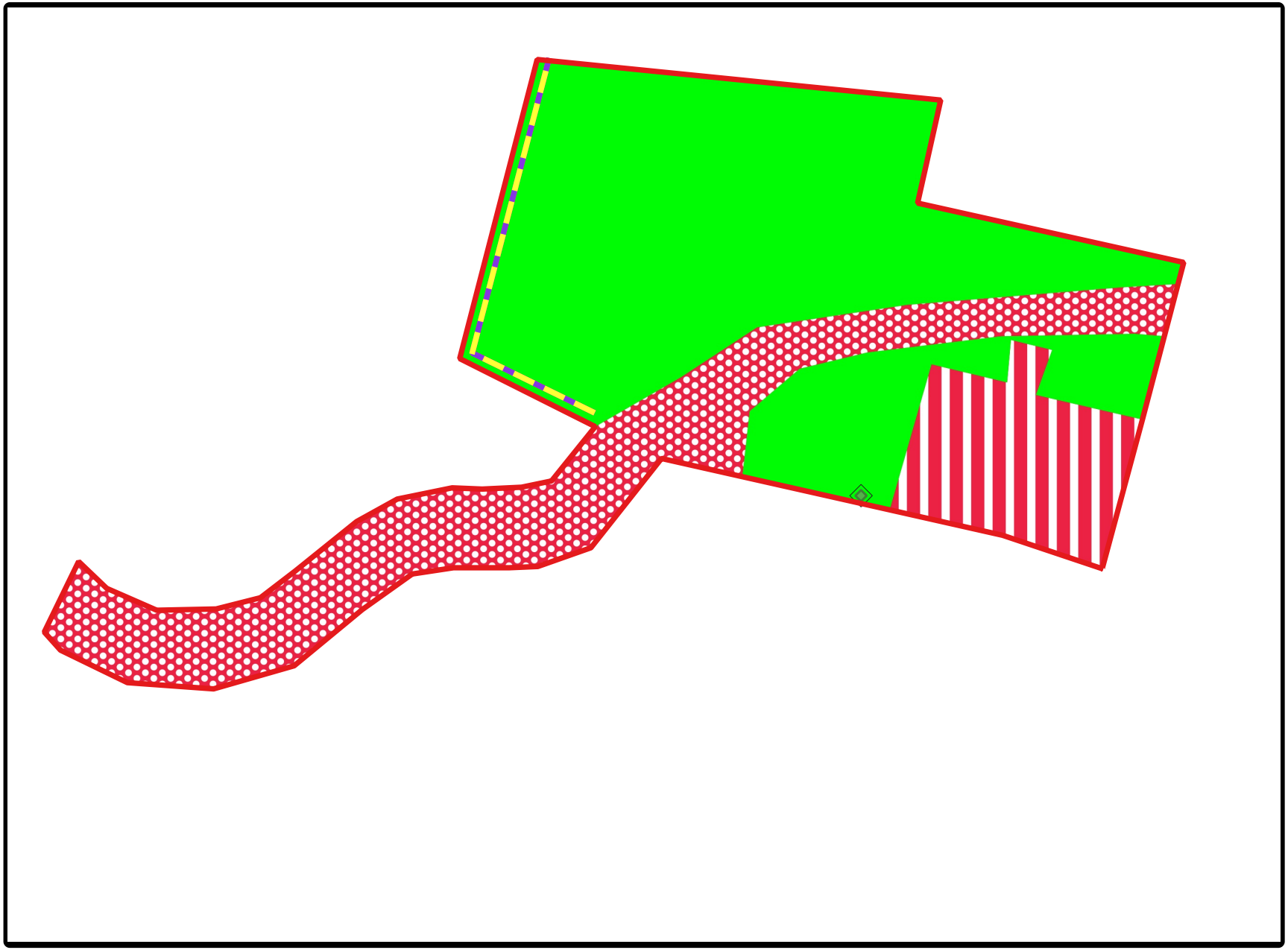
CIEEM. (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2019). Biodiversity Net Gain: Good Practice Principles for Development. Winchester

Department for Environment Food and Rural Affairs (2023). *The Statutory Biodiversity Metric Calculation Tool.*

Department for Environment Food and Rural Affairs (2023). *The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology.*

UKHab Ltd (2023). UK Habitat Classification Version 2.1



Legend

- Red Line Boundary
- Existing Medium Urban Tree
- Native hedgerow with trees
- Artificial unvegetated, unsealed surface
- Developed land; sealed surface
- Modified grassland

