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Habitat Management and Monitoring Plan

Site Name

Land south of Old Crawley Road, Faygate

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Client

Fairfax Acquisitions Ltd

Author

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Report Summary

Purpose	The Ecology Co-operation was commissioned by Fairfax Acquisitions Ltd to provide a Habitat Management and Monitoring Plan (HMMP) with respect to a proposed development of 120 dwellings with associated access and hard and soft landscaping at land south of Old Crawley Road, Faygate. This document outlines the proposed strategy to enhance existing habitats identified on the site (species-rich native hedgerow) and create low distinctiveness habitats (native hedgerow, modified grassland), and new medium distinctiveness habitats (other neutral grassland, mixed scrub, mixed woodland and urban trees) over a 30-year period. In accordance with the Biodiversity Impact Calculations for the site, carried out in March 2026 by The Ecology Co-op, these enhanced/newly created habitats will provide net gain for the proposed project. This report should be read in combination with these calculations and their associated report which demonstrate the potential uplift in credits on the site in line with its existing baseline value.
Context	The site measures around 4.9ha and is situated on the rural fringes of Horsham. It currently comprises of a cultivated arable field with a small area of bracken in the southwest corner, surrounded by hedgerows. A UKHab survey and habitat condition assessments were undertaken by The Ecology Co-op in April 2022, February 2024 and December 2025. This data was collated into the Statutory Biodiversity Metric and accompanying report in March 2026 by the same company.
Proposed enhancements and habitat creation	The proposals will see the following post-intervention: Enhanced habitats: • 0.16km of species-rich native hedgerow (poor to moderate condition) Created habitats: • 0.334ha of other neutral grassland (moderate condition) • 0.195ha other neutral grassland, SUDS (moderate condition) • 0.419ha of modified grassland (poor condition) • 0.275ha of mixed scrub (moderate condition) • 0.613ha other woodland; broadleaved (moderate condition) • 0.4927ha /121 small sized urban trees (poor condition)
Management and monitoring	Prescribed management for all retained, enhanced and created habitats is detailed in section 7. Regular botanical monitoring surveys will take place throughout the 30-year project period, carried out by a qualified ecologist with appropriate botanical survey experience. A plan for this is detailed in section 8. Monitoring of other habitats for their condition will also be required, and is outlined in section 9.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-operation was commissioned by Fairfax Acquisitions Ltd to provide a Habitat Management and Monitoring Plan (HMMP) with respect to a proposed development at land south of Old Crawley Road, Faygate. This document outlines the proposed strategy to enhance existing habitats identified on the site including medium distinctiveness (species-rich native hedgerow) and create new low distinctiveness habitat (native hedgerow, modified grassland) and medium distinctiveness habitats (other neutral grassland, mixed scrub, other woodland; broadleaved and urban trees) over a 30-year period in accordance with the Biodiversity Impact Calculation for the site¹, carried out in March 2026 by The Ecology Co-op.

These enhanced/newly created habitats will provide a likely net gain of 4.33 habitat units (+43.77%) and 1.96 hedgerow units (+65.45%) on the site through the proposed development at Land south of Old Crawley Road. This report should be read in combination with the calculation^{Error! Bookmark not defined.} and the associated report² which demonstrate the potential uplift in credits on the site in line with its existing baseline value. Alongside this habitat creation and enhancement, this report outlines the monitoring surveys planned for the site during the project lifespan to ensure that the habitat and condition assessment criteria of the Statutory Biodiversity Metric³ will be met by the end of the 30-year period.

Implementation of all habitat management and monitoring will be overseen by a suitable ecological consultancy, and the client will be given contact details for an ecologist so that any issues can be resolved promptly.

Whilst this Habitat Management and Monitoring Plan details the best options currently seen to reach target habitats and habitat conditions, the management plan will evolve and can be adjusted as the project progresses through the 30-year period. All changes to the management plan will be carried out in consultation with the landowner, advising ecologist(s) and any other relevant bodies/stakeholders, where necessary.

1.2 Background

The proposed development is to construct 120 new homes with associated new access and hard and soft landscaping on land that is current arable cropland. The site measures around 4.9ha and is situated on the rural fringes of Horsham. The central grid reference is TQ 20123 32801. It currently comprises a cultivated arable field with a small area of bracken in the southwest corner, surrounded by hedgerows. A deciduous woodland parcel lies adjacent to the eastern boundary and further cultivated fields are situated to the north and east of the site. A residential estate forms the western boundary and small areas of grassland lie to the south. Figure 1 shows the boundary of the site and local context.

¹ The Ecology Co-op (2026). P3073 Land south of Crawley Road, Statutory Biodiversity Metric Calculation Tool Rev0 – Issued.

² The Ecology Co-op (2026). Biodiversity Impact Calculation – Land south of Old Crawley Road.

³ Natural England (2024). The Statutory Biodiversity Metric – Calculation Tool. Available online at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>.



Figure 1. Aerial image showing the location of the application site, with the site boundary indicated in red. Images produced courtesy of Google maps (map data ©2023 Google).

1.3 Summary of Previous Survey Work

An Ecological Assessment was undertaken in 2022⁴ with updated site walkovers in February 2024 and December 2025. The subsequent Biodiversity Impact Calculation (BIC) using the Statutory Biodiversity Metric was undertaken by the The Ecology Co-op in 2026¹². This included all onsite areas within the application site including boundary linear habitats.

The BNG calculation identified the potential for a net gain of 4.33 habitat units (+43.77%) and 1.96 hedgerow units (+65.45%) through the creation/enhancement of the following habitats onsite:

Retained habitats:

- 0.234km of w1g6 – lines of trees associated with ditch (moderate condition)
- 0.124km of h2a – species-rich native hedgerow (moderate condition)

Enhanced habitats:

- 0.16km h2 – species-rich native hedgerow (poor to moderate condition)

⁴ The Ecology Co-op (2026). Ecological Impact Assessment – Land off Old Crawley Road.



Created habitats:

- 0.334ha of g3c – other neutral grassland (moderate condition)
- 0.195ha of g3c – other neutral grassland relating to the onsite SUDS (moderate condition);
- 0.419ha of g4 – modified grassland (poor condition)
- 0.275ha of h3h – mixed scrub (moderate condition)
- 0.613ha of w1 – broadleaved woodland in (moderate condition)
- 0.4927ha/121 small specimens of native trees (poor condition)
- 0.597km of h2 – native hedgerow (poor condition).

2 RESPONSIBILITIES

2.1 Prior to Handover

Implementation of all habitat creation (see section 6) will be the responsibility of the relevant contractor appointed by Fairfax Acquisitions Ltd.

2.2 Post-handover

Implementation of all habitat management (see section 7) and contingency measures (see section 7/8/9) will be the responsibility of SDP Developers for the duration of the work schedule (see section 7).

