CT ECOLOGY LTD
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[redacted]

21 February 2025

Benjamin Hume
Folkes Architects
The Old Forge
6 Church Street
Storrington
West Sussex
RH20 4LA

Ref: 23054

Dear Ben

Biodiversity Net Gain Assessment: Land at Lake Lane, Barnham, Bognor Regis.

Introduction

CT Ecology was commissioned by Folkes Architects to undertake a biodiversity net gain assessment in relation to the proposed scheme for the above site in order to inform the planning application submission.

Proposals are for the construction of seven residential units with associated parking and landscaping. Access will be via the existing entrance. Habitats in the north and south of the site will be retained and enhanced along with areas of scrub along the western and southern site boundaries. A single tree will require removal to facilitate the works along with the pruning of a small number of boundary trees. The application site covers 0.53ha.

Site Description

The site is within a semi-rural location within the northern extent of Barnham in the Arun District of West Sussex at British National Grid SU969 047. The site comprised horse grazed fields with areas of bare ground and modified grassland dominated the site. A single building was present in the south-east extent together with areas of boundary scrub, tall ruderal vegetation and scattered trees. A stream extended part way along the eastern site boundary.

The site is bounded to the north by a commercial plant nursery with residential properties and associated gardens bounding the site in all other directions. Access was via an access track, extending from Lake Lane to the south. A railway line (the south coast main line) is located beyond Lake Lane, approximately 360m to the south.

In the wider surrounds, commercial nurseries and agricultural fields dominate the landscape together with residential properties. The centre of Bognor Regis is approximately 6km to the south-west and the A27 is approximately 2km to the north.

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Methodology

Baseline Assessment

The BNG assessment has been informed by a Preliminary Ecological Appraisal, undertaken in October 2023 (CT Ecology 2023) by Carly Teague BSc (Hons), MSc, MCIEEM; a suitably qualified ecologist with over 17 years' experience as a professional ecologist. For the purposes of the BNG assessment, the existing habitat data was augmented in May 2024, concurrently with undertaking protected species surveys at the site. The River Condition Assessment in relation to the chalk stream was undertaken by Jack Kellett BSc (Hons), MCIEEM who is RCA Accredited and suitably qualified to undertake watercourse assessments for BNG.

Biodiversity Net Gain Assessment

The biodiversity value of the site has been quantified applying the Statutory Biodiversity Metric (2024). The metric uses habitats to describe biodiversity, which is converted into measurable 'biodiversity units' according to the area of each type of habitat. The metric scores different habitat types according to their relative biodiversity value and adjusts this according to the condition and location of the habitat. Where new habitat is created or existing habitat is enhanced then the associated risks of doing so are factored into the metric. The metric can then be used to quantify the biodiversity value of habitats and it can be used to calculate the losses and gains in biodiversity from proposed activities including development or site management.

The biodiversity 'value' of each habitat type is evaluated using the area and the relative 'quality' of the habitat. This assessment of quality comprises four components:

- Distinctiveness
- Condition
- Strategic significance
- Habitat connectivity

The calculation then gives a number of biodiversity units that represents the baseline biodiversity value of that habitat parcel.

A further calculation is then obtained to provide a post development score (to include measures to retain, enhance or create additional biodiversity features) and additional factors to account for the risk associated with these actions are also taken into account to include:

- Difficulty of creating or restoring a habitat
- Temporal risk
- Spatial Risk

The post development biodiversity units are then deducted from the baseline units to provide a value for 'the extent of change'. If a net gain is achieved then there is no need to consider additional potential off-site measures however if the calculation does not result in a sufficient net gain in biodiversity units, proposals may need to be revised or additional enhancement measures employed or off-site enhancement measures may need to be considered.

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The current biodiversity net gain assessment has been based on existing habitat areas and proposed habitat types post development, based on discussions with the client.

Results

Baseline Assessment

A summary of the existing habitats is provided in the table below.

