

**PARCEL R10, PHASE 2B OF THE SOUTH
WOKINGHAM STRATEGIC DEVELOPMENT
LOCATION**

BIODIVERSITY NET GAIN DESIGN STAGE REPORT

Final Document (Revision 2)

January 2026

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EclA • HRA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

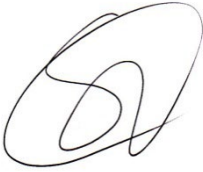
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BIODIVERSITY NET GAIN DESIGN STAGE REPORT

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EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by Miller Homes to prepare a Biodiversity Net Gain Design Stage Report for Parcel R10, Phase 2b of the South Wokingham Strategic Development Location (SDL), Wokingham, Berkshire. The purpose of the assessment is to demonstrate whether the proposals will contribute to a surplus or deficit in relation to the Biodiversity Net Gain Target. The site is located to the South of Wokingham on the border of the Wokingham Borough and Bracknell Forest administrative areas and comprises approximately 90.95 hectares of predominately agricultural land. The area which is the subject of the current Reserved Matters application comprises approximately seven hectares in the east of the site. The proposals entail the construction of 215 dwellings with associated landscaping.

The main findings of the Biodiversity Net Gain Design Stage report are:

- The site comprises cereal crop, 'developed land; sealed surface' representing Waterloo Road, and native boundary hedgerows. The pre-development on-site baseline units are 13.59 habitat units and 5.47 hedgerow units.
- All cereal crop and 'developed land; sealed surface' is lost to the development. Hedgerows will be retained with the exception of H26 which will be partially lost;
- In addition to the residential development ('developed land; sealed surface') and associated vegetated gardens, the development will include the creation of modified grassland, introduced shrub, mixed shrub and rain gardens within the developed area. Public open space will include other neutral grassland and newly created woodland blocks, and a Sustainable Urban Drainage feature, designed to be beneficial for wildlife, will be created in the west of Parcel R10;
- Habitats will be managed to meet their target condition for a minimum 30 year period following development by following measures set out in the accompanying Landscape and Ecological Management Plan;
- Following the completion of the assessment post-development units are 13.90 habitat units and 10.18 hedgerow units. This represents a 2.24% gain in habitat units and 86.29% of hedgerow units. Although this parcel will be under the 10% net gain target of the scheme, it is considered that this will be offset by gains in other areas.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Miller Homes to prepare a Biodiversity Net Gain Assessment to support a Reserved Matters application for the development of Parcel R10, Phase 2b of the South Wokingham Strategic Development Location (SDL) (hereafter referred to as 'the site').

A hybrid planning consent was submitted to Wokingham Borough Council and granted on 19th July 2024 (Ref. 191068). The hybrid application comprised an outline application for a mixed use development of up to 1,434 dwellings, a two-form entry primary school, local centre, public open space, play areas and associated infrastructure and landscaping, and a full application for the associated Suitable Alternative Natural Greenspace (SANG), known as Holme Park SANG, associated landscaping and temporary car park.

To support the application a Biodiversity Net Gain assessment was submitted (ECOSA, 2020). The submitted application made use of the DEFRA Metric 2.0 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019), which was the metric calculation tool that was current at the time of submission. The assessment was subsequently updated in part to address comments from Wokingham Borough Council and in part to update the calculation using the DEFRA Metric 3.1 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019), which was at that stage the most current calculation tool (Aspect Ecology, 2022).

Following granting of planning consent, a section 106 (s106) agreement was entered into, which included certain commitments in relation to Biodiversity Net Gain, these commitments are set out in Part 7 of the s106 and include:

- Establishing a Biodiversity Net Gain Target for the Application Site and Holme Park SANG – this target is a 10% net gain on the Biodiversity Net Gain Baseline. The Biodiversity Net Gain Baseline is defined as the habitat type and habitat condition as recorded in the South Wokingham Revised Biodiversity Net Gain Assessment (Aspect Ecology, 2022), which is included in Annex 15 of the s106;
- Determining whether the Biodiversity Net Gain units at the time of the approval of the Reserved Matters for the final Development Zone exceed or fall short of the Biodiversity Net Gain Target;
- If there is a shortfall, Wokingham Borough Council will calculate a Biodiversity Net Gain Contribution, based on the Biodiversity Net Gain Unit Price (£20,000),

and serve a Biodiversity Net Gain Contribution Notice on the Owners, specifying the Biodiversity Net Gain Contribution amount.

- If the target is exceeded, Wokingham Borough Council will give notice of a Biodiversity Net Gain Surplus. The surplus may be registered on the biodiversity gain site register or sold to a third party, in order to offset other schemes in future. The registration or sale of the Biodiversity Net Gain Surplus is subject to the council's approval and/or meeting various requirements specified within the s106. This includes making a Biodiversity Net Gain Administration and Monitoring Contribution to compensate the council for reasonable costs arising from each request to register a or assist with the sale of the units forming the surplus,

In order to facilitate this Schedule 10 of the s106 requires that on or prior to the submission of each Reserved Matters application to the council, a Biodiversity Net Gain Assessment using DEFRA Metric 3.1 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019) must be submitted. In addition, the Biodiversity Net Gain Units (if any) by which any previous Reserved Matters applications within the Application Site and Home Park SANG, combined, exceeded the Biodiversity Net Gain Target for the previous Reserved Matters approvals within the Application Site and Holme Park SANG combined must also be submitted.

Prior to the submission of any reserved matters applications, a separate planning application was submitted to Wokingham Borough Council for a link road, to provide an alternative route to Waterloo Road from south of the roundabout at the junction of Waterloo Road with William Heelas Way to a point further east on Waterloo Road, together with a turning head between the two new junctions (Ref. 240892). Due to the date of this application (1st November 2024), this application was required to demonstrate delivery of 10% net gain using the Statutory Metric, in accordance with Schedule 7a of the Town and Country Planning Act 1990 (Paragraph 2.2). This application and the link road application have overlapping red line boundaries, however, if both applications undertake a Biodiversity Net Gain Assessment on the same land there is a risk of 'double counting' i.e. using the same habitat creation or enhancement measures to offset multiple loss areas which are not equivalent. Therefore, to avoid double counting, the area within the red line of the link road application has been excluded from the Biodiversity Net Gain Assessment for this application, despite falling within the red line boundary.

1.2 The Site

The site is located to the South of Wokingham on the border of the Wokingham Borough and Bracknell Forest administrative areas, located, centred on National Grid

Reference (NGR) SU 8251 6782. The site comprises approximately 90.95 hectares and predominately consists of agricultural farmland, although also includes parts of Easthampstead Road and Waterloo Road.

The area which is the subject of the current Reserved Matters application (hereafter referred to as 'Parcel R10') comprises approximately seven hectares in the east of the site, centred on NGR: SU 8320 6796.

Both the site boundary and the boundary of Parcel 10 are shown on **Map 1**.

1.3 Aims and Scope of Report

The aim of this document is to establish whether the development of Phase 2b of the South Wokingham SDL continues to deliver a measurable net gain in biodiversity following the detailed design of this Reserved Matters application. The net change in biodiversity value is determined by calculating the pre-development and post-development biodiversity units provided by the site using the DEFRA Metric 3.1 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019).

