

Biodiversity Net Gain Assessment

Site Address:

Land North of The Crescent, Hitchin, Hertfordshire SG4 7RE

Client:

Hornbeam Homes

Assessment Date:

5th November 2025

Project:

This report is prepared to inform a planning application with the North Hertfordshire District Council. The proposal is described as:

Erection of 5 no. new family dwellings.

BNG assessment methodology and legislation can be found in the Arbtech Supplement: **BNG Methodology and Legislation – 2025.**

The results and recommendations contained within this report are valid for 18 months. An updated site visit and BNG assessment may be required if the report is to be used any longer than 18 months after completion.

Version Control			
Status	Issue	Name	Date
Draft	0.1	James Fielding PhD BA (Hons) PGcert (merit) Consultant Ecologist	29/10/25
Final	1.0	James Fielding PhD BA (Hons) PGcert (merit) Consultant Ecologist	06/11/25

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Site Location and Context

A baseline habitat map is provided in **Appendix 1**, a post development habitat map in **Appendix 2**, a proposed development plan in **Appendix 3**, headline BNG results in **Appendix 4**, and condition assessments in **Appendix 5**.

The survey site is centred on National Grid Reference TL 19264 27196 and has an area of approximately 0.6ha.

The site is a small area of tussocky grassland, blackthorn scrub and scattered trees on the eastern edge of the hamlet of Gosmore, south of Hitchin and west of St Ippolyts village, located immediately to the north of the Crescent and the west of London road. The site contains an electricity substation, and historical plans indicate a building was previously in the site before it fell into disuse. The boundaries of the site are lined with fir trees to the north and south. To the south, the immediate landscape is suburban, whilst the landscape to the north, east and west is predominantly arable, with hedgerow boundaries, whilst a small stand of deciduous woodland is located to the north-east. Such features likely enhance the area for a variety of species, including bats, amphibians and reptiles.

This report should be read in conjunction with the following documents:

- ❖ Statutory BNG Metric – Land north of the crescent SG4 7RE – v1 (Arbtech Consulting Ltd., 2025)
- ❖ Proposed Plan (Hornbeam Homes, 2025)
- ❖ Preliminary Ecological Appraisal (PEA) - Land north of the crescent SG4 7RE – v1 (Arbtech Consulting Ltd., 2025)

Executive Summary

- ❖ The current landscaping proposal generates a net loss of area-based habitat units (-69.94%) and a net gain of linear-based habitat units (-23.23%) with unmet trading rules.
- ❖ In order to achieve a +10% biodiversity net gain for area-based habitats, a minimum area-based unit score of 6.43 will need to be achieved. At present, there is a unit deficit of 4.67 units. Of these units, 2.46 units must be of grassland, 2.07 units must be of heathland and scrub and 0.11 units must be of trees.

Introduction

BNG Informative		
Habitat Degradation Statement	Date reflected by BNG calculations	16 th October 2025
	The baseline biodiversity value of the site is derived from the site as observed during the PEA field survey (Arbtech Consulting Ltd., 2025). As evident in the screenshots of satellite imagery obtained from GoogleEarth dated 7th May 2018 and 28th February 2024, the site does not appear to have undergone any degradation. The habitats on site, and therefore biodiversity value of the site, is not considered to have undergone degradation since 30th January 2020.	
	 	
Irreplaceable Habitat Statement	No irreplaceable habitats as listed under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024) are currently present nor were present before 30 th January 2020.	
Metric Version & Publication Date	Statutory Biodiversity Metric Calculation Tool first published 29 th November 2023 with last updates to metric tools and user guides on 3 rd July 2025.	
BNG Target Uplift	+10%	

National Character Area (NCA)	110 - Chilterns		
Strategic Significance	❖ The local nature recovery strategy (LNRS) for Hertfordshire is available here: https://www.hertfordshire.gov.uk/about-the-council/how-the-council-works/partnerships/herts-nature-recovery-partnership/local-nature-recovery-strategy.aspx		
	Habitat	Baseline / Post-Development	Justification
	Scrub	Present in baseline	The LNR states that scrub should be retained and created (alongside woodland)
	Other neutral grassland	Present in baseline	The LNR strategy states that “our vision for neutral grassland is to retain, restore and extend the habitat”
	Native hedgerow	Present post development	The Urban strategy section in the LNRS discusses the importance of establishing native hedgerow connectivity in residential developments.
Limitations			
There were no specific limitations to the assessment.			

