

St. John's CE Thornham Primary School,

Middleton

Preliminary Ecological Appraisal & BNG

Assessment

2024



RACHEL
HACKING
ECOLOGY

Client The Cranmer Trust

Project Title St. Johns CE Thornham Primary School

Project Reference RHE.4132

Project Leader Mark Ashton

Contact Details markashton@rachelhackingecology.co.uk

	Name	Position	Date
Author	Mark Ashton	Junior Ecologist	13/03/2024
Reviewer	Simon Holden	Associate Ecologist	28/03/2024
Reviewer	Dr Rachel Hacking	Principal Ecologist	02/04/2024



RACHEL
HACKING
ECOLOGY

The Stables
Paradise Wharf
Ducie Street
Manchester
M1 2JN

0161 465 8971

www.rachelhackingecology.co.uk

mail@rachelhackingecology.co.uk



RACHEL
HACKING
ECOLOGY

Report Contents

Executive Summary	3
1. Introduction.....	4
2. Methods	6
3. Results	8
4. Assessment	15
5. Recommendations.....	18
Appendix 1: Planning Policy & Legislation.....	19
Appendix 2: Habitat Map	22
Appendix 3 – Landscape plan	23
Appendix 4 – BNG Metric calculations	23
Appendix 4 – BNG Metric calculations	24
Appendix 5 – Condition Assessment Sheets	26



Executive Summary

Development Details

The client is proposing a single-storey extension to St John's CE Thornham Primary School, Middleton, hereafter referred to as the 'site'.

This report describes the ecological features of the site and its surroundings and assesses the potential impacts of the development on the ecological interest. Recommendations are provided so that the development is compliant with biodiversity policy and legislation.

Ecological Interest

The habitats on site are common locally and nationally. The building offers negligible potential to support roosting bats. Four ponds are present within 250m of the site. There is potential for the proposed development to disturb nesting birds and Great Crested Newt, if present.

Biodiversity Net Gain Assessment

Baseline habitats score 1.20 area units and 1.07 hedgerow units. Post-development habitats score 1.08 area units and 1.07 hedgerow units. This represents a net loss of -10.40% in area units and a net gain of +0% in hedgerow units. Suggestions are made to bring the proposed development to net gain.

Outcomes

No further survey work is required. Recommendations include mitigation for protected species and suggestions to enhance the biodiversity value of the site.



1. Introduction

1.1 Project Brief

- 1.1.1 Rachel Hacking Ecology Limited was commissioned in 2024 by The Cranmer Trust to carry out an ecological appraisal of land at St. Johns CE Thornham Primary School, Middleton, hereafter referred to as the 'site'. The site is located at O.S. grid reference: SD 89124 08917 (see Figure 1).

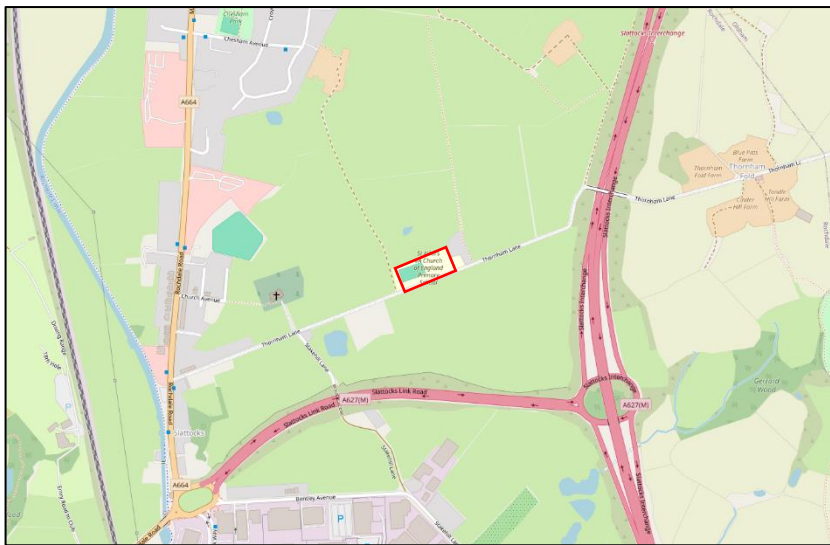


Figure 1. Map showing the location of the site

Description of Development

- 1.1.2 The site will be the subject of a planning application for a single-storey extension at the west of the existing building, and landscaping of associated grounds.

