



BNG Habitat Management & Monitoring Plan

Land at Oak & Apple Tree
Cottages, Boorley Green

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Report	Biodiversity Net Gain Assessment & Habitat Management and Monitoring Plan (HMMP)
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1.0 INTRODUCTION

1.1 Background

Ecosupport Ltd were commissioned by McCarthy and Stone Ltd to undertake a Biodiversity Net Gain Assessment for a new planning application for the land at Oak and Apple Tree Cottages, Boorley Green and detail the results of this assessment within a Habitat Management and Monitoring Plan.

The purpose of this assessment is to quantify the biodiversity value of the site prior to its development, and the predicted value post development. This is measured in biodiversity units, calculated according to the habitats present based on their size, distinctiveness and condition. This enables the quantitative calculation of the predicted change in biodiversity value as a result of the proposed development, with the objective of achieving a net gain in biodiversity.

This report will also address how habitats will be enhanced and created to achieve a net gain in biodiversity units and how these habitats will be managed and monitored for at least 30 years. The following points will be covered (DEFRA, 2023):

- How significant on-site enhancements will be managed, taking into account any legal restrictions and requirements
- When and how habitats will be monitored
- When and how monitoring results will be reported
- When and how management proposals will be reviewed
- How habitats will be restored if the management plan is not working

1.2 Site Location and Description

The site comprises of land adjacent Oak Cottage, Winchester Road, Boorley Green, SO32 2UA (centred on grid reference SU 50469 14827) (**Fig 1**). The site is bound by Winchester Road and Oak and Apple Tree Cottages to the east, recently constructed residential development to the north and west and residential dwellings to the south. The wider environ is largely suburban, surrounded by residential development (including large newly-constructed or in-progress developments) and MacDonald Botley Park Hotel & Spa is opposite the site across Winchester Road to the east.

Figure 1. Approximate site boundary (redline) (Google Satellite, 2026).



1.3 Development Proposals

It is understood that the proposals are for a retirement facility comprising 50 retirement living apartments with communal facilities, landscaping and car parking and two dwellings (**Fig 2**).

Figure 2. Landscape General Arrangement (terrafirma, 2026)



2.0 METHODOLOGY

The methodology for the assessment follows the Natural England Statutory Biodiversity Metric habitat condition assessment protocols and uses the Statutory Biodiversity Metric calculation tool to calculate biodiversity losses and gains (Natural England, 2024).

2.1 Habitat Assessment

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Statutory Biodiversity Metric calculation. Tom Lane BSc (Hons) MRES carried out the survey on the 6th January 2026, to undertake a condition assessment of the habitats present on site.

The area of identified habitats is calculated in hectares (ha), ignoring linear features or ditches (the area is measured to the centre line of such features). The length of linear features is measured separately in kilometres (km). The dominant habitat type was selected, according to those defined by UKHab Ltd (2023). Where there was disparity between the UK classification for habitat type and those present within the Statutory Biodiversity Metric calculator tool, this was noted within the condition assessment tables.

2.2 Habitat Distinctiveness

Each habitat was assigned a score for distinctiveness, according to the Statutory Biodiversity Metric calculator tool and User Guide (Natural England, 2024). This ranged from Poor - High for most habitats, or Not Applicable (e.g., Developed Land – Sealed Surface). Using the tool, habitats were assigned a score based on their distinctiveness.

2.3 Habitat Condition

The condition of each habitat was assessed following criteria set out in the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024), which includes detailed assessment criteria for different habitats. Tom Lane BSc (Hons) MRES carried out the survey on the 6th January 2026, to undertake a condition assessment of the habitats present on site. Full results of the condition assessments can be found below. The condition of each habitat was assessed individually on site.

2.4 Strategic Significance

Each habitat was assigned a strategic significance in line with the Statutory Biodiversity Metric User Guide (DEFRA, 2024). The site or adjacent sites are not listed as areas of importance or areas that could become important within the draft Local Nature Recovery Strategy or any other identified ecological network or habitat of importance for Hampshire and therefore all habitats have been considered as 'not in local strategy'.

2.5 Limitations

Although the survey was taken outside the optimum timing for the identification of botanical interest species, it was considered that the majority of species present could be suitably identified. In addition, previous survey data collected by Ecosupport Ltd in the 2024 season

and by the previous condition assessments by the Somerset Wildlife Trust Consultancy (2024) were used to inform the assessment to confirm accurate classification and conditions. This was therefore not considered to represent a significant limitation to the overall assessment.

This survey does not constitute a full site assessment for invasive species, such as Japanese Knotweed (*Reynoutria japonica*).

3.0 EXISTING HABITATS AND DEVELOPMENT PROPOSALS

Sections 3.1 & 3.2 provide an outline of the baseline habitats on site and the Condition Assessments undertaken with reference to the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024). For these assessments, the current habitats on site were categorised according to UK Hab (2023) classifications. The baseline habitats map can be found in **Appendix A**.

3.1 Baseline Habitats

The following habitats were found on site, as shown within the appended plan:

- Buildings (u1b5) (Developed land; sealed surface in BNG metric) (**Fig 3**)
- Artificial unvegetated; unsealed surface (u1c) (**Fig 4**)
- Modified grassland (g4) (with secondary codes 27 traditional orchard, 32 scattered trees) (each of these count separately under BNG metric) (**Figs 5-7**)
- Bramble scrub (h3d) (**Fig 8**)
- Vacant or derelict land (u1 & secondary code 82) (**Fig 9**)
- Native hedgerow with trees (h2a & secondary code 11) (**Fig 10**)
- Line of trees (w1 & secondary code 33) (**Fig 11**)

Figure 3. Examples of Buildings - Developed land, sealed surface present on-site (taken January 2026).



Figure 4. Photo of the access track (left - taken June 2024, right – taken January 2026)



Figure 5. Modified grassland on-site (left – taken June 2024, right - taken January 2026).



Figure 6. Traditional orchard on-site (left – taken June 2024, right - taken January 2026).



Figure 7. Individual tree on-site (taken January 2026).



Figure 8. Bramble scrub on-site (taken January 2026).



Figure 9. Pile of stored materials classified as derelict land (taken January 2026)



Figure 10. Native hedgerow with trees (taken January 2026).



Figure 11. Line of trees on-site (taken January 2026).

3.2 Baseline Condition Assessment

The developed land; sealed surface and artificial unvegetated; unsealed surface does not have a condition assessment as their conditions are automatically set to 'N/A – Other'. The bramble scrub also does not require condition assessments as the condition is automatically set to 'Condition Assessment N/A'. However, condition assessments were carried out on the modified grassland, traditional orchard, individual trees, native hedgerow with trees, line of trees and vacant and derelict land.