3 LEGAL PROTECTION

Legal protection applying to relevant bird, mammal and herpetofauna species is detailed in Appendix 1 of this report. This includes both national and European legislation that protects badgers *Meles meles*, bats, dormice *Muscardinus avellanarius*, reptiles and breeding birds.

4 METHODOLOGY

In order to inform this report and the Biodiversity Impact Calculations, a UKHab survey and habitat condition assessments were undertaken by Libby Morris, Consultant Ecologist at The Ecology Co-op in April 2022 with updated surveys undertaken in February 2024 by Kate Lewis, Senior Ecologist and December 2025 by Sam Lunn, Principal Ecologist.

5 BASELINE CONDITIONS

5.1 Existing Habitats

Habitats (UKHAB) within the site at Old Crawley Road are shown in Figure 2 below and comprise of;

- 4.749ha of c1- arable cropland (N/A condition)
- 0.051ha of g4 – modified grassland (moderate condition)



- 0.095ha of g1c – bracken (N/A condition)
- 0.124 of h2a – species-rich native hedgerow (moderate condition)
- 0.16 h2 – species-rich hedgerow (poor condition)
- 0.21 r1e – ditch with trees (N/A condition)

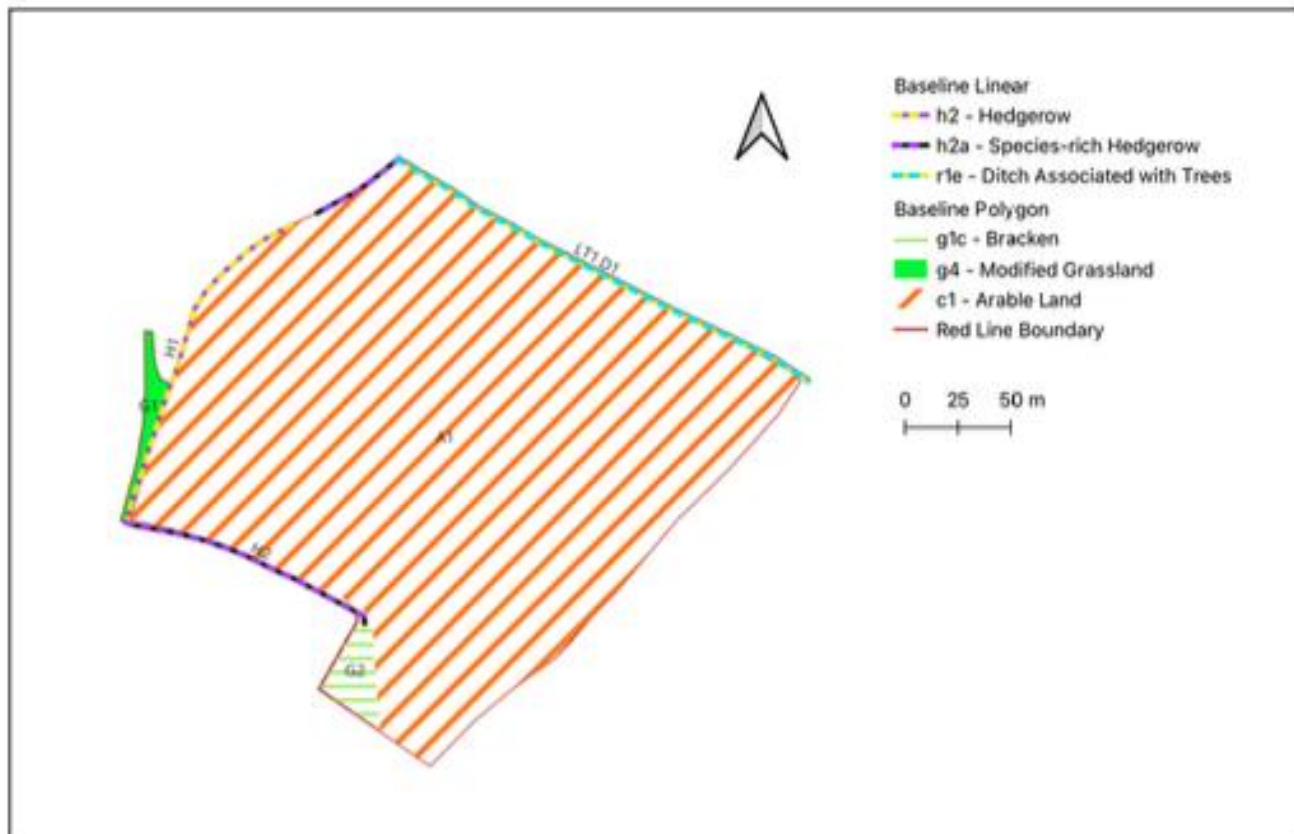


Figure 1. UKHAB map showing existing habitats within the site. The site boundary is indicated with a red line. Produced using QGIS software, version 4.06.3 – Hannover.



Photograph 1a & 1b. Left – arable cropland. Right – native hedgerow.



6 PROPOSED HABITAT RETENTION/CREATION/ENHANCEMENT

The proposals will see habitat creation will see the following:

Retained habitats:

- 0.234km of w1g6 – lines of trees associated with ditch (moderate condition)
- 0.124km of h2a – species-rich native hedgerow (moderate condition)

Enhanced habitats:

- 0.16km h2 – species-rich native hedgerow (poor to moderate condition)

Created habitats:

- 0.334ha of g3c – other neutral grassland (moderate condition)
- 0.195ha of g3c – other neutral grassland relating to the onsite SUDS (moderate condition);
- 0.419ha of g4 – modified grassland (poor condition)
- 0.275ha of h3h – mixed scrub (moderate condition)
- 0.613ha of w1 – broadleaved woodland in (moderate condition)
- 0.4927ha/121 small specimens of native trees (poor condition)
- 0.597km of h2 – native hedgerow (poor condition).



Figure 2. UKHAB map showing the proposed habitats within the site. The site boundary is indicated with a red line. Produced using QGIS software, version 4.06.3 – Hannover.

6.1 Hedgerows

0.124km of native species-rich hedgerow (h2a) will be retained in a 'moderate' condition and 0.16km (h2) of native species-rich hedgerow will be enhanced to meet 'moderate' condition over the 30-year period.

0.16km of h2 species rich hedgerow at the western boundary is to be enhanced from 'poor' to 'moderate'.

0.597km of h2 native species hedgerow will be created along the southeastern boundary and along street edges within the development. This will aim to meet 'poor' condition, which will need to be maintained over the 30-year period.

6.1.1 Maintenance

The hedgerow in moderate condition will need to be maintained across the 30-year period and this will be achieved using the measures in section 7.

6.1.2 Creation

A variety of native trees will be planted from November to March before they come into leaf. Planting should be avoided during droughts, hard frosts (most likely in January and February) or particularly cold, windy periods.



