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Biodiversity Net Gain Assessment

Client Name: Croudace Homes
Site: Bridge Farm, Twyford
Date: December 2024
Version: 3
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REVISION HISTORY

REV	DESCRIPTION OF CHANGE	DATE	INITIALS
1	Original Report	22.10.2024	RJ
	Quality review	12.11.2024	OL
	Finalised for issue	12.11.2024	RJ
2	Amended report following client review	25.11.2024	RJ
3	Amended report following update to landscape plan	13.12.2024	RJ

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DISCLAIMER

It should be noted that the information above provides details of the Site's current ecological situation. In the event that the proposed development does not commence within 12 months of the date of this report, further advice should be sought from a suitably qualified ecologist as to whether the information provided requires updating in light of changing ecological conditions.

1. EXECUTIVE SUMMARY

- 1.1. A Biodiversity Net Gain Assessment has been carried out in relation to a proposed residential development of land at Bride Farm, Twyford ("the Site").
- 1.2. The proposed development will result in a net gain in habitat biodiversity of **+20.79%** (+7.10 habitat units), a net gain in hedgerow biodiversity of **+133.91%** (+5.75 hedgerow units), and a net gain in watercourse biodiversity of **+15.60%** (+1.07 watercourse units).
- 1.3. The Proposed Development does not violate any trading rules within the Metric.
- 1.4. The change in biodiversity value, as assessed here, is dependent upon the implementation of an appropriate habitat management plan within the Site upon completion of the proposed development.

2. INTRODUCTION

- 2.1. Nicholsons was commissioned by Croudace Homes to carry out a Biodiversity Net Gain Assessment (BNGA) in relation to a proposed residential development (“the Proposed Development”) of land at Bridge Farm, Twyford (Grid reference: SU 78338 76613) hereafter referred to as “the Site”. The location of the Site is provided by **Figure 1**.
- 2.2. A baseline habitat survey of the Site was originally undertaken by Aspect Ecology (BIA, 2022) and supported by an updated assessment by Nicholsons in April 2024 as part of a Biodiversity Baseline Assessment which included condition assessment relevant to Biodiversity Net Gain (BNG). This report provides an update on the previous BNG assessment undertaken by Aspect Ecology (2022) using the Statutory Metric.
- 2.3. At the time of the assessment, the Site comprised four large fields previously managed for arable and pastoral land, but now consisting of other neutral grassland (g3c). The fields were bordered by native hedgerows (h2a and h2a5) and thin strips of broadleaved woodland (w1g), with a series of derelict farm buildings in the centre of the Site (u1b5). The Site was bordered by the River Loddon (r1a) to the west, with a narrow strip of wet woodland (w1d) forming part of the riparian corridor adjacent to the river.
- 2.4. Habitats and linear features in the wider landscape, which may be important for ecological connectivity of the Site, included the River Loddon and its associated wet woodland corridor.
- 2.5. There were seven non-statutory and no statutory designated sites within 2km of the Site, with the River Loddon Local Wildlife Site (LWS) and the Loddon Valley Gravel Pits Biodiversity Opportunity Area (BOA) located directly adjacent to the Site on the west boundary.
- 2.6. Assumptions have been made on the potential for habitats and their conditions post-intervention based on the Landscape Masterplan and Landscape Design Strategy (Ilex Landscape Architects, September 2024), which may include small changes to soft landscaping (e.g., the addition of a small number of trees) or habitat management effort compared to the original landscaping plan, in order to achieve the mandatory +10% Biodiversity Net Gain. Small changes and/or proposed management efforts applied have been agreed with the applicant and are reported later in this document. Any agreed changes are reflected in our post-intervention habitat map, **Figure 3** and within this report, and it is the applicant’s responsibility to ensure these are reflected in the final landscaping plan accompanying this assessment to the applicants decisionary body.
- 2.7. We have provided ecological justification for feasible habitat creation and management post-intervention, but it remains the applicant’s responsibility to ensure that these activities are correctly informed and applied. A failure to create and manage habitats in line with this assessment may mean a failure to maintain habitats over a 30-year period from creation.
- 2.8. The Proposed Development has been assessed based on the supplied landscaping plan¹. The landscaping plan used for this assessment is provided by **Appendix 4**.

¹ Croudace Homes (2024) Landscape Masterplan – CH038-002H – September 2024

- 2.9. The purpose of this report is to assess the net gain or loss of habitats in terms of the DEFRA Statutory Metric (“the Metric”) for the Proposed Development.

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Figure 1: Site Location

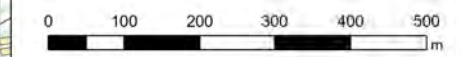
Ref: 991-1-NE.102-Site Location Plan v1 SF 071124



LEGEND

Site boundary

N



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TITLE:	Site Location Plan
PROJECT/SITE:	Bridge Farm, Twyford
CLIENT:	Croudace Homes
MAP REF:	991-1-NE.102
VERSION:	v1
DATE:	07/11/2024
SCALE:	1:10,000 @ A3
APPROVED BY:	RJ
PRODUCED BY:	SF

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3. METHODOLOGY

- 3.1. This BNG Assessment has been completed based upon baseline habitat survey data (“Baseline”, e.g., pre-development) and post-intervention interpretations of the landscaping plan (“Post-intervention”, e.g., post-development).

Baseline habitat survey

- 3.2. A UKHab habitat survey² was completed in order to report on the habitats present at the Site and determine the need for further ecological assessment. Habitats are classified by their type, and where applicable, their vegetative structure and botanical value. As part of the UKHab habitat survey, DEFRA Statutory Condition Assessment Sheets (“the condition assessment sheets”) were used to assess the condition of the habitats on-site as they relate to BNG.
- 3.3. The survey was conducted in dry and bright conditions, during the optimal period for botanical survey, with no access restriction to the survey area, and so no limitations to survey are reported.
- 3.4. Following on from the baseline habitat survey, habitats are referred to and reporting using BNG habitat classification, as converted from UKHab habitat classification. Do note that while these are similar, and UKHab forms the foundational classification system for BNG, there are subtle differences between the two.

Biodiversity Net Gain Assessment

- 3.5. The Metric measures, compares, and accounts for the change in biodiversity, i.e., the losses and gains of habitat types and their value, resulting from intervention.
- 3.6. In addition to the Metric, the DEFRA Statutory User Guide (“the User Guide”), must be used. It is important to note that the Metric, the User Guide, and the condition assessment sheets are all legal implements in relation to BNG.
- 3.7. For the purposes of the Metric, area habitats, linear habitat features (e.g., hedgerows, lines of trees), and watercourse habitats (e.g., rivers, streams, ditches), are all assessed separately. To confirm, the gain or loss of linear feature units does not affect the gain or loss of habitat units. Within the Metric itself, area habitats are assessed within the ‘Habitats’ tabs, linear habitat features are assessed within the ‘Hedgerows’ tabs, and watercourse habitats are assessed in the ‘Watercourses’ tabs. The latter requires a bespoke river assessment process.
- 3.8. All area habitats, linear habitat features, and watercourse habitats are given a predetermined distinctiveness score by the Metric. The distinctiveness score reflects the ecological and conservation importance of the habitat across England. Distinctiveness scores range from ‘Very Low’ (0) to ‘Very High’ (8).

² UKHab Ltd (2023) The UK Habitat Classification Manual Version 2.01.