The document provides a summary of the scheme design for the Reserved Matters application and background ecological information which has been used to undertake the metric calculations. The metric calculations have been provided in a separate excel spreadsheet (ECOSA, 2025a). Although all areas of have been included in the metric calculation, only habitats associated with the boundary of this Reserved Matters application are discussed and mapped in this report. Details of pre- and post-development habitats for land associated with future Reserved Matters applications is provided in the following documents:

- The Environmental Statement submitted as part of the hybrid application provides detailed habitat descriptions for pre-development habitats (Nexus, 2019);
- The Land at Phase 2 of the South Wokingham SDL – Biodiversity Net Gain Assessment provides explanation for the metric inputs for pre- and post-development habitats at the time the hybrid application was submitted (ECOSA, 2020); and
- South Wokingham Revised Biodiversity Net Gain Assessment included within the s106 agreement provides information on subsequent amendments made to the metric in order to 'transfer' it into the DEFRA Metric 3.1 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019) and to address initial comments from Wokingham Borough Council (Aspect Ecology, 2022).

This document should also be read in conjunction with the following documents which will be submitted as part of this Reserved Matters application:

- Ecological Mitigation Strategy (ECOSA, 2025b); and
- Landscape and Ecological Management Plan (Pegasus Group, 2025).

1.4 Site Proposals

The proposals are for the construction of 215 dwellings with associated landscaping.

At the time of production of this report, it is anticipated that consent will be sought during February/March 2025 with works commencing on site during spring/summer 2025.

2.0 LEGISLATIVE AND PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the legislative and planning policy as relevant to Biodiversity Net Gain within the Wokingham Borough Council administrative area. This information is then used to make necessary recommendations for mitigation and enhancements in order to ensure any future planning application accords with relevant planning policy.

2.2 National Legislation

Schedule 14 of the Environment Act 2021 inserts a new schedule, Schedule 7A, into the Town and Country Planning Act 1990 that requires schemes seeking planning consent to achieve 10% net gain as measured by an approved metric (DEFRA, 2024c). The requirements under Schedule 14 came into force on 12th February 2024. Therefore, any planning permissions submitted after this date are subject to a legal minimum requirement to demonstrate 10% Biodiversity Net Gain. However, as a hybrid planning application for this scheme was submitted before this date (10th June 2019), there is no legal requirement for the scheme to achieve 10% net gain and this requirement is based on planning policy drivers only (Paragraph 2.3).

2.3 Planning Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with the most recent revised NPPF published in December 2024.

The NPPF sets out that development proposals should not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 187 states that the planning system should contribute to and enhance the natural environment by *"...minimising impacts on and providing **net gains** for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures..."*.

Local planning policy within Wokingham is provided by the Wokingham Borough Council final adopted Core Strategy, adopted 29th January 2010 and the Wokingham Borough Development Plan 2014, adopted 21st February 2014. Policy TB23 of the Wokingham Borough Development Plan 2014: 'Biodiversity and Development' states that as well as complying with Policy CP7 of the Core Strategy: 'Biodiversity', which sets out requirements for protecting biodiversity on site, development proposals must also demonstrate how they provide opportunities, including through design, layout and landscaping to incorporate new biodiversity features or enhance existing. This supports the existing requirement of the

Although neither of these policies specifically requires a metric to be used to demonstrate that net gains for biodiversity would be delivered by the scheme, given the uncertainty around future legal requirements for Biodiversity Net Gain and the use of metrics it was agreed with Wokingham Borough Council that a metric would be used to provide quantitative evidence that the scheme would deliver a net gain for biodiversity.

3.0 METHODOLOGY

3.1 Biodiversity Net Gain Assessment Process

The Biodiversity Net Gain Assessment was undertaken using DEFRA Metric 3.1 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019).

The calculation tool provides a pre- and post-development biodiversity value for the site, which allows an assessment of the net biodiversity losses or gains to be made.

First the habitat types are established. Habitats are classified using either the UK Habitat Classification System (UKHab Ltd, 2023), European Nature Information System (EUNIS) (European Environment Agency (EEA), 2019), Water Framework Directive (WFD) Lakes typologies UK Technical Advisory Group (UK Technical Advisory Group (UKTAG), 2003) or the hedgerows and lines of trees key within the Biodiversity Metric 3.1 - Auditing and accounting for biodiversity - User Guide (Natural England, 2022). A small number of habitats have definitions specific to biodiversity metric 3.1. This means that habitats are classified in a way which is widely recognised and that can be directly input into the biodiversity metric 3.1 calculation tool. All habitats used in biodiversity metric 3.1 and their definition source are provided in the Biodiversity Metric 3.1 - Auditing and accounting for biodiversity – Technical Supplement (Panks, et al., 2022).

Next, the areas of both pre-development and post-development habitats are established. Areas are mapped and measured by ECOSA using QGIS based on resources such as field survey results, aerial photography, Ordnance Survey (OS) mapping resources and plans provided by the client. Habitats that will be impacted by the proposals but returned to the same habitat type and condition within a year of the initial impact are considered temporary losses and are not accounted for in the metric. Non-linear habitats are measured in hectares while linear features are measured by length in kilometres. Therefore, for the purposes of the calculation they are addressed separately with separate biodiversity units calculated for linear and non-linear features.

The pre- and post-development values are calculated by taking the area of each habitat and applying multipliers, which can have a positive or negative effect on the overall score, based on a number of components of biodiversity quality. Additional 'risk' multipliers are applied to the post-development values, to account for the uncertainty around forecasting a future ecological scenario. These multipliers are detailed in **Appendix 2**.

Data regarding the current ecological conditions at the site pre-development (Paragraph 3.3) and proposed ecological conditions at the site post-development (Paragraph 3.4) are entered into the calculation tool in order to determine what

modifiers should be applied. For the purposes of inputting into the metric calculation tool areas are grouped into a single measurement based on that habitat's characteristics (i.e. habitat, condition and strategic significance).

3.1.1 Metric Rules

The Biodiversity Metric 3.1 User Guide (Natural England, 2022) sets out four rules that must be followed when undertaking a metric calculation. If the calculation does not adhere to these rules, a proposal cannot claim a biodiversity net gain.

Rule 1

“Where the metric is used to measure biodiversity change, biodiversity unit values need to be calculated both prior to the intervention and post-intervention for all parcels of land / linear features affected.”

Rule 2

“Compensation for habitat losses can be provided by creating new habitats, or by restoring or enhancing existing habitats. Measures to enhance existing habitats must provide a significant and demonstrable uplift in distinctiveness and/or condition to record additional biodiversity units.”

Rule 3

“‘Trading down’ must be avoided. Losses of habitat are to be compensated for on a ‘like for like’ or ‘like for better’ basis. New or restored habitats should aim to achieve a higher distinctiveness and/or condition than those lost. Losses of irreplaceable or very high distinctiveness habitat cannot adequately be accounted for through the metric.”

This means that newly created habitats should be similar (for example grassland type habitats being replaced by grassland type habitats) and new habitat should aim to achieve either a higher distinctiveness and/or better condition than those which are lost. The only exception applies where low distinctiveness habitats are lost these can be offset with different but higher distinctiveness habitats. Losses of irreplaceable or very high distinctiveness habitat should be avoided or a bespoke compensation scheme would need to be devised and agreed with the relevant authority. Further information on trading rules is provided within the user guide to support this rule.

Rule 4

“Biodiversity units generated by biodiversity metric 3.1 are unique to this metric and cannot be compared to unit outputs from versions 3.0, 2.0, the original DEFRA metric, or any other biodiversity metric. Furthermore, the three types of biodiversity units generated by this metric (for area, hedgerow and river habitats) are unique and cannot be summed, traded or converted.”