These will be planted as bare root whips.

A minimum of five woody species is required in a 30m length to define a hedgerow as 'species rich'.

All grass and weeds will be removed in a 1m diameter circle around each tree station prior to planting, by physical stripping. This planting will include a minimum of 50% thorny species such as blackthorn *Prunus spinosa* and hawthorn *Crataegus monogyna* as well as at least five of the following species:

- hornbeam *Carpinus betulus*;
- sweet chestnut *Castanea sativa*;
- beech *Fagus sylvatica*;
- hazel *Corylus avellana*;
- elder *Sambucus nigra*;
- silver birch *Betula pendula*;
- wild cherry *Prunus avium*;
- bird cherry *Prunus padus*;
- pedunculate oak *Quercus robur*;
- small leaved lime *Tilia cordata*; and
- crab apple *Malus sylvestris*.

6.1.2.1 Tree Guards

Whilst there will be no access for grazing/browsing livestock within the land parcel, tree guards will be required to prevent browsing by deer. Biodegradable tree guards (such as the Bio-Earth Biodegradable Plastic-Free Tree Shelter Guard⁵) will be fitted around all new young trees.

6.1.2.2 Watering

Newly planted trees require watering when planted and regularly in the first weeks after, with the ground thoroughly wetted to ensure the water reaches the roots. New trees will be watered appropriately (the Arboricultural Association recommended 50 litres/week) in the summer months for their first three years.

6.1.3 Enhancement

Gaps in the existing hedgerow are to be filled with native tree species to achieve a minimum of five woody species in a 30m length to define a hedgerow as 'species rich'. Where trees are damaged or diseased they should be replaced in order to achieve the above species criteria. Newly planted tree protection and watering regimes are to be implemented as identified in sections 6.1.2.1 and 6.1.2.2 above.

6.1.4 Ecological Value at Point of Handover

At point of handover, the existing hedgerow will have been enhanced to ensure all gaps have been filled with

⁵ <https://www.green-tech.co.uk/tree-planting-products/tree-protection-and-shelters/earthboard-biodegradable-plastic-free-tree-shelter-guard#:~:text=Earthboard%20Biodegradable%20Plastic%20Free%20Tree,recyclable%2C%20and%20100%25%20compostable.>



native trees and that management is altered to allow the hedge to recover. The metric contains a built-in temporal multiplier, and it is expected that the enhanced hedge will reach its 'moderate' target condition in three years.

At the point of handover, the new created hedgerow will have been planted. The metric contains a built-in temporal multiplier, and it is expected that the new hedge will reach its 'poor' target condition in one year.

6.1.5 Statutory Biodiversity Metric Aims

In order to retain and enhance the native species-rich hedgerows to 'moderate' condition under the Statutory Biodiversity Metric, the hedges can fail a total of no more than four attributes and not fail both attributes in more than one functional group of the following condition assessment criteria.

In order to create the native hedgerow in 'poor' condition under the Statutory Biodiversity Metric, the hedge can fail a total of more than four attributes or fail both attributes in more than one functional group at the end of the 30-year project period.

- **Criteria A1** (height): >1.5m 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).
- **Criteria A2** (width): >1.5m 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 *Prunus spinosa* 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).
- **Criteria 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.
- **Criteria 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).
- **Criteria 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.
- **Criteria 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 *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or



together, does not exceed the 20% cover threshold.

- **Criteria 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.
- **Criteria 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).
- **Criteria 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.
- **Criteria 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.

6.2 Other Neutral Grassland

0.334ha of g3c – other neutral grassland (moderate condition) will be created.

6.2.1 Creation

In order to ensure this habitat establishes properly, baseline soil testing will be required to choose the correct seed mix and method of sowing, which can identify the soil phosphorous, magnesium, potassium and pH. However, the following methods below are generally used to establish this habitat.

Ground Preparation

Good ground preparation is essential to the success of establishing the grassland. Subsoil should be included in the seed bed to reduce fertilisation and increase the suitability for wildflower seed growth. The area should be rotavated to create an area of largely bare ground to allow the wildflower seed mix to establish.

Seed mix and Sowing

The seed mix should be sown between late August and the end of September during mild and wet weather, or during mid-March to mid-May when the ground has sufficient moisture and there is very little risk of frosts, to ensure the best conditions for seedling establishment. Emorsgate EM3 Special General Purpose Meadow Mixture⁶ or another suitable mixture which consists of at least 20% native wildflowers will be sown. The seed

⁶ <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/>



can be distributed by machine or hand and will not require rolling.

Table 1. Emorsgate EM3 Special General Purpose Meadow Mixture composition.

%	Common name	Scientific name
Wildflowers		
0.4	Kidney vetch	<i>Anthyllis vulneraria</i>
1.6	Common knapweed	<i>Centaurea nigra</i>
0.6	Greater knapweed	<i>C. scabiosa</i>
0.1	Rough Chervil	<i>Chaerophyllum temulum</i>
0.4	Crosswort	<i>Cruciata laevipes</i>
1	Wild carrot	<i>Daucus carota</i>
0.2	Viper's-bugloss	<i>Echium vulgare</i>
0.7	Lady's bedstraw	<i>Galium verum</i>
0.1	Meadow crane's-bill	<i>Geranium pratense</i>
0.8	Field scabious	<i>Knautia arvensis</i>
0.2	Meadow vetchling	<i>Lathyrus pratensis</i>
1	Oxeye daisy	<i>Leucanthemum vulgare</i>
2.4	Musk mallow	<i>Malva moschata</i>
0.6	Black medick	<i>Medicago lupulina</i>
0.4	Wild marjoram	<i>Origanum vulgare</i>
2.2	Ribwort plantain	<i>Plantago lanceolata</i>
0.4	Hoary plantain	<i>P. media</i>
2	Salad burnet	<i>Poterium sanguisorba</i>
0.4	Cowslip	<i>Primula veris</i>
0.2	Great burnett	<i>Sanguisorba officinalis</i>
1.4	Yellow rattle	<i>Rhianthus minor</i>
0.2	Selfheal	<i>Prunella vulgaris</i>
1	Red campion	<i>Silene dioica</i>
0.2	Bladder campion	<i>S. vulgaris</i>
0.3	Tufted vetch	<i>Vicia cracca</i>
0.2	Common vetch	<i>V. stiva</i>
Grasses		
8	Common bent	<i>Agrostis capillaris</i>
28	Crested dog's tail	<i>Cynosurus cristatus</i>
24	Red fescue	<i>Festuca rubra</i>
4	Smaller cat's tail	<i>Phleum bertolonii</i>
16	Smooth-stalked meadow grass	<i>Poa pratensis</i>

6.2.1 Ecological Value at Point of Handover

At the point of handover, the new neutral grassland will have been created. The metric contains a built-in temporal multiplier, and it is expected that the new grassland will reach its 'moderate' target condition in the 5th year.

