

Biodiversity Net Gain Assessment

Land at Old London Road,
Washington, West Sussex

October 2025

Biodiversity Net Gain Assessment

Land at Old London Road, Washington, West Sussex

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Appendix A – Habitat Map

Appendix B – Post Development Landscape Plan

Appendix C- Landscape & Ecological Management Plan

1. Introduction

Project Background

- 1.1 Phlorum Limited was commissioned by James Williams to compile a Biodiversity Net Gain Assessment in relation to the proposed development of the Land at Old London Road, Washington, West Sussex (hereafter referred to as “the site”). The site address is at Land at Washington, Old London Road, West Sussex.
- 1.2 Version (V2) was produced to include minor text updates and update the works description and client address.
- 1.3 This version (V3) has been produced to include a landscape and ecological management plan for the proposed new habitats which the appendices (Appendix C).

Site Description and Context


- 1.4 During the preliminary ecological appraisal habitat survey on the 03rd February 2025, the habitats recorded on site comprised modified grassland (g4), ruderal vegetation (u81), tall forbs (g16), mixed scrub (h3h), bare ground (g510), and trees (w33). The updated site visit on 26th August 2025 recorded bramble scrub (h3d) and tall forbs (g81) as also present on site.
- 1.5 At the time of the preliminary ecological appraisal survey the main site footprint had been cleared and the cut vegetation had been left in situ as brash piles. The survey assumed that all of the cleared area was mixed scrub, due to the species composition left on site in the brash piles. The condition of the mixed scrub was considered as in ‘good’ condition within the BNG metric, as the BNG guidance states that if vegetation has been cleared then the baseline condition of the habitats on site are assumed ‘good’ as a default. The initial condition assessment was carried out with the preliminary ecological appraisal on the 3rd of January 2025. However, it is noted that the optimum period to assess scrub is during the spring/summer months.
- 1.6 An updated survey was undertaken in August 2025 to reassess the site. During the survey it was noted that the main site area was not all mixed scrub as previously considered but appeared to consist of an area of young mixed scrub, tall forbs interspersed with bramble and an area of bramble scrub. Due to the clearance of the site in January, the habitat that was considered as mixed scrub has been left in ‘good’ condition within the BNG metric. However, the subsequent August survey considered that the main site area was bramble scrub and mixed scrub, with the mixed scrub accounting for a smaller area than originally assessed. It is possible that the County Ecologist will not agree with this approach and want the baseline to be taken as mixed scrub all in good condition.

- 1.7 The August survey also identified areas of tall forbs and ruderal/ephemeral, it was considered that the tall forbs and ruderal/ephemeral habitats were likely not grown enough to be visible among the vegetation visible in February. As a result, the condition of these habitats was assessed based on the August survey, and a default condition of good was not used.
- 1.8 The January condition assessment of the site survey recorded that the left vegetation cuttings were largely tall, young scrub plants, with the taller vegetation largely concentrated on the northwestern section of the site. However, it was not possible to accurately determine this due to the clearance of the vegetation, therefore the site was considered to be mixed scrub in good condition. The new growth recorded in the updated August survey, was considered to largely reflect the species and composition of the cuttings left on site in January, with bramble and mixed scrub consisting largely of young willow present across the site. Therefore, within the BNG metric the condition of habitats has not changed, however the total area classified as mixed scrub has been considered to be reduced, and bramble scrub has included within the metric.
- 1.9 The site is located off a slip road from the A24 and is bound on the east side by this. In the immediate surrounds to the west are a residential area, to the west a large rock quarry and in the wider surrounds, Heath Common town to the northwest, major and minor roads, agricultural fields, scattered woodland and waterbodies.
- 1.10 The National Grid Reference for the centre of the site is TQ12241381. The survey area extended over approximately 0.1 hectares (ha).

Description of Development

- 1.11 It is understood that the development proposals are for construction of 4 residential units at the site.

Documentation Provided

- 1.12 This document has been developed with reference to the findings contained within the previous ecological report:
 -  Preliminary Ecological Appraisal (PEA) (Phlorum, 2025).

2. Methodology




Establishing the Baseline Habitat




- 2.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites, legally protected species and features of interest within a 2km radius of the site. This was carried out by Phlorum (Phlorum, 2025).
- 2.2 Phlorum carried out a Preliminary Ecological Appraisal (Phlorum, 2025) of the site, following the guidance set by the Joint Nature Conservation Committee, handbook for Phase 1 surveys (CIEEM 2017; JNCC 2010) for survey methodology.
- 2.3 Phlorum carried out an updated site walkover visit on 26th August 2025 to assess the habitat conditions of the scrub habitats, following the guidance set by the Joint Nature Conservation Committee, handbook for Phase 1 surveys (JNCC 2010).