Rule 5

“It is not the area/length of habitat created that determines whether ecological equivalence or better has been achieved but the net change in biodiversity units. Risks associated with creating or enhancing habitats mean that it may be necessary to create or enhance a larger area of habitat than that lost, to fully compensate for impacts on biodiversity.”

Rule 6

“Deviations from the published methodology of biodiversity metric 3.1 need to be ecologically justified and agreed with relevant decision makers. While the methodology is expected to be suitable in the majority of circumstances it is recognised that there may be exceptions. Any local or project-specific adaptations of the metric must be transparent and fully justified.”

3.1.2 Good Practice Principles

The Construction Industry Research and Information Association (CIRIA), the Institute of Environmental Management and Assessment (IEMA) and CIEEM have developed the first UK principles on good practice to achieve Biodiversity Net Gain. These principles provide a framework that helps improve the UK’s biodiversity by contributing towards strategic priorities to conserve and enhance nature while progressing with sustainable development (CIEEM, 2016). The principles are listed in **Appendix 3**. This assessment has been undertaken in line with these best practice principles.

3.2 Establishing the Relevant Date for the Pre-development Value

In accordance with the s106 agreement the Biodiversity Net Gain Baseline is based on the habitat type and habitat condition as recorded in the South Wokingham Revised Biodiversity Net Gain Assessment, December 2022 (Ref: 6087 TN05 SWBNG dv1) (Aspect Ecology, 2022). This document is available in Annex 15 of the Deed. This document referred to baseline ecological conditions established on 8th April 2020.

3.3 Pre-Development Calculation

The information input into the DEFRA Metric Calculation Tool is provided below:

3.3.1 Habitat Type and Area

The habitat area data entered into the calculation tool is for all habitats that lie within Parcel R10 of the red line boundary for the Phase 2b of the South Wokingham SDL as per the boundary set out in the South Wokingham Revised Biodiversity Net Gain Assessment, December 2022 (Ref: 6087 TN05 SWBNG dv1) (Aspect Ecology, 2022), with one exception. An area associated with the construction of a link road through Parcel R10 (this parcel), has been excluded from the biodiversity net gain calculation area for the current application, despite technically lying within the red line of the application, to avoid ‘double counting’ (Paragraph 1.1).

The habitat types and areas within this document were based on a Phase 1 habitat survey originally undertaken on 21st August 2015 by Andrew Bodey of ECOSA, and updated most recently on 8th April 2020 by Georgina Timmis, Principal Ecologist of ECOSA. The Phase 1 habitat survey followed best practice methods set out by the Joint Nature Conservation Committee (JNCC, 2010). Subsequently, the Phase 1 habitat classifications were converted to UKHab classifications (UKHab Ltd, 2023). The results of the Phase 1 habitat survey are provided in detail in the Environmental Statement (Nexus, 2019), and the details of conversion are provided in the Land at Phase 2 of the South Wokingham SDL – Biodiversity Net Gain Assessment (ECOSA, 2020), which was submitted with the original application. Aspect Ecology subsequently amended some of the habitat classifications based on discussions with Wokingham Borough Council. These changes are summarised in the South Wokingham Revised Biodiversity Net Gain Assessment (Aspect Ecology, 2022). For the purpose of this assessment, the only relevant change is that H25 was amended from 'native hedgerow' to 'native hedgerow – associated with bank or ditch'.

3.3.2 Habitat Condition

In accordance with the s106, the habitat condition data entered into the calculation tool are based on the values set out in the South Wokingham Revised Biodiversity Net Gain Assessment, December 2022 (Ref: 6087 TN05 SWBNG dv1) (Aspect Ecology, 2022). This document is available in Annex 15 of the Deed.

The habitat conditions within this document were based on a condition assessment survey undertaken on 8th April 2020 by Georgina Timmis, Principal Ecologist of ECOSA. The condition assessment was based on the criteria within the Biodiversity Metric 2.0 Technical Supplement (Crosher, et al., 2019). The habitat condition assessment is assumed to have been 'transferred' into Metric 3.1 as part of the South Wokingham Revised Biodiversity Net Gain Assessment, December 2022 (Ref: 6087 TN05 SWBNG dv1) (Paragraph 3.3.4). Some habitat types (for example most agricultural habitats and hardstanding) are not subject to assessment and are assigned default scores by the calculation tool.

3.3.3 Strategic Significance

The following plans, strategies and policies were identified as being relevant to the assessment of strategic significance for this site:

- Wokingham Biodiversity Action Plan (Wokingham Borough Council, 2014).

Based on a consultation with Thames Valley Environmental Records Centre (TVERC) on 5th July 2022, the site does not lie within any of Berkshire's Biodiversity Opportunity Areas or any Local Wildlife Sites, although, two Local Wildlife Sites, Big Wood LWS and Peacock Meadows LWS, lie approximately 215 metres and 515 metres to the east

of the site respectively. A Local Nature Recovery Strategy for Berkshire is currently in development, but is not due to be finalised until June or July 2025 (Royal Borough of Windsor and Maidenhead, n.d.).

These plans, strategies and policies were used to determine whether any pre-development habitats are of high strategic significance, and to justify a conclusion of medium strategic significance where relevant.

3.3.4 Assumptions and Limitations

Subsequent to the completion of the condition assessment on 8th April 2020, as part of the South Wokingham Revised Biodiversity Net Gain Assessment, Aspect Ecology 'transferred' the metric from the metric version 2.0 to the metric version 3.0. Metric version 3.0 included some changes to condition assessment criteria, however, as nothing is mentioned in the accompanying report, it is assumed that these changes did not affect the baseline condition assessments and that these remain based on the condition assessment survey undertaken on 8th April 2020.

3.4 Post-Development Assessment

The post-development biodiversity value of the site is based on information provided by Miller Homes with the following plans utilised in order to complete the assessment:

- Landscape Masterplan, dated 11th June 2025 (Drawing No. P24-2114_EN_001D (**Map 1**);
- R10 Detailed On-Plot Landscape Proposals, dated 11th June 2025 (Drawing No. P24-2114_EN_002C);
- Detailed POS Soft Landscaping Plan, dated 11th June 2025 (Drawing No. P24-2114_EN_003B).

The information input into the DEFRA Metric Calculation Tool is provided below:

3.4.1 Habitat Type and Area

The post development habitat type and area data entered into the calculation tool are based on the provided landscape plans. Planting specifications are used to determine the UKHab classification that the newly created habitat would be most likely to fall under.

As per the pre-development calculation, part of the site associated with the construction of a link road through Phase 2a and 2b of the South Wokingham SDL has been excluded from the calculation to avoid 'double counting' (Paragraph 3.3.1).

3.4.2 *Habitat Condition*

The post-development habitat condition data entered into the calculation tool are based on a 'target condition' which, in accordance with Principle 4 of the Biodiversity Net Gain Good Practice Principles for Development (**Appendix 2**), is considered to be reasonably achievable. What is reasonably achievable has been judged based on consultation with landscapers and the wider design team to understand what management regimen is considered feasible and what conflicting pressures may be experienced by the habitat in question. Target conditions are considered conservative, to account for uncertainty in the delivery.

3.4.3 *Strategic Significance*

The same plans, strategies and policies identified as relevant to the pre-development calculation are considered relevant to the post-development calculation (Paragraph 3.3.3). These plans, strategies and policies were used to determine whether any post-development habitats are of high strategic significance, and to justify a conclusion of medium strategic significance where relevant.