6.2.2 Statutory Biodiversity Metric Aims



In order to create the 0.334ha of g3c – other neutral grassland ‘moderate’ condition, a minimum of three condition assessment criteria shall need to be met including essential criterion A at the end of the 30-year project period.

The condition criteria are as follows:

- **Condition A** (essential): 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.
- **Condition 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.
- **Condition C:** Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.
- **Condition D:** Cover of Bracken is less than 20% and cover of scrub (including bramble.) is less than 5%.
- **Condition E:** Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.
- **Condition F:** There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type (essential for good condition for non-acid grassland types only).

6.3 Other Neutral Grassland (SUDS)

0.195ha of g3c – other neutral grassland relating to the onsite SUDS (moderate condition) will be created.

6.3.1 Creation

In order to ensure this habitat establishes properly, baseline soil testing will be required to choose the correct seed mix and method of sowing, and can identify the soil phosphorous, magnesium, potassium and pH. However, the following methods below are generally used to establish this habitat.

Ground Preparation

Good ground preparation is essential to the success of establishing the grassland. Subsoil should be included in the seed bed to reduce fertilisation and increase the suitability for wildflower seed growth. The area should be rotavated to create an area of largely bare ground to allow the wildflower seed mix to establish.

Seed mix and Sowing

The seed mix should be sown between late August and the end of September during mild and wet weather, or during mid-March to mid-May when the ground has sufficient moisture and there is very little risk of frosts, to ensure the best conditions for seedling establishment. Emorsgate EM8 Meadow Mixture for wetlands⁷ or another suitable mixture which consists of at least 20% native wildflowers will be sown. The seed can be distributed by machine or hand and will not require rolling.

⁷ <https://wildseed.co.uk/product/mixtures/complete-mixtures/meadow-mixtures-for-specific-soils/meadow-mixture-for-wetlands/>



A mix suitable for areas of wetland is specified for the newly created sustainable urban drainage features. The sloping banks of the swale should support a diverse, species-rich sward which is made up of at least 20 plant species including a variety of flowering plant species to provide colour, texture, and ecological value. Therefore, increased wildflower content is recommended wherever possible. The mix that has been specified is EM8 Meadow mixture for Wetlands, by Emorsgate.

Table 2. EM8 Meadow Mixture for Wetlands.

Common Name	Scientific Name
Wildflowers 20%	
Yarrow	<i>Achillea Millefolium</i>
Agrimony	<i>Agrimonia eupatoria</i>
Wild Angelica	<i>Angelica sylvestris</i>
Betony	<i>Betonica officinalis</i>
Common Knapweed	<i>Centaurea nigra</i>
Meadowsweet	<i>Filipendula ularia</i>
Hedge Bedstraw	<i>Galium album</i>
Lady's Bedstraw	<i>Galium verum</i>
Meadow Vetchling	<i>Lathyrus pratensis</i>
Rough Hawkbit	<i>Leontodon hispidus</i>
Oxeye Daisy (Moon Daisy)	<i>Leucanthemum vulgare</i>
Birdsfoot Trefoil	<i>Lotus corniculatus</i>
Greater Birdsfoot Trefoil	<i>Lotus pedunculatus</i>
Black Medick	<i>Medicago lupulina</i>
Ribwort Plantain	<i>Plantago lanceolata</i>
Cowslip	<i>Primula veris</i>
Selfheal	<i>Prunella vulgaris</i>
Meadow Buttercup	<i>Ranunculus acris</i>
Yellow Rattle	<i>Rhinanthus minor</i>
Common Sorrel	<i>Rumex acetosa</i>
Great Burnet	<i>Sanguisorba officinalis</i>
Ragged Robin	<i>Silene flos-cuculi</i>
Dandelion	<i>Taraxacum officinale</i>
Tufted Vetch	<i>Vicia cracca</i>
Grasses 80%	
Common Bent (w)	<i>Agrostis capillaris</i>
Sweet Vernal-grass (w)	<i>Agrostis capillaris</i>
Grey Sedge (w)-	<i>Carex divulsa subsp. divulsa</i>
Crested Dogstail	<i>Cynosurus cristatus</i>
Tufted Hair-grass (w)-	<i>Deschampsia cespitosa</i>
Red Fescue	<i>Festuca rubra</i>
Meadow Barley (w)-	<i>Hordeum secalinum</i>
Smaller Cat's-tail (w)-	<i>Phleum bertolonii</i>
Rough-stalked Meadow-grass	<i>Poa trivialis</i>
Tall Fescue	<i>Schedonorus arundinaceus</i>

6.3.2 Ecological Value at Point of Handover

At the point of handover, the new neutral grassland (SUDS) will have been created. The metric contains a built-in temporal multiplier, and it is expected that the new neutral will reach its 'moderate' target condition in the 5th year.



6.3.3 Statutory Biodiversity Metric Aims

In order to create the 0.195ha of g3c – other neutral grassland in ‘moderate’ condition, a minimum of three condition assessment criteria shall need to be met including essential criterion A at the end of the 30 year project period.

The condition criteria are as follows:

- **Condition A (essential):** 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.
- **Condition 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.
- **Condition C:** Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.
- **Condition D:** Cover of Bracken is less than 20% and cover of scrub (including bramble.) is less than 5%.
- **Condition E:** Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.
- **Condition F:** There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type (essential for good condition for non-acid grassland types only).

6.4 Modified Grassland

0.419ha of modified grassland (g4) will be created and aims to meet ‘poor’ condition. This grassland is located along the entrance to the site near the western and southern boundaries within the landscaped amenity space.

6.4.1 Creation

In order ensure this habitat establishes properly, baseline soil testing will be required to choose the correct seed mix and method of sowing, and can identify the soil phosphorous, magnesium, potassium and pH. However, the following methods below are generally used to establish this habitat.

Ground Preparation

Good ground preparation is essential to the success of establishing the grassland. Subsoil should be included in the seed bed to reduce fertilisation and increase the suitability for wildflower seed growth. The area should be rotavated to create an area of largely bare ground to allow the wildflower seed mix to establish.

Seed mix and Sowing

The seed mix should be sown between late August and the end of September during mild and wet weather, or during mid-March to mid-May when the ground has sufficient moisture and there is very little risk of frosts, to ensure the best conditions for seedling establishment. Emorsgate EM3 Special General Purpose Meadow



Mixture⁸ or another suitable mixture which consists of at least 20% native wildflowers will be sown. The seed can be distributed by machine or hand and will not require rolling.

Table 3. Emorsgate EM3 Special General Purpose Meadow Mixture composition.