Calculating Biodiversity Net Gain/Loss

- 2.4 A Biodiversity Net Gain (BNG) assessment involves making a comparison between the biodiversity value of the present habitat, prior to development (i.e. the baseline) and the predicted biodiversity value of the habitats following completion of the development (i.e. post-development). The comparison is made in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.
- 2.5 If the baseline habitat has recently been disturbed/cleared then the baseline is taken as 30th January 2020.
- 2.6 The calculation of Biodiversity Net Gain (BNG) was undertaken using The Statutory Biodiversity Metric (DEFRA 2023). The metric uses site habitats, as areas and linear lengths, to calculate a score for the site. Each habitat is scored according to its relative biodiversity value. This value is then adjusted depending on various factors, to calculate the 'biodiversity units' for each habitat.

Baseline Calculation

- 2.7 Site baseline habitats are assessed based on the following:
 -  Terrestrial areas;
 -  Terrestrial linear lengths; and
 -  Aquatic linear lengths.
- 2.8 The baseline habitat map from the Preliminary Ecological Appraisal is used to calculate the individual parcels of habitats on the site, such as terrestrial areas (e.g. woodland, grassland), terrestrial lengths (e.g. hedgerows) and aquatic lengths (e.g. streams, rivers). Each area is measured in *hectares* and each linear feature in *kilometres*.

- 2.9 The Statutory Biodiversity Metric calculator requires habitats present on site to be described using the UKHabs Classification System. As a result, the calculator in the technical data section includes a tool to translate Phase 1 habitats into UKHabs habitats.
- 2.10 Once the UKHabs habitat names, and areas/lengths have been measured the parcels need to be assessed against the following criteria:
-  Habitat Distinctiveness – The calculator creates an automated score based on the type of habitat present. Highly diverse habitats, particularly those habitats of Principal Importance under the NERC Act (2006) or Annex 1 habitats in the Habitats Directive (1992) score 'high', whilst sites with low diversity such as arable crops have 'low' scores.
 -  Habitat Condition – An assessment of the quality of the habitat parcel assessed during the baseline surveys.
 -  Strategic Significance – An assessment based on the information set out in local plans or policies.
- 2.11 The calculator realises the importance of individual trees but there is no UKHabs habitat for these in the area calculation. As a result, the 'Street tree helper', which allows numbers of trees to be converted to an area in hectares is used, regardless of if the tree is a street tree or isolated tree in another habitat. Trees are categorised as 'small', 'medium', 'large' or 'very large'. The condition of the tree can then be assessed as 'poor', 'moderate' or 'good'.

For the purpose of this assessment the size of the trees has been assessed during the site walkover.

Post Development Calculation












- 2.12 The post development areas are calculated by initially assessing the areas/length of habitats retained, enhanced, and created plus any offsite areas created or enhanced.
- 2.13 A 'Habitat Condition' and 'Strategic Significance' assessment are carried out on the post-development habitats. Where habitats have been created or enhanced, additional factors are considered, such as time taken for each of these habitats to reach target condition (temporal multiplier) and the difficulty of recreating these habitats (difficulty multiplier).
- 2.14 The baseline biodiversity score and post-development score are then calculated and compared the biodiversity impact loss or gain is calculated for each habitat (e.g. terrestrial habitat, terrestrial linear and /or linear aquatic habitat).
- 2.15 If needed offsite enhancement and/or creation of habitats can be carried out and assessed.
- 2.16 The site, and if needed the offsite enhancement, are then managed for at least 30 years via legal agreements, such as planning obligations or conservation covenants.

Caveats




- 2.17 The BNG calculates habitats and only provide a score to represent the biodiversity on site. As a result, compensation and mitigation should be designed using appropriate expertise and common sense.
- 2.18 As only habitats are calculated an increase in biodiversity due to increase in fauna (e.g. birds, bats, insects, reptiles, amphibians, or other mammals) is not included. The creation of bird/bat/insect boxes, log piles, and/or hibernacula's can significantly enhance the ecosystems on a site, but these enhancement are not calculated by the BNG calculator. The BNG calculator is a good guide to help increase biodiversity but habitats need both flora (plants) and fauna (animals) enhanced to ensure healthy and sustainable ecosystems.
- 2.19 The existing levels of protection provided to certain habitats or protected species are not changed by this calculator. The impact on protected species are not considered by the calculator, and must be assessed separately.
- 2.20 In nature the boundaries between ecological habitats are not usually an easily defined line, unless human impact such a hard surface (e.g. buildings/roads), fences, ploughing, and/or felling has occurred. As a result, the habitat areas used are based on best judgement and therefore are subjective.
- 2.21 The calculator requires area measurements in *hectares* and linear measurements in *kilometres*, which for small sites can result in smaller areas/lengths not being recorded when only 2 decimals places area used.
- 2.22 As isolated trees are measured separately the overall area of all the habitat parcels can be greater than the actual site area.
- 2.23 The calculator cannot take account of all site-specific features and circumstances that may affect the true value of certain habitats or dictate the nature of habitat creation and enhancement. Such features and circumstances may make it impossible to satisfy trading rules for medium and high distinctiveness habitats, even where a clear net gain for biodiversity is being delivered.
- 2.24 **Under The Statutory Biodiversity Metric meeting the Trading Rules is a requirement and irreplaceable habitats cannot be lost on site.**
- 2.25 Whilst the calculator provides a valuable guide as to how a development will affect biodiversity, it should be considered as a guide to be used in combination with pragmatic and knowledge-based judgement when reaching conclusions as to how effective biodiversity enhancement will be delivered.