3.2.1 Modified grassland

The condition assessment for the modified grassland is shown in **Table 1**, the grassland is considered to be in good condition.

Table 1. Condition Assessment for modified grassland.

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.	Yes	NB – Jan 2026 consistently recorded 5 species per m2. However, in 2024 SWTC recorded 6 species per m2 and given the time of year, it is reasonable to assume species count will be higher in optimal season. Therefore, as a precaution, it is considered this criterion is passed.
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.	Yes	

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.	Yes	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Yes	
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes	
G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA ⁴).	Yes	
Number of criteria passed			6
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	✓	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		

3.2.2 Traditional Orchard

The condition assessment for the traditional orchard is shown in **Table 2**, the habitat is considered to be in moderate condition.

Table 2. Condition Assessment for the traditional orchard.

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	Presence of ancient and or veteran trees. Note - this criterion is essential for achieving Good condition.	No	None present
B	Presence of deadwood in or on trees, or on the ground: at least 20% of mature trees have deadwood associated with them. Some examples of deadwood are: standing, attached and fallen trees or limbs; dead stems; branches and branch stubs greater than 10 cm diameter; and internal cavities. The types and distribution of deadwood provide a range of habitats suitable to support a wide assemblage of saproxylic invertebrates. Note - this criterion is essential for achieving Good condition.	No	Less than 20% of trees have deadwood and no fallen deadwood was present
C	Less than 5% of fruit trees are smothered by scrub. Small patches of dense scrub and or scattered scrub growing between trees can be beneficial to biodiversity, however these occupy less than 10% of ground cover.	Yes	No scrub
D	There is evidence of formative and or restorative pruning to maintain longevity of trees.	Yes	Appear to be appropriately managed with good fruit presence
E	At least 95% of the trees are free from damage caused by humans or animals, for example browsing, bark stripping or rubbing on non-adjusted ties.	No	Half of trees appeared subject to browsing pressure
F	Grassland is not overgrazed, poaching is not evident around the trees, with no more than 10% of trees poached under the canopy.	Yes	
G	Species richness of the grassland is equivalent to a medium, high, or very high distinctiveness grassland.	No	Grassland is modified grassland (low distinctiveness)
H	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA3) and species indicative of suboptimal condition ⁴ make up less than 10% of ground cover.	Yes	

Number of criteria passed			4
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 6- 8 criteria, including essential criteria A and B.	Good (3)		
Passes 4 or 5 criteria; OR Passes 6 or 7 criteria but fails an essential criterion.	Moderate (2)	√	
Passes 3 or fewer criteria.	Poor (1)		

3.2.3 Individual trees

The condition assessments for the 16 individual trees are shown in **Table 3**.

Table 3. Condition Assessments for the individual trees.

Condition Assessment Criteria		Tree reference				
		T3 (x2)	T-P1 (x1)	G11 (x7)	T-HC1 (x1)	T-HC2 (x5)
		Criterion passed (Yes or No)				
A	The tree is a native species (or at least 70% within the block are native species).	Yes	No	Yes	Yes	Yes
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Yes	Yes	Yes	Yes
C	The tree is mature (or more than 50% within the block are mature).	No	No	No	No	No
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	Yes	Yes	No (coppice)	No (coppice)
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	No	No	No	No
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	Yes	Yes	Yes	Yes

Number of criteria passed		4	3	4	3	3
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/√				
Passes 5 or 6 criteria	Good (3)					
Passes 3 or 4 criteria	Moderate (2)	✓	✓	✓	✓	✓
Passes 2 or fewer criteria	Poor (1)					

3.2.4 Native hedgerow with trees

The condition assessment for the native hedgerows with trees are shown in **Table 4**.

Table 4. Condition Assessments for the native hedgerows with trees.

Condition Assessment Criteria				Parcel reference		
				H2	H3	H4
				Criterion passed (Yes or No)		
A1	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	Yes	Yes	Yes

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).	No	Yes	Yes
B1	Gap hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Yes	Yes	No
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).	No	Yes	No
C1	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - Measured from outer edge of hedgerow; and - Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Yes	Yes	Yes
C2	Nutrient-enriched perennial	Plant species indicative of nutrient enrichment of soils dominate <20% cover	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	Yes	No	No

	vegetation	of the area of undisturbed ground.	together, does not exceed the 20% cover threshold.			
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) 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, as well as the BSBI website where the 'Online Atlas of the British and Irish Flora' contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website.	Yes	Yes	Yes
D2	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	Yes	No	Yes
E1	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	No	Yes	Yes
E2	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Yes	No	Yes
Number of criteria passed (/10)				7	7	7

Condition Assessment Result	Condition Assessment Score	Score Achieved x/√		
No more than 2 failures in total; AND No more than 1 failure in any functional group.	Good (3)			
No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	Moderate (2)	✓	✓	✓
Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	Poor (1)			

3.2.5 Line of trees

The condition assessment for the line of trees is shown in **Table 5**, the habitat is considered to be in moderate condition.

Table 5. Condition Assessment for the line of trees.

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	At least 70% of trees are native species.	Yes	
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.	Yes	
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.	No	
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.	No	Constructed pathway present on northern part of site
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.	Yes	

Number of criteria passed			3
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓	
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)	✓	
Passes 2 or fewer criteria	Poor (1)		

3.2.6 Vacant and derelict land

The condition assessment for the Vacant and derelict land is shown in **Table 6**.

Table 6. Condition Assessment for the Urban- vacant and derelict land

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	No	Tall forbs were encroaching the edges of the materials pile but structure is not varied and tall forbs accounted for nearly all structure.
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	No	Tall forbs were encroaching the edges of the pile but not in diverse species and unlikely to provide much benefit
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Yes	
Number of criteria passed			1
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓	

• 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)	✓	

4.0 PROPOSED CREATED HABITATS & NET GAIN ASSESSMENT

4.1 On-Site Proposals

4.1.1 Non-linear Habitats

Table 7 indicates those non-linear habitats due to be *created* on site with details provided, where appropriate, as to how the necessary condition criteria will be met if relevant.

4.1.2 Linear Habitats

Table 8 indicates those linear habitats due to be *retained, created, and enhanced* on site with details provided, where appropriate, as to how the necessary condition criteria will be met.