%	Common name	Scientific name
Wildflowers		
0.4	Kidney vetch	<i>Anthyllis vulneraria</i>
1.6	Common knapweed	<i>Centaurea nigra</i>
0.6	Greater knapweed	<i>C. scabiosa</i>
0.1	Rough Chervil	<i>Chaerophyllum temulum</i>
0.4	Crosswort	<i>Cruciata laevipes</i>
1	Wild carrot	<i>Daucus carota</i>
0.2	Viper's-bugloss	<i>Echium vulgare</i>
0.7	Lady's bedstraw	<i>Galium verum</i>
0.1	Meadow crane's-bill	<i>Geranium pratense</i>
0.8	Field scabious	<i>Knautia arvensis</i>
0.2	Meadow vetchling	<i>Lathyrus pratensis</i>
1	Oxeye daisy	<i>Leucanthemum vulgare</i>
2.4	Musk mallow	<i>Malva moschata</i>
0.6	Black medick	<i>Medicago lupulina</i>
0.4	Wild marjoram	<i>Origanum vulgare</i>
2.2	Ribwort plantain	<i>Plantago lanceolata</i>
0.4	Hoary plantain	<i>P. media</i>
2	Salad burnet	<i>Poterium sanguisorba</i>
0.4	Cowslip	<i>Primula veris</i>
0.2	Great burnett	<i>Sanguisorba officinalis</i>
1.4	Yellow rattle	<i>Rhianthus minor</i>
0.2	Selfheal	<i>Prunella vulgaris</i>
1	Red campion	<i>Silene dioica</i>
0.2	Bladder campion	<i>S. vulgaris</i>
0.3	Tufted vetch	<i>Vicia cracca</i>
0.2	Common vetch	<i>V. stiva</i>
Grasses		
8	Common bent	<i>Agrostis capillaris</i>
28	Crested dog's tail	<i>Cynosurus cristatus</i>
24	Red fescue	<i>Festuca rubra</i>
4	Smaller cat's tail	<i>Phleum bertolonii</i>
16	Smooth-stalked meadow grass	<i>Poa pratensis</i>

6.4.2 Ecological Value at Point of Handover

At the point of handover, the new modified grassland will have been created. The metric contains a built-in temporal multiplier, and it is expected that the new modified grassland will reach its 'poor' target condition in 1 year.

⁸ <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/>



6.4.3 Statutory Biodiversity Metric Aims

In order for the created grassland to reach 'poor' condition at the end of the 30-year project period, it will need to pass three or fewer criteria, including essential criterion A, or passes a minimum of four criteria excluding criterion A:

- **Criteria A:** There are 6-8 vascular plant species per m² present, including at least 2 forbs. 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 m², 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.
- **Criteria 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.
- **Criteria C:** Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.
- **Criteria 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.
- **Criteria E:** Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).
- **Criteria F:** Cover of bracken *Pteridium aquilinum* is less than 20%.
- **Criteria G:** There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).

6.5 Mixed Native Scrub

0.275ha of mixed scrub (h3h) will be created in the south-east of the site. This aims to meet 'moderate' condition.

6.5.1 Creation

The creation of scrub must include native species only. Planting will include whips planted in clumps with areas of bare ground in-between, and the recommended planting density is 1 shrub per 1 metre squared. All shrubs will need to be planted as bare root stock between late November and late February to avoid the need for watering, stress on the roots and an increased risk of failure.

A minimum of five species will be chosen from the recommended list below:

- dog rose *Rosa canina*;
- field rose *Rosa arvensis*
- field maple *Acer campestre*;
- dogwood *Cornus sanguinea*;



- hazel;
- blackthorn;
- hawthorn;
- elder; and
- goat willow.

6.5.2 Ecological Value at Point of Handover

At the point of handover, the new native scrub will have been planted. The metric contains a built-in temporal multiplier, and it is expected that the new native scrub will reach its 'moderate' target condition in 5 years.

6.5.3 Statutory Biodiversity Metric Aims

In order to create mixed scrub of 'moderate' condition under the Statutory Biodiversity Metric, three or more of the following condition assessment criteria, shall need to be met at the end of the 30-year project period:

- **Criteria 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).
 - At least 80% of scrub is native,
 - There are at least three native woody species,
 - No single species comprises more than 75% of the cover (except hazel, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens*, which can be up to 100% cover).
- **Criteria B:** Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.
- **Criteria C:** There is an absence of invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act 1981 (as amended)) and species indicative of suboptimal condition make up less than 5% of ground cover.
- **Criteria D:** The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.
- **Criteria E:** There are clearings, glades or rides present within the scrub, providing sheltered edges.

6.6 Broadleaved Woodland

0.613ha of w1 – broadleaved woodland (moderate condition) will be created.

6.6.1 Creation

The woodland will be planted as bare root whips across the site with an informal pattern to the north and the western edges of the site in accordance with the UKHab map and landscape planting plans, with the aim to meet 'moderate' condition.

Species have been chosen that complement the structure of the native deciduous woodland priority habitat in the surrounding landscape, and this includes the following six species identified in the landscape strategy plan:

**Table 4.** Native species for rural tree planting.

Scientific name	Common Name
<i>Sorbus aucuparia</i>	Rowan
<i>Quercus robur</i>	English oak
<i>Betula pendula</i>	Silver birch
<i>Taxus baccata</i>	Yew
<i>Crataegus monosyna</i>	Hawthorn
<i>Corylus avellana</i>	Hazel
<i>Prunus spinosa</i>	Blackthorn
<i>Acer campestre</i>	Field maple
<i>Alnus glutinosa</i>	Black alder
<i>Castanea sativa</i>	Sweet chestnut
<i>Sorbus torminalis</i>	Wild service tree
<i>Tilia cordata</i>	Small leaved lime
<i>Prunus avium</i>	Wild cherry
<i>Carpinus betulus</i>	Hornbeam
<i>Fagus sylvatica</i>	Beech

Saplings from a mixed-species native nursery stock will be planted in an informal arrangement see habitat plan on Figure 3, with trees planted with a minimum of 2m between them.

These trees will preferably be sourced from local nurseries. It is best to plant bare root stock while the trees are dormant between November and March in the absence of heavy frost. Trees will be protected by a staked mesh guard with an area of bark and/or wood chip mulch present at least 1.2m around the tree trunks. Newly planted trees require watering when planted and regularly in the first weeks after, with the ground thoroughly wetted to ensure the water reaches the roots.

6.6.2 Ecological Value at Point of Handover

At the point of handover, the new woodland will have been planted. The metric contains a built-in temporal multiplier, and it is expected that the new woodland will reach its 'moderate' target at the 15th year.

6.6.3 Statutory Metric Aims

In order to create 0.613ha of other woodland; broadleaved in 'moderate' condition under the Statutory Biodiversity Metric, these trees will have to meet a minimum assessment score of 26 at the end of the 30-year period.