Relevant Planning History

- 1.1.3 No previous planning applications or ecology surveys were identified using the Rochdale Council website.

1.2 Scope of Work

- 1.2.1 The Client commissioned Rachel Hacking Ecology to carry out the following works:
- Record the extent, type, and condition of habitats within and next to the site.
 - Search for signs of protected species and assessment of the potential of habitats and features to support protected and notable species.
 - Calculate the baseline and post-development biodiversity units.

1.3 Site Visit Information

Surveyor Details

- 1.3.1 Austin Rigby and Mark Ashton (Junior Ecologists) visited the site on 7th March 2024. Austin and Mark are experienced in undertaking similar surveys throughout the UK.

Weather

- 1.3.2 The weather at the time of the survey was dry and windy with low overcast cloud-cover. The temperature was approximately 13°C.



2. Methods

2.1 Desk Study

- 2.1.1 The Magic website (Multi-Agency Geographical Information for the Countryside) was interrogated for the presence of Statutory Designated Sites (and European Protected Species licences) within a 2km radius of the site.
- 2.1.2 The site was checked to determine if it is located within an Impact Risk Zone for any Site of Special Scientific Interest (SSSI) and if so, whether the Local Planning Authority will need to consult Natural England.
- 2.1.3 Given the limited nature of the proposed development, it was not deemed proportionate to undertake a data centre record search.

2.2 Field Survey

Extended Phase 1 Habitat Survey

- 2.2.1 In accordance with JNCC guidelines¹ the site was walked over, and the habitats and features of ecological interest were mapped and described. Habitats and features of particular interest were target noted.
- 2.2.2 During the walkover habitat and features were assessed for their suitability to support protected and notable species in accordance with CIEEM guidelines². Field signs of protected, notable, and invasive non-native species, if encountered, were mapped, and described.

Bats

- 2.2.3 The exterior of the building on site was surveyed from the ground using binoculars and a high-powered torch. Any features offering potential access to roosting bats were recorded. Such features may include suitable gaps in roof coverings, gaps behind external cladding/facia and gaps in masonry.
- 2.2.4 Evidence indicating the presence of roosting bats was also searched for. This may include bat droppings on walls, windows or on the ground below roost entrances or staining from fur oil around roost entry points.

¹ JNCC (2010). *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*. Joint Nature Conservation Committee, Peterborough.

² CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal*. Chartered Institute of Ecology and Environmental Management, Winchester.



- 2.2.5 Any trees on the site were subject to a ground-level assessment, searching for Potential Roosting Features (PRFs), such as flaking bark, woodpecker holes, knot holes and limb splits.

2.3 Biodiversity Net Gain

- 2.2.1 The Statutory BNG Metric calculation tool was used to assess the predicted changes in habitat units resulting from the proposed development. This report should be read in conjunction with the spreadsheet RHE.4132 St Johns, Thornham Statutory Metric.

- The baseline habitats recorded during the Extended Phase 1 habitat Survey were measured using QGIS mapping software.
- Habitat conditions were assessed using the Statutory BNG Metric Habitat Condition Assessment sheets.
- The strategic significance of baseline habitats was assessed on whether they were formally identified in a local strategy or policy, or whether they were in an ecologically desirable location.
- The proposed habitats, including any retained or enhanced habitats, were assessed using data provided by Halliday Meecham Architects.

- 2.2.2 The predicted change in biodiversity units was determined by calculating the difference between the baseline units and the post-development units.

- 2.2.3 Mark Ashton carried out the calculations and assessment in March 2024.

2.4 Mitigation Hierarchy

- 2.4.1 Mitigation measures should be embedded within the masterplan design and planning application process. This process from proposal to implementation needs to consider the 'mitigation hierarchy' of avoid, reduce, compensate, and enhance:

- Aim to avoid negative effects through the design process.
- Mitigate if negative effects cannot be avoided.
- Use compensation measures to offset residual impacts.
- Identify and implement opportunities to enhance biodiversity.