Baseline

Baseline Biodiversity Value: On-Site				
Area-Based Habitats (A-1)				
Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.00943	An electricity substation is present to the east of the site, with a slat wooden fence with concrete posts surrounding it. A small hard standing access road is also present at the south-eastern corner of the site.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance
Other neutral grassland	0.26765	A small area of tussocky neutral grassland is present at the centre of the site. Species present include Yorkshire fog, false oat grass, cocks foot and perennial ryegrass. Other species present include pennywort, yarrow, daisy, dandelion and white clover. At least ten	Medium condition: passes 5 of 7 criteria	High Strategic Significance

		defunct ant hills are present, indicating prolonged continuity of habitat and boosting the biodiversity of the area.		
Blackthorn scrub	0.15885 0.09217	The site contains two large patches of dense, blackthorn-dominated scrub on the eastern and western ends of the site. The scrub is dominated by blackthorn, with other tree species present including hazel, rosehip, ash, oak saplings and beech. Other species present include common ivy and bramble, which is abundant in a few patches.	Moderate condition: passes 3 of 5 criteria	High Strategic Significance
Rural Tree	Small (0.0122)	5no. trees were considered in the baseline, of which 3 are small and 2 are large. The 2no. large trees are mature oaks in good condition. Other trees present include small hazel and oak. One additional large oak tree is present just outside of the site boundary.	Medium: passes 4 of 6 criteria	Medium strategic significance
	Large (0.00733)		Good: passes 6 of 6 criteria.	Medium strategic significance

Baseline Biodiversity Value: On-Site				
Linear-Based Habitats (B-1)				
Habitat	Length (km)	Description	Condition Assessment	Strategic Significance
Line of trees	L1: 0.0691 L2: 0.123	A line of fir trees is present on both the north and southern boundary of the site.	Moderate condition: passes 3 of 5 criteria	Medium Strategic Significance

Post-Development

Post-Development Biodiversity Value: On-Site

Area-Based Habitats

	Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Retained (A-1)	Developed land; sealed surface	0.00356	The electricity substation will be retained	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance
	Blackthorn scrub	0.02557	A small area of blackthorn scrub will be retained around the electricity substation	Moderate condition	High Strategic Significance
	Rural trees	0.00733	The large oaks will be retained on site as part of the new urban garden areas	Good condition	Medium Strategic Significance
Created (A-2)	Developed land; sealed surface	0.20844	New access roads and parking spaces will be created on site. 5 new family dwellings will be erected on site.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance
	Urban garden	0.28748	New trees and ornamental shrubs will be created on site, which have been folded into the urban garden as per the BNG user guide.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance
Enhanced (A-3)					

Post-Development Biodiversity Value: On-Site					
Linear-Based Habitats					
	Habitat	Length (km)	Description	Condition Assessment	Strategic Significance
Retained (B-1)	Line of trees	L1: 0.0691 L2: 0.123	The fir trees on the northern and southern boundary are retained.	Moderate	Medium strategic significance
Created (B-2)	Native hedgerow	0.0512	New native hedgerows will be created on site. Some small sections of hedgerow are folded into the vegetated garden as per the BNG user guide.	Medium	High strategic significance
Enhanced (B-3)					