3. Biodiversity Net Gain Assessment

Existing Habitats

- 3.1 The existing habitats identified on site during the Preliminary Ecological Appraisal were modified grassland (g4), ruderal vegetation (u81), mixed scrub (h3h), bare ground (g510), and trees (w33). Following an updated site visit in August 2025 bramble scrub (h3d) and tall forbs (g16) were additionally recorded.
- 3.2 The habitat map can be seen in Appendix A.
- 3.3 The landscape scheme can be seen in Appendix B.
- 3.4 A landscape and ecological management plan for the proposed new habitats can be seen in Appendix C.
- 3.5 Where relevant, the following habitats will be referred to using the UK Habitat Classification¹ to help inform the Biodiversity Net Gain (BNG) for the site.
- 3.6 The following habitats will be lost:
-  **Mixed scrub:** The scrub in the northwest of the site will be lost as part of the development.
 -  **Bramble scrub:** An extent of the bramble scrub will be lost as part of the development.
 -  **Tall forbs:** An extent of the vegetation across the site will be lost as part of the development.
- 3.7 The following habitats will be retained:
-  **Modified grassland:** The grassland will be retained.
 -  **Tall forbs:** An extent of the vegetation will be retained.
 -  **Ruderal vegetation:** An extent of the vegetation will be retained.
 -  **Bramble scrub:** The scrub at the eastern aspects of the site will be retained.
 -  **Trees:** All trees around the site boundaries will be retained.
- 3.8 The following habitats will be enhanced:
-  **Bare ground:** The areas of bare ground at the south of the site will be enhanced with grassland seeding.
- 3.9 The following habitats will be created:
-  **Buildings:** Three new residential properties will be created.
 -  **Hardstanding:** New areas of hardstanding will be created as part of the development.

¹ UKHab Ltd (2023) The UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)
13601 BNG V3

-  **Modified grassland:** New areas of grassland will be created as garden areas at the rear of the new buildings. The lawns will be seeded with a flowering lawn mix.
-  **Introduced shrubs:** New shrub planting around the site.
-  **Trees:** New trees will be planted around the site. Eight small native fruit trees and eight native medium trees will be planted.

Headline Results

- 3.10 The headline results, including total unit and percentage change are shown in Table 1 below.

Table 1: Results

	Habitat Area Units (Terrestrial area)	Habitat Length Units (Terrestrial linear length)	Aquatic Length Units (Aquatic linear length)
On-site Baseline	3.23	na	na
On-site post- intervention	3.36	na	na
Total net unit change	0.13	na	na
Total net % change	+3.97%	na	na

- 3.11 The Trading Rules requirement of the BNG assessment are not satisfied for the site due to loss of the scrub and tall forb habitats.

Results Summary

- 3.12 The existing area habitats on the site are considered by the Biodiversity Net Gain assessment to have a value of **3.23 units**. The post-development area habitats are considered by the Biodiversity Net Gain Assessment to have a value of **3.36 units**. This is a **0.13 net change** in habitat units which equates to a **+3.97 % net gain**.
- 3.13 This reflects the replacement of mixed scrub, bramble scrub, tall forbs and ruderal vegetation with buildings and associated hardstanding areas, grass lawn garden areas, shrub planting and tree planting. The score reflects the retention of the onsite trees, an area of bramble scrub, enhancement of the bare ground areas with new grassland seeding and new native tree planting.
- 3.14 There are no linear/aquatic habitat features on the site pre- or post-development.
- 3.15 Trading Rules for the site **are not satisfied** for the loss of the scrub and tall forb habitats.

4. Discussion

- 4.1 A Biodiversity Net Gain Assessment has been carried out for the proposed development of Land in Washington, West Sussex. The site comprised of grassland (g4), ruderal vegetation (u81), tall forbs (g16), mixed scrub (h3h), bare ground (g510), and trees (w33).
- 4.2 It is understood that development proposals are for construction of 4 residential units at the site.
- 4.3 An overall net gain of **+3.97 %** in habitat units from the existing baseline has been calculated. The net gain reflects the replacement of mixed scrub, bramble scrub, tall forbs and ruderal vegetation with buildings and associated hardstanding areas, grass lawn garden areas, shrub planting and tree planting. The score reflects the retention of the onsite trees, an area of bramble scrub, enhancement of the bare ground areas with new grassland seeding and new native tree planting.
- 4.4 Trading Rule requirement of the BNG assessment are **not satisfied**, mainly due to the loss of bramble and mixed scrub.
- 4.5 It is understood that the clients will be purchasing Statutory biodiversity credits. The unit shortfall summary by Tier for estimating credits is a 0.68 shortfall in A1 tier units.
- 4.6 There may also be significant gains for ecology on the site that are not captured by the BNG Assessment, such as species-specific enhancements including bird and bat boxes.
- 4.7 A Habitat Management and Monitoring Plan (HMMP) will be required to demonstrate how the post development habitat will be maintained, who is responsible for creating and enhancing it, and who is responsible for its maintenance, management and monitoring over a 30-year period.