3. Results

3.1 Survey Constraints

- 3.1.1 Field survey results are valid for a limited duration and no investigation can provide a complete description and characterisation of a site. The composition of habitats and species can change depending on environmental variables and the mobility of species, so the results of a study become less reliable over time. In some cases, surveys that are 3 years old may be acceptable for a project assuming that habitats have not significantly changed in the intervening period, but for protected species it is likely that survey data will need to be no more than 18 months old.
- 3.1.2 Table 1 describes the survey limitations and how these were mitigated.

Table 1. Survey Constraints and Mitigated Response.	
Constraints	Mitigated Response
The surveys were undertaken during early-March when many plants, including invasive non-natives, may have died back.	The surveys enabled the broad habitat types to be identified and recorded. No priority habitats are present, and a robust assessment was possible.

3.2 Designated Sites

- 3.2.1 Statutory sites within the study area are summarised in Table 2.

Table 2. Statutory Designated Sites			
Name	Status	Location/distance	Interest
Rochdale Canal	SSSI / SAC	Approx. 650m west of site	Aquatic plants including floating water-plantain <i>Luronium natans</i> .
Hopwood Woodlands	LNR	Approx. 1KM west of site	Large area of fragmented woodland surrounding Hopwood Hall, offering several habitats for birds, bats and amphibians.
SSSI: Site of Special Scientific Interest, SAC: Special Area of Conservation, LNR: Local Nature Reserve.			

- 3.2.2 The site is within the Impact Risk Zone of the Rochdale Canal SAC/SSSI, but the proposed development will not require the LPA to consult Natural England.

3.3 Habitats

- 3.3.1 The Phase 1 habitat map is contained in Appendix 2 and proposed development plans in Appendix 3. BNG metric calculations are shown in Appendix 4 and condition assessment sheets in Appendix 5.

Modified Grassland

- 3.3.2 The western half of the site is amenity grassland used as a playing field. The grassland is dominated by Perennial Rye-grass *Lolium perenne* (see Photograph 1). There are other small areas of grassland throughout the site (see Photograph 2). The grassland is deemed to be in poor condition, passing only 3 of 7 of the assessment criteria and failing essential criterion 1 (see Appendix 5). Modified grassland extends to 0.466ha and scores 0.93 habitat units.



Photograph 1 showing amenity grassland playing field.



Photograph 2 showing smaller isolated areas of amenity grassland.

Developed Land: Sealed Surface

- 3.3.3 Hardstanding is present as pathways and car parking areas (see Photograph 2). Condition assessment does not apply. Hardstanding extends to 0.253ha and scores zero habitat units.



Photograph 2 showing hardstanding.

Buildings

- 3.3.4 There is one building on site. The building consists of an older section to the east and a newer extension to the west (see Photograph 3). The newer section, to be affected by the development is in good condition and is well sealed throughout. Buildings are classed as Developed land; sealed surface and score zero in the biodiversity metric.



Photograph 3 showing the newer portion of the building.

Artificial– sealed surface (Astroturf)

- 3.3.5 Astroturf is present as a recreation area in the centre of the site (see Photograph 4). Astroturf is classed as artificial; sealed surface. Condition assessment is not applicable. Artificial sealed surface extends to 0.026ha and scores zero habitat units.



Photograph 4 showing the astroturf recreation area.

Individual Trees

- 3.3.6 Several trees are present to the north of the site (See Photograph 5). Species include Sycamore *Acer pseudoplatanus*, Beech *Fagus sylvatica*, and Silver Birch *Betula pendula*.



Photograph 5 showing individual trees.

Tall, Ruderal Herb

- 3.3.7 An area of tall ruderal herb exists on site (see Appendix 2). The area is owned and managed by a third party and will not be affected by development, for this reason the area has been removed from the BNG calculation and is not considered further.

Native Hedgerow

- 3.3.1 Native hedgerow is present around the edges of the site, including road verges (see Photograph 6). Species include Hawthorn *Crataegus monogyna*, Elder *Sambucus nigra*, Ash *Fraxinus excelsior*, Holly *Ilex aquifolium* and Ivy *Hedra helix*. The hedgerow is in good condition; passing six of eight specified condition criteria. The native hedgerow extends to 0.95km and score 0.57 hedgerow units.