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- 3.9. The condition of area habitats and linear habitat features are assessed using the condition assessment sheets, which provide a set of criteria and a scoring system against which differing habitats are assessed. The river assessment process has a separate process, but the result is the same. Depending on how many of the criteria the habitat passes, the condition can then be classified on a scale ranging from 'Poor' (1) to 'Good' (3). Certain habitats with little ecological value have 'N/a' (0) or a default score.
- 3.10. Strategic significance is the evidence of or justification of the significance of a habitat in relation to the local area, or local and national policy. Additional value, i.e., 'Locally ecologically desirable but not in local strategy', is afforded to habitats if they are ecologically meaningful, or are identified within local or national policy (e.g., Local Biodiversity Strategy, Local Biodiversity Action Plan), particularly where they contribute significantly to important landscape-scale habitat (e.g., buffer a riverine valley; provide habitat connectivity within the landscape). The highest significance, 'Formally identified in local strategy' is reserved for habitats linked to Local Nature Recovery Strategies (LNRS), and where these have not been published for the area in question, these need to be significant aspect of local or national policy.
- 3.11. Once the baseline value of area habitats, linear habitat features, and watercourse habitats have been established, a comparison can be made against what habitats will be retained, enhanced, and created within the Site post-intervention.
- 3.12. The difference in value between the baseline and post-intervention habitats are compared to provide an assessment of overall net loss or gain in biodiversity within the Site.
- 3.13. In addition to habitat, hedgerow and watercourse value (e.g., +10%), interventions as a result of the Proposed Development must not violate trading rules within the Metric or User Guide. The basic trading rule violation occurs when there is an overall loss in biodiversity (e.g., <10%). Trading rule violations also occur where the loss of higher distinctiveness habitats is not appropriately replaced, or there is a loss of irreplaceable habitats. Trading rules can be specific to distinctiveness (i.e., no net loss of medium or higher distinctiveness habitats) or habitat types (e.g., no net loss of Lowland Mixed Deciduous Woodland).
- 3.14. For habitats to be created or enhanced, an additional multiplier is applied based upon estimated time to target condition and difficulty of creation. In practice, this means that very high distinctiveness habitats may yield a lower net gain in biodiversity than lower distinctiveness habitats. Depending on the project and its aims, it may be reasonable to request a consultation for bespoke habitat creation with the relevant planning authority.
- 3.15. Both on-site and off-site habitats can be assessed within the Metric. On-site refers specifically to areas of land intended for intervention and should match the boundary of any associated planning application or works (e.g., redline boundary). Off-site land can include any other owned land and can be used to offset the losses incurred through on-site intervention and should usually be directly adjacent or close to the Site (e.g., blue land). The inclusion of off-site land within an assessment requires the baseline survey of that land and its inclusion in the BNGA in question. Off-site land receives a penalty to the value of intervention when compared to on-site intervention, and so local off-site intervention is more effective for improving on BNG than the intervention of off-site land further afield. If units are being purchased or traded from another

project, these units must be legally agreed (and purchased if applicable), prior to their inclusion in a BNGA, and the Metric must include habitat reference numbers relating to that site's registry on the biodiversity gain site register.

3.16. This assessment utilises the Good Practice Principles for Development (2016)³. This document sets out ten principles which have been applied and referred to throughout this report.

1. Apply the mitigation hierarchy.
2. Avoid losing biodiversity that cannot be offset by gains elsewhere.
3. Be inclusive and equitable.
4. Address risks.
5. Make a measurable Net Gain contribution.
6. Achieve the best outcomes for biodiversity.
7. Be additional.
8. Create a Net Gain legacy.
9. Optimise sustainability.
10. Be transparent.

3.17. In addition to this guidance, we apply the newer Biodiversity Gain Hierarchy (as set out in Article 30A of the Development Management Procedure Order), and actively seek to apply the latest and best practice in the BNG industry.

3.18. Developers and other practitioners of Biodiversity Net Gain should adhere to best practice guidance in order to realise meaningful benefits to the environment, society, and the economy, in line with international and national commitments by the UK Government to halt the loss of biodiversity. Critically, thoughtful application of this guidance provides a way for industry to evidence their projects have followed best practice.

3.19. Examples of application of best practice in relation to BNG may include: 1. Thoughtfully designed landscaping which serves both biodiversity as well as human recreation and aesthetics; 2. Measured ecological enhancements in response to local or national themes (e.g., provision of bat/bird boxes even when not required by other ecological recommendation); 3. Active engagement with local knowledge and monitoring groups (e.g., Wildlife Trusts) to ensure the integration of a Proposed Development into the local area, particularly where higher distinctiveness and high condition habitats are proposed (e.g., Other Neutral Grassland in Good condition; woodlands).

³ Biodiversity Net Gain: Good Practice Principles for Development © CIEEM, CIRIA, IEMA, 2016.

4. PLANNING POLICY

National Policy

4.1. The National Planning Policy Framework (NPPF) December 2023 (as amended) state the following in relation to biodiversity:

- 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 ... (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 ... trees and woodland; c) maintaining the character of the undeveloped coast, while improving access to it where appropriate; d) minimising the impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; ... ; f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”
- 181: “Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value ... (and) take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.”
- 185: “To protect and enhance biodiversity ... , plans should: a) identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and; b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”
- 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. ... ; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused ... ; development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development 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.

Local policy

4.2. The Local Biodiversity Plan for Twyford within the Wokingham Borough Core Strategy (adopted January 2010) states the following in relation to biodiversity:

- Policy CP7: Biodiversity:

“Sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance.

Development:

A) Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or

B) Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly, or

C) That compromises the implementation of the national, regional, county and local biodiversity action plans will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and:

i) Mitigation measures can be put in place to prevent damaging impacts; or

ii) Appropriate compensation measures to offset the scale and kind of losses are provided.”

5. BASELINE

- 5.1. The baseline habitats present within the Site are reported below, including brief descriptions for each habitat, the relevant condition assessment criteria, and areas and Metric values.
- 5.2. A map to show the habitats present within the baseline is shown in **Figure 2**.

Habitats

- 5.3. The baseline habitat survey confirmed the following habitats to be present within the Site:
 - **Urban: Developed land, sealed surface** – Areas of built environment, hardstanding, and the derelict farm buildings in the centre of the Site totalling 1.84ha. This habitat has a default condition (O) within the Metric and is very low distinctiveness (O).
 - **Grassland: Modified grassland** – a small area of grassland measuring approximately 0.081ha associated with the yard around the derelict farm buildings. This habitat has not been managed, but shows signs of nutrient enrichment and high levels of disturbance, with common nettle *Urtica dioica* (D) being dominant in the sward, and barren brome *Bromus sterilis* (O), spear thistle *Cirsium vulgare* (O), cock's-foot *Dactylis glomerata* (O), creeping thistle *Cirsium arvense* (O) and groundsel *Senecio vulgaris* (O) also recorded frequently. This habitat succeeded 4 out of the 7 criteria within the 'grassland (low)' condition assessment and was assessed as being in poor condition, failing essential criteria A for achieving moderate or good condition. It was assessed as also failing criteria B and D.
 - **Grassland: Modified grassland** – four fields (F1-F4) previously used for agriculture and pasture were recorded within the Site totalling approximately 10.75ha. **F1** was the largest field located to the east of the Site. This field comprised barren brome (D), meadow brome *Bromus commutatus* (A), tufted hair grass *Deschampsia cespitosa* (OLF), sweet vernal *Anthoxanthum odoratum* (O), cleavers *Galium aparine* (O), common nettle (RLO), rough meadowgrass *Poa trivialis* (R), Yorkshire fog *Holcus lanatus* (R), creeping bent *Agrostis stolonifera* (R), spear thistle (R), vetch *Vicia spp.* (R), ragwort *Senecio jacobaea* (R), and field horsetail *Equisetum arvense* (R). A small area of bramble *Rubus fruticosus agg.* (R) scrub and green alkanet *Pentaglottis sempervirens* (R) was recorded along the west boundary of **F1**. This habitat succeeded 4 out of 7 of the criteria within the 'grassland (low)' condition assessment and was assessed as being in poor condition, failing essential criteria A for achieving moderate or good condition. It was also assessed as failing criteria B and D.
 - **Grassland: Modified grassland** – **F2** was located to the south-west of the Site, bordering the River Loddon and associated riparian habitat. This field comprised largely of common nettle (D), meadow brome (A), cock's-foot (O), cleavers (O), gypsywort *Lycopus europaeus* (R), creeping thistle (R), spear thistle (R), greater willowherb *Epilobium hirsutum* (R), thyme-leaved speedwell *Veronica serpyllifolia* (R), white deadnettle *Lamium album* and red deadnettle *Lamium purpureum* (R). Other species were recorded at smaller abundances. This habitat succeeded 5 out of 7 of the criteria within the 'grassland (low)' condition assessment and was assessed as being in moderate condition, failing criteria B and D.