5. Conclusions and Recommendations

Conclusions

- 5.1 A Biodiversity Net Gain Assessment has been carried out for the proposed development of the Land at Old London Road, Washington, West Sussex. An overall net gain of 3.97% in habitat units from the existing baseline has been calculated.
- 5.2 It is understood that the clients will be purchasing Statutory biodiversity credits. The BNG assessment shows that the unit shortfall is 0.68 A1 tier units.
- 5.3 It should be noted that the BNG assessment does not capture other methods of ecological enhancement such as the inclusion of bat and bird boxes.
- 5.4 It is understood that BNG credits will be purchased for the site.
- 5.5 It is recommended that a Habitat Management and Monitoring Plan (HMMP) is produced for the site.

6. References

- 🌿 Baker J., Hoskins R. and Butterworth T. (2019). Biodiversity Net Gain. Good practice principles for development: A practical guide. Ciria, London. Baker J., Hoskins R. and Butterworth T. (2019). Biodiversity Net Gain. Good practice principles for development: Case studies. Ciria, London.
- 🌿 British Standards Institute (2013). 24040:2013. *Biodiversity-Code of Practice for Planning and Development*. Standards Policy & Strategy Committee. Milton Keynes: BSI.
- 🌿 CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal Second Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.
- 🌿 CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.
- 🌿 DEFRA (2023) *The Statutory Biodiversity Metric. Calculation tool*. www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.
- 🌿 DEFRA (2024) *The Statutory Biodiversity Metric. User guide*. www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.
- 🌿 Department for Communities and Local Government (2019) *National Planning Policy Framework (NPPF)* (on-line). Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf
- 🌿 Joint Nature Conservation Committee (2010). *Handbook for Phase 1 habitat survey - A technique for Environmental Audit*. JNCC, Peterborough.
- 🌿 Phlorum (2025) Preliminary Ecological Appraisal for Land at Old London Road, Washington, West Sussex
- 🌿 UKHab Ltd (2023). *UK Habitat Classification Version 2.0*. (at <https://www.ukhab.org>).