Table 7. Non-linear habitats to be *created* on site including details as to the condition assessment criteria that must be met in order to achieve the targeted condition

Habitat Type	Action	Area (ha)	Condition	Condition Assessment Notes	Strategic Significance	Location Notes
Urban tree	Created	0.1669	Moderate	41 urban trees of moderate condition will be created in line with the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024). Specifically, criteria B, D and F will be targeted for achievement with appropriate management implemented to prevent adverse impacts to health and trees placed within suitable green space areas were at least 20% of the canopy will oversail vegetation beneath. Where possible planted trees will comprise of native species to achieve criteria A.	Area not in local strategy.	Throughout site
Developed land; sealed surface	Created	0.485	N/A - Other	No condition assessment required as per the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024).	Area not in local strategy.	Buildings
Vegetated garden	Created	0.0497	Condition Assessment N/A	No condition assessment required as per the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024).	Area not in local strategy.	Private gardens and bulb plantings
Sustainable Drainage System (SuDS)	Created	0.0041	Moderate	A SuDS of moderate conditions will be created in line with the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024). Specifically, criteria A, C and E1 will be targeted for achievement of a varied vegetation structure (with a single structural habitat component not accounting for 80% of the total habitat area), plants comprising of mostly native species (if non-native they should not be detrimental to the habitat or native wildlife) and appropriate management to ensure invasive non-native species do not exceed 5% of the total vegetated area.	Area not in local strategy.	North-western corner.
Introduced shrub	Created	0.0657	Condition Assessment N/A	No condition assessment required as per the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024).	Area not in local strategy.	Ornamental planting

						surrounding building
Modified grassland	Created	0.174	Poor	Modified grassland of poor condition will be created in line with the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024). Specifically, criteria C, F and G will be targeted for achievement with management implemented to minimise cover of scrub, bracken and invasive species.	Area not in local strategy.	Amenity grassland throughout site
Other neutral grassland	Created	0.0374	Moderate	Other neutral grassland of moderate condition will be created in line with the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024). Specifically, criteria A, B, C and D will be targeted for achievement with sowing of an appropriate seed mix and appropriate management to minimise bare ground, scrub, and bracken and maintain a varied sward height.	Area not in local strategy.	Wildflower grassland at north of site
Mixed scrub	Created	0.0728	Moderate	Mixed scrub of moderate condition will be created in line with the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024). Specifically, criteria A, B, and C will be targeted for achievement through planting native shrub and tree species and appropriate management.	Area not in local strategy.	
Traditional orchard	Retained	0.0109	Moderate	A portion of the existing traditional orchard will be retained in its current condition targeting the same criteria.	Area not in local strategy.	Close to the eastern boundary (within created habitat)
Traditional orchard	Created	0.013	Moderate	Traditional orchard of moderate condition will be created in line with the Statutory Biodiversity Metric Technical Annex 1 (Defra, 2024). Specifically, Criteria C, D, F and H will be targeted for achievement with appropriate management to prevent grazing, minimise scrub and invasive species cover, and pruning of trees to maintain longevity.	Area not in local strategy.	Near the east and west boundaries.

Table 8. Linear habitats to be *retained, created, and enhanced* on site including details as to the condition assessment criteria that must be met in order to achieve the targeted condition

Habitat Type	Action	Length (km)	Target Condition	Condition Assessment Notes	Strategic Significance	Location Notes
Line of trees	Retained	0.0844	Moderate	The existing line of trees will be retained in its current condition targeting the same criteria.	Area / compensation not in local strategy	Along the north boundary (hedge reference: H1)
Native hedgerow with trees	Retained	0.1476	Moderate	The existing native hedgerow with trees will be retained in its current condition targeting the same criteria.	Area / compensation not in local strategy	Along the west boundary (hedge reference: H2)
Native hedgerow with trees	Retained	0.0331	Moderate	The existing native hedgerow with trees will be retained in its current condition targeting the same criteria.	Area / compensation not in local strategy	Along the south boundary (hedge reference: H3)
Native hedgerow with trees	Retained	0.0366	Moderate	Part of the existing native hedgerow with trees will be retained in its current condition targeting the same criteria.	Area / compensation not in local strategy	Along the east boundary (hedge reference: H4)
Native hedgerow	Created	0.3406	Poor	Multiple native hedgerows will be created targeting poor condition in line with the Statutory Biodiversity Metric Condition Assessments (DEFRA, 2024). Although the target condition aim is listed as poor, higher criteria will be aimed to be met and Criterion B1, B2, C2, and D1 will be targeted for achievement.	Area / compensation not in local strategy	Multiple hedges around the site

Native hedgerow with trees	Enhanced	0.0439	Good	Part of the existing native hedgerow with trees will be enhanced to good condition in line with the Statutory Biodiversity Metric Technical Annex 1 (DEFRA, 2024). Specifically, criteria A1, A2, B2, C1, C2, D1, D2, E1 and E2 will continue to be targeted for achievement with management implemented to maintain a width and height of at least 1.5m, maintain a strip of undisturbed ground >1m in width with perennial herbaceous vegetation for >90% of its length, limit horizontal and vertical gappiness, and reduce nutrients along the edge through change in management / adjacent habitats.	Area / compensation not in local strategy	Along the east boundary (hedge reference: H4)
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4.2 Metric Calculations

Following the incorporation of the above measures into the DEFRA Statutory Biodiversity Metric, **on site there is a net loss of -66.63% (or -3.99 units) in habitat and a 29.22% gain (or +0.73 units) in hedgerow and the trading rules are not satisfied (Fig 12)**. It is considered there is further habitat creation or offsetting required to meet BNG rules.

Figure 12. Screenshot of the 'headline results' output from the BNG assessment undertaken for the site using the Defra Statutory metric following the off-site incorporation.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	-3.99
	<i>Hedgerow units</i>	0.73
	<i>Watercourse units</i>	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	-66.63%
	<i>Hedgerow units</i>	29.22%
	<i>Watercourse units</i>	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

4.3 Off-Setting

4.3.1 Unit Deficit

In order to deliver the targeted 10% biodiversity net gain and meet the trading rules, it will be necessary to obtain habitat units from an off-site BNG provider. As shown in **Fig 13**, 4.59 habitat units are required.