Table 1.0: Habitat Descriptions

Habitat Type	UK Habitats Code (secondary codes in brackets)	Description
Modified grassland	g4	The site comprised a series of grazed fields. Some of which were dominated by bare ground but where present, the grassland was indicative of a semi-improved sward, dominated by coarse grasses indicating long-term and regular management. Dominant grassland species included Yorkshire fog (*Holcus lanatus*) with abundant perennial rye-grass (*Lolium perenne*) and sheep's fescue (*Festuca ovina*). Meadow foxtail (*Alopecurus pratensis*) was occasional and appeared to be more associated with the field margins. Forbs were occasional within the sward and included dandelion (*Taraxacum* agg.), yarrow (*Achillea millefolium*), daisy (*Bellis perennis*), ribwort plantain (*Plantago lanceolata*), creeping cinquefoil (*Potentilla reptans*), common knapweed (*Centaurea nigra*) and creeping buttercup (*Ranunculus repens*).
	(12: Scattered Bracken)	An area of scattered bracken (*Pteridium aquilinum*) had developed in the north-east corner of the site.
	(81: Ruderal)	Ruderal species had colonized the field margins together with areas of grassland in the northern site extent where grazing had been relaxed. Common nettle (*Urtica dioica*), spear thistle (*Cirsium vulgare*) and docks (*Rumex* sp.) were dominant together with abundant willowherbs (*Epilobium* sp.) and common fleabane (*Pulicaria dysenterica*).

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Mixed Scrub	h3h	Areas of dense scrub had developed around the site margins. Species included willow (*Salix* sp.), bramble (*Rubus fruticosus* agg.), dog-rose (*Rosa canina*) and blackthorn (*Prunus spinosa*).
Scattered Trees	(32)	A small number of scattered trees were along the eastern boundary of the site. Species included elder (*Sambucus nigra*) and hawthorn (*Crataegus monogyna*). An area of standing dead wood was also to the north of the stable unit.
Chalk Stream	r2b	A short section of a stream bounded the site to the east. The stream extended for approximately 35m before from the northern corner of the site before being routed further east. The channel was narrow; approximately 0.25m wide and water was flowing south to north with a low water level at the time of the survey. The banks were relatively steep. The channel was heavily shaded by overhanging scrub. Leaf litter was evident within the channel. Aquatic vegetation was restricted to fine-leaved water dropwort (*Oenanthe aquatica*) at the time of the assessment. Ruderal vegetation had developed along the banks.
Bare ground	(510)	Bare ground extended throughout the southern site extent.
Developed Land; Sealed Surface. Hardstanding	u1b6	Areas of concrete were present around the stable unit.
Developed Land; Sealed Surface. Building	u1b5	A small 'L' shaped stable unit, comprising three stalls, was located within the south-east corner of the site. This was of typical stable design with single skinned timber clad walls, timber stable doors and a single skinned, pitched corrugated concrete roof with skylights. The building was sealed at the gable ends with UPVC on the eastern and western elevations. The stable doors were open enabling ingress by bats and birds. Internally the ridge line was open, revealing the single skinned sheet metal roof above. The cladding was in good condition and well-sealed in addition to the timber supporting framework. An old barn swallow nest was observed in the northern most stall. Dense cobwebs were present throughout the roof structure.

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Biodiversity Net Gain Assessment

The total net % change for the proposed development area when applying the Statutory Biodiversity Metric is **+1.75%** (habitat units) and **+54.08%** (watercourse units) which indicates a net gain in biodiversity as a result of the Scheme.

Based on size and nature of the application site, a 10% gain in habitat units cannot be achieved within the site itself although the watercourse units far exceed the 10% minimum threshold. There is no land in proximity to the application site which is within the ownership of the applicant and therefore off-site enhancements are not an option for this application. Off-site units will therefore need to be purchased in accordance with current BNG guidance.

Currently the scheme has a unit shortfall of 0.38 (Tier A1) which will need to be purchased from an off-site habitat bank. Environment Bank were contacted initially and they have confirmed they have units available (medium distinctiveness grassland) although these are national units as they do not have a habitat bank local to the site, at present. Providing these, or equivalent equal distinctness habitat units from a local habitat bank if/when one becomes available, are secured then **the scheme will be achieving the 10% Net Gain** in habitat units through the implementation of on-site enhancement and the purchase of off-site units.

The total area of semi-natural habitats to be lost to facilitate the development equates to 0.46ha which comprises 0.22ha modified grassland, 0.03ha mixed scrub, 0.19ha bare ground and a single tree.