Change of Biodiversity Value

		Biodiversity Units	
		Area-Based	Linear-Based
On-Site	Baseline	5.85 ❖ 2.46 units of other neutral grassland ❖ 2.31 units of blackthorn scrub ❖ 0.97 units of scattered rural trees (large) ❖ 0.11 units of scattered rural trees (small)	0.85 ❖ 0.85 units of line of trees
	Post-Development	1.76 ❖ 0.55 units of urban garden ❖ 0.97 units of retained scattered rural trees (large) ❖ 0.24 units of retained blackthorn scrub	1.04 ❖ 0.85 units of retained line of trees ❖ 0.2 units of native hedgerow
	Net Change	-4.09 units (-69.94%)	+0.2 units (+23.23%)
	Overall Net Change	-4.09 units (-69.94%)	+0.2 units (+23.23%)

Results, Discussion, and Next Steps

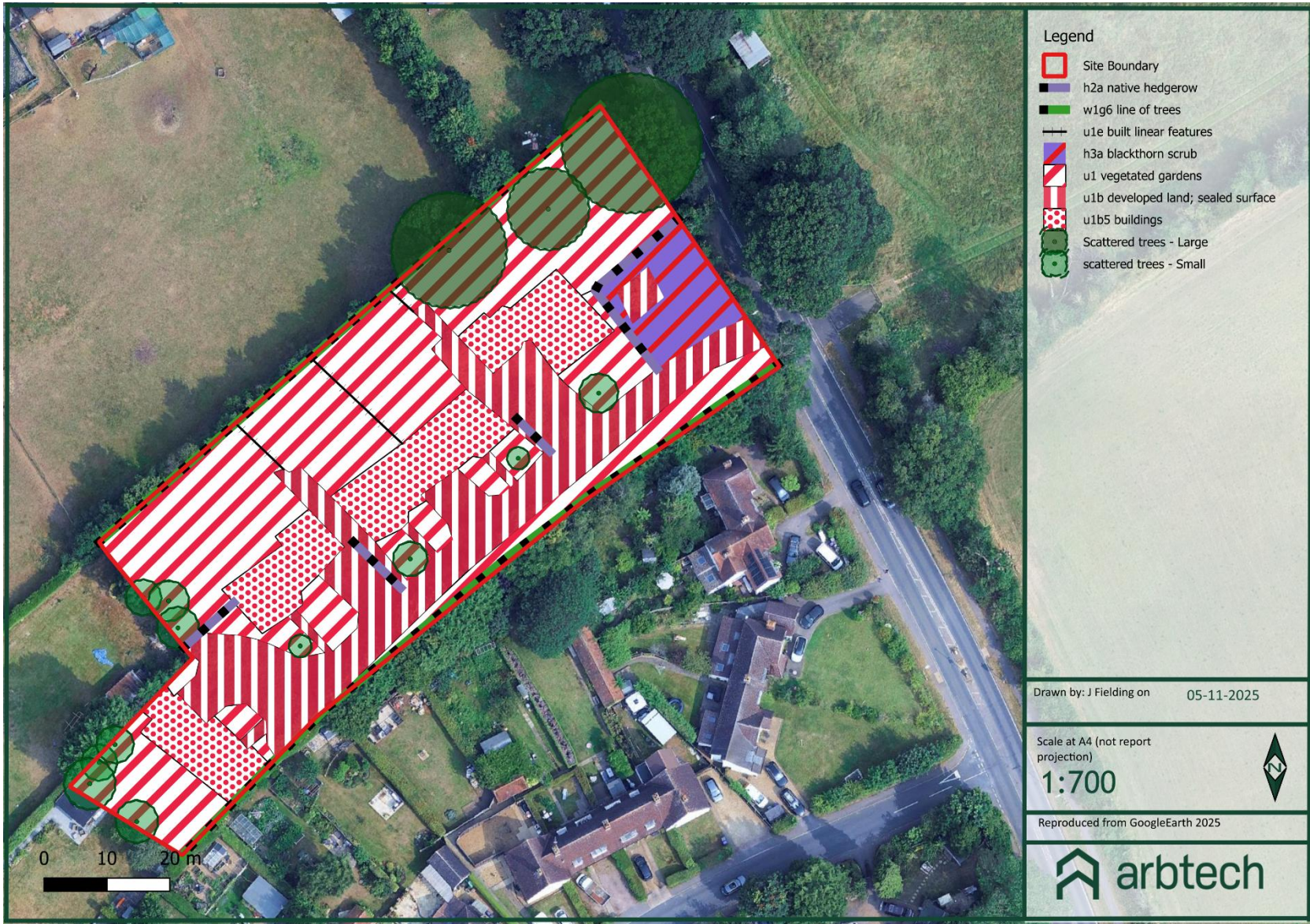
BNG Informative	
Results	The current landscaping proposal generates a net loss of area-based habitat units (-69.94%) and a net gain of linear-based habitat units (-23.23%) with unmet trading rules. In line with the Statutory Biodiversity Metric User Guide (2024), any loss of a habitat must be replaced on a like-for-like or like-for-better principle. At present, trading conditions are not satisfied for the loss of 3no. rural trees (medium distinctiveness) and areas of blackthorn scrub and neutral grassland (medium distinctiveness). With unmet trading conditions and a net area loss, the proposal fails principal Rules 1 and 2 of BNG and is not compliant with current legislation (Environment Act 2021) and planning policies (National Planning Policy Framework, 2024) In order to achieve a +10% biodiversity net gain for area-based habitats, a minimum area-based unit score of 6.43 will need to be achieved. At present, there is a unit deficit of 4.67 units. Of these units, 2.46 units must be of grassland, 2.07 units must be of heathland and scrub and 0.11 units must be of trees.
Recommendations and Next Steps	In order to achieve the required net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to achieve a net gain on site. The provisioning of additional landscaping should first be considered within the site boundary. However, there is limited scope on site and this provision may not be possible to achieve on site or adjacent with the current arrangement (within the redline boundary or offsite on other owned land) considering the size of the proposed development area and the limited amount of soft landscaping within the parcel. Based on the proposed plans, it is unlikely that net gain will be achieved by ways of habitat creation/enhancement without significant changes to the proposals on site or require unfeasible commitments off-site. As such, a financial contribution to off-site ecological enhancements (i.e. purchasing biodiversity units) within an approved scheme is required to make up the +10% net gain for area-based habitat units. The mechanism for securing this off-setting will need to be proposed to and confirmed by the LPA and would be linked to the application through a planning obligation Section 106 (s106) agreement. The proposed habitat compensation must be of an appropriate distinctiveness to meet the trading rules of BNG.