Figure 13. Screenshot from the 'headline results' output from the BNG assessment undertaken for the site using the DEFRA Statutory Biodiversity Metric showing the deficit required to achieve 10% gain

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
<i>Area habitat units</i>	10.00%	5.99	6.59	4.59
<i>Hedgerow units</i>	10.00%	2.49	2.74	0.00
<i>Watercourse units</i>	10.00%	0.00	0.00	0.00

4.3.2 Trading Rules

There are habitat trading rules that apply requiring specific habitats to be obtained in offsite units. Currently, there is a loss in traditional orchard (a high distinctiveness habitat) (**Fig 14**) and individual trees (a medium distinctiveness habitat) (**Fig 15**). As per the trading rules, units must be obtained within the same medium distinctiveness habitat group or by a higher distinctiveness habitat and for high distinctiveness habitats like-for-like habitat must be obtained. As such, of the 4.59 habitat units required, a minimum of 0.50 units of traditional orchard must be obtained and 0.01 units of individual trees or a higher distinctiveness habitat must be obtained. The remaining habitat units do not have any specific requirements for distinctiveness.

Figure 14. Screenshot of the total “high distinctiveness” traditional orchard biodiversity units lost taken from the BNG assessment undertaken for the site using The Statutory Biodiversity Metric.

High Distinctiveness					
Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Losses not yet accounted for
Grassland - Traditional orchards	Grassland	-0.50	0.00	-0.50	-0.50 ▲

High Distinctiveness Summary	
High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Remaining losses; Like for like not satisfied	-0.50 ▲

Figure 15. Screenshot of the total “medium distinctiveness” biodiversity units lost taken from the BNG assessment undertaken for the site using The Statutory Biodiversity Metric.

Medium Distinctiveness					
Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change	Cumulative broad habitat change
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	0.00
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins pollen and nectar	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins tussocky	Cropland	0.00	0.00	0.00	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	0.25 ✓
Grassland - Other neutral grassland	Grassland	0.25	0.00	0.25	
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	0.45 ✓
Heathland and shrub - Bramble scrub	Heathland and shrub	-0.04	0.00	-0.04	
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Willow scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	0.45	0.00	0.45	0.00
Lakes - Ponds (non-priority habitat)	Lakes	0.00	0.00	0.00	
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.00
Urban - Biodiverse green roof	Urban	0.00	0.00	0.00	0.00
Individual trees - Urban tree	Individual trees	0.51	0.00	0.51	-0.01 ▲
Individual trees - Rural tree	Individual trees	-0.52	0.00	-0.52	
Woodland and forest - Other Scot's pine woodland	Woodland and forest	0.00	0.00	0.00	0.00
Woodland and forest - Other woodland, broadleaved	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland, mixed	Woodland and forest	0.00	0.00	0.00	
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures with integrated greening of grey infrastructure (IGGI)	Intertidal hard structures	0.00	0.00	0.00	
		0.69	0.00	0.69	

Medium Distinctiveness Summary	
Medium Distinctiveness Units available to offset lower distinctiveness deficit	0.70 ✓
Medium Distinctiveness broad habitat losses to be offset by trading up	-0.01 ▲
Medium Distinctiveness Unit deficit (required to meet trading rules)	-0.01 ▲

4.3.3 Biodiversity Credits & Spatial Risk Multipliers

It is understood a local bank will be used to obtain the required units. Statutory Biodiversity Credits should only be used as a last resort option where there are no other local schemes available. If it is not possible to obtain any offsite units from a local BNG provider, spatial risk multipliers are also applied to off-site habitat compensation, as shown in **Table 9**. For example, if compensation must be provided Outside, twice as many credits would be required to meet the site requirements.

Table 9. Spatial risk scores and descriptions (as reproduced from Table 9 of the Statutory BNG user guide)

Spatial risk category and score	Area and hedgerow modules
Within (1.0)	Compensation is within Local Planning Authority (LPA) boundary or National Character Area (NCA) of impact site
Neighbouring (0.75)	Compensation is outside LPA or NCA of impact site, but within neighbouring LPA or NCA
Outside (0.5)	Compensation is outside LPA or NCA of impact site and outside neighbouring LPA or NCA

5.0 HABITAT MANAGEMENT

This section provides an outline of the habitat management prescriptions to create and enhance the proposed habitats within the site to meet the desired condition criteria for the purposes of delivering biodiversity net gain.

5.1 Protection of Retained Habitats

All of the habitats of value to be retained or enhanced will be protected from damage during the works. The line of trees and native hedgerows will be fenced using Heras fencing or similar to prevent access by machinery. Where mature trees are present, they will be protected using standard arboricultural tree protection measures which include protection of the canopy and prevention of root compaction.

No vehicles will enter the protective ring fencing and no materials will be stored within their circumference. All protective fencing must be in place prior to any construction machinery arriving on site, before any works on site get underway, and will remain in place until all work is completed. This will minimise the level of disturbance within the protected areas during the works and ensure the habitats and any wildlife species that may be using them are protected.

5.2 Modified Grassland

Modified grassland of poor condition will be created. These areas of grassland will be turfed or seeded with a general amenity grass. Creation and management will be carried out as directed in the landscape and planting plan. As poor condition is targeted and the grass will be managed for amenity value, no specific management for biodiversity will be required.

5.3 Other Neutral Grassland

5.3.1 Proposed Planting

Species rich grassland will be incorporated in various areas around the site, via sowing of a suitable native wildflower meadow mix such as Emorsgate EM2 Standard General Purpose Meadow Mixture, and EM8 Meadow Seed Mixture for Wetlands around the proposed SUDs feature. The sowing of these seeds will be completed either during the Spring (March-May) or the late Summer (August-October) when the temperatures are warm, and the ground is dry. The seed must be surface sown at an even distribution throughout the entire landscaped area.

5.3.2 Management

Wildflower areas do not require any additional watering or fertilizer. Cutting a meadow and removing the clippings retains low nutrient levels in the soil and suppresses coarse grasses which would otherwise out-compete the wildflowers. It is recommended the wildflower grassland undergoes two annual cuts. The growth should be cut back to a height of 50-75mm. The cut grass should be dried on site. Cuttings should be left in situ for approximately one week, after this the arisings are to be removed from site. The boundaries will be cut every 2-3 years between October and February.

First year management: Perennial species take at least a full year to establish. For newly sown areas the first summer will be dominated by annual weeds arising from the soil seed bank and by grass

growth. This should be controlled by mowing throughout the first year to minimise competition and weed seed production.

Management Once Established: During the second year it is recommended that the grassland left to flower and will be cut in mid-summer. However, if a retained buffer area is established along the new scrub or hedgerows, this should not be cut in May or early June due to nesting birds. Mowing in mid-June brings a premature end to the flowers and can compromise nesting birds, which do not fledge until late July, insects and other wildlife. If some mowing has to take place at this time, sections should be cut at different dates to prolong the overall flowering season and give wildlife a chance to move. The second annual cut should be undertaken during late Autumn.