The following habitat features will be incorporated post development:

On-site (outside of new plot gardens)

- 0.025ha wildflower grassland will be created within the road verges and within the retained buffer area in the east and north of the site, with long-term meadow management promoting a diverse range of flowering species to develop throughout the growing season;
- A new attenuation pond will be created in the retained buffer in the north of the site. Although primarily for drainage this will be designed with wildlife in mind to increase its biodiversity value;
- 0.002ha of mixed scrub will be planted at the site entrance;
- 50 trees will be planted around the site boundaries and within the road verges;
- 0.01ha of retained grassland will be enhanced through overseeding with a suitable wildflower mix which will serve to enhance the sward with long-term meadow management promoting a diverse range of flowering species to develop throughout the growing season;
- 0.07ha mixed scrub will be enhanced through additional planting around site boundaries and within the retained buffer areas to improve the condition of this habitat; and
- the chalk stream (within the retained buffer area) will be enhanced through management to improve its condition in the long-term through reducing shading of the channel by overhanging trees, removing sediment build-up within the channel and eliminating poaching through the cessation of grazing.

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A summary of the biodiversity metric score is shown in the table below.

Table 1.1: Statutory Biodiversity Metric Headline Results Summary

FINAL RESULTS		
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.88
	Hedgerow units	0.00
	Watercourse units	0.18
Total net % change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	1.75%
	Hedgerow units	0.00%
	Watercourse units	54.08%
Trading rules satisfied?		Yes ✓

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	4.61	5.08	0.35
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.32	0.36	0.00

Conclusions and Recommendations

The total net % change for the proposed development area when applying the Statutory Biodiversity Metric is **+1.75%** (habitat units) and **+54.08%** (watercourse units) which indicates a net gain in biodiversity as a result of the Scheme.

Based on size of the application site and scope of the proposals, a 10% gain in habitat units cannot be achieved within the site although the watercourse units far exceed the 10% minimum threshold. Off-site enhancements are not an option for this application and therefore off-site units will need to be purchased. Environment Bank have confirmed they have national units available (medium distinctiveness grassland). Providing these, or equivalent equal distinctness habitat units from a local habitat bank if/when one becomes available, are secured then **the scheme will be achieving the 10% Net Gain** in habitat units through the implementation of on-site enhancement and the purchase of off-site units.

Management of the on-site habitats will be undertaken by a management company which will be instructed as part of the development. In addition, a series of targeted enhancement measures in relation to protected species will be integrated into the proposals which will serve to improve the overall biodiversity value of the site post development. Although these cannot be factored into the Biodiversity Metric, these features will also add to the overall biodiversity value to the site. These measures will include:

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Bird Box

A single bird box will be installed on a suitable tree adjacent to the development site, in the rear garden of the property. This could include the following specification (or suitable alternative make/model):

- Schwegler 1B x 4;
- Schwegler Sparrow Terrace x 1

Bat Box

A series of bat boxes will be installed at the site as part of the proposals in order to provide additional roosting opportunities post works. The boxes will be installed on suitable trees and/or the new dwellings. The following are recommended:

- Greenwoods single crevice bat box x 5; and
- Greenwoods small hollow bat box x 5

Reptiles

A series of two compost piles will be created in the retained buffer area adjacent to the attenuation pond to provide breeding habitat for grass snake.

In order to ensure the success of implementation and establishment of the biodiversity net gain measures, a long-term management plan will be required in accordance with current BNG guidance.

I trust the above information relating to land at Lake Lane, is satisfactory however if you have any queries, please do not hesitate to contact me.

Yours sincerely

[redacted]

Carly Teague BSc (Hons) MSc MCIEEM

Director

References

- CIEEM – Chartered Institute of Ecology and Environmental Management (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater and Coastal.* Winchester: CIEEM [On-line]. Available from http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf [Accessed on 21/01/2025].

- CIEEM – Chartered Institute of Ecology and Environmental Management (2013). *Guidelines for Preliminary Ecological Appraisal.* Winchester: CIEEM [On-line]. Available from http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf [Accessed on 21/01/2025].

- GOV.UK (2024). *The Statutory biodiversity metric tools and guides* [on-line]. Available from Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk) [Accessed on 12/01/2025].

- UKHab Ltd (2023). *UK Habitat Classification Version 2.0* [on-line]. Available from: https://www.ukhab.org [Accessed on 30/10/2024 & 21/01/2025].