The condition criteria are as follows:

- **Condition A:** Age of the trees; Three age-classes present (3pts) two age classes present (2 pts) one age class present (1pt)
- **Condition B:** Wild, domestic and feral herbivore damage; No significant browsing damage in woodland(3pts), evidence of significant browsing pressure is present in less than 40% of the woodland (2pts), Evidence of significant browsing pressure in more than 40% of the whole woodland (1pt)
- **Condition C:** Invasive plant species; No invasive species present in woodland (3pts), *Rhododendron Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species³



- <10% cover.(2pts) Rhododendron or cherry laurel present, or other invasive species³ ≥10% cover(1pt).
- **Condition D:** Number of native tree species; five or more native tree or shrub species found across the woodland parcel (3pts). Three to four native tree or shrub species⁴ found across woodland parcel. (2pts) Two or less native tree or shrub species⁴ across woodland parcel. (1pt)
 - **Condition E:** Cover of native tree and shrub species; >80% of canopy trees and >80% of understory shrubs are native.(3pts) 50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.(2pts) <50% of canopy trees and <50% of understory shrubs are native.(1pt)
 - **Condition F:** Open space within woodland; 10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted. (3pts) 21 - 40% of woodland has areas of temporary open space. (2pts) <10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category (1pt).
 - **Condition G:** Woodland regeneration; All three classes present in woodland⁸; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.(3pts) One or two classes only present in woodland.(2pts) No classes or coppice regrowth present in woodland.(1pt)
 - **Condition H:** Tree health; Tree mortality 10% or less, no pests or diseases and no crown dieback.(3pts) 11% to 25% tree mortality and or crown dieback or low-risk pest or disease present.(2pts) Greater than 25% tree mortality and or any high-risk pest or disease present. (1pt)
 - **Condition I:** Vegetation and ground flora; Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.(3pts) Recognisable woodland NVC plant community at ground layer present.(2pts) No recognisable woodland NVC plant community at ground layer present.(1pt)
 - **Condition J:** Woodland vertical structure; Three or more storeys across all survey plots, or a complex woodland.(3pts) Two storeys across all survey plots. (2pts) One or less storey across all survey plots.(1pt)
 - **Condition K:** Veteran trees; Two or more veteran trees per hectare.(3pts) One veteran tree per hectare.(2pts) No veteran trees present in woodland.(1pt)
 - **Condition 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.(3pts) 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.(2pts) 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.(1pt)
 - **Condition M:** Woodland disturbance; No nutrient enrichment or damaged ground evident.(3pts) Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground.(2pts) 1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground.(1pt)

6.7 Line of Trees

There is 0.234km of native trees associated with the ditch running along the northern boundary of the site. These are to be retained and maintained to meet moderate condition.



6.7.1 Ecological Value at Point of Handover

At the point of handover, the line of trees will be a moderate condition. The metric contains a built-in temporal multiplier, and it is expected that the line of trees will be maintained in its 'moderate' target condition throughout the 30-year period.

6.7.1 Statutory Metric Aims

In order to retain 0.234km of lines of trees in 'moderate' condition under the Statutory Biodiversity Metric, these trees will have to meet three or more criteria at the end of the 30-year period. The condition criteria are as follows:

- **Condition A:** At least 70% within the block are native species.
- **Condition B:** The tree canopy is predominantly continuous with gaps in canopy cover making up <10% of the total area and individual gap being >5m wide,
- **Condition C:** One or more of the 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.
- **Condition D:** There is an undisturbed naturally vegetated strip of at least 6m on both sides to protect the lien of trees from farming as other human activities (excluding grazing), where veteran trees are present, root protection area should follow standing advice.
- **Condition E:** At least 95% of the tree are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this) there I little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests diseases or human activity.

6.8 Urban Trees

There are 121 urban trees that are to be planted throughout the development within the streetscape and amenity space. These will aim for a 'poor' condition.

6.8.1 Creation

Urban trees will be planted as bare root whips across the site with an informal arrangement shown in Figure 3. These street trees are planted in small clusters and single trees to soften the development and provide wildlife habitat.

Species have been chosen that complement the structure of the existing deciduous woodland priority habitat, and this includes those species detailed in Table 5 below.

Table 5. Native species for rural tree planting.

Scientific name	Common Name
<i>Acer campestre</i>	Field maple
<i>Alnus glutinosa</i>	Black alder
<i>Castanea sativa</i>	Sweet chestnut
<i>Sorbus torminalis</i>	Wild service tree



Scientific name	Common Name
<i>Tilia cordata</i>	Small leaved lime
<i>Prunus avium</i>	Wild cherry
<i>Sorbus aucuparia</i>	Rowan
<i>Quercus robur</i>	English oak
<i>Betula pendula</i>	Silver birch
<i>Carpinus betulus</i>	Hornbeam
<i>Fagus sylvatica</i>	Beech

These trees will preferably be sourced from local nurseries. It is best to plant bare root stock while the trees are dormant between November and March in the absence of heavy frost. Trees will be protected by a staked mesh guard with an area of bark and/or wood chip mulch present at least 1.2m around the tree trunks. Newly planted trees require watering when planted and regularly in the first weeks after, with the ground thoroughly wetted to ensure the water reaches the roots.

6.8.2 Ecological Value at Point of Handover

At the point of handover, the new urban trees will have been planted. The metric contains a built-in temporal multiplier, and it is expected that the new urban trees will reach its 'moderate' target condition in the 10th year.

6.8.3 Statutory Metric Aims

In order to create 0.4927ha of urban trees in 'poor' condition under the Statutory Biodiversity Metric, these trees will have to meet two or fewer criteria at the end of the 30-year period. The condition criteria are as follows:

- **Condition A:** The tree is a native species (or at least 70% within the block are native species).
- **Condition B:** The tree canopy is predominantly continuous with gaps in canopy cover making up <10% of the total area and individual gap being >5m wide (individual trees automatically pass this criterion).
- **Condition C:** The tree is mature (or more than 50% within the block are mature).
- **Condition 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 that trees retain >75% of expected canopy for their age range and height.
- **Condition E:** Natural ecological niches for vertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.
- **Condition F:** more than 20% of the tree canopy area is oversailing vegetation beneath.

7 ONGOING MANAGEMENT

7.1 Hedgerows

Year 1 to 5

Newly created hedgerow tree saplings to be kept well-watered during establishment. Weeds must be controlled at the base of the young trees.



Tree guards, to protect the new saplings from rabbits and deer, to be inspected yearly for the first five years and then removed if planting is well established.

Checks for signs of disease. If disease is identified, advice should be sought from an arboriculturalist regarding the appropriate method of treatment.

Inspection for the presence of invasives. Invasives are more likely to colonise in the first five years after recent ground disturbance and bare ground cover.

Replacement planting will be required where any trees fail to establish and to close gaps within the hedgerow as it establishes.