3.4.4 *Assumptions and Limitations*

Some assumptions have been made regarding the achievable condition of proposed habitats, these assumptions are set out in the relevant tables in **Appendix 5** and **Appendix 6**.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section sets out a summary of the baseline ecological conditions at the site, supported by a pre-development habitat map (**Map 2**). Full details of the baseline habitats are provided in the Environmental Statement (ECOSA, 2020). This section then establishes the baseline biodiversity units for the site.

4.2 Important Ecological Features

Following the completion of the Ecological Assessment the following Important Ecological Features were identified:

- Hedgerows;
- Bats;
- Badger
- Breeding birds;
- Reptiles;
- Great crested newt;
- European hedgehog;
- Common toad; and
- Invertebrates

These features have been considered in the design the Biodiversity Net Gain solution on site and also inform the strategic significance assessment, where relevant. For full understanding of the Important Ecological Features identified within the scheme please refer to the Ecological Mitigation Strategy (ECOSA, 2025b), which provides the most current baseline information. Although the Biodiversity Net Gain Assessment is based on a historic baseline, the current baseline of the site has been considered in the design of the scheme and the planning of future mitigation and management measures.

4.3 Baseline Habitats

4.3.1 *Habitat Type*

Baseline habitat types for the R10 parcel are shown on **Map 2**. At the time the baseline was established, the R10 parcel was dominated by **cereal crops**. A limited area of '**Developed Land; Sealed Surface**' was present in the west of the parcel which represented Waterloo Road. The road has subsequently been realigned as part of construction of the 'Eastern Gateway' under a separate planning consent.

There are four hedgerows within the parcel. Hedgerow 25 is a '**native hedgerow associated with ditch**' that bisects the parcel east to west, Hedgerow 26 and 27 are **native hedgerows** that form the western and southern boundaries respectively.

Hedgerow 28 is a **native species-rich hedgerow** that forms part of the eastern boundary.

Detailed habitat descriptions for both R10 and the rest of the site are provided in the Environmental Statement (Nexus, 2019). These were converted from Phase 1 habitat types into UKHab types using the guidance set out within the DEFRA Metric 2.0 – Auditing and Accounting for Biodiversity Calculation Tool (Natural England, 2019).

4.3.2 **Habitat Distinctiveness**

Baseline habitat and hedgerow distinctiveness for Parcel R10 is shown on **Map 3** and summarised in **Table 1**.

Table 1: Baseline Habitat and Hedgerow Distinctiveness for the R10 parcel

Distinctiveness	Baseline Habitats and Hedgerows
Very Low	Developed land; sealed surface.
Low	Cereal crops, native hedgerow
Medium	Native hedgerow – associated with bank or ditch, native species rich hedgerow
High	N/A
Very High	N/A

Irreplaceable Habitats

There are no irreplaceable habitats on site.

4.3.3 **Condition Assessment**

Baseline habitat conditions for Parcel R10 are shown in **Map 3**. Cereal crops and developed land; sealed surface are given a default score by the calculation tool. Details of the condition criteria met by each hedgerow within parcel R10 are provided **Appendix 4**. All hedgerows were in good condition when the baseline was established.

4.3.4 **Strategic Significance**

‘Semi-improved grassland’ (which it is considered that other neutral grassland falls under) and hedgerows are habitats covered by the Wokingham Borough Biodiversity Action Plan, and therefore are assigned high strategic significance. There is no ecological justification for considering other habitats to be ecologically desirable. Therefore, all habitats on site are assigned low strategic significance (Area/compensation not in local strategy/no local strategy).

4.4 Baseline Biodiversity Units

The pre-development habitat units for the site have been calculated at 13.59 units, and the hedgerow units at 5.47 units. The full calculation is provided within the accompanying statutory biodiversity metric calculation tool (ECOSA, 2025a).

5.0 PROPOSED DESIGN

5.1 Introduction

This section sets out a summary of the proposed post-development ecological conditions at the site, including proposed habitat types and distinctiveness. It provides justification for the assigned conditions and strategic significance values. This section then establishes the post-development biodiversity units for the site.

5.2 Habitat Retention

The site is dominated by cereal crop. As the land will be taken out of agricultural use this will inevitably be lost. The ‘developed land; sealed surface’ habitat on site is associated with a road that was present on the date the pre-development value was calculated but has since been removed as part of road improvement works which do not form part of this application. Therefore, this habitat type has also been entirely lost.

Hedgerows on site are proposed to be retained, with the exception of a section of H26 which has already been lost as a result of road improvement works which do not form part of this application. A very small length of H28 may be lost in two places to facilitate footpath links to a proposed subsequent phase of the South Wokingham SDL, however, given that the extent of the gaps (approximately 2 metres each) would not constitute a failure of the condition criteria of the hedgerow, and therefore would not lower the overall condition, this minor loss has not been specifically accounted for in the metric. Hedgerows H27 and H28 will be retained and form a boundary habitat on the edge of the proposed new woodland planting (Paragraph 5.4.1).

Areas of lost and retained habitat are shown on **Map 4**.

5.3 Habitat Enhancement

As the only habitats proposed to be retained are hedgerows, and these are already in good condition and cannot be materially improved, no enhancements of existing habitats are proposed.

5.4 Post-Development Habitats

5.4.1 Habitat Type

Post-development habitats are shown on **Map 4**.

Post-development the centre of the site will be dominated by ‘**developed land; sealed surface**’ in the form of the new residential buildings, as well as associated **vegetated gardens**. **Introduced shrub**, areas of **modified grassland** and **rain gardens** are scattered throughout the developed area. A small area of **mixed scrub** will be planted alongside Hedgerow 25. A **Sustainable Urban Drainage feature** will be created in the

west of the site. The public open space will be dominated by **other neutral grassland**, with areas of **‘other woodland; broadleaved’** planted on the southern and eastern boundaries of the site.

5.4.2 **Habitat Distinctiveness**

Post-development habitat and hedgerow distinctiveness is shown on **Map 6** and summarised in **Table 2**.

Table 2: Post Development Habitat and Hedgerow Distinctiveness

Distinctiveness	Post-Development Habitats and Hedgerows
Very Low	‘Developed land; sealed surface’
Low	Introduced shrub, modified grassland, rain garden, Sustainable Urban Drainage Feature, vegetated garden,
Medium	Mixed scrub, other neutral grassland, ‘other woodland; broadleaved’
High	N/A
Very High	N/A

5.4.3 **Condition Assessment**

Post-development habitat conditions are shown in **Map 6**. Details of the condition criteria met by each anticipated post-development habitat and hedgerow are provided in **Appendix 5** and **Appendix 6** respectively.

5.4.4 **Strategic Significance**

‘Semi-improved grassland’ (which it is considered that other neutral grassland falls under) and hedgerows are habitats covered by the Wokingham Borough Biodiversity Action Plan, and therefore are assigned high strategic significance. Woodland and urban trees on site have also been assigned high strategic significance as the creation of these habitats achieve the objectives of policy SE03 of the Thames Valley NCA. There is no ecological justification for considering other habitats to be ecologically desirable. Therefore, all habitats on site are assigned low strategic significance (Area/compensation not in local strategy/no local strategy).

5.5 **Post-Development Biodiversity Units**

The post-development habitat units for the site have been assessed as being 13.90, and the hedgerow units as 10.19. The full calculation provided within the accompanying statutory biodiversity metric calculation tool

6.0 RESULTS AND CONCLUSIONS

6.1 Results

6.1.1 Metric Output

The baseline biodiversity units for the site are 13.59 habitat units and 5.47 hedgerow units. The anticipated post-development biodiversity units for the site are 13.90 habitat units and 10.18 hedgerow units.