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- **Grassland: Modified grassland – F3** was the smallest field located in the centre of the Site, adjacent to the River Loddon riparian buffer. This field comprised of barren brome (A), meadow brome (A), common nettle (D), spear thistle (O), cock's-foot (O), creeping thistle (O), cleavers (O), white deadnettle (O), lesser burdock *Arctium minus* (O), broadleaved dock *Rumex obtusifolius* (R), creeping bent (R), red fescue *Festuca rubra* (R), meadow buttercup *Ranunculus acris* (R), and meadow foxtail *Alopecurus pratensis* (R). Other species were recorded at smaller abundances. This habitat succeeded 5 out of 7 of the criteria within the 'grassland (low)' condition assessment and was assessed as being in moderate condition, failing criteria B and D.
- **Grassland: Modified grassland – F4** was located to the north-west of the Site. This field comprised of meadow brome (D), barren brome (OLA), meadow foxtail (RLO) sweet vernal (O), with herbaceous species including bulbous buttercup *Ranunculus bulbosus* (O), slender speedwell *Veronica filiformis* (R), common nettle (RLF) and white deadnettle (RLO), with other species recorded at smaller abundances. Other species were recorded at smaller abundances. This habitat succeeded 4 out of 7 of the criteria within the 'grassland (low)' condition assessment and was assessed as being in poor condition, failing essential criteria A for achieving moderate or good condition. It was also assessed as failing criteria B and D.
- **Hedgerow: Native hedgerow with trees – H2** was located along the west boundary of field F4 to the north of the Site. H2 was intact and species included hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, oak, lime *Tilia spp.*, sycamore *Acer pseudoplatanus*, and beech *Fagus spp.* Ground flora consisted of common nettle, ivy *Hedera helix* and bramble. This hedgerow averages 4m in width, and 4m in height Emergent trees ranged up to 6m. This hedgerow succeeded 8 out of the 10 criteria within the 'hedgerow (with trees)' condition assessment, achieving good condition. It was assessed as failing criteria C1 and E1.
- **H3** was located on the southern Site boundary, south of field F2. H3 was defunct and gappy around the base. Species included hawthorn, scots pine *Pinus sylvestris*, horse chestnut *Aesculus hippocastanum* and crack willow *Salix fragilis*. Ground flora consisted predominantly of common nettle, garlic mustard *Alliaria petiolata* and pendulous sedge *Carex pendula*. Average width was 1.5m, average height was 3m, with emergent trees up to 8m. This hedgerow succeeded 3 out of the 10 criteria within the 'hedgerow (with trees)' condition assessment, achieving poor condition. It was assessed as failing criteria A2, B1, B2, C1, C2 D2 and E2.
- **Hedgerow: Species-rich native hedgerow with trees – H1** was located on the north Site boundary, north of field F4. H1 was defunct and species included elder *Sambucus nigra*, oak *Quercus robur*, sycamore, hawthorn, dog rose *Rosa canina* and blackthorn *Prunus spinosa*. Ground flora consisted of bramble., garlic mustard, white deadnettle, cow parsley *Anthriscus sylvestris*. This hedgerow averages 3m in width and 2m in height. Emergent trees ranged up to 6m in height. This hedgerow succeeded 6 out of the 10 criteria within the 'hedgerow (with trees)' condition assessment, achieving moderate condition. It was assessed as failing criteria B2, C1, D2 and E1.

- **Individual trees: Rural tree** – one tree recorded within field F2 adjacent to the wet woodland bordering the River Loddon. The tree was a mature London plane *Platanus × acerifolia* measuring approximately 12m in height. This tree succeeded 5 out of the 6 criteria within the ‘individual trees’ condition assessment and was assessed as being in good condition. The tree was assessed as failing criteria A.
- **Woodland and forest: Other broadleaved woodland** – A thin strip of native broadleaved woodland adjacent to Muddlers Lane and field F2 totalling 0.346ha consisting of oak, sycamore, horse chestnut *Aesculus hippocastanum*, London plane, elder *Sambucus nigra*, beech *Fagus sylvatica*, holly and elm *Ulmus spp.* Ground flora consisted of garlic mustard, lords and ladies *Arum maculatum*, common nettle, bramble and common dandelion *Taraxacum officinale agg.*, with a rare abundance of hybrid bluebells *Hyacinthoides × massartiana*. This habitat scored 23 out of a possible 39 within the ‘woodland’ condition assessment and was assessed as being in poor condition. It was assessed as losing significant value within criteria G, I, J, K, L and M.
- **Woodland and forest: Wet woodland** – a strip of wet woodland habitat was recorded along the east bank of the River Loddon. Species recorded included crack willow, hawthorn, goat willow *Salix caprea*, alder *Alnus glutinosa* and elder. Ground flora consisted of garlic mustard, meadowsweet *Filipendula ulmaria*, lesser burdock *Arctium minus* and hemlock water dropwort *Oenanthe crocata*. This habitat was adjacent to the River Loddon LWS and the strategic significance for this habitat was determined to be ‘Location ecologically desirable but not in local strategy’. This habitat scored 27 out of a possible 39 within the ‘woodland’ condition assessment and was assessed as being in moderate condition. It was assessed as losing significant value within criteria G, K and M.
- **River: Priority habitat** – The River Loddon and associated riparian habitat is located on the west boundary of the Site. Approximately 380m of the river is adjacent to the Site. This river is not to be directly impacted by the Proposed Development, but is within 10m of the Site boundary and as such has been subject to a condition assessment. The updated river condition assessment confirmed that the river condition had not changed since the previous BNG report (Aspect Ecology, 2022) and the river baseline condition was determined to be moderate condition (0.78 provisional score from update river condition assessment).
- The River Loddon located on the boundary of the Site has been included in this calculation, as the waterbody and associated riparian habitat may be impacted by the changes to the surrounding habitat and it is important to reflect its location to the Site.

5.4. The majority of habitats within the Site have been classified as having low strategic significance, e.g., the Site is an ‘Area/compensation not in local strategy/ no local strategy’ as these habitats do not have appropriate relevance to a LNRS, or local or national policy. Some habitats of higher ecological value within the Site, such as the River Loddon for part of the River Loddon LWS and are therefore justified as ‘Formally identified in local plan’. Due to its proximity to the river, the wet woodland has been identified as ‘Locally ecologically desirable but not in local strategy’.

Baseline habitat assessment

- 5.5. An assessment of the baseline habitats present within the Site is provided by **Table 1**, **Table 2** and **Table 3**. A map to show the baseline habitats and their conditions within the Site is provided by **Figure 2**. The full baseline condition assessments are provided by **Appendix 2**.
- 5.6. The baseline habitat value for the Site was assessed as 34.14 habitat units, 4.29 hedgerow units, and 6.85 watercourse units.