Photograph 6 showing native hedgerow.

Native Hedgerow with Trees

- 3.3.1 A native hedgerow with trees is present, bordering the southern edge of the site (see Photograph 7). This section consists of Holly, Beech *Fagus sylvatica*, Sycamore *Acer pseudoplatanus* and Hawthorn. The native hedgerow with trees is in poor condition; passing 3 of 10 criteria of the condition assessment. This habitat extends to 0.043km and scores 0.17 hedgerow units.



Photograph 7 showing the native hedgerow with trees.

3.4 Species

Great Crested Newt

- 3.4.1 No ponds exist on site. Four ponds were identified within 250m of the site. No ponds are directly connected to the construction zone. Habitats on site are of limited value to amphibians although they may forage on amenity grassland and shelter in hedgerow bases on the wider site. The construction zone currently supports negligible suitability for Great Crested Newt *Triturus cristatus*, being frequently disturbed mown grassland and hardstanding.

Reptiles

- 3.4.2 Habitats on site are of negligible suitability for reptiles and reptiles are not considered further in this report.

Nesting Birds

- 3.4.3 Habitats on site are of limited interest for birds. The hedgerows and trees on site offer suitable nesting habitat.

Badger

- 3.4.4 The embankment in the adjacent field to the western boundary, and the amenity grassland on site, offers suitable habitat and foraging opportunities for Badger *Meles meles*. No evidence of Badger activity was recorded during the survey.

Bats

- 3.4.5 The building on site is in good condition and is well sealed. The area of the building to be affected by the development is recently built and has a flat roof with no void. The roof is intact (see Photograph 8). No cavities suitable for roosting bats exist. The building offers negligible potential to support roosting bats due to the absence of suitable features. No evidence of bat activity was found during the survey.



Photograph 8 showing the part of the building to be extended

3.4.6 Several trees on site offer potential to support roosting bats, however habitats on site are generally open and exposed.

3.4.7 Bats may forage along hedgerows and tree lines.

Other Species

3.4.8 Habitats on site do not offer potential to support any other notable species.

3.5 Invasive Species

3.5.1 No non-native invasive species, as listed under Schedule 9 of The Wildlife & Countryside Act 1981 (as amended), were identified in the survey. This group is not considered further.

4. Assessment

4.1 Development Context

- 4.1.1 The following assessment is based on the proposed layout shown at Appendix 3.

4.2 Impacts on Designated Sites

- 4.2.1 No impacts to statutory designated sites are anticipated due to the distance between them and the site and the absence of any impact pathways.

4.3 Impacts on Habitats

- 4.3.1 The habitats on site are of ecological importance at the site level only and there is no requirement to compensate for their losses. Native hedgerows are a priority habitat.
- 4.3.2 Trees and hedgerows could be damaged during construction through soil compaction if materials are stored within the root protection area. Mitigation will be required (see Section 5 of this report).

4.4 Impacts on Species

Amphibians

- 4.4.1 Four ponds exist within 250 metres of the site although none have direct connectivity to the construction zone. The nearest pond lies 82 metres to the south. The construction zone sits within a wider, frequently used area of mown grassland and hardstanding. No suitable Great Crested Newt habitat will be affected by the proposals. However, it would be prudent to adopt a precautionary working method statement (see Section 5 of this report).

Nesting Birds

- 4.4.2 Nesting birds in hedgerows and trees on site could potentially be disturbed during construction if not appropriately protected. The loss of 5 trees could negatively impact upon nesting birds. Mitigation will be required (see Section 5 of this report).

Badger

- 4.4.3 Impacts to Badger are unlikely, but Badgers could potentially be harmed if they access excavations during construction. Mitigation will be required (see Section 5 of this report).



Bats

4.4.4 No impacts to bats are anticipated.



5. Biodiversity Net Gain

5.1 Baseline Habitats

Baseline Area Habitats

- 5.1.1 The baseline area habitats are calculated to provide 1.2 units.

Baseline Linear Habitats

- 5.1.2 The baseline hedgerow habitats are calculated to provide 1.07 units.