10 20 m

1:300

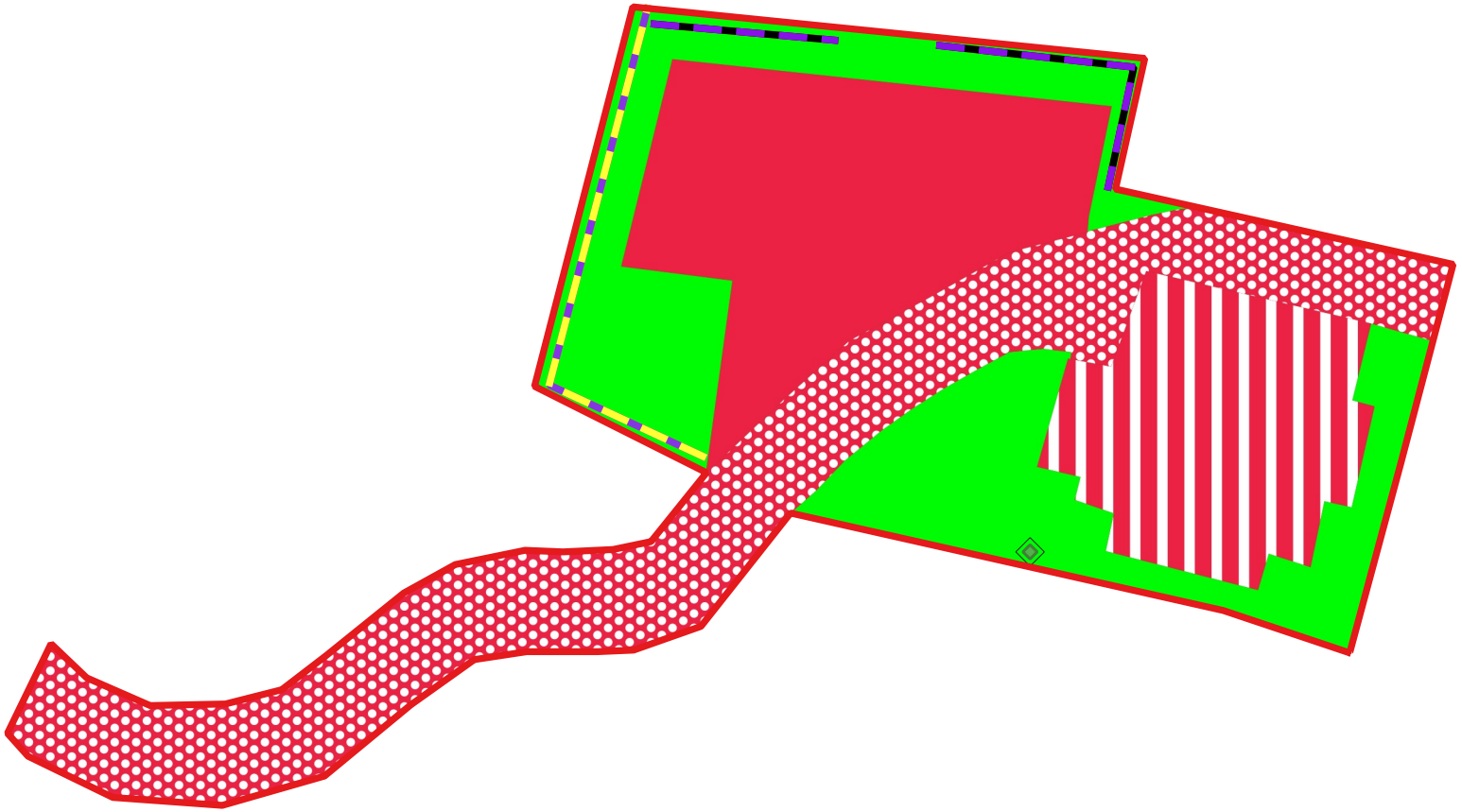
Figure No. 01 - Baseline Site Habitat Plan

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. office@lizardlandscape.co.uk W. lizardlandscapeecology.com

Client
Hopegar Properties Ltd

Project Title & Location
The Pavillion,
Mackley Field,
Small Dole

Drawn by	Approved by	Rev	Date
WM	CO	00	28/11/24



Legend

- Existing Medium Urban Tree
- Native hedgerow with trees
- Species-rich native hedgerow
- Artificial unvegetated, unsealed surface
- Developed land; sealed surface
- Modified grassland
- Grasscrete
- Red Line Boundary

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. office@lizardlandscape.co.uk W. lizardlandscapeecology.com