Appendix A

Site Maps

Figure 1: Land Adjacent to Lake Lane Habitat Survey Map

Drawn by: CT
Date: 21/02/2025
Scale: 1:1250

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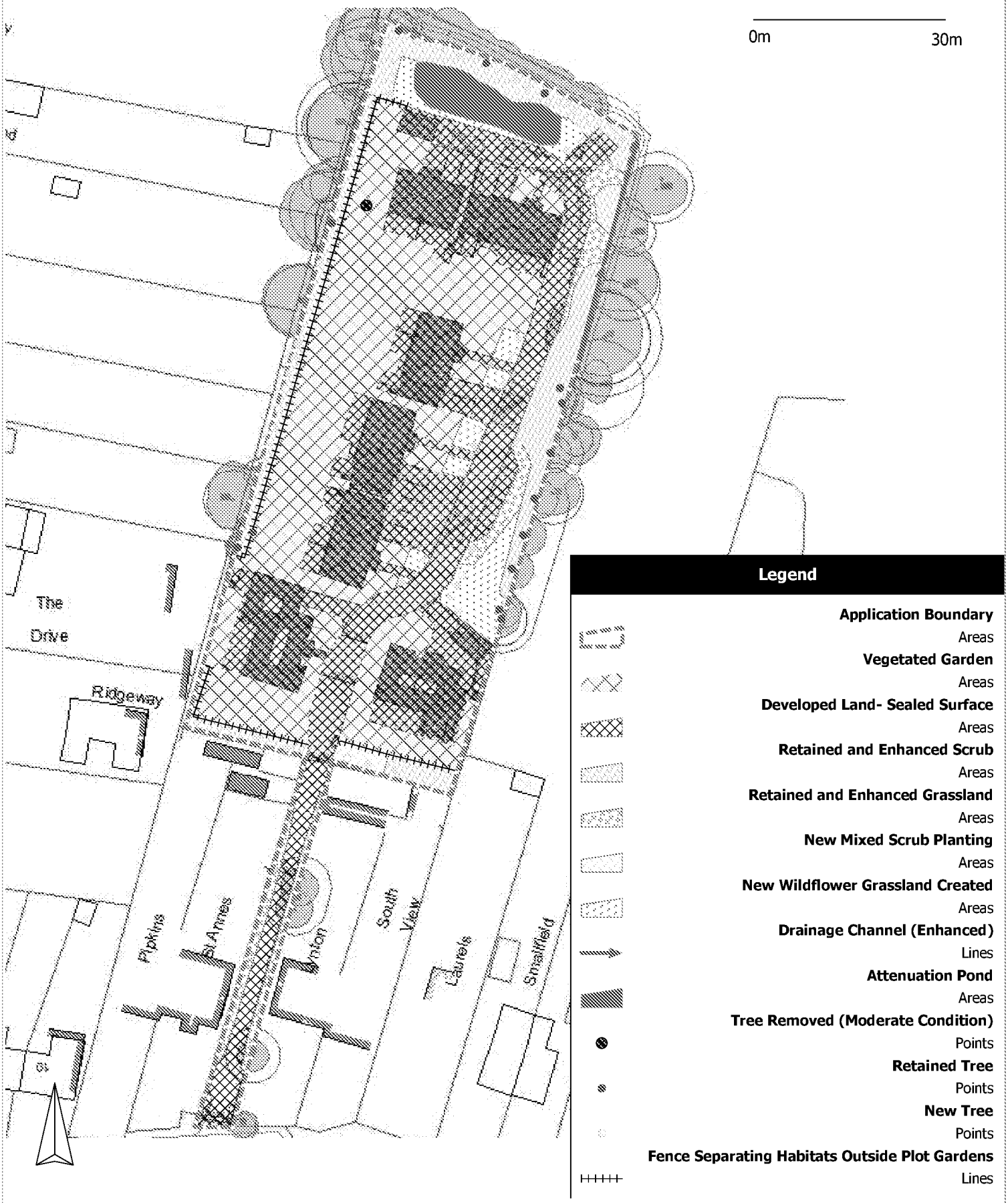

Figure 2: Land Adjacent to Lake Lane Post Development Map

Drawn by: CT
Date: 21/02/2025
Scale: See Map

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Appendix B

Baseline Habitat Condition Assessment Sheets

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**Habitat parcel reference**	