This represents a net gain of 0.30 habitat units and of 4.72 hedgerow units which is a gain of **2.24% habitat units and 86.29% hedgerow units**. This leaves a deficit of 1.05 habitats units to match the overall scheme goal of 10% net gain.

6.1.2 Compliance with Metric Rules and Best Practice Principles

The metric assessment calculates biodiversity value both prior to and post-intervention and there is no 'trading down'. No irreplaceable or very high distinctiveness habitats are being lost. Habitat and hedgerow units are not summed, traded or converted. Habitat compensation has accounted for risks and is not done on an area/length basis. There are no deviations from the published methodology of the Biodiversity Metric 3.1. The assessment complies with best practice principles (**Appendix 3**).

6.1.3 Implementation

In order to ensure that the proposed habitat types are established and maintained in the condition targeted within the metric, an appropriate plan for implementation of the measures set out in this document during the construction phase, as well as a management and monitoring plan for a minimum period of 30 years (Pegasus Group, 2025) will be provided as a condition of any planning consent.

6.2 Conclusion

The calculation indicates that parcel R10 will meet the target of 10% gain in relation to hedgerows on site, but not in relation to habitat units. The deficit of habitat units will be made up for in other areas of the scheme.

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Map 1 Site Location Plan

**R10, SOUTH WOKINGHAM,
BERKSHIRE**

BIODIVERSITY NET GAIN ASSESSMENT

Map 1 - Site Location Plan

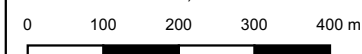
Client:	Kingacre Estates Limited
Date:	June 2025
Status:	Draft

KEY

-  Site Boundary
-  Wider South Wokingham Boundary



Scale at A3 1:10,000



Prepared by: JP	Date: 210225
Last amended by: JP	Date: 300625

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Map 2 Baseline Habitats



R10, SOUTH WOKINGHAM,
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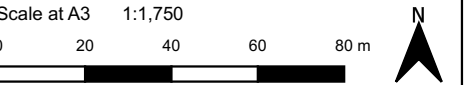
BIODIVERSITY NET GAIN ASSESSMENT

Map 2 - Baseline Habitats

Client:	Kingacre Estates Limited
Date:	December 2025
Status:	Draft

- KEY**
- Site Boundary
 - BNG Assessment Boundary
 - Link Road for Phase 2a and 2b of the South Wokingham SDL
 - Cereal crops
 - Developed land; sealed surface
 - Sustainable urban drainage feature
 - Native Hedgerow (h2NE5)
 - Native Hedgerow - Associated with bank or ditch (h2NE9)
 - Native Species Rich Hedgerow (h2NE2)

While the aerial imagery shows the habitats on site at present, our data is accurate according to when the baseline was fixed in 2020. Please refer to the report for further details.



Prepared by: JP	Date: 210225
Last amended by: JP	Date: 231225

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Map 3 Baseline Condition and Distinctiveness



**R10, SOUTH WOKINGHAM,
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BIODIVERSITY NET GAIN ASSESSMENT

Map 3 - Baseline Habitats Condition and Distinctiveness

Client:	Kingacre Estates Limited
Date:	December 2025
Status:	Draft

KEY

- Site Boundary
- BNG Assessment Boundary
- Link Road for Phase 2a and 2b of the South Wokingham SDL

Condition

- Moderate
- N/A - Other
- Good

Distinctiveness

- Low
- V.Low
- Medium
- Low

While the aerial imagery shows the habitats on site at present, our data is accurate according to when the baseline was fixed in 2020. Please refer to the report for further details.



Prepared by: JP	Date: 210225
Last amended by: JP	Date: 231225



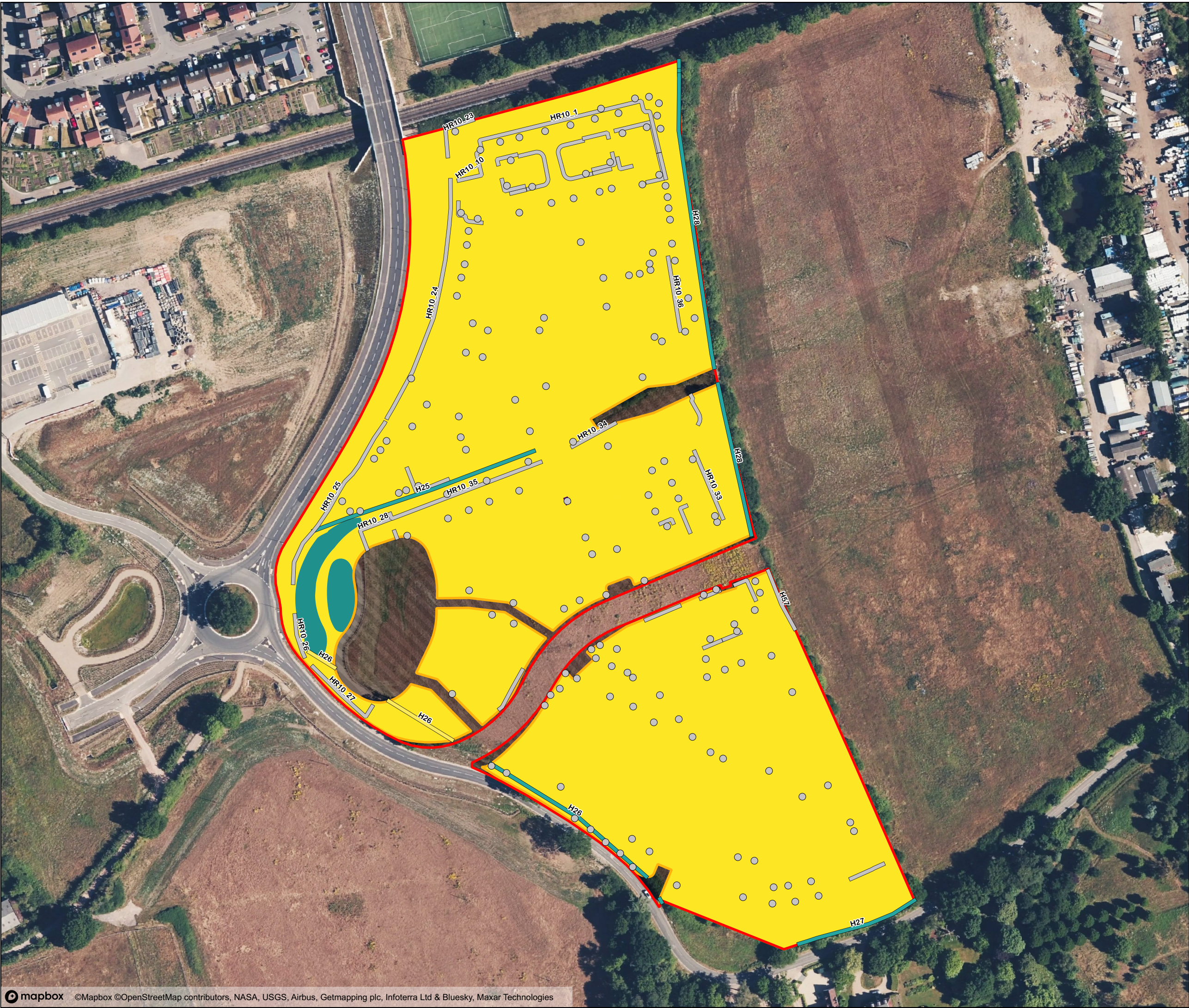
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Map 4 Habitat Retention



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BIODIVERSITY NET GAIN ASSESSMENT