Retained Habitats

- 5.1.3 0.432ha of amenity grassland will be retained, with a score of 0.86 habitat units. Most trees are to be retained with 5 small trees lost to the development.

5.2 Created Habitats

Developed Land; Sealed Surface

- 5.2.1 This habitat consists of both the building footprints and the areas of hardstanding proposed. These have a combined area of 0.023ha. These habitats do not provide any habitat units.

Artificial unvegetated unsealed surface

- 5.2.2 This habitat consists of pathways and gravel areas proposed. These have a combined area of 0.015ha and do not provide any habitat units.

Individual Trees

- 5.2.3 Twelve small and three medium trees will be planted. This equates to 0.065ha providing 0.2 units. The target condition for planted trees is moderate throughout.

5.3 Summary

- 5.3.1 The proposed habitats are calculated to result in a total of 0.2 habitat units.
- 5.3.2 The Biodiversity Impact Assessment shows a net loss of 0.13 habitat units (-10.4%). For hedgerows the metric shows a 0% change requiring a further 0.11 habitat units to achieve 10% net gain.

6. Recommendations

6.1 Mitigation and Enhancement Measures

Habitats

- 6.1.1 Adjacent habitats, including the hedgerows and trees bordering the site, and the area of young trees at the western edge of the site, should be protected during construction with fencing to prevent accidental incursion.
- 6.1.2 Standard pollution prevention measures should be included in a Construction Environmental Management Plan (CEMP) to avoid risk of pollution in surrounding habitats.

Great Crested Newt

- 6.1.3 It is recommended that the development proceeds under a Precautionary Working Method Statement, and if a Great Crested Newt is found, work must stop and a suitably experienced and licensed ecologist be contacted for advice.

Nesting Birds

- 6.1.4 Impacts on nesting birds should be avoided by carrying out site clearance and similar operations outside of the bird breeding season (March- August). Construction activities that might directly impact upon breeding birds should hence be limited to the September-February period. If vegetation has to be cleared during the bird breeding season checks immediately before clearance by a suitably qualified ecologist will be required. If nesting activity is detected work in that area will need to stop until the ecologist considers that nesting activity is finished.

Biodiversity Net Gain

- 6.1.5 As the proposed development results in biodiversity net loss, the metric was used to calculate predicted means by which 10% net gain could be achieved.
- 6.1.6 The most appropriate method for this site would be a combination of scrub and further tree planting.
- 6.1.7 In addition to the trees proposed in the landscaping plans, additional trees could be included and an area 150m² of mixed scrub managed to a moderate condition would bring the proposed development into a net gain of 0.23 habitat units (17.0%).
- 6.1.8 For linear (hedgerow) units the most appropriate suggestion for this site would be an enhancement to the pre-existing hedgerow with trees as identified in the habitat map.

Appendix 1: Planning Policy & Legislation

National Policy

The National Planning Policy Framework (NPPF 2023) describes the Government's planning policy for England and how it should be applied. Within this framework, the requirements in relation to biodiversity are included within several policies. The two most relevant to individual planning decisions are Paragraphs 180 and 186, shown below:

- 180. Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 186. When determining planning applications, local planning authorities should apply the following principles:
 - a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development



in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Legislation

The Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) includes the notification and confirmation of Sites of Special Scientific Interest (SSSIs). SSSIs can be notified for their floral, faunal, geological, or physiographical features. Protection against damaging operations and management of SSSIs is also included within the Act. Impact Risk Zones (IRZs) are zones around an SSSI account for the particular sensitivities of the features for which it is notified and identify development proposal which could have adverse impacts.

The Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) protects native animals, plants and habitats. Under the Act it is an offence to intentionally kill, injure or take any wild animal listed on Schedule 5 and it is an offence to interfere with places used for shelter or protection, or intentionally disturb animals occupying such places. The Act prohibits picking, uprooting or destroy any wild plant (or any attached seed or spore) listed in Schedule 8.