Client
Hopegar Properties Ltd

Project Title & Location
The Pavilion,
Mackley Field,
Small Dole

Drawn by	Approved by	Rev	Date
WM	CO	00	28/11/24

10 20 m

Figure No. 02 - Proposed Site Habitat Plan

N

1:300

Appendix A – Condition Assessment for Existing Habitats

UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	On-site	**Survey date and Surveyor name**	19/07/2023 Will Mills
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	TQ 21461 12681	**Habitat parcel reference**	

Habitat Description
An area of low diversity modified grassland surrounding the exisitng building and continues as part of the larger Mackley Field.

ukhab – UK Habitat Classification

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No	Species per m2 is limited to ~3-4.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	The sward hieght is of a uniform length.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	No scrub present at the time of survey.
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes	No physical damage noted at the time of survey.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	Yes	Bare ground within the habitat area was ~4%.
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Yes	No bracken present at the time of survey.
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Yes	No invasive species noted at the time of survey.
	Essential criterion achieved (Yes or No)		No
	Number of criteria passed		5

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	1	

Suggested enhancement interventions to improve condition score

Areas for etention outside of the proposed parking area can be enhanced through over seeding with a native low-flowering lawn mix to increace species diversity and abundance.

Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Condition Sheet: INDIVIDUAL TREES Habitat Type

Habitat Types

Individual trees – Urban trees
Individual trees – Rural trees
Complete a condition sheet for each tree or block of trees.

Please see the separate Line of trees condition sheet for a line of rural trees. You should only use the Line of trees condition assessment and record that habitat type in rural locations.

Habitat Description

A single ornamental mature apple tree located along the southern boundary of the site.

Individual trees (description applied to the urban or rural environment):
Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.

Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only):
Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.

On-site or off-site, site name and location	On-site	**Survey date and Surveyor name**	19/07/2023 Will Mills
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	TQ 21461 12681	**Habitat parcel reference**	

	Condition Assessment Criteria	**Criterion passed (Yes or No)**	**Notes (such as justification)**
A	The tree is a native species (or at least 70% within the block are native species).	No	Tree is a non native ornamental apple.
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Conpy is continuous.
C	The tree is mature (or more than 50% within the block are mature)[1].	Yes	Tree is of a mature gae and size.
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	No evidence of adverse impacts from human activity noted.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	No niches noted.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	>50% of the tree oversails vegetation.
	Number of criteria passed	4	

Condition Assessment Result (out of 6 criteria)	**Condition Assessment Score**	**Score Achieved ×/✓**
Passes 5 or 6 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	X
Passes 2 or fewer criteria	Poor (1)	
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.		

Suggested enhancement interventions to improve condition score[2]

Footnotes

Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from:
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)
and:
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 2 - Enhancement of this habitat type is only possible by improving the habitat so that it meets all Criteria B, D and F. It is not possible or appropriate to enhance individual tree/s through meeting just one or two of those Criteria, nor by meeting Criteria A, C or E.

Condition Assessment Details					
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria. This assessment is based on the Hedgerow Survey Handbook[1] and Favourable Conservation Status document[2]. For further clarification please refer to the Hedgerow Survey Handbook. Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.					
Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)		**Criteria - the minimum requirements for 'favourable condition'**	**Criteria description**	**Criterion passed (Yes or No)**	**Notes (such as justification)**
Core groups - applicable to all hedgerow types					
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	Yes	Hedgerow height is 2m on average.
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn *Prunus spinosa* suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Yes	Hedgerow width is around 2m.
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Yes	The gap between the ground and base canopy is <0.5m.
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	Yes	The hedgerow is continuous with no gaps noted.
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 hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	No	The hedgerow only has 0.3m of undisturbed ground.
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	No	Cover of indicator species including nettles is >20%.

D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA[3]) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website[4], as well as the BSBI website[5] where the 'Online Atlas of the British and Irish Flora'[6] contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website[7].	Yes	No invasive species noted at the time of survey.
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	Yes	No damage from human activity noted at the time of survey.
Additional group - applicable to hedgerows with trees only					
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	No	All trees are semi-mature.
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Yes	All trees displayed good vitality and health.

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees		
Category	**Category Requirements**	**Metric Score**
Good	No more than 2 failures in total; **AND** No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; **AND** Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; **OR** Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
	Score achieved:	

Condition categories for hedgerows with trees		
Category	**Category Requirements**	**Metric score**
Good	No more than 2 failures in total; **AND** No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; **AND** Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; **OR** Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
	Score achieved:	1

Suggested enhancement interventions to improve condition score

Hedgerow to be retained and managed in its current state.