Trimming hedgerows where required (unlikely as hedgerow initially establishes) should be carried out for the first five years annually to maintain healthy tree growth. Cutting should ideally take place in January/February to encourage fruiting and avoid nesting bird season.

Year 5 onwards

For newly established and existing hedgerows the cutting regime should be reduced from yearly to every three years after the first five years as flower buds often form on second-year growth. Hedges should be cut in rotation, cutting only a third of all hedgerows in one year. Flails should be avoided on branches/stems with a diameter over 2cm and ensure flail is kept sharp and clean for an effective cut. Alternatively, use a circular saw.

During cutting continue inspection for the presence of invasives and removal where necessary. The hedgerow can also be checked for any dead/dying individual plants and areas that require new planting can be identified. Any supplementary planting should use young, bare root whips and be planted in January/February.

Aim to cut hedge in an 'A' shape, providing a wider, more sheltered base and narrower top. Where possible, allow some trees within the hedge to grow taller, as this provides 'perches' for birds.

7.2 Other Neutral Grassland

Year 1

Most sown species are perennial and are slow to establish. Annual weeds are likely to arise from the seed bank and potentially scrub from residual root stock. Annual weeds can provide temporary shelter for invertebrates and are to be retained until mid to late summer. They can then be cut, removed and composted. Dig out any scrub, bracken or perennial weeds, for example docks.

The grassland (g3c) will be managed throughout the majority of the year in the first three years, with twice yearly hay and/or silage cuts to control sward growth where necessary in both spring (April/May) and late summer (August/Sept). A 'dial up/dial down' approach will be used where possible, involving close monitoring of sward height throughout the year by the landowner, in consultation with the supervising ecologist, and adjustment of cutting regimes where necessary.

Year 3 Onwards

Once grassland is established, fields will be subject to a once yearly hay cut at the end of the growing season,



once all grasses and wildflowers have set seed to a height 5cm in year one and 40cm in subsequent years.

Currently this should be carried out between late-August to mid-September, but this may be subject to change with an altering climate. Cuttings will be left in rows to dry and shed seed for between 3-5 days and then arisings will be removed to prevent soil nutrient uplift. If deemed necessary, the grass can be cut and gathered in spring, prior to the peak growing season, to between 2-10cm in order to avoid the build-up of rapidly establishing 'undesirable' species.

Uncut margins of grass will be left along the edges to provide a natural ecotone for the adjacent woodland and hedgerow as well as provide refuge and foraging habitat for wildlife throughout the entire year. The longer margins will be cut on a rotational basis every other year to ensure that the grassland does not convert to a rank sward.

Particularly at the early stages of the project where soil nutrient levels are higher it may be necessary to control species that are potentially injurious (e.g. ragwort, St John's wort *Hypericum perforatum*, creeping thistle *Cirsium arvense*, broad-leaved dock *Rumex obtusifolius*, spear thistle *Cirsium Vulgare* and curled dock *Rumex crispus*) if they become over-dominant within the sward. This control will be very localised and use minimal chemical intervention possible, with cutting and hand pulling techniques utilised where possible. If larger patches of these species establish, localised application of herbicide will be used through hand-operated knapsack sprayers or weed wipers to eliminate individual plants. If possible, citronella-based sprays could be used, which is sometimes termed as a more 'environmentally friendly' option. These sprays are best applied when plants are at seedling or rosette stage using knapsack or weed wipers.

Monitoring of bare ground cover is to be undertaken during botanical surveys on an annual basis. Where invasive species have become dominant, scalping of the sward through low cutting can be used to create bare patches of soil. Any areas of bare ground should be resown.

7.3 Modified Grassland

Year 1

The growth and establishment of wild grasses may be slow initially especially at low sowing rates, and there will be flush of annual weeds in the first growing season that can be easily controlled by topping and mowing.

The sward should be cut and gathered to a height of approximately 5cm at least three times in its first year of establishment to control the flush of annual weeds which will grow during the first growing season and suppress faster growing grass species to encourage establishment of less competitive flowering species. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm throughout the first growing season to prevent weeds smothering the emerging grasses. Remove cuttings if dense, regular topping will reduce the quantity over time and these can be left to disperse.

Year 2 Onwards

The second and subsequent years can be managed through regular mowing to form a neat edge to the access route into the site.

As part of on-going management, the grassland should be cut and gathered each year to a height of approximately 40mm after flowering in July and August. This process can be carried out through, strimming or tractor mowing. This is important to ensure that species diversity of the area is maintained, and grass species



do not become dominant. Where necessary, a second cut could be taken in March each year if the sward is growing too coarsely. The grassland should not be cut between the 1st of April and mid-August so that plants are given the opportunity to flower. Grass cuttings should be collected and removed to prevent nutrient enrichment of the soil. Aim for the sward height to be varied at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm.

Check for cover of bracken which should be less than 20%. Any areas of bare ground should be resown.

7.4 Mixed Native Scrub

Year 1 to 5

Tree saplings kept well-watered during establishment. Weeds must be controlled at the base of the young trees.

Tree guards, to protect the new saplings from rabbits and deer and accidental damage to be inspected yearly for the first five years and then removed if planting is well established. The mixed scrub habitat should include a variety of species and maintain different stages of growth at all times from bare ground, to vegetation and deadwood, to provide shelter in close proximity to available food sources and basking opportunities for reptiles. After five years, fencing protecting areas of scrub will be removed to allow grazing access.

7.5 Mixed Woodland

Year 1 to 5

Tree saplings kept well-watered during establishment. Weeds must be controlled at the base of the young trees.

Tree guards, to protect the new saplings from rabbits and deer, to be inspected yearly for the first five years and then removed if planting is well established.

Check for signs of disease. If disease is identified advice should be sought from an arboriculturalist regarding the appropriate method of treatment. Replacement planting will be required where trees fail to establish.

Build-up of leaf litter from the proposed trees onto the other neutral grassland parcels will need to be prevented through the raking up of leaves in the autumn months.

7.6 Line of Trees

Year 1 to 5

Check for signs of disease. If disease is identified advice should be sought from an arboriculturalist regarding the appropriate method of treatment. Replacement planting will be required where trees fail to establish.

Build-up of leaf litter from the proposed trees onto the adjacent other neutral grassland parcel will need to be prevented through the raking up of leaves in the autumn months.

Cutting of existing trees as required must only be timed outside the bird nesting season (avoiding 1st March to 31st August). Where possible shrubs shouldn't be cut until February, so that valuable winter food associated with fruiting shrubs/trees is retained for over-wintering birds.



7.7 Urban Trees

New trees will be watered appropriately (the Arboricultural Association recommends 50 litres/week) in the summer months for their first three years.

New trees will be checked annually for signs of damage and disease. If disease is identified, advice should be sought from an arboriculturalist regarding the appropriate method of treatment.