Table 1: Baseline area habitats

Habitat	Distinctiveness	Condition	Area (ha)	Biodiversity Units
Urban: Developed land, sealed surface	Very Low (0)	N/a (0)	1.837	0.00
Grassland: Modified grassland (F1, F4 and grassland near buildings)	Low (2)	Poor	7.456	14.91
Grassland: Modified grassland (F2 and F3)	Low (2)	Moderate	3.372	13.49
Individual trees: Rural trees	Medium (4)	Good (3)	0.0163	0.22
Woodland: Other broadleaved woodland	Medium (4)	Poor (1)	0.346	1.38
Woodland: Wet woodland	High (6)	Moderate (2)	0.30	4.14
Totals (area not including trees)			13.31	34.14

Table 2: Baseline linear habitats (not including watercourse habitats)

Habitat	Distinctiveness	Condition	Length (km)	Biodiversity Units
Hedgerows: Species-rich native hedgerow with trees (H1)	High (6)	Moderate (2)	0.182	2.18
Hedgerows: native hedgerow with trees (H2)	Medium (4)	Good (3)	0.098	1.18
Hedgerows: native hedgerow with trees (H3)	Medium (4)	Poor (1)	0.108	0.43
Line of trees	Low (2)	Moderate (2)	0.125	0.50
Totals			0.51	4.29

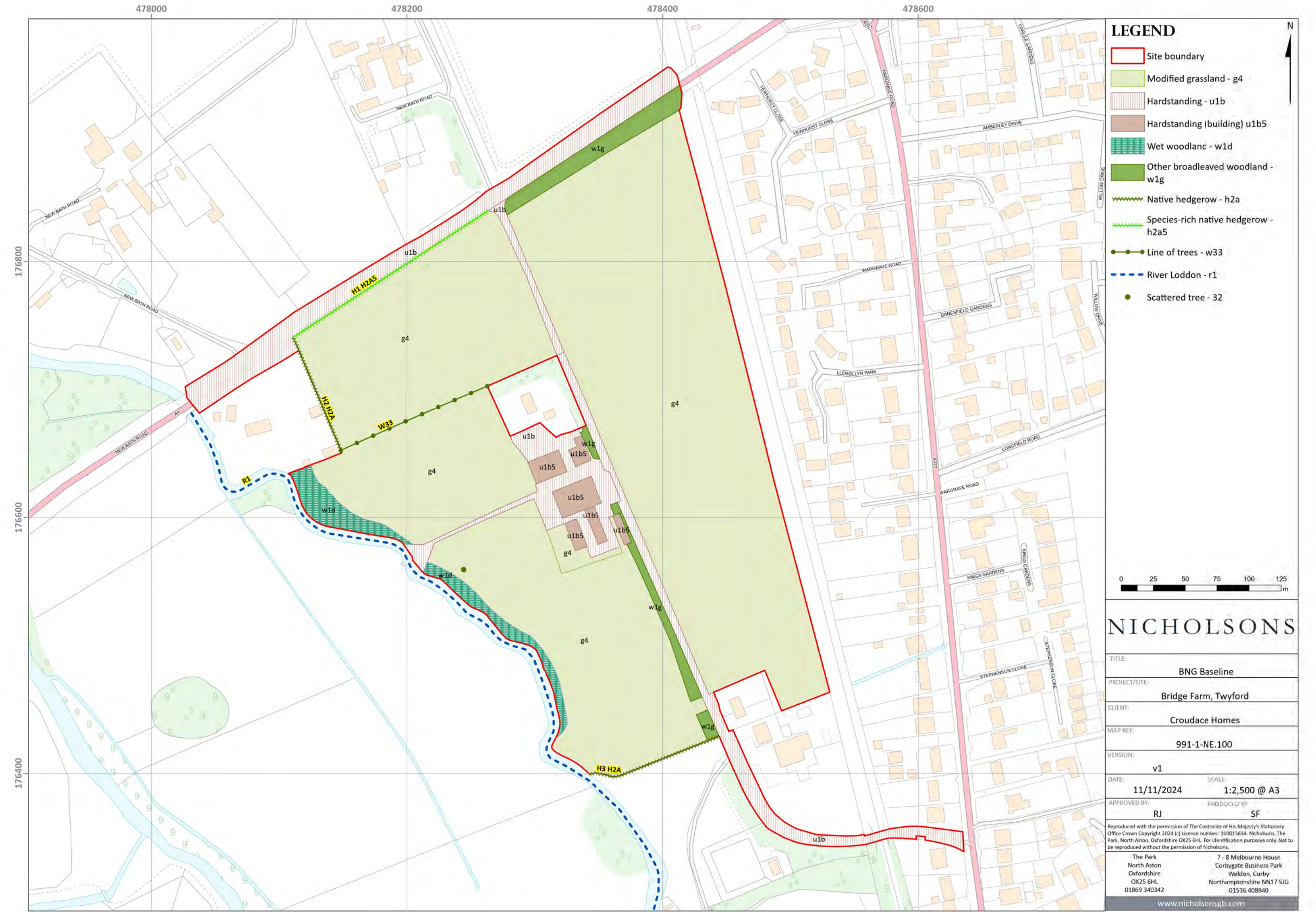
Table 3: Baseline watercourse habitats

Habitat	Distinctiveness	Condition	Length (km)	Biodiversity Units
River: Priority habitat	V. High (8)	Moderate (2)	0.38	6.85
Totals			0.38	6.85

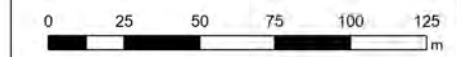
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Figure 2: Baseline habitat map

Ref: 991-1-NE.100-BNG Baseline v1 SF 111124



- LEGEND**
- Site boundary
 - Modified grassland - g4
 - Hardstanding - u1b
 - Hardstanding (building) u1b5
 - Wet woodlanc - w1d
 - Other broadleaved woodland - w1g
 - Native hedgerow - h2a
 - Species-rich native hedgerow - h2a5
 - Line of trees - w33
 - River Loddon - r1
 - Scattered tree - 32



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TITLE:	BNG Baseline	
PROJECT/SITE:	Bridge Farm, Twyford	
CLIENT:	Croudace Homes	
MAP REF:	991-1-NE.100	
VERSION:	v1	
DATE:	11/11/2024	SCALE: 1:2,500 @ A3
APPROVED BY:	RJ	PRODUCED BY: SF

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6. POST-INTERVENTION

- 6.1. The habitats proposed to be present within the Site post-intervention are reported below, including brief descriptions for each habitat, a feasible example of the relevant condition assessment criteria to be targeted, any justification required, and areas and Metric values.
- 6.2. Post-intervention habitats have been interpreted from the supplied landscaping plan, and where applicable, discussed and agreed with the applicant.
- 6.3. Relevant guidance, ecological expertise, and professional judgement have been used to assign achievable habitat creation, enhancement, and management targets. Our suggestions for achieving feasible conditions, as well as broad suggestions for management are detailed below.
- 6.4. A post-intervention habitat map is provided by **Figure 3**, which shows the habitats that will be retained, enhanced, and created by the Proposed Development.

Habitat retention

- **Hedgerows: Species-rich native hedgerow with trees (H1)** – approximately 160m of hedgerow H1 will be retained, with some sections to be removed to facilitate road access into the Site. Retained sections of hedge will be kept in its current condition.
- **Hedgerows: Native hedgerow with trees (H2 and H3)** – the hedgerow on the west boundary of field F4 and the south boundary of field F2 will be retained in their entirety and in their current condition.
- **Line of Trees** – This habitat will be retained in its entirety and current condition.
- **Individual Tree: Rural tree** – the single London plane tree in field F2 will be retained at its current condition as part of the Proposed Development.
- **Woodland: Wet woodland** – the thin strip of woodland bordering the River Loddon on the west Site boundary will be retained in its entirety and in its current condition.