Map 4 - Habitat Retention

Client:	Kingacre Estates Limited
Date:	December 2025
Status:	Draft

KEY

- Site Boundary
- BNG Assessment Boundary
- Link Road for Phase 2a and 2b of the South Wokingham SDL

Habitats

- Enhanced
- Retained
- Lost

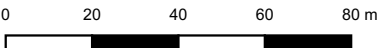
Hedgerows

- Created
- Retained
- Lost

Urban Trees

- Created

Scale at A3 1:1,750



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Map 5 Post-Development Habitats

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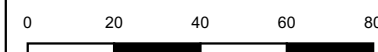
Map 5 - Post-development Habitats

Client:	Kingacre Estates Limited
Date:	December 2025
Status:	Draft

KEY

- | | |
|--|--|
|  | Site Boundary |
|  | BNG Assessment Boundary |
|  | Link Road for Phase 2a and 2b of the South Wokingham SDL |
|  | Developed land; sealed surface |
|  | Introduced shrub |
|  | Mixed scrub |
|  | Modified grassland |
|  | Other neutral grassland |
|  | Other woodland; broadleaved |
|  | Rain garden |
|  | Sustainable urban drainage feature |
|  | Vegetated garden |
|  | Hedge Ornamental Non Native (h2NE3) |
|  | Native Hedgerow (h2NE5) |
|  | Native Hedgerow - Associated with bank or ditch (h2NE9) |
|  | Native Species Rich Hedgerow (h2NE2) |
|  | Proposed Small |

Scale at A3 1:1,750



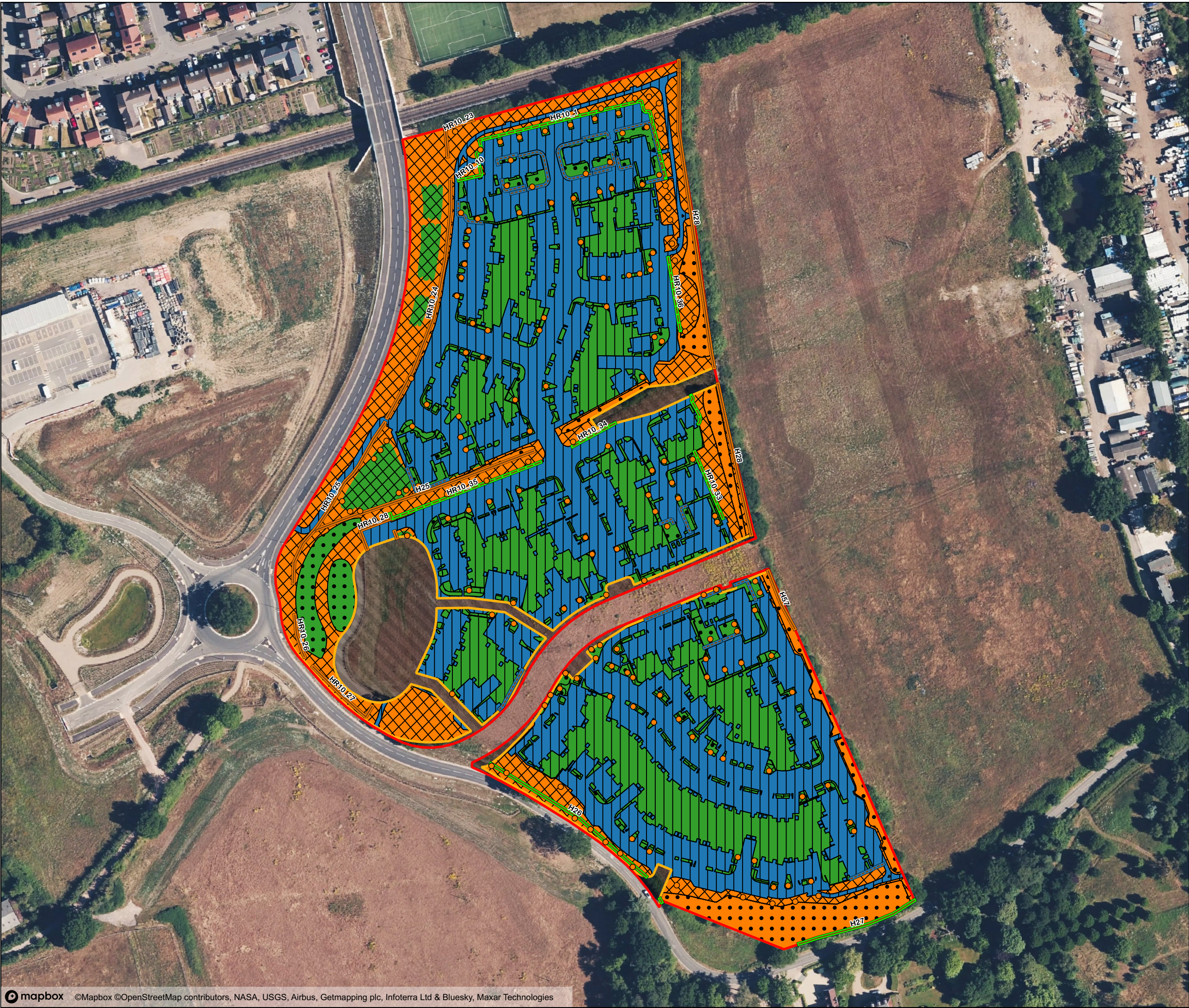
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Map 6 Post-Development Condition and Distinctiveness



R10, SOUTH WOKINGHAM,
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BIODIVERSITY NET GAIN ASSESSMENT

Map 6 - Post-development Habitats Condition
and Distinctiveness

Client:	Kingacre Estates Limited
Date:	December 2025
Status:	Draft

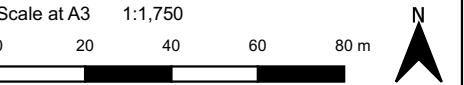
KEY

Site Boundary

BNG Assessment Boundary

Link Road for Phase 2a and 2b of the South Wokingham SDL

Condition	Distinctiveness
Moderate	Medium
Poor	Low
N/A / Other	V.Low
Good	Medium
Moderate	Low
Poor	V.Low
Moderate	



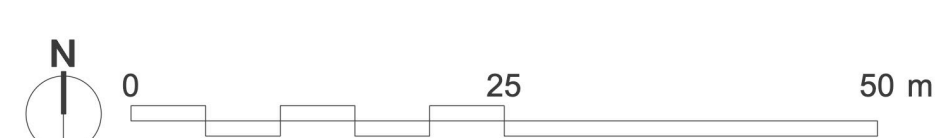
Prepared by: JP	Date: 210225
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Appendix 1 Site Proposals Plan



DRAFT FOR COMMENT

PEGASUS
GROUP

Appendix 2 Components of Biodiversity Quality and Risk Multipliers

Components of Biodiversity Quality

Habitat Distinctiveness

The distinctiveness of a habitat represents its relative quality and importance compared to other habitat types, based on an assessment of the distinguishing features of a habitat, including consideration of species richness, rarity and the degree to which a habitat supports species rarely found in other habitats. The Habitat Distinctiveness scores are automatically assigned by the calculator in accordance with the assessment methodology detailed in the Biodiversity Metric 3.1 Technical Supplement (Panks, et al., 2022).

Habitat Condition

The condition of a habitat represents its relative quality judged against the perceived ecological optimum state for that particular habitat type. Therefore, habitat condition is specific to the habitat type and not comparable between habitat types (unlike Habitat Distinctiveness).