Figures and Appendices

Appendix A

Habitat Map

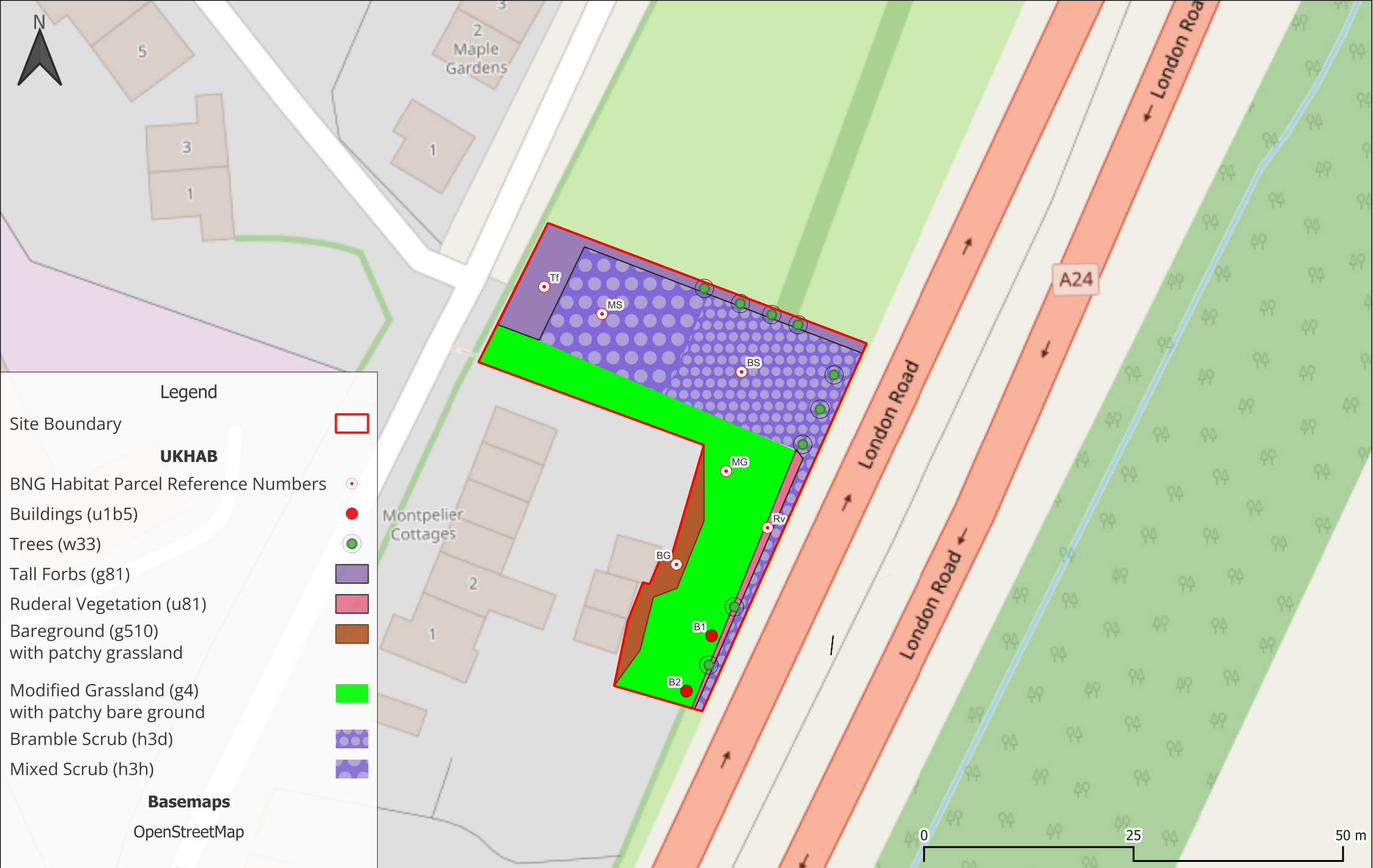


Figure 2: Land at Old London Road, Washington, West Sussex - BNG Habitat Parcel Reference Map

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Appendix B

Post Development Landscape Plan



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- Zone 1 (Area of BNG)
- Retained Habitats.
- Zone 2 (Areas to the front of residential dwellings)
- Newly created shrubbery
- Zone 3 (Residential gardens)
- Medium Trees (8 in total)
- Small Fruit Trees (8 in total)
- Garden lawns to be seeded with flowering grass mixes

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09/03/25	PLANNING ISSUE	A1

SCALE:	DRAWN:	CHECKED:
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CLIENT:	SITE ADDRESS:
James Williams	Land East of MG

DRAWING:	TITLE:	REVISION:
New Build	Landscape Plan	
PROJECT NO:	DRAWING NO:	
LEMG	ARC/08825/18	



ARCHEVOLVE

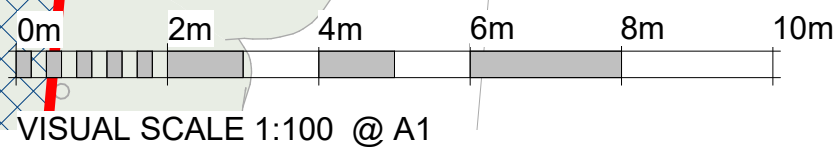
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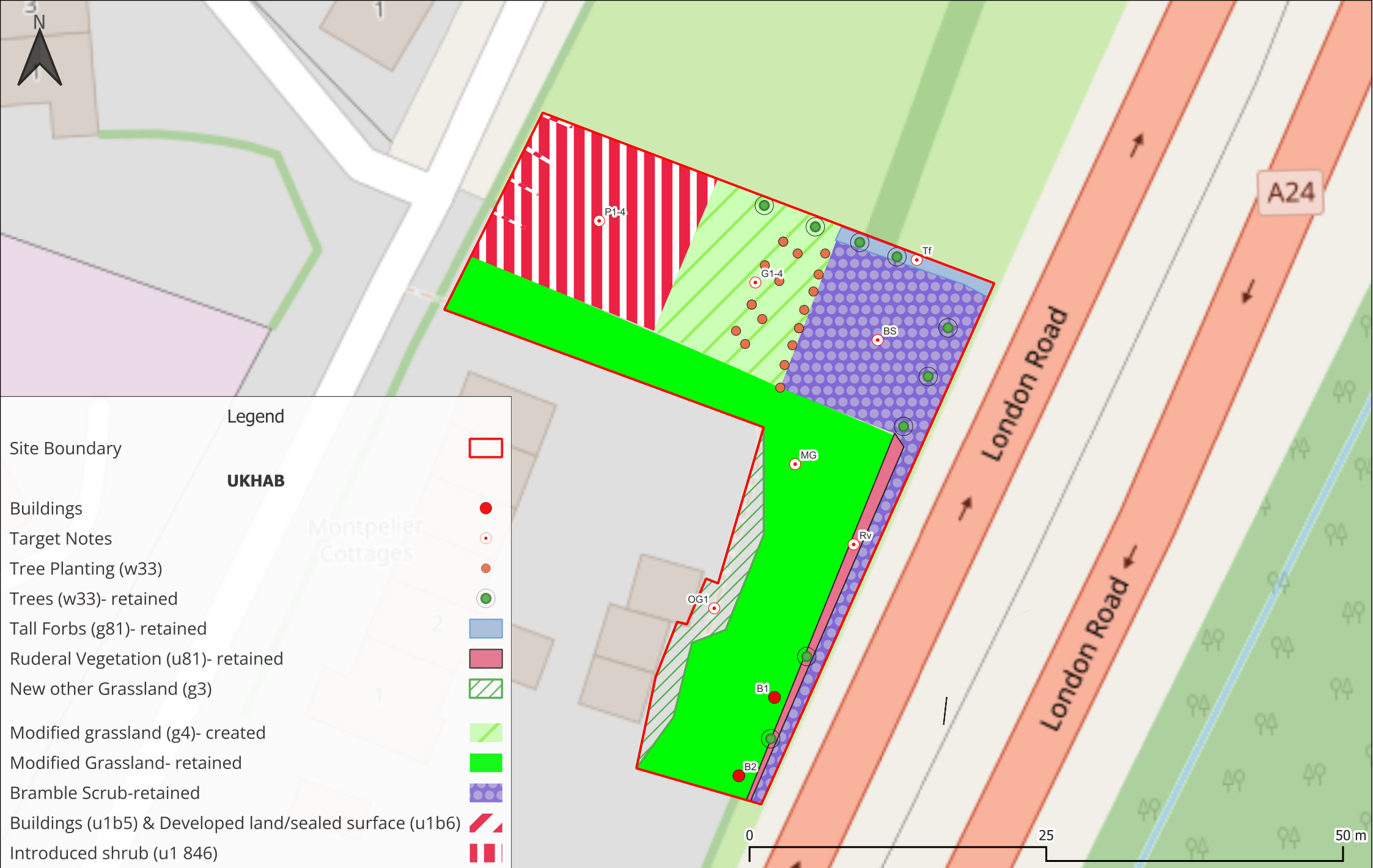