Habitat enhancement

- **Grassland: Other neutral grassland** – fields F2 and F3 are to be enhanced from modified grassland to wildflower meadow. Areas of grassland within the flood zone adjacent to the River Loddon will be seeded with Emorsgate EM8 Meadow Mixture for Wetlands, with other areas to be seeded with Emorsgate EM2 Standard General Purpose Meadow Mixture. Narrow paths will be periodically mown into this habitat to facilitate public access, creating a varied height across the sward. This habitat can feasibly achieve 4 out of the 6 criteria within the 'grassland' (medium, high, very high) condition assessment and was assessed as targeting moderate condition, failing criteria E and F. It is suggested that management targets criteria B to ensure the habitat is enhanced to a better condition.
- **Woodland: Other broadleaved woodland** – approximately 0.179ha of the woodland strip in the centre of the Site will be retained, with small sections of it to be removed to facilitate footpaths and access through the Site. In order to achieve a net gain through the proposal and not violate Metric trading rules, this habitat must be enhanced. It is suggested that

enhancement is achieved by removing any invasive or undesirable species (criteria C), encourage growth of shrub layer (criteria J), and retain deadwood features where safe to do so (criteria L). These enhancements would achieve 26 out of 39 in the 'woodland' condition assessment and improve this habitat to moderate condition.

- **River: Priority habitat** – the riparian habitat on the east bank of the River Loddon will be improved to secure a net gain in watercourse biodiversity through the proposals. The existing bridge (a shipping container) will be removed together with its associated concrete stanchions, with the bank profiles returned to their natural state. Several other enhancements within the wider environs of the river include the planting of willow and black poplar trees, the enhancement of grassland to EM8 wet wildflower meadow, and the provision of wader scrapes and permanent ponds forming part of the drainage strategy. These enhancements will raise the condition of the river fairly good (1.22 provisional score from updated river condition assessment).

Habitat creation

- **Urban: Developed land; sealed surface** – areas of hardstanding forming access, pathways and parking spaces across the Site, and new residential buildings totalling 5.786ha. This habitat has a default condition (N/a / 0) within the Metric.
- **Urban: Artificial unvegetated, unsealed surface** – areas of hoggin pathways made of soluble materials totalling 0.018ha. This habitat has a default condition (N/a / 0) within the Metric.
- **Urban: Vegetated garden** – areas of garden associated with the newly created buildings totalling 1.40ha, to be laid with amenity grassland turf. This habitat has a default condition (poor) within the Metric.
- **Urban: Introduced shrub** – areas of new ornamental shrub planting covering approximately 0.448ha in association with the newly constructed buildings. This habitat has a default condition (poor) within the Metric.
- **Urban: Sustainable drainage system (SuDS)** – areas of aquatic and marginal shrub planting associated with the newly created SuDS attenuation basins will amount to 0.131ha. This habitat would likely achieve 5 out of the 5 criteria within the 'urban (bioswales and SuDs)' condition assessment and has been assessed to achieve good condition.
- **Urban: sustainable drainage system** – newly created SuDS attenuation basins and swales totalling 0.524ha to be seeded with wet meadow mix. This habitat could achieve 3 out of the 5 criteria within the 'urban (bioswales and SuDS)' condition assessment and has been assessed to achieve moderate condition. This habitat would likely fail criteria A and B.
- **Individual tree: Urban Tree** – An approximate total of 217 native trees, 125 street trees, 40 feature trees, 36 orchard trees, and 47 multi-stem trees are to be planted as part of the Proposed Development. The feature trees will be non-native specimens and are determined to likely achieve 3 out of the 6 criteria within the 'individual tree' condition assessment, failing criteria A, C and E, targeting moderate condition. The orchard trees will likely achieve 3 out of the 6 criteria, failing criteria A, C and D, targeting moderate condition. The multi-stem specimens and native trees will likely achieve 4 out of the 6 criteria, failing criteria C

and E, targeting moderate condition. The street trees will likely achieve 2 out of the 6 criteria, failing criteria C, D, E and F, targeting poor condition.

- **Grassland: Modified grassland** – Area totalling 1.528ha of Emorsgate EL1 flowering lawn mix to be seeded around the Site, forming pathways and amenity species. This habitat can feasibly achieve 5 out of the 7 criteria within the ‘grassland (low)’ condition assessment and was assessed as targeting moderate condition, failing criteria B and D. It is suggested that management targets criteria A, E and C.
- **Heathland and Scrub: Mixed scrub** – an area totalling 0.194ha will be created within the enhanced area of wildflower meadow grassland. This habitat will consist of nine native species. This habitat can feasibly achieve 3 out of the 5 criteria within the ‘scrub’ condition assessment and was assessed as targeting moderate condition. It is suggested that management targets criteria A, C and D to ensure this habitat meets this condition.
- **Woodland: Other broadleaved woodland** – an area of new native woodland totalling approximately 0.267ha will be planted to add to existing landscape buffers on the north and south Site boundaries. New woodland will consist of nine native species. This habitat can feasibly achieve a total of 23 out of 39 within the ‘woodland’ condition assessment and was assessed as targeting poor condition. It is suggested that management targets criteria B, C, D and H.
- **Hedgerow: Ornamental hedgerow** – sections of low and tall pre-formed instant hedgerow totalling approximately 1.36km are to be planted in association with the buildings and areas of hardstanding. Due to the setting and nature of these hedgerows, it is likely that they will be kept as ornamental features regardless of the species mix. Therefore, these hedgerows are considered to be classed under the ‘non-native and ornamental hedgerow’ criteria and have a fixed condition (poor) within the Metric.
- **Hedgerow: Species-rich native hedgerow** – sections of native hedgerow totalling approximately 0.526km are to be planted throughout the Site. These hedgerows will feasibly achieve 4 out of the 8 criteria within the ‘hedgerow’ condition assessment and was assessed as targeting moderate condition. It is suggested that management targets criteria B1, B2, C2 and D1 to ensure the hedgerows achieve this condition.
- **Hedgerow: Species-rich native hedgerow with trees** - sections of native hedgerow near the wildflower grassland area totalling approximately 0.140km are to be planted throughout the Site. This hedgerow will feasibly achieve 5 out of the 10 criteria within the ‘hedgerow (with trees)’ condition assessment and was assessed as targeting moderate condition. It is suggested that management targets criteria B1, B2, C2 and D1 to ensure the hedgerows achieve this condition.

Post-intervention habitat assessment

- 6.5. An assessment of the post-intervention habitats present within the Site are provided by **Table 4**, **Table 5** and **Table 6**. A map to show the post-intervention habitats and their targeted conditions

within the Site is provided by **Figure 3**. The post-intervention condition assessments are provided by **Appendix 3**.

- 6.6. The post-intervention habitat value for the Site was assessed as being 41.24 habitat units, 10.04 hedgerow units, and 7.92 watercourse units.