Grassland which is consistently cut late in the season, in August and September, year on year reduces species diversity as late cutting gives more time for coarse grasses and other dominant plants to grow unchecked. To maintain maximum diversity and flowering interest the buffer should be managed in sections at different times from late June to the end of August. Varying the mowing times from year to year is the best way to maintain a diverse balanced sward.

5.4 Sustainable Drainage System (SuDS)

Ideally the margins of the SuDS should be shallow. The best ecologically valuable SUDs have 'gentle' shelving edges. The swale will be excavated as part of construction works, after which it will be seeded or turfed with wildflower meadow grass.

It is expected that the SuDS will be managed as a dry swale and will comprise of wildflower meadow only filling during heavy rain events.

5.4.1 Management

First year management: During the first-year annual weed growth will be targeted to encourage the development of perennial ground cover which will be achieved through regular maintenance of the grassland areas to a height of 30-50mm (during dry periods). All arisings must be taken from site following cuts to prevent the addition of too many nutrients into the soil.

Management Once Established: Once the seed is established (it may take several years for full colonisation to be successful), due to the seasonal flooding of this feature, it will be managed as a meadow/grassland. After the first year, management should ensure that the feature is not cut through to July/August to give sown species opportunity to flower, prior to a main summer cut followed by cuts in autumn and spring (as required/ during drier periods). Management to reduce the sward height however should not be lower than 15mm.

Targeted scrub, bracken and invasive plant removal should also be carried out as needed to prevent encroachment into the habitat.

5.5 Mixed Scrub

5.5.1 Proposed Planting

The newly created areas of mixed scrub across the site will be planted with native shrub species as specified in the planting plan.

Native shrubs will be planted at a density of roughly 1 shrub per m² to avoid creating dense clusters and no single species comprising more than 75% cover. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. The scrub will become denser and more connected as it grows up.

5.5.2 General Management

Following establishment, scrub will require minimal ongoing management however the following measures can be employed as necessary:

- New scrub will be weeded following first planting and watered whenever necessary during the first growing season.
- Scrub will be cut back annually as needed to ensure the area does not become overgrown and thinned every five years. Different areas of scrub will be cut back / thinned on rotation in order to ensure a diverse age range (seedlings, sapling, young shrubs and mature shrubs) persists.
- Any existing or later establishing Bramble will be reduced in density and will be maintained at approximately 15% density within the scrub patches.
- Ongoing management will be undertaken to prevent successional scrub developing within the adjacent grassland areas.
- Management must take into account the requirement for maintaining habitat connectivity across the site. Should any such vegetation die or its density become sparse, additional planting will be undertaken, replacing like-for-like.

All management of trees and scrub will be undertaken outside of the bird nesting season, which spans February – August inclusive (Natural England, 2015).

5.6 Traditional Orchard

Two new parcels of traditional orchard will be created on site to compensate for orchard area lost within the centre of site. These will be created and managed as follows.

5.6.1 Planting

A variety of fruit trees (apple, cherry and pear) are specified in the planting plan to be planted in the orchards. Planting will be carried out in the first year. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. Rootgrow or Bonemeal will be applied to the new plants to encourage healthy root growth. All trees will be planted with tree guards initially to protect the trees from browsing.

In addition, the ground below the trees will be sown with wildflower meadow grassland, such as Emorsgate EM2. The sowing of these seeds will be completed either during the Spring (March-May)

or the late Summer (August-October) when the temperatures are warm, and the ground is dry, but should be completed after the fruit trees are planted so that the ground is not further disturbed. The seed must be surface sown at an even distribution throughout the entire landscaped area.

5.6.2 Tree Management

5.6.2.1 Management in Years 1 to 5

During the first five years, trees will be managed to encourage healthy formation.

All newly planted trees must have a 1-metre exclusion zone whereby weeds are routinely and pro-actively removed for the first 3 years. Bark mulch is recommended around each tree and will act as an effective management method to also suppress weed colonisation. While the grassland in general will be allowed to grow longer from year 2, the 1-metre exclusion zone will be maintained and the grass cut around the new trees during a longer period for five years. This is to prevent pests from accessing the trees while they are vulnerable. The trees will be watered as needed during dry periods during the first three years, after which they should be strong enough to withstand normal dry periods.

Tree guards will be checked annually and removed once the tree is large enough. All tree guards will be removed by Year 5.

Formative pruning will be used initially to encourage strong roots and trunk while it establishes. This will involve pruning all fruit that develops on new trees for the first five years to allow the trees to grow strong. Any dead fruit, weak or diseased branches will be removed to promote growth of healthy branches.

5.6.2.2 Management in Years 6 to 30

After five years, less intensive management will be required. The grassland can be allowed to grow around the base of the trees and will be managed as a meadow grassland and trees will be pruned for annually for fruit production rather than growth.

Pruning will be carried out annually and timing varies based on the type of trees. The apple and pear trees will be subject to winter pruning (Nov – March) during the dormant season and this helps stimulate new fruit growth in the next season. The cherry trees will be subject to late summer (July – August) pruning, following completion of fruiting. Winter pruning is not recommended for cherry trees because it can introduce diseases to the trees. Pruning will focus on removing dead, diseased or crossed branches. It is recommended that no more than 25% of the tree is removed in a single prune.

5.6.3 Grassland management

The grassland below the fruit trees will generally be managed as Other Neutral Grassland, following the recommendation in **Section 5.3.2** above. However, as noted above, a 1-metre exclusion zone will be maintained around the trees during the first five years of establishment. Mulch will be used to suppress the grass or the grass will be regularly cut around the trees during the first five years.

5.6.4 Deadwood creation

While deadwood on the new trees will likely take a long period to establish, deadwood will be created on the ground in the orchard surrounding the trees. Pruned branches may be placed on the ground surrounding the trees to provide a habitat feature for invertebrates and other species (however any diseased branches pruned will be removed from site to prevent the spread of disease). In addition, presence of deadwood on the ground will likely encourage a different growth structure within the grassland to provide further diversity.

5.6.5 Monitoring and Replacement

The orchard will be monitored as part of the BNG monitoring reports. Any trees that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season. If the grassland is not meeting suitable criteria for a medium distinctiveness habitat then a supplementary seed mix will be sown and/or a change in management.

Adaptive management will be used and the monitoring reports will encourage any additional remedial measures specific to the orchard parcels.