European Protected Species (EPS) such as bats, Hazel Dormouse, Otter, Natterjack Toad, Smooth Snake, Sand Lizard and Great Crested Newt are protected by the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) and the Conservation of Habitats and Species Regulations 2017. The Acts make it an offence to:

- a) Deliberately capture, injure or kill an EPS;
- b) Deliberately impair an EPS's ability to survive, breed, reproduce, rear or nurture young; to hibernate or migrate; or significantly affect the local distribution or abundance of the EPS.
- c) Possess or control live or dead EPS or any part of, or anything derived from a EPS;
- d) Damage or destroy a breeding site or resting place of an EPS;



- e) Intentionally or recklessly obstruct access to any place that is used for shelter or protection by an EPS;
- f) Intentionally or recklessly disturb a structure or place that it uses for shelter or protection that is occupied by an EPS.

All common herptiles are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000). Grass Snake, Slow Worm, Common Lizard, Adder are protected against intentional killing or injury. Common Frog, Common Toad, Smooth Newt and Palmate Newt is protected against sale. In addition, all British reptiles, Common toad and Great Crested Newt are listed as Species of Principal Importance.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or take any wild bird or take, damage, or destroy its nest whilst in use or being built, or take or destroy its eggs. It is an offence to intentionally or recklessly disturb a species listed on Schedule 1 of the Act while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young.

The Protection of Badgers Act 1992 makes it an offence to wilfully, or to attempt to kill, injure, take, possess or cruelly ill-treat a Badger, or intentionally or recklessly interfere with a sett. Interference of a sett includes disturbing badgers during occupation of a sett, or damaging or destroying a sett, or obstructing access to the sett.

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority to have regard to conserving biodiversity. Section 41 of the same Act requires the Secretary of State to publish a list of the living organisms and types of habitats that are of 'Principal Importance' for the purpose of conserving biodiversity. The Secretary of State must take steps, as appear reasonably practicable, to further the conservation of those living organisms and habitats in any list published under this section. The list of species and habitats of principal importance currently includes 943 species and 56 habitats. These are the species and habitats found in England which are regarded as conservation priorities under the UK Post-2010 Biodiversity Framework

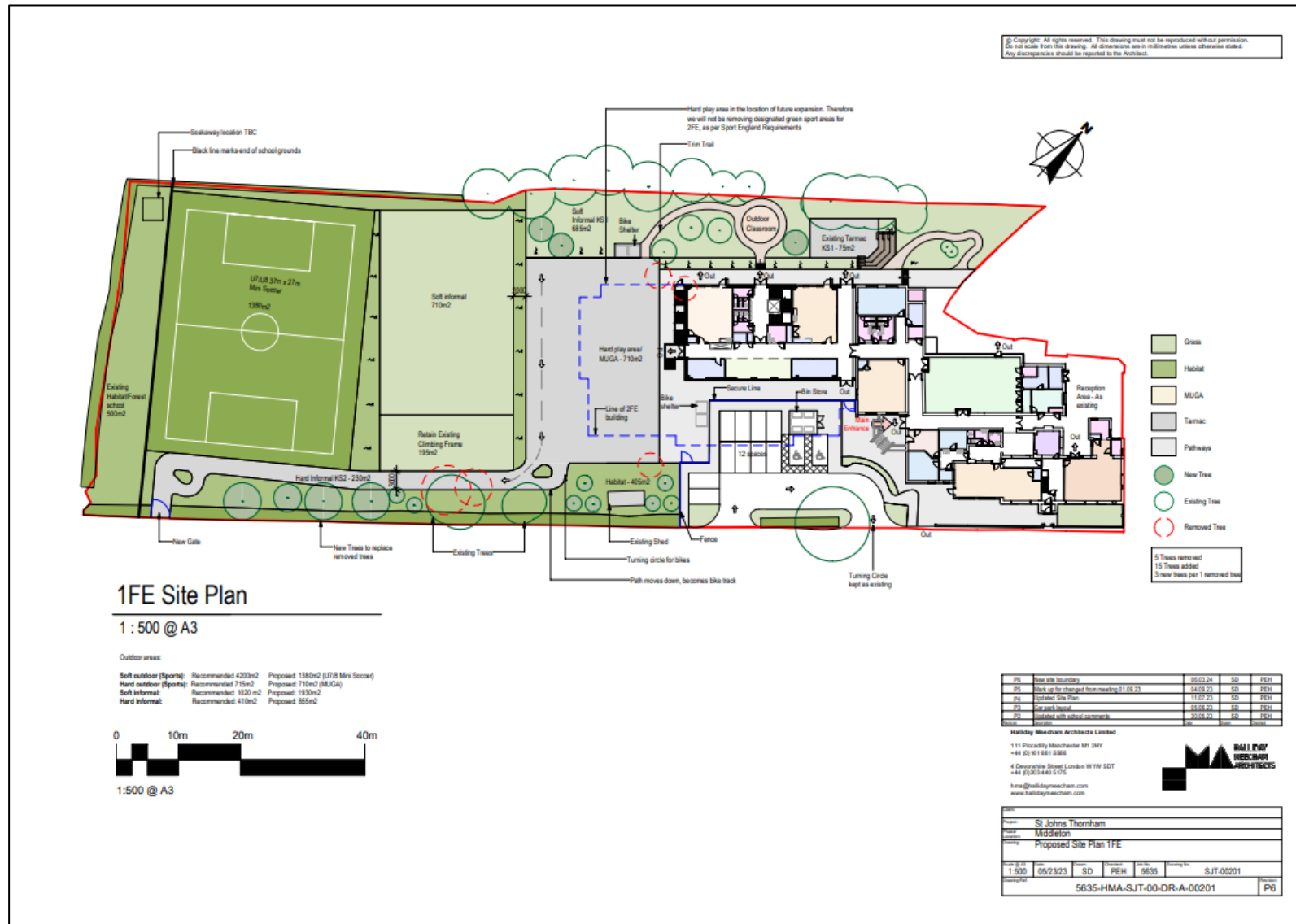
The Hedgerows Regulations 1997 protect 'important' hedgerows from destruction or damage. A hedgerow is 'important' if it (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy 'important' hedgerows unless permitted by the local planning authority.