Table 4: Post-intervention area habitats

Habitat	Distinctiveness	Condition	Area (ha)	Biodiversity Units
Retained Habitats				
Individual trees: Rural tree	Medium (4)	Good (3)	0.0163	0.22
Woodland: Wet woodland	High (6)	Moderate (2)	0.30	4.14
Enhanced Habitats				
Grassland: Other neutral grassland	Medium (4)	Moderate (2)	2.536	17.25
Woodland: Other broadleaved woodland	Medium (4)	Poor (1)	0.179	1.22
New Habitats				
Urban: Developed land; sealed surface	V. Low (1)	N/a	5.786	0.00
Urban: Artificial unvegetated, unsealed surface	V. Low (1)	N/a	0.018	0.00
Urban: Vegetated garden	Low (2)	Poor (1)	1.40	2.70
Urban: Introduced shrub	Low (2)	Poor (1)	0.463	0.89
Urban: Sustainable drainage system (aquatic and marginal planting)	Low (2)	Good (3)	0.131	0.44
Urban: Sustainable drainage system (SuDS)	Low (2)	Moderate (2)	0.524	1.26
Urban Trees (Feature trees)	Medium (4)	Moderate (2)	0.1629	0.50
Urban Trees (Orchard trees)	Medium (4)	Moderate (2)	0.1466	0.45

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Habitat	Distinctiveness	Condition	Area (ha)	Biodiversity Units
Urban Trees (Multi-stem trees)	Medium (4)	Moderate (2)	0.1914	0.59
Urban Trees (Native trees)	Medium (4)	Moderate (2)	0.8835	2.70
Urban trees (Street trees)	Medium (4)	Poor (1)	0.5089	1.43
Grassland: Modified grassland	Low (2)	Moderate (2)	1.528	5.30
Heathland and scrub: Mixed scrub	Medium (4)	Moderate (2)	0.194	1.30
Woodland: Other broadleaved woodland	Medium (4)	Poor (1)	0.267	0.89
Totals (area not including trees)			13.31	41.24

Please note that areas and units have been rounded for ease of reading and may not match the Metric.

Table 5: Post-intervention linear habitats (not including watercourse habitats)

Habitat	Distinctiveness	Condition	Length (km)	Biodiversity Units
Retained Habitats				
Hedgerows: Species-rich native hedgerow with trees (H1)	High (6)	Moderate (2)	0.160	1.92
Hedgerows: native hedgerow with trees (H2)	Medium (4)	Good (3)	0.098	1.18
Hedgerows: native hedgerow with trees (H3)	Medium (4)	Poor (1)	0.108	0.43
Line of trees	Low (2)	Moderate (2)	0.125	0.50
New Habitats				
Non-native and ornamental hedgerow	V. Low (1)	Poor (1)	1.36	1.31
Species-rich native hedgerow	Medium (4)	Moderate (2)	0.526	3.52
Species-rich native hedgerow with trees	High (6)	Moderate (2)	0.14	1.18
Totals			2.517	10.04

Please note that areas and units have been rounded for ease of reading and may not match the Metric.

Table 6: Post-intervention watercourse habitats

Habitat	Distinctiveness	Condition	Length (km)	Biodiversity Units
Enhanced Habitats				
River: Priority habitat	V. High (8)	Fairly good (2.5)	0.380	7.92
Totals			0.380	7.92

Figure 3: Post-intervention habitat map

Ref: 991-1-NE.101-BNG Post-Intervention v3 SF 131224



7. CONCLUSION AND RECOMMENDATIONS

- 7.1. The Proposed Development will result in a net gain in habitat biodiversity of **+20.79%** (+7.10 habitat units), a net gain in hedgerow biodiversity of **+133.91%** (+5.75 hedgerow units), and a net gain in watercourse biodiversity of **+15.60%** (+1.07 watercourse units).
- 7.2. In line with this assessment, the Proposed Development will achieve the mandatory +10% net gain in biodiversity for area habitats, linear habitat features, and watercourse habitats, as assessed separately.
- 7.3. A print of the headline results of the Metric calculator is provided by **Appendix 1**.
- 7.4. The Proposed Development does not violate any trading rules within the Metric.
- 7.5. In order to achieve a net gain through the proposals and not violate Metric trading rules, the retained areas of existing other broadleaved woodland habitat (w1g) must be enhanced to moderate condition by targeting criteria C, J and L. This will be detailed within the Landscape Design Strategy (Ilex Landscape Architects, September 2024) to ensure this enhancement is captured in the Proposed Development.
- 7.6. The habitat areas and conditions established by this assessment are to be maintained for the next 30 years from creation, as defined as the point of creation of each habitat prior to time to condition.

8. APPENDICES

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Appendix 1: A print of the Metric Results

Ref: Bridge Farm, Twyford Metric Results V3 RJ 221124

Bridge Farm, Twyford

Return to
results menu

Headline Results

Scroll down for final results ⚠

On-site baseline	Habitat units	34.14	
	Hedgerow units	4.29	
	Watercourse units	6.86	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	41.24	
	Hedgerow units	10.04	
	Watercourse units	7.82	
On-site net change (units & percentage)	Habitat units	7.10	20.79%
	Hedgerow units	5.75	133.88%
	Watercourse units	1.07	15.60%

Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	7.10	
	Hedgerow units	5.75	
	Watercourse units	1.07	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	7.10	
	Hedgerow units	5.75	
	Watercourse units	1.07	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	20.79%	
	Hedgerow units	133.88%	
	Watercourse units	15.60%	

Trading rules satisfied?	Yes ✓
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Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	34.14	37.55	0.00
Hedgerow units	10.00%	4.29	4.72	0.00
Watercourse units	10.00%	6.86	7.54	0.00

No additional area habitat units required to meet target ✓

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓

Appendix 2: Baseline condition assessment sheets

Ref: Bridge Farm, Twyford Baseline Condition Assessment V1 RJ 221024

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)													
UK Habitat Classification (UKHab) Habitat Type													
Grassland - Modified grassland													
Habitat Description													
ukhab – UK Habitat Classification													
On-site or off-site, site name and location	Onsite	Survey date and Surveyor name		25/04/2024 - Rachel Jackson									
		Survey reference (if relating to a wider survey)											
Limitations (if applicable)		Habitat parcel reference											
		F1	F2	F3	F4	Grassland near building							
		Grid reference											
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.	N	Y	Y	N	N							
	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.												
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	N	N	N	N							
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	Y	Y	Y	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	N	N	N	N							
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Y	Y	Y	Y	Y							
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y	Y	Y	Y	Y							
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Y	Y	Y	Y	Y							
Essential criterion achieved (Yes or No)		N	Y	Y	N	N							
Number of criteria passed		4	5	5	4	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)		X	X									
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	X			X	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).													

D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Y	Y	Y													
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	Y	N													

Additional group - applicable to hedgerows with trees only

E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example, young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N	N	Y													
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.	Y	Y	N													

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

Condition categories for hedgerows without trees

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

Condition categories for hedgerows with trees

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

Suggested enhancement interventions to improve condition score

Footnotes

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

Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows.* [online] Available on: [Definition of Favourable Conservation Status for Hedgerows - RP2943 \(naturalengland.org.uk\)](https://www.naturalengland.org.uk/conservation/conservation-status/definition-of-favourable-conservation-status-for-hedgerows)

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

Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain.* Species Status 7: 1-116. [online] Available on: [The Vascular Plant Red Data List for Great Britain \(Species Status No. 7\) | JNCC Resource Hub](https://www.jncc.gov.uk/publications/vascular-plant-red-data-list-for-great-britain)

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

Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora.* [online] Available on: [Acknowledgements | Online Atlas of the British and Irish Flora \(brc.ac.uk\)](https://www.brc.ac.uk/online-atlas-of-the-british-and-irish-flora)

Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNS) (2022) Available on: [Home » GBNNS \(gbnns.org\)](https://www.gbnns.org/)

Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from: [Keepers of time: ancient and native woodland and trees policy in England \(publishing.service.gov.uk\)](https://www.gov.uk/government/publications/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england)

and
[Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions)

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.			
<i>Please see the separate Line of trees condition sheet for a line of <u>rural</u> trees. You should only use the Line of trees condition assessment and record that habitat type in <u>rural</u> locations.</i>			
Habitat Description			
Mature London plane tree with a few dead and split limbs and peeling bark. Adjacent to the riparian habitat near the River Loddon.			
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	Onsite	Survey date and Surveyor name	Rachel Jackson 25/04/2024
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		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).	N	
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		5	
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved */✓/	
Passes 5 or 6 criteria	Good (3)	X	
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 enhancement interventions to improve condition score²			
Footnotes			
Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from:			
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)			
and:			
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)			
Footnote 2 - Enhancement of this habitat type is only possible by improving the habitat so that it meets all Criteria B, D and F. It is not possible or appropriate to enhance individual tree/s through meeting just one or two of those Criteria, nor by meeting Criteria A, C or E.			