Habitat Description
The site comprised grassland divided into a series of grazed fields. Some fields comprised solely bare ground and these have been mapped and detailed separately but where present, the grassland was indicative of a more modified sward, dominated by coarse grasses indicating long-term and regular management. Dominant grassland species included Yorkshire fog (Holcus lanatus) with abundant perennial rye-grass (Lolium perenne) and sheep's fescue (Festuca ovina). Meadow foxtail (Alopecurus pratensis) was occasional and appeared to be more associated with the field margins. Poaching was evident throughout approximately 40% of the grassland. Forbs were occasional within the sward with limited species diversity. Species included dandelion (Taraxacum agg.), yarrow (Achillea millefolium), daisy (Bellis perennis), silverweed (Potentilla anserina), creeping cinquefoil (Potentilla reptans), common knapweed (Centaurea nigra) and creeping buttercup
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.	Y	
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.	N	
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.	Y	
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.	N	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	N	
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Y	
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Y	
		Essential criterion achieved (Yes or No)	YES
		Number of criteria passed	4

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved Y/N	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		

Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	YES	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		

Suggested enhancement interventions to improve condition score

Re-seeding with appropriate grassland mix containing yellow rattle and wildflowers. Grazing cessation.

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: URBAN Habitat Type			
Habitat type(s)			
Sparsely vegetated land - Ruderal/Ephemeral **Sparsely vegetated land - Tall forbs** **Urban - Allotments** **Urban - Biodiverse green roof** **Urban - Bioswale** **Urban - Cemeteries and churchyards** **Urban - Facade-bound green wall** **Urban - Ground based green wall** **Urban - Intensive green roof** **Urban - Open mosaic habitats on previously developed land** **Urban - Rain garden** **Urban - Sustainable drainage system (SuDS)** **Urban - Vacant or derelict land** **Urban - Bare ground**			
Habitat Description			
Bare ground dominated the south western site extent, a result of prolonged horse grazing.			
See the Statutory Biodiversity Metric User Guide for green roofs and UK Habitat Classification (UKHab) for other habitats:			UKHab – UK Habitat Classification
On-site or off-site, site name and location	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**Habitat parcel reference**	

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for **all urban habitat types**			
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	N	
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	N	
C	Invasive non-native plant species (listed on Schedule 9 of WCA[1]) and others which are to the detriment of native wildlife (using professional judgement)[2] cover less than 5% of the total vegetated area[3]. **Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).**	Y	
Additional Criterion - must be assessed for **Open mosaic habitat on previously developed land** only:			
D	The parcel shows spatial variation and forms a mosaic of bare substrate PLUS: - At least four early successional communities (a) to (i); Communities: (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland, (i) pools.		
Additional Criteria - must be assessed for **Bioswale and SuDS** habitat types only:			
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife[4].		
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.		
Additional Criterion - must be assessed for **Intensive green roofs** only:			

F	The roof has a minimum of 50% native and non-native wildflowers. 70% of the roof area is soil and vegetation (including water features).		
Additional Criterion - must be assessed for **Biodiverse green roofs** only:			
G	The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers. **Note – to achieve Good condition some additional habitat, such as sand piles, stones, logs etc. are present.**		
		Essential criteria relevant for habitat type achieved (Yes or No):	Y
		Number of criteria passed:	1

Condition Assessment Result	Condition Assessment Score	Score Achieved 'Y'
Results for habitats requiring assessment of **3 core criteria** only **(all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs)**:		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C.	Good (3)	
• Passes 2 of 3 core criteria; OR • Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 0 or 1 of 3 core criteria.	Poor (1)	YES
Results for **Green roofs** and **Open mosaic habitat on previously developed land** (requiring assessment of **4 criteria** only - core criteria plus additional criterion specified for habitat type):		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C; AND • Passes additional criterion relevant to specific habitat type (D, F or G).	Good (3)	
• Passes 2 or 3 of 4 criteria; OR • Passes 4 of 4 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 0 or 1 of 4 criteria.	Poor (1)	
Results for **Bioswale or SuDS** (requiring assessment of **5 criteria** - core criteria plus additional criteria specified for habitat type):		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C; AND • Passes all additional criteria relevant to specific habitat type (Group E)	Good (3)	
• Passes 3 or 4 of 5 criteria; OR • Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 2 or fewer of 5 criteria.	Poor (1)	