	A summary as to what off-site units will be required is detailed in the table below.				
		Distinctiveness	Broad Habitat Group	Habitat	Units Required
	Area-Based	Medium	Grassland	Other Neutral Grassland	2.46
			Heathland and Scrub	Blackthorn scrub	2.07
			Individual Trees	Rural Tree	0.11
		Other			0.03
		Total			
Pre-Commencement	A Biodiversity Gain Plan (BGP) and Habitat Management and Monitoring Plan (HMMP) must be produced for the site. This should include recommendations for the implementation, management and monitoring of the site for at least 30 years to ensure that biodiversity net gain is delivered.				
	These additional requirements can only be actioned following the finalisation of the BNG assessment – be it on-site or off-site net gains sought.				
BNG Mitigation Hierarchy					
Avoidance	The proposed plans have been designed to minimise impacts on the habitats present on site where possible, such as by retaining the two mature oak trees on site. However losses could not be completely avoided or minimised whilst still achieving the goal of providing housing.				
Minimisation					
Mitigation	The losses on site have been partially off-set by the creation of new vegetated garden areas, hedgerows and scattered trees. However full mitigation was not possible within the boundary of the site.				
Offset	As such, off-site offsetting will need to be quired through procuring habitat units from a habitat bank.				

Appendix 1: Baseline Habitat Plan



Appendix 2: Post-Development Habitat Plan



Appendix 3: Proposed Development Plan



Appendix 4: Headline BNG Results

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-4.09		
	Hedgerow units	0.20		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-69.94%	Total net gain achieved is less than target set ▲	
	Hedgerow units	23.23%		
	Watercourse units	0.00%		
Trading rules satisfied?		No - Check Trading Summaries ▲		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Area habitat units	10.00%	5.85	6.43	4.67
Hedgerow units	10.00%	0.85	0.93	0.00
Watercourse units	10.00%	0.00	0.00	0.00
				No additional hedgerow units required to meet target ✓
				No additional watercourse units required to meet target ✓

Appendix 5: Baseline Habitat Conditions

Individual Trees

Rural Trees; assessed using 'Individual Trees' habitat type condition sheet:

Condition Assessment Criteria		Condition Achieved (Y/N)				
		T01 L	T02 L	T03 S	T05 S	T06 S
A	The tree is a native species (or more than 70% within the block are native species).	Y	Y	Y	Y	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	Y	Y	Y	Y
C	The tree is mature (or more than 50% within the block are mature).	Y	Y	N	N	N
D	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Y	Y	Y	Y
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y	Y	N	N	N
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	Y	Y	Y	Y
Number of criteria passed		6	6	4	4	4

Condition Assessment Result	Condition Assessment Score	Score Achieved ✓	
Passes 5 or 6 of 6 criteria	Good (3)	✓	
Passes 3 or 4 of 6 criteria	Moderate (2)	✓	
Passes 0, 1 or 2 of 6 criteria	Poor (1)		

Neutral Grassland; assessed using 'Grasslands Medium/High/Very High Distinctiveness' habitat type condition sheet:

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes/Justification
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relative to the specific habitat type. Note – this criterion is essential for achieving moderate or good condition for non-acid grassland types only.	Y	Species composition resembles definition of g3c ‘other neutral grassland’.
B	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y	Varied sward height is present
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Y	Cover of bare ground exceeds 5%.
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	N	Large % cover of scrub
E	Combined cover of species indicative of sub-optimal condition 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 (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Y	Physical damage does not exceed 5% of total area. No invasives observed
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 2 and 4 cannot contribute towards this count). Note – this criterion is essential for achieving good condition for non-acid grassland types only.	Y	Species composition of seed mixes suggests there will likely be 10 or more vascular plant species per m ² .
Essential criterion for good condition achieved (for non-acid grassland) (Yes or No)		Y	
Number of criteria passed		5	
Condition Assessment Result		Condition Assessment Score	Score Achieved ✓
Non-acid grassland types (result out of 6 criteria)			
Passes 5 or 6 criteria, including essential criterion A and additional criterion F		Good (3)	

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)		

Scrub— check condition assessment supplement; assessed using ‘Scrub’ habitat type condition sheet:

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes/Justification
A	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species, with no single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Y	Species present closely matches the characteristics of the specific scrub type (mixed scrub), with at least 80% native scrubs, three native woody species, and no dominant species.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Y	A balance of all age classes are present
C	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Y	non-native invasive species not present
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	The scrub lacks a well developed edge due to adjacent urban and agricultural properties
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	The scrub lacks glades or rides
Number of criteria passed			3
Condition Assessment Result (out of 5 criteria)		Condition Assessment Score	Score Achieved ✓
Passes 5 criteria		Good (3)	
Passes 3 or 4 criteria		Moderate (2)	✓
Passes 2 or fewer criteria		Poor (1)	

Line of Trees; assessed using 'Line of Trees' habitat type condition sheet:

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes/Justification
A	At least 70% of trees are native species.	N	<70% native species
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5m wide.	Y	Predominantly continuous lines of trees
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	Y	Occasional ivy and loose bark is present
D	There is an undisturbed naturally-vegetated strip of at least 6m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice.	N	Land to the north of the northern line is disturbed agricultural, and to the south of the southern line is urban
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). 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.	Y	>95% of trees are in healthy condition
Number of criteria passed			3
Condition Assessment Result (out of 5 criteria)		Condition Assessment Score	Score Achieved ✓
Passes 5 criteria		Good (3)	
Passes 3 or 4 criteria		Moderate (2)	✓
Passes 2 or fewer criteria		Poor (1)	