The condition assessment was based on the criteria within the Biodiversity Metric 3.1: Auditing and Accounting for Biodiversity – Condition Assessment Sheets (Natural England, 2019). Some habitat types (for example most agricultural habitats and hardstanding) are not subject to assessment and are assigned default scores by the calculation tool.

For proposed habitat creation, retention and enhancement a 'Target Condition' is assigned, this is the condition that it is proposed the habitat will achieve post-development and is based on the same criteria as the condition assessment.

Strategic Significance

The Strategic Significance multiplier gives additional unit value to habitats that are located in preferred locations for biodiversity and other environmental objectives. Strategic significance is the local significance of the habitat based on its location and habitat type. The strategic significance of an area may change between pre- and post-development scenarios, where the strategic value of the habitat features has changed post-development. For example, newly developed residential units may no longer be strategically significant compared to the pre-development situation, whereas a newly created ecological corridor or buffer may be deemed as more strategically significant if created post-development.

There are three categories of strategic significance.

High (Formally Identified In Local Strategy)

Strategic significance will be high if the habitat location is identified in local plans, strategies or policies. These include Local Nature Recovery Strategies, local biodiversity plans, National Character Areas objectives, Local Planning Authority Local Ecological Networks, Shoreline Management Plans, estuary strategies and green infrastructure strategies.

Medium (Location ecologically desirable but not in local strategy)

Medium strategic significance can be used where professional judgement is applied and the location is deemed ecologically desirable for a particular habitat type, whether recorded in the site baseline, being created or enhanced. Where professional judgement is applied in this way, the decision should be justified, and evidence provided.

Low (Area/compensation not in local strategy/no local strategy)

In the absence of any locally or nationally relevant strategic document indicating areas of significance for biodiversity, or robust ecological justification for a medium score, a low strategic significance score is used by default in all pre- and post-intervention calculations. A low strategic significance score does not penalise a proposal as it results in a multiplier of x1 being applied and the score remaining unchanged.

Risk Multipliers

In addition to the above components, several additional multipliers are assigned to habitats which are proposed to be created or enhanced post-development. These factors take into account the risks associated with attempting to establish new habitats and are detailed below.

Difficulty Risk

This is the risk associated with the delivery of biodiversity creation or enhancement due to uncertainty in the effectiveness of techniques to create or restore a particular habitat type. For some habitat types it is much more difficult to replicate habitat losses because of the unique physical and ecological features of the habitat.

Temporal Risk

For some habitat types, it can take a long time to achieve the Target Condition (see Habitat Condition paragraph above). If there is a significant time lag between initial habitat loss and establishing new habitats of adequate condition to compensate for this loss, there will be lower levels of biodiversity for this period of time. The temporal risk multiplier reflects this temporary reduction in quality.

In addition, where habitat creation is delayed from the initial impact (for example if a landscaping scheme is delivered in the latter stages of a construction program) an additional temporal risk is applied to represent the time delay from the loss of biodiversity through to creation/enhancement of new habitats. Temporal risk can be mitigated by creating habitats in advance of the impact they are intended to offset, where this is undertaken and the time that will be taken to achieve the habitats target condition is reduced, the negative risk multiplier is also reduced.

Spatial Risk

Where habitat creation is being undertaken to offset habitat loss as a result of the proposals, it is beneficial for such offsetting to be delivered in proximity to the original loss, ideally within the site itself, so that the ecosystem services provided by such habitat will benefit receptors that

are affected by the proposals. Where this is not possible, it is considered that locating off-site compensation within the local planning authority area or the same National Character Area represents a minimal risk. For offsetting delivered further afield a negative multiplier is applied.

Appendix 3 Biodiversity Net Gain Good Practice Principles for Development

The principles set out in **Table 3** are taken from (CIEEM, 2016) and set out the best practice principles that projects should adhere to where designing Biodiversity Net Gain and sets out how the principle has been applied in the design of these proposals.

Table 3: Biodiversity Net Gain Good Practice Principles for Development

Principle	Descriptor	Proposal Design
Principle 1. Apply the Mitigation Hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	It has been necessary for the baseline habitats to be cleared to facilitate the development. The area being cleared comprises entirely habitats of low distinctiveness. The habitats will be compensated with habitats of higher distinctiveness/better condition once the development has been completed.
Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve No Net Loss or Net Gain.	All biodiversity loss in the scheme have been offset by gains elsewhere in the scheme.
Principle 3. Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.	A BNG assessment was submitted to support the hybrid application and was commented on by Wokingham Borough Council. The council's comments and feedback were accounted for when the metric was resubmitted in Version 3.1, and have also been carried through to this assessment. The final design has been developed in consultation with the Design Team for the project including engineers, arboriculturists and landscape specialists to ensure that all requirements including traffic, amenity, drainage etc., not just ecology, have been considered.
Principle 4. Address risks	Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	We have targeted habitats which are realistic and achievable based on the proposed long-term management of the site. These targets were developed in consultation with the landscape specialists on the Design Team (Pegasus).

Principle	Descriptor	Proposal Design
Principle 5. Make a measurable Net Gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	A measurable net gain has been established through this document. The design of the scheme not only achieves net gain, but furthers the objectives of the Thames Valley Natural Character Area and provides enhancements for a range of protected species. Details of species enhancements are detailed in the Ecological Mitigation Strategy (ECOSA, 2025b) and the Landscape and Ecological Management Plan (Pegasus Group, 2025).
Principle 6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when: Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels Enhancing existing or creating new habitat Enhancing ecological connectivity by creating more bigger, better and joined areas for biodiversity	The scheme design has retained the significant majority of medium distinctiveness habitats and replaced generally very low and low distinctiveness habitats with low to medium distinctiveness habitats, resulting in an overall gain in the diversity and distinctiveness of the habitat composition on site. Newly created hedgerows and woodlands around the site boundaries have been designed to promote the movement of wildlife around to site.
Principle 7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e., do not deliver something that would occur anyway).	The scheme has been designed to deliver a range of habitats including grassland, woodland, hedgerows and a Sustainable Drainage feature which will be managed for wildlife. The scheme also enhances the sites' connectivity to the wider surrounds (through creation of hedgerows and woodland on the boundaries of the site).
Principle 8. Create a Net Gain legacy	Ensure Net Gain generates long-term benefits by: Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity Planning for adaptive management and securing dedicated funding for long-term management	The measures set out in the Landscape and Ecological Management Plan will secure the net gain legacy.

Principle	Descriptor	Proposal Design
	Designing Net Gain for biodiversity to be resilient to external factors, especially climate change Mitigating risks from other land uses Avoiding displacing harmful activities from one location to another Supporting local-level management of Net Gain activities	
Principle 9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	The habitat creation measures proposed have been located to not only provide biodiversity gains but also to provide a positive enhancement to both the sites landscape and amenity use.
Principle 10. Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	The preparation of this report sets out transparently how biodiversity net gain has been designed at the site.