Condition 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			
<i>Please see the separate Individual trees condition sheet for linear blocks and groups of trees in an <u>urban</u> setting. You should only use this Line of trees condition assessment and record this habitat type in <u>rural</u> locations.</i>			
Habitat Description			
See the Statutory Biodiversity Metric User Guide. This assessment is based on the Hedgerow Survey Handbook¹. 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	Onsite	Survey date and Surveyor name	Rachel Jackson 25/04/2024
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		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	
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.	Y	
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.	N	
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	
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	
		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)	X	
Passes 2 or fewer criteria	Poor (1)		
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)			

[illegible]

K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	1	1											
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	1	2											
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground ¹⁴ .	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground ¹⁴ .	1	1											
Total Score (out of a possible 39)																	
Condition Assessment Result		Condition Assessment Score		Result Achieved													
Total score >32 (33 to 39)		Good (3)															
Total score 26 to 32		Moderate (2)			27												
Total score <26 (13 to 25)		Poor (1)		23													
Suggested enhancement interventions to improve condition score																	
Footnotes																	
Footnotes below refer to the EWBG woodland condition assessment details: EWBG (No date). <i>Assessing your Woodland's Condition</i> [online]. Available from: Woodland Wildlife Toolkit (sylvia.org.uk)																	
The woodland condition assessment survey methodology is outlined in the EWBG toolkit. However the criteria on this sheet are those specific to the Statutory Biodiversity Metric and must be used when assessing woodland condition.																	
Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch <i>Betula</i> sp., cherry <i>Prunus</i> sp. or <i>Sorbus</i> sp.: 0 - 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or <i>Sorbus</i> species; 0 - 20 years = Young; 21 - 60 years = Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees. Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed. Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly. Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage <i>Lysichiton americanus</i>; Himalayan balsam <i>Impatiens glandulifera</i>; Japanese knotweed <i>Reynoutria japonica</i>; cherry laurel <i>Prunus laurocerasus</i>; shalloon <i>Gaultheria shallon</i>; snowberry <i>Symphoricarpos albus</i>; variegated yellow archangel <i>Lamium galeobdolon subsp. argentatum</i>; rhododendron <i>Rhododendron ponticum</i>; and tree-of-heaven <i>Ailanthus altissima</i>. Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present. Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs. Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees. Footnote 7 - Given the increased ratio of edge habitat to woodland where the woodland is <10ha. Footnote 8 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening. Footnote 9 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level. Footnote 10 - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this. Footnote 11 - This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information. Footnote 12 - 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) EWBG INDICATOR 12 is the relevant indicator. Footnote 13 - See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm. Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.																	

Appendix 3: Post-intervention condition assessment sheets

Ref: Bridge Farm, Twyford Post Development Condition Assessment V1 RJ 221024

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	Onsite	Survey date and Surveyor name	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		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.	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 <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	
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 .	Y	
F	Cover of bracken <i>Pteridium aquilinum</i> 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)		Y	
Number of criteria passed		5	
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/7	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	X	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		
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).			

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														
Habitat Description														
ukhab – UK Habitat Classification														
On-site or off-site, site name and location	Onsite	Survey date and Surveyor name												
		Survey reference (if relating to a wider survey)												
Limitations (if applicable)		Habitat parcel reference												
		EM6 seed	EM2 seed											
Condition Assessment Criteria		Grid reference												
		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	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	Y											
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Y	Y											
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%.	Y	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.	N	N											
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.	N	N											
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)														
		N	N											
Number of criteria passed		4	4											
Condition Assessment Result	Condition Assessment Score	Score Achieved $\pi/\sqrt$												
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)													
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	X	X											
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 <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> . 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: 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													
ukhab – UK Habitat Classification													
On-site or off-site, site name and location				Survey date and Surveyor name									
Limitations (if applicable)				Survey reference (if relating to a wider survey)									
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	Habitat parcel reference										
			Native hedgerow	Hedge with trees									
			Grid reference										
Core groups - applicable to all hedgerow types			Criterion passed (Yes or No)										Notes (such as justification)
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).	N	N								
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).	N	N								
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).	Y	Y								
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	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).	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	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 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	Y								

[illegible]

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.																		
<i>Please see the separate Line of trees condition sheet for a line of <u>rural</u> trees. You should only use the Line of trees condition assessment and record that habitat type in <u>rural</u> locations.</i>																		
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 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	Onsite				Survey date and Surveyor name													
					Survey reference (if relating to a wider survey)													
Limitations (if applicable)					Habitat parcel reference													
					Feature tree	Multi-stem tree	Native tree	Orchard tree	Street tree									
Grid 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).				N	Y	Y	N	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.				Y	Y	Y	N	N									
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.				N	N	N	Y	N									
F	More than 20% of the tree canopy area is oversailing vegetation beneath.				Y	Y	Y	Y	N									
Number of criteria passed					3	4	4	3	2									
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.																		
Suggested enhancement interventions to improve condition score ²																		
Footnotes																		

Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)

and:

[Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions)

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

Condition 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			
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	Onsite	Survey date and Surveyor name	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		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 <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Y	Mix of 9 native species
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	Scrub located in area of wildflower meadow
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)	X	
Passes 2 or fewer criteria	Poor (1)		
Suggested enhancement interventions to improve condition score			
Footnotes			
Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Native woody species as defined and listed in the Hedgerow Survey Handbook: 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 3 – See gov.uk standing advice on ancient and veteran species. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk) Footnote 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, using professional judgement. Footnote 5 – Wildlife and Countryside Act 1981 (as amended). Footnote 6 – Species indicative of suboptimal condition for this habitat type may include: non-native conifers, tree-of-heaven <i>Alnus altissima</i> , holm oak <i>Quercus ilex</i> , European turkey oak <i>Quercus cerris</i> , cherry laurel <i>Prunus laurocerasus</i> , snowberry <i>Symphoricarpos</i> spp., shallon <i>Gaultheria shallon</i> , American skunk cabbage <i>Lysichiton americanus</i> , buddleia <i>Buddleja</i> spp., cotoneaster <i>Cotoneaster</i> spp., Spanish bluebell <i>Hyacinthoides hispanica</i> and hybrid bluebells <i>Hyacinthoides x massartiana</i> . There may be additional relevant species local to the region and or site.			