Suggested enhancement interventions to improve condition score:

Footnotes:

Condition Sheet: SCRUB Habitat Type			
Habitat Types			
Heathland and shrub - Blackthorn scrub **Heathland and shrub - Gorse scrub** **Heathland and shrub - Hawthorn scrub** **Heathland and shrub - Hazel scrub** **Heathland and shrub - Mixed scrub** **Heathland and shrub - Dunes with sea buckthorn (H2160)** **Heathland and shrub - Willow scrub**			
Habitat Description			
Areas of dense scrub had developed around the site margins. Species included willow (Salix sp.), bramble (Rubus fruticosus agg.), dog-rose (Rosa canina) and blackthorn (Prunus spinosa).			
For Dunes with sea buckthorn see:	Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas of Conservation (jncc.gov.uk)		
For other scrub types see:	ukhab – UK Habitat Classification		
On-site or off-site, site name and location	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**Habitat parcel reference**	

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).[1] - At least 80% of scrub is native, - There are at least three native woody species[2], - No single species comprises more than 75% of the cover (except hazel *Corylus avellana* , common juniper *Juniperus communis* , sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens* , which can be up to 100% cover).	Y	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran[3]) shrubs are all present.	N	
C	There is an absence of invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) and species indicative of suboptimal condition[6] make up less than 5% of ground cover.	Y	
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	N	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	
	Number of criteria passed	2	
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score:	Score Achieved x/./	

Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)	YES	
Suggested enhancement interventions to improve condition score			

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

Nine mature/early mature trees located around the site boundaries. Native species. Full details in associated arboricultural report.

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	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**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).	Y	
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).	Y	
C	The tree is mature (or more than 50% within the block are mature)[1].	Y	
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.	Y	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	
	Number of criteria passed	6	

Condition Assessment (Based on no. of criteria)	Condition Assessment Score	Score Achieved (√)
Passes 5 or 6 criteria	Good (3)	YES
Passes 3 or 4 criteria	Moderate (2)	
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 enhancements/measures to improve condition score[2]

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

Six young/early semi-mature trees located around the site boundaries. Native species. Full details in associated arboricultural report. This condition assessment inlcudes T22 to be felled.

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	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**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).	Y	
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).	Y	
C	The tree is mature (or more than 50% within the block are mature)[1].	N	
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.	Y	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	
	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)	YES
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 measures to improve condition score[2]

Appendix C

Post Development
Habitat Condition Assessment Sheets

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)

UK Habitat Classification (UKHab) Habitat Types

Grassland - Lowland calcareous grassland
Grassland - Lowland dry acid grassland
Grassland - Lowland meadows
Grassland - Other lowland acid grassland
Grassland - Other neutral grassland
Grassland - Tall herb communities (H6430) [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.]
Grassland - Upland acid grassland
Grassland - Upland calcareous grassland
Grassland - Upland hay meadows
Sparsely vegetated land - Calaminarian grassland

On-site or off-site, site name and location	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**Habitat parcel reference**	

Habitat Description

Existing grassland enhanced with an appropriate wildflower mix with a diverse mix of grasses and forbs. Newly created grassland also seeded with a wildflower mix and managed appropriately to promote flowering and to achieve a mixed sward height throughout the year

ukhab – UK Habitat Classification

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).[1] **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Y	
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 insects, birds and small mammals to live and breed.	Y	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].	Y	
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.	Y	
E	Combined cover of species indicative of suboptimal condition[3] 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. If any invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed.	Y	

Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**		
		Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		
		Number of criteria passed	5	

Condition Assessment Result	Condition Assessment Score	Score Achieved √
Acid grassland types (Result out of 5 criteria)		
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	
Non-acid grassland types (Result out of 6 criteria)		
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)	Y
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	

Suggested enhancement interventions to improve condition score

Notes

Footnote 1 - Professional judgement should be used alongside the UKHab description.

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Footnote 3 - Species indicative of suboptimal condition for this habitat type include: 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* . There may be additional relevant species local to the region and or site.

Footnote 4 – 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, by applying professional judgement.