Any trees which fail within the 30-year period must be replaced.

Tree guards will be removed after three years and recycled.

Build-up of leaf litter from the proposed trees onto the other neutral grassland parcels will need to be prevented through the raking up of leaves in the autumn months.

8 BOTANICAL MONITORING REQUIREMENTS

Monitoring surveys will commence from Year 1. Surveys from Years 1–3 will focus on establishment of the sward. The first-year monitoring of grassland parcels will be essential to characterise the swards' composition and apply effective management to control grass growth using measures such as increased cut and collect and additional yellow rattle applications moving forward.

Years 4 onwards will be focused on the botanical diversity of the grassland sward within the enhanced and created modified grassland areas to ensure they meet the condition assessment criteria under the biodiversity metric. This will involve carrying out a repeat condition assessment and include a UKHab survey of each field to categorise the habitat criteria that the grassland currently meets.

Quadrat sampling will be undertaken to identify the habitat type that is establishing and then number of species per m². The location of these quadrats will be recorded, and sampling will be carried out in the same location during each monitoring survey to ensure ease of comparison. Fixed-point contact photos will also be taken to measure the appearance and structure of the sward over time. Percentage of bare ground, scrub and bracken cover will be estimated for each parcel. A botanical species list will be collected across the grassland through a general walkover to check against target species list.

All surveys will be carried out by a qualified ecologist with appropriate botanical survey experience.

Table 6. Schedule for botanical monitoring surveys for other neutral grassland at land south of Old Crawley Road.

Year	0	1	2	3	4	5	6	7	10	15	20	25	30
June		X	X	X	X	X	X		X		X		X
July								X		X		X	
August					X	X	X		X		X		X



9 GENERAL MONITORING REQUIREMENTS

9.1 Hedgerows

Hedgerows will annually be checked for signs of disease and more frequently while new ones are establishing. If disease is identified advice will be sought from an arboriculturist regarding the appropriate method of treatment.

During the management of hedgerows, they will be inspected for the presence of invasives. This will follow the cutting/trimming schedule. Invasives are more likely to colonise in the first five years after recent ground disturbance and bare ground cover.

Monitoring checks for Years 25 and 30 will focus upon the condition assessment criteria to ensure that this matches up with the HMMP goals.

Table 7. Schedule for monitoring surveys for hedgerows at land south of Old Crawley Road.

Year	0	1	2	3	4	5	6	7	10	15	20	25	30
January/February	X	X	X	X	X	X	X	X	X	X	X	X	X
August		X	X	X	X	X							

9.2 Mixed Scrub

Scrub encroachment will be monitored twice annually. Scrub will be checked at the end of the growing season and at the beginning of the growing season at which point areas that have encroached or are likely to encroach can be cut back. In addition, checks for species present against the expected species list will be carried out.

Monitoring will take place twice a year for the first five years. Depending on the rate at which scrub needs knocking back, this can be adjusted after the first five years to be done annually in September if there is no management required in April/May. The species list of the scrub will then be assessed only once every five years, with knocking back and invasive checks built into the management plan rather than monitoring plan.

Table 8. Schedule for scrub monitoring at land south of Old Crawley Road.

Year	0	1	2	3	4	5	6	7	10	15	20	25	30
April	X	X	X	X	X	X							
September	X	X	X	X	X	X	X	X	X	X	X	X	X

9.3 Trees and Woodland

Tree saplings must be kept well-watered during establishment in the summer months for their first three years.

Tree guards to be inspected twice annually to remove weeds and any soil build up. Tree stakes and ties will be checked annually and after strong winds.



Leaf litter from the proposed trees to be raked up in the autumn months within grassland areas.

Monitoring checks for Years 25 and 30 will focus upon the condition assessment criteria to ensure that these align with the HMMP goals.

Table 9. Schedule for monitoring surveys for trees and woodland at land south of Old Crawley Road.

Year	0	1	2	3	4	5	6	7	10	15	20	25	30
January/February	X	X	X	X	X	X	X	X	X	X	X	X	X
June/ July/August	X	X	X	X									
September/ October		X	X	X	X	X	X	X	X	X	X	X	X

9.4 Adaptive Management

Yearly management/monitoring reports will drive annual management practices across the site.

The most important aspect to adaptive management is robust and regular monitoring by appropriately qualified practitioners who can identify emerging issues with the establishment of created habitats. Following annual reports written and reviewed by practitioners, management techniques and schedules can be reviewed and updated as necessary year on year. Monitoring reports can be bi-annually for habitats/parcels with a larger number of ecological constraints/ongoing issues. Changes in management/monitoring schedule will need to be recorded and this plan.

It is important that land managers are aware of potential issues and record anything during day-to-day management that can be fed back to project manager, the relevant authority and practitioners to ensure the relevant steps are taken before the annual monitoring checks.

The following measures will be implemented in order to trigger appropriate remedial actions to address previously unforeseen impacts:

- any newly planted trees/shrubs which fail within the first two years will be replaced;
- in the event that grassland has failed to establish within the first two years, specialist advice will be sought; this will include (but may not be limited to) input from an ecologist and a soil specialist. Further soil testing may be required as well as re-seeding and or changes to the prescribed management regime.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.



APPENDIX 1 – Relevant Legislation and National Planning Policy

Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of *habitats and species of principal importance for the conservation of biodiversity* in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

The Act enables the reform of the Habitats Regulations and further improves protection for nature through the establishment of Local Nature Recovery Strategies that support national Nature Recovery Networks. In addition, the Act provides for the production of Protected Site Strategies and Species Conservation Strategies, aimed at supporting the design and delivery of strategic approaches to deliver better outcomes for nature.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2024)⁹ sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

Paragraph 179b, which states that council policies should “*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.*” The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)¹⁰. In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- minimising impacts on existing biodiversity and habitats;
- providing net gains in biodiversity and habitats, wherever possible;
- establishing coherent ecological networks that are more resilient to current and future pressures.

⁹ HM Government (2024). National Planning Policy Framework. Department for Communities and Local Government. Available online at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>.

¹⁰ HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.



UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK's response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government's response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade.

Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

References

Circular 06/2005 (2005). Government Circular: Biodiversity and geological conservation – statutory obligations and their impact within the planning system. Office of the Deputy Prime Minister, London. Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf

Defra (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services. Available at: www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services.

Defra (2013) Progress Update. Available at: www.gov.uk/government/publications/biodiversity-2020-simple-guide-and-progress-update-july-2013.

Natural Environment and Rural Communities (NERC) Act (2006). HMSO London. Available at: http://www.legislation.gov.uk/ukpga/2006/16/pdfs/ukpga_20060016_en.pdf

HM Government (2024). National Planning Policy Framework. Department for Communities and Local Government. Available online at:

<https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>.