[illegible]

Condition Assessment Result	Condition Assessment Score	Score Achieved */√										
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)											
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)	X										
• 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)	X										
• Passes 2 or fewer of 5 criteria.	Poor (1)											
Suggested enhancement interventions to improve condition score												
Footnotes												
Footnote 1 – Wildlife and Countryside Act 1981 (as amended).												
Footnote 2 – Sources of information about detrimental non-native species can be found on the GB Non-native Species Secretariat (GBNNSS) website: Home » NNS (nonnativespecies.org) and Natural England Access to Evidence page should also be checked for up-to-date information: Horizon-scanning for invasive non-native plants in Great Britain - NECR053 (naturalengland.org.uk)												
For criterion C – For green roof habitat types only – buddleia <i>Buddleja davidii</i> should be assessed alongside Schedule 9 species. This species impairs the health of the local ecosystem and reduces the biodiversity potential of the roof. It is also a sign that a roof has not been planted and seeded correctly in subsequent years.												
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 – Use professional judgement. Sources of information about non-native species that are not detrimental to native wildlife can be found on the GBNNSS website: Alternative plants » NNS (nonnativespecies.org)												

[illegible]

Condition Assessment Result	Condition Assessment Score	Result Achieved									
Total score >32 (33 to 39)	Good (3)										
Total score 26 to 32	Moderate (2)		X								
Total score <26 (13 to 25)	Poor (1)	X									
Suggested enhancement interventions to improve condition score											
Footnotes											
Footnotes below refer to the EWBG woodland condition assessment details: EWBG (No date), <i>Assessing your Woodland's Condition</i> [online]. Available from: Woodland Wildlife Toolkit (sylva.org.uk)											
The woodland condition assessment survey methodology is outlined in the EWBG toolkit. However the criteria on this sheet are those specific to the Statutory Biodiversity Metric and must be used when assessing woodland condition.											
Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch <i>Betula</i> sp., cherry <i>Prunus</i> sp. or <i>Sorbus</i> sp.: 0 - 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or <i>Sorbus</i> species; 0 - 20 years = Young; 21 - 60 years = Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees. Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed. Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly. Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage <i>Lysichiton americanus</i>; Himalayan balsam <i>Impatiens glandulifera</i>; Japanese knotweed <i>Reynoutria japonica</i>; cherry laurel <i>Prunus laurocerasus</i>; shalton <i>Gaultheria shalton</i>; snowberry <i>Symphoricarpos albus</i>; variegated yellow archangel <i>Lamium galeobdolon</i> subsp. <i>argentatum</i>; rhododendron <i>Rhododendron ponticum</i>; and tree-of-heaven <i>Ailanthus altissima</i>. Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present. Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs. Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees. Footnote 7 - Given the increased ratio of edge habitat to woodland where the woodland is <10ha. Footnote 8 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening. Footnote 9 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level. Footnote 10 - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this. Footnote 11 - This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information. Footnote 12 - 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) EWBG INDICATOR 12 is the relevant indicator. Footnote 13 - See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm. Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.											

Appendix 4: Landscaping plan

Ref: CH038-002H-MW-10/09/24

APPLICATION BOUNDARY / S278 BOUNDARY

EXISTING VEGETATION - RETAINED
Refer to Arboricultural Impact Assessment and Method Statement; Changes must be consulted with the arboriculturist

Structural Planting

NATIVE TREE PLANTING
Standard, clear stem trees and feathered trees of British Native Origin. Riverine species in the flood meadows adjacent to the river. 12-14 Girth

STREET TREE PLANTING
Standard, clear stem trees suited to streetscape conditions & urban environments. 12-14 Girth.

FEATURE TREE PLANTING
Standard, clear stem trees suited to urban environments. Cultivers and ornamental species. 14-16 Girth.

GARDEN TREE PLANTING
Standard, clear stem trees. Cultivers and ornamental species. 10-12 Girth.

ORCHARD TREE PLANTING
Including local varieties on semi-vigorous rootstock such as MM106

MULTI-STEM TREE or SHRUB PLANTING
Small species trees and large shrubs; native and non-native. 1.5-3m tall on planting.

LOW NATIVE HEDGE PLANTING
Planted as transplants (60-100cm tall) and to be maintained at 1m tall. Including hawthorn and at least 7 species

LOW PRE-FORMED HEDGE PLANTING
Generally evergreen species and to be maintained at 80cm tall.

TALL PRE-FORMED HEDGE PLANTING
Generally evergreen species and to be maintained at 180cm tall.

NATIVE WOODLAND PLANTING
Planted as transplants in a matrix @ 3 per m2. With stakes and rabbit guards. Mix of at least 9 native species.

NATIVE SCRUB / SHRUB PLANTING
Planted as transplants in a matrix @ 3 per m2. With stakes and rabbit guards. Mix of at least 9 native species.

Other Planting

ORNAMENTAL SHRUB PLANTING
Shrub & herbaceous planting, generally in front gardens with an emphasis on Plants for Pollinators'. 5cm depth bark mulch.

ORNAMENTAL WET SHRUB PLANTING
In 30cm deep depressions, indicating the connection between the streetscape drainage system and attenuation basins

SuDS Planting

NATIVE WET MEADOW PLANTING in SWALES
Native wild-flower SuDS turf, with the potential to contract grow from seed harvested from the local area for distinctiveness

RIVERINE FEATURE PLANTING in SWALES
Native wild-flower SuDS turf and swaths of native wetland grasses such as Pendulous Sedge and Common Rush

NATIVE WET MEADOW PLANTING in BASINS
Native wild-flower SuDS turf, with the potential to contract grow from seed harvested from the local area for distinctiveness

NATIVE AQUATIC & MARGINAL PLANTING in BASINS
Including Pond Lily, Water Hornwort, Yellow Flag Iris, Marsh Marigold, Purple Loosestrife, Common Rush and Pendulous Sedge

Grasslands

AMENITY GRASS for Plots
Amenity Turf to be maintained short mown

SPECIES RICH AMENITY GRASS & MOWN PATHS
Existing grasslands mown short or 'Flowering Lawn' seed or turf

NATIVE MEADOW
Existing species rich native grasslands to be retained and enhanced. Reinstatement (where needed) with site derived donor seed, or a suitable seed mix such as Emorsgate E2M Meadow Mixture for Wetlands for areas with the flood zone, or Emorsgate E2M Standard General Purpose Meadow Mixture for areas above the flood zone.

NEAP and 'Discovery Disks'; PAINTED MACADAM
Hard Surfaced Area

(Play concept and thematic design to be developed through planning conditions)

DISCOVERY DISKS / INFORMAL PLAY
Interactive signage interpreting the landscape and ecological features of the open space / informal play elements such as boulder clusters / logs

Faunal Enhancements / Tree Management
refer to ecologists plans for nestboxes, hibernacula etc.

Shallow Scrapes for Wading Birds
Shallow linear depressions in meadow to ecologists specification.

EXISTING CRACK WILLOW TREES FOR POLLARDING
As per ecological and landscape strategy



Railings

Estate Railing
5 bar estate railing in black, 1m tall

Front Garden Railing
Such as Zaun 'Holloway' Railing 1m tall

Hard surfacing & Furnishings
(refer to DES-703-108 Surface Materials Layout)

Hoggin Footpath

Tarmac

Block Paving
Brett Alpha 'Autumn Gold' with 'Brindle' detailing (or similar)

Block Paving
Brett Omega in Neutral with Charcoal Detailing (Or Similar)

Block Paving
Brett Omega in Autumn Gold with Brindle Detailing (Or Similar)

Paving Slabs
Neutral by Brett (Or Similar)

Levels
Cover Levels (Refer to Drainage Strategy Plan)
Topographic Levels

Bins and Benches
Woodscape Backrest Seats, Type 3a, Straight
Woodscape Litter Bin LBS 220 Single.

Notes
Refer to:
Biodiversity Net Gain Assessment Report (Nicholson's Ecology)
Biodiversity Enhancement Plans (Nicholson's Ecology)
Landscape and Ecological Management Plans (Nicholson's Ecology)
CH038-001 Landscape Design Statement
CH038-002 Landscape Master Plan
CH038-003 S106 Open Space Areas
CH038-004 Tree Planting Plan 1
CH038-005 Tree Planting Plan 2
CH038-006 Tree Planting Plan 3
CH038-007 Tree Planting Plan 4
CH038-008 Canopy Cover xls
CH038-009 Tree Planting Schedule

Bridge Farm , Twyford
LANDSCAPE MASTER PLAN

RESERVED MATTERS

CH038-002H - MW - 10 / 9 / 24

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ilex
Landscape Architects