Figure 3: Land at Old London Road, Washington, West Sussex - Post Development BNG Habitat Parcel Reference Map

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Appendix C

Landscape & Ecological Management Plan

Landscape and Ecological Management Plan

Land at Old London Road, Washington,
West Sussex

October 2025

Landscape and Ecological Management Plan

Land at Old London Road, Washington, West Sussex

October 2025

James Williams
Old London Road
Washington
West Sussex

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Appendix A- Timetable of Works

1. Introduction

Background

- 1.1 Phlorum Limited was commissioned by James Williams to compile a Landscape and Ecological Management Plan (LEMP) in relation to the proposed development at Land at Old London Road, Washington, West Sussex here on referred to as 'The Site'. The site address is Land at Old London Road, Washington, West Sussex.

Proposed Development

- 1.2 It is understood that the proposed development involves construction of 4 LEMP Report
- 1.3 This document has been compiled in the context of the proposals stated in this introduction and based on information made available by the client at the time. Alterations to the scheme and changes in ecological legislation may necessitate amendments to this document at a later stage.

2. Project Outline

Aims and Objectives

- 2.1 The conservation objectives for the development site are to avoid any negative impacts to protected species within the works area, and to enhance the biodiversity of the site wherever possible, with regard to the site potential and constraints and the nature of the proposed development.

Design and General Management Objectives

- 2.2 The main design objectives and management objectives in relation to this 5-year management plan are listed below:
-  Create opportunities for tree planting with species chosen to provide structure and an identifiable character to the landscape as well as contributing to the ecological value of the site;
 -  Use planting to enhance the existing boundary and to provide a transition between the functional landscape of the site and the adjacent existing developments;
 -  Establish the long term design objectives of the landscape area and define management objectives and ensure the successful establishment and long term health of the plant stock through watering and pruning if and when required; and
 -  Create new habitats and maximise the wildlife/ biodiversity value of the site.
- 2.3 The main habitats to be created at the site are: amenity grass lawn; ornamental shrubs; and trees.








Roles and Responsibilities

- 2.4 Clearly defined and allocated roles and responsibilities for delivering the plan.
- 2.5 During the construction phase the Principal Contractor will appoint and manage the Landscape Contractor who will be responsible for carrying out the habitat management plan and undertaking the necessary habitat creation works outlined in this plan.
- 2.6 Post-handover the maintenance, monitoring and management of the habitats outlined within this plan will be the responsibility of the managing agents/landowners.

Ecological Value and Condition

- 2.7 The ecological value and condition of the site at handover and how this is expected to develop and change over time.
- 2.8 The current ecological value of the site is set out in the Preliminary Ecological Appraisal report produced by Phlorum (Phlorum, 2025).
- 2.9 The scheme will include new habitats such as trees, amenity grass, ornamental shrubs and a moderate sized area of bramble scrub which will be retained. All of the existing trees will be retained.