Appendix 2: Habitat Map



Appendix 3 – Landscape Plan



Appendix 4 – BNG Metric calculations

St. John's Thornham CE primary School		Return to results menu	
Headline Results			
Scroll down for final results ▲			
On-site baseline	Habitat units	1.20	
	Hedgerow units	1.07	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	1.08	
	Hedgerow units	1.07	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	-0.13	-10.40% On-site net gain is less than target set ▲
	Hedgerow units	0.00	0.00% On-site net gain is less than target set ▲
	Watercourse units	0.00	0.00%

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.13
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-10.40% Total net gain achieved is less than target set ▲
	Hedgerow units	0.00% Total net gain achieved is less than target set ▲
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	



Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
<i>Habitat units</i>	10.00%	1.20	1.32	0.25	
<i>Hedgerow units</i>	10.00%	1.07	1.18	0.11	
<i>Watercourse units</i>	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓



Appendix 5 – 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	St. John's CE Primary School, Thornham, Middleton	Survey date and Surveyor name	7th March 2024 - Mark Ashton, Austin Rigby
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	SD 89124 08917	Habitat parcel reference	
Habitat Description			
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.	N	2-3 species per m2
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	Mown grass, uniform height
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	No scrub present
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	Mown grass, active playing area for children
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Y	Bare ground present but minimal due to human activity i.e. football games
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y	No bracken present
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Y	No NIN's identified during survey
Essential criterion achieved (Yes or No)			No
Number of criteria passed			4
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√	
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)	X	
Suggested enhancement interventions to improve condition score			
Footnotes			
Footnote 1 – Creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, curled dock <i>Rumex crispus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common nettle <i>Urtica dioica</i>, creeping buttercup <i>Ranunculus repens</i>, greater plantain <i>Plantago major</i>, white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i>. 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).			



Appendix 5 – Condition Assessment Sheet

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				
See the Statutory Biodiversity Metric Technical Annex 2 and UK Habitat Classification: ukhab – UK Habitat Classification				
On-site or off-site, site name and location	Survey date and Surveyor name		7th Marh 2024 Mark Ashton, Austin Rigby	
Limitations (if applicable)	Survey reference (if relating to a wider survey)			
Grid reference	SD 89124 08917	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).	Y	
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 <i>Prunus spinosa</i> 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).	Y	
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).	N	
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).	Y	
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.	Y	
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 <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	Y	
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 BSI website ⁵ where the 'Online Atlas of the British and Irish Flora' 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 ⁶ .	Y	No non-native invasive species identified
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).	N	Hedgerow has been trimmed
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:		3		