5.7 Individual (Urban) Trees

5.7.1 Proposed Planting

A total of 41 trees will be planted across the site. Species specified in the planting schedule are as follows:

Trees

Abbreviation	Species	Girth	Height
Acer_camp	Acer campestre	12-14cm	3.5-4.0m
Acer_camp 'E'	Acer campestre 'Elsrijk'	12-14cm	3.5-4.0m
Amel_gran 'Robin Hill'	Amelanchier x grandiflora 'Robin Hill'	12-14cm	3.5-4.0m
Betu_'Fasc'	Betula albosinensis 'Fascination'	12-14cm	3.5-4.0m
Betu_jacq	Betula utilis var. jacquemontii	12-14cm	3.5-4.0m
Liqu_styr 'Worp'	Liquidambar styraciflua 'Worplesdon'	12-14cm	3.5-4.0m
Magn_Stel	Magnolia stellata		
Prunus_'Sun_Blvd'	Prunus 'Sunset Boulevard'	12-14cm	3.5-4.0m
Prun_padu	Prunus padus	12-14cm	3.5-4.0m
Quer_robu	Quercus robur	12-14cm	3.5-4.0m
Tili_cord	Tilia cordata	12-14cm	3.5-4.0m
Tili_cord 'Str.'	Tilia cordata 'Streetwise'	12-14cm	3.5-4.0m
Ulm_'F'	Ulmus 'Fiorente'	12-14cm	3.5-4.0m

Planting will be carried out in the first year. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. Rootgrow or Bonemeal will be applied to the new plants to encourage healthy root growth.

5.7.2 Management

5.7.2.1 Mycorrhizal Treatment

To ensure a successful establishment of the newly planted trees, it is recommended that mycorrhizal treatment to the tree roots is conducted **during the planting**, this would reduce the risk of tree

mortality and increase the long-term tolerance of these trees to periods of drought or adverse soil conditions thus ensuring a higher chance of successful long-term establishment.

5.7.2.2 Weed & Water Management

All newly planted trees must have a 1-metre exclusion zone whereby weeds are routinely and pro-actively removed for the **first 2 – 3 years**. Bark mulch is recommended around each tree and will act as an effective management method to also suppress weed colonisation. All new trees will be watered during any dry periods to encourage establishment during the first three years.

5.7.2.3 Pruning

The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms (but pruning will not be extensive enough to restrict expected canopy or height for their species).

5.7.2.4 Monitoring and Replacement

Trees will be monitored as part of the BNG monitoring reports. Any plants that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season.

5.8 Native Hedgerow

5.8.1 Proposed Planting

Multiple native hedgerows of poor condition will be created. Species specified in the planting schedule are as follows:

Native Hedges

Abbreviation	Species	Height	Specification	Density	Qty.
Carp_betu	Carpinus betulus	40-60cm	1+1 : Transplant -seed raised: B	1/m	253 No.

Native Hedges Mix

Abbreviation	Species	Specification	Percentage Contribution
Carp_betu	Carpinus betulus	1+1: Transplant - seed raised: B	17%
Cory_avel	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	17%
Crat_mono	Crataegus monogyna	1+1: Transplant - seed raised: B	17%
Fagu_sylv	Fagus sylvatica	1+2: Transplant - seed raised: B	17%
Ligu_oval	Ligustrum ovalifolium	0/2: Cutting: Branched: 5 brks: B	17%
Prun_spin	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	17%

The majority of the hedgerows are to be planted with Hornbeam (*Carpinus betulus*) only. However, the rest of the new hedgerows are specified to be planted with 5 plants per m² using a variety of native species as detailed above.

5.8.2 Management

To enable a successful outcome, the hedgerows will require ongoing management works. The more favourable approach to managing hedgerows for the benefits of wildlife is to encourage minimal

interference and ensure when there is any cutting, it does so after autumn fruiting (so late winter is preferable). However, as the target condition is poor, no specific management targets are required.

5.8.3 Monitoring & Replacement

Monitoring will take place during the compliance checks, as detailed below. This will be carried out by a suitably experienced ecologist during late winter – early spring of each year. These monitoring visits will assess the general health of the hedges and recommend potential remedial actions. Any plants that are removed, die or become seriously damaged or defective during the monitoring period of planting shall be replaced like for like in the next planting season.

5.9 Native Hedgerow with Trees

5.9.1 Proposed Planting

A section of the existing native hedgerow with trees will be enhanced from moderate to good condition. Horizontal gaps in the hedgerow will be filled in with new planting. Species recommended to be planted include:

- Hawthorn (*Crataegus monogyna*),
- Hazel (*Corylus avellana*)
- Hornbeam (*Carpinus betulus*)
- Holly (*Ilex aquifolium*)
- Guelder Rose (*Viburnum opulus*)
- Alder Buckthorn (*Frangula alnus*),
- Wild Cherry (*Prunus avium*),
- Crab Apple (*Malus sylvestris*),
- Elder (*Sambucus nigra*),
- Dogwood (*Cornus sanguinea*),
- Privet (*Ligustrum vulgare*),
- Dog Rose (*Rosa canina*).

5.9.2 Management

To enable a successful outcome, the enhanced hedgerow will require ongoing management works. The more favourable approach to managing hedgerows for the benefits of wildlife is to encourage minimal interference and ensure when there is any cutting, it does so after autumn fruiting (so late winter is preferable).

Management is recommended to follow management practices outlined within Bright and MacPherson (2002):

- Cutting will be done on a 3-year cycle* (part of the hedges on site cut during the first year, another part of the hedges cut during second year and no cutting during the third year), to provide sustained foraging opportunities across the site every active season. Hedgerows will be allowed to develop into a tall, dense, bushy structures and maintained at a height of 3 – (preferably 4) meters. If this is not possible due to aesthetic reasons, they should be allowed to grow to a minimum of 2m.

- Not all hedgerows should be cut in any one year, so some heavy fruiting hedges are always present.
- Flails should not be used if possible meaning management works will likely involve cutting using hand tools
- Coppicing or laying should be used to manage any of the hedgerows on site which become gappy or sparse
- If the size of the hedgerow needs to be reduced, avoid cutting the top and cut one side.

If cutting is required more frequently, management will aim to only cut one side of the hedgerow at a time and at a time of year that avoids flowering or fruiting season, allowing the hedgerow to maintain a dense structure.

Through the change in management and additional planting it is expected that the hedgerow with trees can meet the additional criteria on gappiness that is currently failing.

5.9.3 Monitoring & Replacement

Monitoring will take place during the compliance checks, as detailed below. This will be carried out by a suitably experienced ecologist during late winter – early spring of each year. These monitoring visits will assess the general health of the hedges and recommend potential remedial actions. Any plants that are removed, die or become seriously damaged or defective during the monitoring period of planting shall be replaced like for like in the next planting season.