Footnote 5 – Wildlife and Countryside Act 1981 (as amended).

Condition Sheet: SCRUB Habitat Type			
Habitat Types			
Heathland and shrub - Blackthorn scrub **Heathland and shrub - Gorse scrub** **Heathland and shrub - Hawthorn scrub** **Heathland and shrub - Hazel scrub** **Heathland and shrub - Mixed scrub** **Heathland and shrub - Dunes with sea buckthorn (H2160)** **Heathland and shrub - Willow scrub**			
Habitat Description			
Enhancement of existing scrub through planting an additional three native woody species. New areas of scrub to support at least four woody species.			
For Dunes with sea buckthorn see:	Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas of Conservation (jncc.gov.uk)		
For other scrub types see:	ukhab – UK Habitat Classification		
On-site or off-site, site name and location	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**Habitat parcel reference**	

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).[1] - At least 80% of scrub is native, - There are at least three native woody species[2], - No single species comprises more than 75% of the cover (except hazel *Corylus avellana* , common juniper *Juniperus communis* , sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens* , which can be up to 100% cover).	Y	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran[3]) shrubs are all present.	N	
C	There is an absence of invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) and species indicative of suboptimal condition[6] make up less than 5% of ground cover.	Y	
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	
	Number of criteria passed		3

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score:	Score Achieved x/./	

Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)	YES	
Passes 2 or fewer criteria	Poor (1)		
Suggested enhancement interventions to improve condition score			

Condition Sheet: POND Habitat Type

Habitat Type

Lakes - Ponds (priority habitat)
Lakes - Ponds (non-priority habitat)
Lakes - Temporary lakes ponds and pools (H3170) [Use this condition sheet for Temporary ponds and pools, use Lake condition sheet for Temporary lakes]
Lakes - Ornamental lake or pond [Use this condition sheet for Ornamental ponds, use Lake condition sheet for Ornamental lakes]

Habitat Description

Attenuation pond. Lined but constructed with wildlife in mind with mixed slope profiles and aquatic planting comprising at least four native species including marginal and submerged aquatics.

ukhab – UK Habitat Classification			
On-site or off-site, site name and location	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference	SU969 047	**Habitat parcel reference**	

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - applicable to all ponds (woodland[1] and non-woodland):			
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Y	
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	N	
C	Less than 10% of the water surface is covered with duckweed *Lemna* spp. or filamentous algae.	Y	
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	N	
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams[2], pumps or pipework.	N	
F	There is an absence of listed non-native plant and animal species[3].	Y	
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Y	
Additional Criteria - must be assessed for all non-woodland ponds:			

H	Emergent, submerged or floating plants (excluding duckweed)[4] cover at least 50% of the pond area which is less than 3 m deep.	Y	
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	Y	
	Number of criteria passed	6	

Condition Assessment Result	Condition Assessment Score	Score Achieved Y/	
Results for woodland ponds which require assessment of 7 core criteria			
Passes 7 criteria	Good (3)		
Passes 5 or 6 criteria	Moderate (2)		
Passes 4 or fewer criteria	Poor (1)		
Results for non-woodland ponds which require assessment of 9 criteria			
Passes 9 criteria	Good (3)		
Passes 6 to 8 criteria	Moderate (2)	YES	
Passes 5 or fewer criteria	Poor (1)		

Suggested enhancement interventions to improve condition score

Footnote 1 - A woodland pond will be surrounded on all sides by woodland habitat.

Footnote 2 – This excludes natural dams such as those created by Eurasian beaver *Castor fiber*.

Footnote 3 - Any species included on the Water Framework Directive (WFD) UKTAG GB High Impact Species List should be absent: WFD UKTAG (2021) *Classification of aquatic alien species according to their level of impact* [online]. Available from:

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

50 new young trees to be planted around the site boundaries and along the road verges. Native species to be used.

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	Land at Lake Lane Barnham	**Survey date and Surveyor name**	04th October 2023, 23rd April 2024. Carly Teague
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Grid reference	SU969 047	**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).	Y	
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).	Y	
C	The tree is mature (or more than 50% within the block are mature)[1].	N	
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.	N	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	N	
	Number of criteria passed	2	

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)	
Passes 2 or fewer criteria	Poor (1)	YES
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.		

Suggested enhancement measures to improve condition score[2]