Appendix 5 - Condition Assessment Sheet

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				
See the Statutory Biodiversity Metric Technical Annex 2 and UK Habitat Classification: Habitat - UK Habitat Classification				
On-site or off-site, site name and location	Survey date and Surveyor name			15th March 2024 Mark Ashton, Austin Raby
Limitations (if applicable)	Survey reference (if relating to a wider survey)			
Grid reference	SD 8607N 08880	Habitat parcel reference		
Common 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.				
The 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.				
Ten attributes are used for the assessment				
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)
Group groupings: 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).	Y	
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 backthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Last, 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).	N	
B1. Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gapiness' 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).	N	
B2. Gap - hedge canopy continuity	Gap make up <50% of total length, and no canopy gaps >5 m	This is the horizontal 'gapiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy to matter how small. Access points and gates contribute to the overall 'gapiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	N	
C1. Undisturbed ground and perennial vegetation	<1 m width of undisturbed ground with perennial herbaceous vegetation for >50% 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.	N	
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 nettle <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	Y	
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 8 of the NCA) 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 ³ , as well as the BSI website ⁴ where the 'Online Atlas of the British and Irish Flora' 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 ⁵ .	Y	No non-native invasive species identified
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).	N	Hedgerow has been trimmed
Additional group - applicable to hedgerows with trees only				
E1. Tree class	There is more than one age-class (or morphology) of trees present (for example: young, mature, veteran and/or ancient), 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.		
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.		
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.				
Common assessment 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		
	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	3		
Common assessment 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		
	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, C7 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	3		



Appendix 5 - Condition Assessment Sheet

Condition Sheet: LINE OF TREES Habitat Type			
Habitat Types			
Line of trees			
Line of trees – associated with bank or ditch			
Ecologically valuable line of trees			
Ecologically valuable line of trees – associated with bank or ditch			
Habitat Description			
See the Statutory Biodiversity Metric User Guide.			
This assessment is based on the Hedgerow Survey Handbook ¹ . For further clarifications please refer to the Handbook.			
Where ancient and veteran trees are present within the line of trees, see Footnote 2 for standing advice.			
On-site or off-site, site name and location	St. John's Thornham CE Primary School	Survey date and Surveyor name	7th March 2024 - Mark Ashton, Austin Rigby
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	SD 89069 08880	Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	At least 70% of trees are native species.	Y	Predominantly Sycamore, Ash and Beech
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	N	Trees recently pollarded
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	small cavities and deadwood present
D	There is an undisturbed naturally-vegetated strip of at least 6 m 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 ² .	N	adjacent to road and mown grass within 2m
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.	N	Trees recently pollarded
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)	X	
Suggested enhancement interventions to improve condition score			
Footnotes			
Footnote 1 – DEFRA (2007) <i>Hedgerow Survey Handbook: A standard procedure for local surveys in the UK</i> . 2nd ed [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk).			
Footnote 2 – Where ancient and veteran trees are present, 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 5 - Condition Assessment Sheet

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 separate Line of trees condition sheet for a line of Rural trees.														
Habitat Description														
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 must 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	St. Johns Thornham CE Primay School			Survey date and Surveyor name		7th March 2024, Mak Ashton, Austin Rigby								
				Survey reference (if relating to a wider survey)										
Limitations (if applicable)				Habitat parcel reference										
				1	2	3	4	5						
Condition Assessment Criteria			Grid reference											
			SD89 0880 8893	SD89 0760 8880	SD89 0880 8931	SD89 06008 878	SD89 0690 8881							
				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).			N	Y	N	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) ¹ .			N	N	N	N	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	Y	Y	N	Y						
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.			N	Y	N	Y	N						
F	More than 20% of the tree canopy area is oversailing vegetation beneath.			Y	N	Y	N	N						
Number of criteria passed				2	4	3	3	3						
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score			Score Achieved x/√										
Passes 5 or 6 criteria	Good (3)													
Passes 3 or 4 criteria	Moderate (2)				X	X	X	X						
Passes 2 or fewer criteria	Poor (1)			X										
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.														