5.10 Compliance Check

All habitat creation will be completed within 12 months following the completion of construction works. A compliance visit will be completed by a suitably qualified ecologist once habitat creation has taken place. The check will be conducted annually for the first 5 years post-completion, and every 5-years thereafter until year 30 to ensure the habitat remains in place. The compliance check will be carried out during a suitable time of year and in suitable weather conditions. The ecologist will check the created native hedgerow habitat to assess its health and make an assessment if any recommended changes are required to management.

On completion of the visit, a Biodiversity Net Gain (BNG) monitoring report will be compiled, including the following:

- Assessment of habitats against the objectives defined in this management plan
- Any presence of target species noted during the compliance check
- Date stamped photographic evidence taken from fixed monitoring points, of which will be the central point of each land parcel per habitat type as listed in **Section 4.0**, during the first compliance check after the construction phase
- Detailed site notes including a condition assessment for each habitat type listed in **Section 4.0** (where appropriate) using the condition criteria within the Technical Annex 1 (DEFRA, 2023b, updated 2024).
- Detailed specific recommendations on management actions to promote growth and

establishment of target species / habitats including timescales for undertaking actions (if required) and marked site plans to show the actions

- Management of the above recommended actions must be carried out in the next phase and report of any details
- Each BNG monitoring report will be written up in accordance with the BNG Habitat Monitoring Report template provided by Natural England (2023) and will be sent to the LPA.

5.11 Safeguarding

The developer and project manager will be responsible for briefing all site personnel of the ecological sensitivities of the site and implementing the mitigation measures outlined within **Section 5.1**. If any protected species are encountered during the construction works, it will be the responsibility of the project manager to cease works and immediately contact an ecologist for advice.

5.12 Post-Construction Habitat Creation

Table 10 below depicts the indicative timings associated with the habitat creation and enhancements to be undertaken after all construction works on site have been completed. This is considered to be year 1 of the management plan. For those activities that can be undertaken at any time of year, the earliest possible time is recommended. Each area will be created at different times due to the phased nature of the project.

5.13 Management Responsibilities

McCarthy and Stone Ltd will assume responsibility for the management and maintenance of the newly created and enhanced habitats. When required, responsibility will include ensuring all management works are completed and qualified ecologists, arborists or landscape managers are contracted, etc. An annual management timeline of all habitats has been provided in **Table 11** and management works should continue in perpetuity.

A formal review process will be implemented when objectives and management recommendations are not reached / roles and responsibilities are not fulfilled as agreed. The details of this formal review process are as below:

- A suitably qualified ecologist will visit the site to conduct the compliance check (detailed in **Section 5.10**).
- The compliance check will include the write up and submission of a BNG monitoring report
- The ecologist will review the success for BNG that the previous recommendations or management actions have for the target species / habitats
- The project manager is contacted by the ecologist and is informed of the recommendations or management actions which have not been fulfilled to identify what or who is responsible
- The BNG monitoring report will include a section addressing any raised issues identified during the compliance check
- The BNG monitoring report is submitted to the LPA for review and comment

Table 10. Habitat creation and year 1 management and monitoring of the habitats on site

General Activity	Specific Activity	Dates / Timing	Description
Habitat retention Traditional orchard, line of trees, and native hedgerows (Section 5.1)	Installation of protective fencing	Anytime – pre- commencement of works	Protective fencing will be installed around the retained habitats around the site to ensure that they are not damaged during the works
Habitat creation Modified Grassland (Section 5.2)	Planting	Ideally Autumn or Spring	Establish the amenity grassland through seeding or turfing the area with a suitable grass
	Year 1 Management	Routinely as required	- Grassland will be regularly mown, with no specific management requirements - Remedial measures will be carried out as per planting plan
Habitat creation Other Neutral Grassland (Section 5.3)	Planting	Ideally Autumn or Spring	The areas scheduled to be created as other neutral grassland will be sown with Emorsgate EM2 – Standard General Purpose Meadow Mixture (or similar)
	Year 1 Management	Routinely as needed	- Annual weeds may be arising from the soil seed bank and by grass growth during the first year. - This should be controlled by mowing to 40-60mm throughout the first year to minimise competition and weed seed production.
Habitat creation SuDS (Section 5.4)	Excavation of SUDs	Anytime	1 SUDs feature will be created, excavated with gentle shelving edges during construction works
	Planting	Ideally Autumn or Spring	The SUDs will be sown EM8 Meadow Seed Mixture for Wetlands around the SUDs feature (or similar)
	Year 1 Management	Routinely as needed	- Annual weeds may be arising from the soil seed bank and by grass growth during the first year. - This should be controlled by mowing to 40-60mm throughout the first year to minimise competition and weed seed production.

Habitat creation Mixed Scrub (Section 5.5)	Plant native shrub species	Late Autumn	• Within the newly created mixed scrub, plant native shrubs at a density of 1 per m2 • At least 3 different native woody species will be planted. • No single species will comprise more than 75% of the cover.
	Year 1 Management	Routinely as needed	• Weed around newly planted shrubs as necessary • Water if needed during dry periods during establishment • Replace any dead shrubs like-for-like in the next planting season
Habitat creation Traditional Orchard (Section 5.6)	Planting trees	Late autumn	• Fruit trees will be planted as specified in the planting plan • Rootgrow or Bonemeal should be applied to new plants • Tree guards will be installed to protect trees from browsing
	Sowing grassland	Spring or late-summer	• The orchard will be sown with Emorsgate EM2 – Standard General Purpose Meadow Mixture (or similar) across the ground • Sowing grassland will be carried out in the first season after tree planting
	Year 1 General Tree Management	Anytime	• 1-metre exclusion zone created around the newly planted trees (mulch can optionally be used) • New trees will be watered as needed during dry periods • Tree guards will be checked
	Year 1 New Tree Pruning	Routinely as needed	• Formative pruning will be used to encourage strong growth • All developing fruit will be pruned to focus growth on strengthening the tree rather than fruiting
	Year 1 Grassland management	Routinely as needed	• Annual weeds may be arising from the soil seed bank and by grass growth during the first year. • This should be controlled by mowing to 40-60mm throughout the first year to minimise competition and weed seed production.