Footnotes

Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.* [online] Available on:
layout (hedgelink.org.uk)
Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows.* [online] Available on:
Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk)
Footnote 3 – Wildlife and Countryside Act 1981 (as amended).
Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain.* Species Status 7: 1-116. [online] Available on:
The Vascular Plant Red Data List for Great Britain (Species Status No. 7) | JNCC Resource Hub
Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). *Definitions: wild, native or alien?* [online] Available on:
Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org)
Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora.* [online] Available on:
Acknowledgements | Online Atlas of the British and Irish Flora (brc.ac.uk)
Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on:
Home » NNSS (nonnativespecies.org)
Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from:
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)
and
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Appendix B – Target Condition Assessment for Proposed Habitats

UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	On-site	**Survey date and Surveyor name**	Will Mills
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	TQ 21461 12681	**Habitat parcel reference**	

Habitat Description
An area of low diversity modified grassland to be enhanced within the proposals, surrounding the proposed building and parking area

ukhab – UK Habitat Classification

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	Yes	Species per m2 is expected to be >6.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	The sward hieght is to be managed at a uniform length.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	No scrub present at the time of survey or proposed.
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes	No physical damage is expected.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	Yes	Bare ground within the habitat area to be managed to keep within this range.
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Yes	No bracken present at the time of the baseline survey thus none expected.
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Yes	No invasive species noted at the time of the baseline survey thus none expected.
	Essential criterion achieved (Yes or No)		Yes
	Number of criteria passed		6

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	3	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		

Suggested enhancement interventions to improve condition score

Areas for etention outside of the proposed parking area can be enhanced through over seeding with a native low-flowering lawn mix to increace species diversity and abundance.

Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Condition sheet: HEDGEROW Habitat Types					
Habitat Type					
Native hedgerow **Native hedgerow - associated with bank or ditch** **Native hedgerow with trees** **Native hedgerow with trees - associated with bank or ditch** **Species-rich native hedgerow** **Species-rich native hedgerow - associated with bank or ditch** **Species-rich native hedgerow with trees** **Species-rich native hedgerow with trees - associated with bank or ditch**					
Habitat Description					
Two sections of species rich native hedgerow are to be provisioned along the northern edge of the proposed car park area.					
ukhab – UK Habitat Classification					
On-site or off-site, site name and location	On-site		**Survey date and Surveyor name**	Will Mills	
Limitations (if applicable)			**Survey reference (if relating to a wider survey)**		
Grid reference	TQ 21461 12681		**Habitat parcel reference**		
Condition Assessment Details					
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria. This assessment is based on the Hedgerow Survey Handbook[1] and Favourable Conservation Status document[2]. For further clarification please refer to the Hedgerow Survey Handbook. Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.					
Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)		**Criteria - the minimum requirements for 'favourable condition'**	**Criteria description**	**Criterion passed (Yes or No)**	**Notes (such as justification)**
Core groups - applicable to all hedgerow types					
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	No	Hedgerow unlikely to attain 1.5m in height within the monitoring period.
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn *Prunus spinosa* suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Yes	Hedgerow width shall be maintained to >1.5m.
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Yes	The gap between the ground and base canopy shall be <0.5m.
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	Yes	The hedgerow shall be continuous with no gaps.

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 hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Yes	The hedgerow shall have an area of undisturbed ground on the northern side of >1m.
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	No	Cover of indicator species cannot be garunteed to below 20%.
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA[3]) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website[4], as well as the BSBI website[5] where the 'Online Atlas of the British and Irish Flora'[6] contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website[7].	Yes	No invasive species noted at the time of the baseline survey thus none expected.
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	No	Due to being located adjacent to a car park, damage from human activity may occur.
Additional group - applicable to hedgerows with trees only					
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N/A	N/A
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	N/A	N/A

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees

Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; **AND** No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; **AND** Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; **OR** Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
	Score achieved:	2

Condition categories for hedgerows with trees

Category	Category Requirements	Metric score
Good	No more than 2 failures in total; **AND** No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; **AND** Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; **OR** Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
	Score achieved:	

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.* [online] Available on: layout (hedgelink.org.uk)

Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows.* [online] Available on: Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk)

Footnote 3 – Wildlife and Countryside Act 1981 (as amended).

Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain.* Species Status 7: 1-116. [online] Available on: The Vascular Plant Red Data List for Great Britain (Species Status No. 7) | JNCC Resource Hub

Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). *Definitions: wild, native or alien?* [online] Available on: Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org)

Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora.* [online] Available on: Acknowledgements | Online Atlas of the British and Irish Flora (brc.ac.uk)

Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on: Home » NNSS (nonnativespecies.org)

Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)