Remedial Triggers



- 2.10 Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts.
- 2.11 The ornamental shrubs, amenity grass and trees will be maintained during the tenure of the site by the occupier, as a result the condition of these features are unlikely to diminish over time; however the grasslands could be affected by factors that may impact habitat quality.
- 2.12 The following is potential list of triggers that could negatively impact on the grassland habitat:
 -  Extreme wet, cold or hot weather;
 -  Climate change;
 -  Prolonged periods of flooding and wet weather;
 -  Pollution events, such as emergency pollution incidents from nearby road and motorway network;
 -  Changes to the drainage management of local and regional ditches and watercourses;
 -  The accidental introduction or colonisation of invasive species; and
 -  Over-predation of seed and plant material from other species, such as Canadian geese.
- 2.13 It is recommended during the five year habitat management plan the Landscape Contractor and/or Ecologist is contacted for advice during extreme weather events that could cause a negative impact on the onsite habitats. If impacts are identified then remedial measures should be put in place to restore the habitat.
- 2.14 The Occupier of the site should engage with local landowners in regards to local land use and management to ensure remedial measures can be put in place to deal with any significant offsite land use changes.

- 2.15 The Occupier should inform their member of staff responsible for health, safety and environment on the habitats. In the event of a pollution incident this member of staff should liaise with the appropriate stakeholders and authorities to agree a course of remedial measures.
- 2.16 The newly created habitats should be monitored on a regular basis and any issues should be reported to the Ecologist and/or the Landscape Contractor.

3. Existing Ecological Features



Existing Features to be Retained

3.1 Existing habitat that will be retained within the scheme include the following:

-  Native trees surrounding the northern and northeastern boundary of the site; and
-  Bramble Scrub at the north and northeast of the site, the bramble scrub is interspaced with tall forbs and ruderal vegetation. Bramble scrub and the interspersed vegetation does not require any future management; however, it is recommended that this habitat is kept free of any invasive/non-native weeds.

Ecological Constraints on Site

3.2 Existing ecological constraints on site include:






-  Root protection area of onsite trees; and
-  The root protection area of offsite trees.

4. Habitat Management Plan


Modified Grass

- 4.1 The paragraphs below include prescriptions for grassland included in the design proposals within the footprint of the works.
- 4.2 In order to achieve the target condition, set out by the BNG metric the grassland must achieve certain criteria. The post development condition of the grassland has been assessed as moderate.
- 4.3 It is understood that the newly created lawns will be seeded with a flowering lawn mix in order to achieve the target condition moderate. The grassland should be seeded with a flowering lawn mix such as EL1 flowering lawn mixture by Emorsgate's, or similar. This type of seed mixture contains a diverse selection of species that is suited to regular short mowing as is considered likely for this site.
- 4.4 The retained grassland along the southern boundary should be maintained as stated above for the grass lawns.
- 4.5 The areas of bare ground at the south of the site will be enhanced with grassland seeding. These areas will be maintained as stated above for the grass lawns.


Aims




-  To establish areas of lawn;
-  To increase biodiversity within the site;
-  To create feeding opportunities for wildlife;
-  Grass is to be maintained as a healthy vigorous sward free from disease, fungal growth, discolouration, scorch, wilt, moss, excessive thatch, weeds, frost heave, worm casts, and mole hills; and
-  Water as necessary to secure healthy establishment and to avoid the need for replacement due to dry periods.

Actions

-  Mow at regular intervals to maintain a height of 5cm to develop dense, hard-wearing sward. Do not mow in periods of prolonged dry weather. All cuttings are to be removed from site.

Monitoring and Maintenance





-  Fallen leaves are not to accumulate and shall be collected and removed from site;

-  All boundaries of grass areas shall be kept tidy and management shall extend right up to any building line, wall, fence, service marker, manhole cover, signpost or other obstruction;
-  Establishment shall be regarded as, at the end of each growing season, a healthy, wellrooted, even-coloured, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities;
-  All bare areas of grass, areas of dead grass or grass areas which in the opinion of the Landscape Architect are failing to make satisfactory growth shall be replaced by the Contractor. These areas are to be replaced with species composition appropriate to location.



Ornamental Shrubs

- 4.6 The paragraphs below include prescriptions for new shrub planting included in the design proposals within the footprint of the works.






Aims





-  To establish areas of new planting;
-  To promote new healthy growth;
-  To increase biodiversity within the site; and
-  To create feeding and sheltering opportunities for wildlife.

Actions

-  When planting shrubs ensure that planting pit depth is 50mm greater than the root ball and all soil on sides and bottom of the pit are loose;
-  Maintain healthy, vigorous shrub planting;

Monitoring and Maintenance




-  Lightly clip over plants where required. Cut back flowering shoots after flowering;
-  Water as necessary to secure healthy establishment and to avoid the need for replacement due to dry periods (less than 30mm rainfall at the end of a four week period);
-  Remove suckers, dead, discoloured, weak or damaged stems, cut back any stems obstructing paths etc. Prune to reduce size if suppressing adjoining species;
-  Species specific pruning at appropriate time of year to promote healthy growth and species specific shape and form. Ensure nursery's recommendations are followed for each particular species. Remove dead flowers to encourage repeat blooming;
-  Apply a slow release fertiliser in spring;

-  Fallen leaves and clippings are not to accumulate and shall be collected and removed from site;
-  Weed planting beds by the most appropriate means either by hand, mechanical and chemical use;
-  Bark mulch to be maintained to a depth of 75mm thickness at all times, and inspected three times a year in the active growing season. If mulch is found to be less than an even depth of 75mm, it shall then be topped up; and
-  Replace any failures of plants within the establishment period with immediate effect with the same species and size.