	Deadwood creation	During pruning	Pruned materials will be made into deadwood piles on the ground surrounding the trees (exception – diseased branches will be removed from site to prevent spread)
Habitat creation Individual (Urban) Trees (Section 5.7)	Planting	Late Autumn	- Trees will be planted as specified - Rootgrow or Bonemeal and mycorrhizal treatment should be applied upon planting to promote root growth. - Mycorrhizal treatment will be added during planting
	Year 1 Management	Routinely as required	- Trees should be watered as needed during dry periods - Replacement of dead or damaged trees in the next planting season. - Trees will be subject to light pruning in October - Weeding at the tree base and replacement of wood mulch as necessary to suppress weeds
Habitat creation Native Hedgerow (Section 5.8)	Planting	Late Autumn	- Hedgerows will be planted as specified - In native hedges, species will be planted at 5 plants per m, with species mixed throughout the hedge
	Year 1 Management	Routinely as required	- Minimal interference is encouraged - Plants should be watered as needed during dry periods - Replacement of dead or damaged plants in the next planting season
Habitat enhancement & retained Native Hedgerow with Trees (Section 5.9)	Planting	Late autumn	Gaps in the existing hedgerow with trees will be infilled with new planting using native species
	Year 1 Management	Winter	- Management cycle will begin on existing hedgerows, beginning 3-year management cycle with one side cut in first year - Any new plants that fail will be replaced in the next planting season

5.14 Years 2 – 30 Management / Monitoring Table

Once the initial works covering the first year of management / monitoring have been completed as outlined in **Table 10**, the longer-term management objectives for the ecological features on site will need to be implemented (which have been outlined in detail in the above sections). **Table 11** below provides an overview of the actions required and the timings of when they should be complete (covering years 2– 30 post construction).

Table 11. Schedule of monitoring and management in Years 2 – 30 for all habitats (as per **Sections 4.0 and 5.0**).

General Activity	Specific Activity	Dates / Timing	Description
Modified Grassland (Section 5.2)	Years 2-30 Management	Year-round	- The grassland will be subject to regular mowing as amenity grassland - No particular management for biodiversity is required
Other Neutral Grassland & SUDs (Section 5.3 & Section 5.4)	Years 2-30 Management	Mid to late Summer and Autumn	- Leave to flower until late June to early Sept - Conduct initial hay cut after flowering with growth reduced to 50mm - Manage sections of each grassland parcel at different times from late June to the end of August, varying timings year to year - Carry out a second cut in late autumn.
	Removal of undesirable species	As needed	Targeted scrub, bracken and invasive species removal will be carried out as necessary.
Mixed scrub (Section 5.5)	Cutting back / thinning	Late September – October	- Scrub will be cut back annually as needed to ensure areas do not become overgrown. - Thinning will take place routinely every 5 years. - Different areas will be cut back / thinned on rotation to maintain a diverse age range and Bramble will be maintained at about 15% - Any scrub encroaching into adjacent habitats will be cut back as needed.
	Invasive species removal	Late September – October	Removal of invasive species will be undertaken as necessary if they establish on site.
Traditional Orchard (Section 5.6)	Years 2-5 Tree Management	Anytime	- New trees will be watered as needed during dry periods - Tree guards will be checked and removed once straining tree growth or in Year 5

			Formative pruning will be used to encourage strong growth. All developing fruit will be pruned to focus growth on strengthening the tree rather than fruiting
	Years 6-30 Tree Management	Routinely as needed	- Annual pruning carried out with apple/pear pruned in winter (Nov – Mar) and cherry in late summer (July / August) after fruit season is complete - Pruning will focus on removal of dead, diseased or crossing branches - No more than 25% of tree will be pruned in one year
	Years 2-5 Grassland management	Mid to late Summer and Autumn	- Leave to flower until late June to early Sept - Conduct initial hay cut after flowering with growth reduced to 50mm - Manage sections of each grassland parcel at different times from late June to the end of August, varying timings year to year - Carry out a second cut in late autumn. - Targeted scrub, bracken and invasive species removal will be carried out as necessary. 1-metre exclusion zone around the individual trees will be maintained short and/or mulched to prevent introducing pests around the tree base during vulnerable years
	Years 6-30 Grassland management	Mid to late Summer and Autumn	From Year 6, the 1-metre exclusion zone is no longer required as the tree is expected to be stronger and grassland will be managed as above
	Deadwood creation	During pruning	Pruned materials will be made into deadwood piles on the ground surrounding the trees (exception – diseased branches will be removed from site to prevent spread)
Individual (Urban) Trees (Section 5.7)	Weed management	Routinely as required	Remove weeds from a 1m area around the base of the trees for the first 2-3 years.

	Pruning	October	The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms
	Monitoring	Annually in Years 1-5 then every 5 years late Winter – early Spring	- Trees will be inspected during compliance checks - General health will be assessed with remedial action recommended as necessary. - Any plants that are removed, die or become seriously damaged shall be replaced like-for-like in the next planting season.
Native hedgerow (Section 5.8)	Management	As needed	As poor condition is targeted, no particular management is required of hedgerows on site, although minimal interference is encouraged to create denser hedgerows
	Monitoring & Replacement	As needed	Any plants that are removed, die or become damaged/defective during the monitoring period will be replaced in the next planting season
Native hedgerow with trees (Section 5.9)	Years 2-30 Management	Winter management	- Continue the 3 year cutting cycle (once of a mature size). - Maintain a height of 3-4m wherever possible. - Use hand tools and avoid the use of flails. - Use coppicing or laying to fill gaps. - If hedgerow size needs to be reduced (e.g. in more formal areas), avoid cutting the top and cut only one side. - Trees currently appear in good health but will be managed
	Monitoring of Trees	During compliance checks	- Trees will be inspected during compliance checks - General health will be assessed with remedial action recommended as necessary. - Any plants that are removed, die or become seriously damaged shall be replaced like-for-like in the next planting season.

	Monitoring & Replacement	As needed	- Health of the hedgerows will be monitored during BNG monitoring checks and remedial actions will be carried out as identified - Coppicing / layout or gap planting will be used to gap up / thicken any hedgerows that are thinning
Compliance check (Section 5.10)	Monitoring report	Annually for the first 5 years, then every 5 years until year 30 Must be conducted during a suitable time of year and weather conditions	- A report will be produced by an ecologist to provide details on all management, assessment of habitats, additional management requirements (if required), management to be carried out in the next phase and reporting on any delays - Each report will be sent to the LPA

6.0 REFERENCES

Natural England (2023). *The Statutory Biodiversity Metric*. Available from: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

Natural England (2024). *Statutory Biodiversity Metric Tools and Guides*. Available from: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

UKHab Ltd. (2023). *UK Habitat Classification – Habitat Definitions Version 2.0* (September 2023).

7.0 APPENDIX

Appendix A – BNG Baseline Habitats Map



Appendix B – BNG Post-Development Map