Existing Trees

4.7 All trees within the site are to be retained.





Aims

-  To maintain the healthy growth of the trees;
-  to promote new growth; and
-  to maintain feeding and sheltering opportunities for birds and feeding and commuting opportunities for bats. Retention of these features will also enable a corridor of movement to be maintained for wildlife to the wider surrounds.

Action

-  Annually prune /inspection of the trees.





Monitoring and Maintenance

-  Annually prune trees between September and February inclusive.
-  It is preferable to maintain a dense canopy. Pruning outer branches regularly will promote this.
-  Pruning trees between September and February inclusive is outside the breeding bird season, which is taken to run between March and August, and will therefore avoid disturbance to nesting birds and their young.
-  It is important to note however that birds can nest outside this period if weather conditions are suitable and due care should be taken when undertaking tree works at any time of the year. If breeding birds, or their nests are suspected, or discovered. Then the pruning of trees in the vicinity of the nest must be postponed until young birds have fledged and the nest is no longer in use.






Planted Trees

- 4.8 The paragraphs below include prescriptions for new tree planting included in the design proposals within the footprint of the works.
- 4.9 New trees will be planted around the site within the gardens. Eight small native fruit trees and eight native medium trees will be planted.







Aims

-  To establish areas of new planting;
-  To promote new healthy growth;
-  To increase biodiversity within the site; and
-  To create feeding and sheltering opportunities for wildlife.

Actions

-  Plant all trees in suitable holes in the ground, being aware of the trunk flare.
-  Place the tree at the appropriate height and straighten the tree in the hole;
-  Fill the hole gently, but firmly with soil;
-  Stake the tree if necessary; and
-  Mulch the base of the tree.

Monitoring and Maintenance

-  Water as necessary to secure healthy establishment and to avoid the need for replacement due to dry periods (less than 30mm rainfall at the end of a four week period);
-  Collars in soil at base of tree stems, created by tree movement shall be broken up by fork, avoiding damage to roots. Backfill with topsoil and re-firm;
-  Check all trees for firmness and stability in the ground. Check and adjust tree ties, replacing if necessary;
-  At all times prevent rubbing of ties and adjust to accommodate growth and prevent chafing. Where chafing has occurred, reposition or replace ties to prevent further chafing. Damage to bark to be cut back neatly with a sharp knife; to prevent further damage;
-  Inspect trees regularly for stem wounds, pests and diseases and treat early;
-  Prune dead, dying, crossing, rubbing and damaged branches and encourage new leader as necessary;

- 🌱 Check aeration pipes regularly and clear debris as necessary;
- 🌱 Replace any failures of plants within the establishment period with immediate effect with the same species and size.
- 🌱 Any tree works shall be carried out by a skilled, qualified and approved Arboricultural Contractor in accordance with BS3998: 2010 'Tree Work - Recommendations'. Where possible, and where health and safety constraints permit, and where prior approval of the Project Manager and Ecologist; arisings may be formed into habitat piles within the POS spaces, and standing dead wood maybe left within the woodland to provide additional dead wood habitats to maximise invertebrate biodiversity.
- 🌱 Once established, trees should then be pruned annually between September and February inclusive;
- 🌱 It is preferable to maintain a dense canopy. Pruning outer branches regularly will promote this;
- 🌱 Pruning trees between September and February inclusive is outside the breeding bird season, which is taken to run between March and August, and will therefore avoid disturbance to nesting birds and their young; and
- 🌱 It is important to note however that birds can nest outside this period if weather conditions are suitable and due care should be taken when undertaking tree works at any time of the year. If breeding birds or their nests are suspected, or discovered. Then the pruning of trees in the vicinity of the nest must be postponed until young birds have fledged and the nest is no longer in use.

5. Landscape Plan

- 5.1 The landscape plan incorporating habitat features for the site is provided in the BNG document.
- 5.2 The management of the plan will be reviewed annually by the Principal Contractor and/or Occupier; however it is intended the plan will achieve its objectives in the first five years. The review is to ensure the objectives are being met. The Occupier will appoint an Ecologist and/or Landscape Management Contractor to assess changes in site conditions and identify where changes to management prescriptions may need to be made.
- 5.3 If there is significant habitat loss, then the Ecologist will liaise with the Landscape Architect and Landscape Contractor to amend the Landscape and Habitat Management Plan as necessary.

Appendix A

Timetable of Works

Timetable of Works

Activity	Timing	Comments	Person Responsible
Post development- grassland cutting	April-September each year	As required	Gardening team/landowner
Post development- shrub and tree maintenance – pruning/replacement of failed plants	April-September each year	As required	Gardening team/landowner



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