Appendix 4 Baseline Hedgerow Condition Assessment

Habitat Ref.	H25	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Native hedgerow - associated with bank or ditch (h2a6)	
	Indicator	Condition
A1	Height >1.5m average along length	TRUE
A2	Width >1.5m average along length	TRUE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	FALSE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	TRUE
C2	Undesirable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	TRUE
D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	TRUE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	N/A
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.	N/A
Group A Score:		2
Group B Score:		1
Group C Score:		2
Group D Score		2
Group E Score:		N/A
No. of failures:		1
Number of functional groups where both attributes failed:		0
Condition		Good

Habitat Ref.	H26	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Native hedgerow (h2a6)	
	Indicator	Condition
A1	Height >1.5m average along length	TRUE
A2	Width >1.5m average along length	TRUE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	FALSE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	TRUE
C2	Undesirable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	TRUE
D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	TRUE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	N/A
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.	N/A
Group A Score:		2
Group B Score:		1
Group C Score:		2
Group D Score		2
Group E Score:		N/A
No. of failures:		1
Number of functional groups where both attributes failed:		0
Condition		Good

Habitat Ref.	H27	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Native hedgerow (h2a6)	
	Indicator	Condition
A1	Height >1.5m average along length	TRUE
A2	Width >1.5m average along length	TRUE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	TRUE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	TRUE
C2	Undesirable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	TRUE
D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	TRUE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	N/A
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.	N/A
Group A Score:		2
Group B Score:		2
Group C Score:		2
Group D Score		2
Group E Score:		N/A
No. of failures:		0
Number of functional groups where both attributes failed:		0
Condition		Good

Habitat Ref.	H28	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Species-rich native hedgerow (h2a5)	
	Indicator	Condition
A1	Height >1.5m average along length	TRUE
A2	Width >1.5m average along length	TRUE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	TRUE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	TRUE
C2	Undesirable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	TRUE
D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	TRUE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	N/A
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.	N/A
Group A Score:		2
Group B Score:		2
Group C Score:		2
Group D Score		2
Group E Score:		N/A
No. of failures:		0
Number of functional groups where both attributes failed:		0
Condition		Good

Appendix 5 Post-Development Created Habitat Target Condition

Habitat Ref.	11	
Broad Habitat.	Urban (N/A)	
Habitat Type	Urban Tree (32)	
Justification	Trees will be planted within areas of amenity and semi-natural open space as well as within the developed area. Trees within the semi-natural open space comprise native species, while those proposed in the amenity open space and developed areas are primarily cultivars. As the trees will be newly planted, they will not achieve mature or veteran status in the 'time to target condition' (27 years). It is anticipated that trees will be subject to a management regime (set out in the Landscape and Ecological Management Plan) that will maintain trees in good health and won't require regular pruning that removes more than 75% of the expected canopy for the age range and height of the tree. All trees are positioned to predominantly oversail vegetation beneath.	
	Indicator	Condition
1	The tree is a native species (or more than 70% within the block are native species).	TRUE/FALSE
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	TRUE
3	The tree is mature ² or veteran ³ (or more than 50% within the block are mature ² or veteran ³).	FALSE
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	TRUE
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	FALSE
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	TRUE
Total Score		3-4
Condition		Moderate

Habitat Ref.	4	
Broad Habitat	Heathland and shrub (h)	
Habitat Type	Mixed scrub (h3h)	
Justification	The mixed scrub will be planted with a range of native species including field maple <i>Acer campestre</i> , downy birch <i>Carpinus betulus</i> , hazel <i>Corylus avellana</i> , hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , dog rose <i>Rosa canina</i> and guelder rose <i>Viburnum opulus</i> . Therefore it is anticipated that no one species will comprise more than 75% cover. Given the location of the proposed mixed scrub in relatively small areas within the built environment it will not be possible to provide a significant graded edge or create clearings, glades or rides within the scrub. The scrub will be planted in one phase and will require some regular management due to its location, therefore it is unlikely to develop a good age range. However it is anticipated that the scrub can be managed to ensure no invasive non-native plant species are present.	
	Indicator	Condition
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	TRUE

2	There is a good age range - all of the following are present: seedlings, young shrubs and mature shrubs	FALSE
3	There is an absence of invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) and species indicative of sub-optimal condition make up less than 5% of ground cover.	TRUE
4	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	FALSE
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.	FALSE
Total Score		2
Condition		Poor

Habitat Ref.	10		
Broad Habitat	Woodland and forest (w)		
Habitat Type	Other woodland; mixed (w1h)		
Justification	The woodland will be planted with a diverse range of native tree species including field maple <i>Acer campestre</i> , downy birch <i>Betula pubescens</i> , hazel <i>Corylus avellana</i> , hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , crab apple <i>Malus sylvestris</i> , wild cherry <i>Prunus avium</i> and goat willow <i>Salix caprea</i> . As the woodland is less than 10 hectares no temporary open space is proposed.		
	Woodland will be newly planted and therefore it is not possible for multiple age classes to have established within the ‘time to target condition’ for moderate condition (15 years) and there will be no veteran trees present. It has also been assumed that naturally occurring deadwood will be limited in this timeframe. The vertical structure is considered likely to comprise a shrub layer and upper layer only and that saplings and seedlings would likely be present in this timeframe. Although a diverse ground flora will be established as part of the woodland flora, it cannot be assumed that a recognisable NVC plant community will establish.		
	It has been conservatively assumed that there may be some browsing damage that cannot be controlled as the nature of the woodland would not allow the level of exclusion measures required to guarantee there is no browsing, however, given the urban nature of the surroundings it is not considered that browsing pressure would be significant. The location		
	It is anticipated that the management regimen put in place under the Landscape and Ecological Management Plan will ensure invasive species are regularly and proactively removed from the woodland if they occur. It is also anticipated that proactive management will reduce the risk of pests and disease, however, as this cannot be ruled out it is assumed that low risk pests may be present and there may be some crown dieback in future.		
	Indicator	Condition	Score
1	Age distribution of trees	One age-class present.	1
2	Wild, domestic and feral herbivore damage	Evidence of significant browsing pressure is present in 40% or less of whole woodland.	2
3	Invasive plant species	No invasive species present in woodland.	3
4	Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	3
5	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	3
6	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.	3
7	Woodland regeneration	One or two classes only present in woodland.	2
8	Tree health	11% to 25% mortality and/or crown dieback or low-risk pest or disease present..	2

9	Vegetation and ground flora	No recognisable woodland NVC plant community at ground layer present.	1
10	Woodland vertical structure	Two storeys across all survey plots.	2
11	Veteran trees	No veteran trees present in woodland.	1
12	Amount of deadwood	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	1
13	Woodland disturbance	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground.	2
Total Score			26
Condition			Moderate

Habitat Ref.	8		
Broad Habitat	Urban (N/A)		
Habitat Type	Sustainable drainage system (SuDS) (848)		
Justification	The SUDS has been designed to incorporate a range of vegetation structures including native shrub planting, tussocky grassland, wetland meadow and marginal planting. These habitats will be planted with a range of native species including wet tolerant shrub planting dogwood <i>Cornus sanguinea</i> , hazel <i>Corylus avellana</i> , hawthorn <i>Crataegus monogyna</i> , alder buckthorn <i>Frangula alnus</i> , goat willow <i>Salix cinerea</i> and guelder-rose <i>Viburnum opulus</i> , marginal planting marsh marigold <i>Caltha palustris</i> , male fern <i>Dryopteris filix-mas</i> , meadowsweet <i>Filipendula ulmaria</i> , yellow flag iris <i>Iris pseudacorus</i> and soft rush <i>Juncus effusus</i> and a native wetland meadow mix for the base of the basins. These will all be beneficial to wildlife. While the wetland scrapes within the SUDS are likely to be wet throughout the year, the remainder of the SUDS will be dry. It is anticipated that the management regimen set out in the Landscape and Ecological Management Plan will ensure that invasive species do not colonise the area.		
	Indicator		Condition
Core Criteria - must be assessed for all urban habitat types			
1	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.		TRUE
2	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.		TRUE
3	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area.		TRUE
	Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).		TRUE
Additional Criterion - must be assessed for Open mosaic on previously developed land only			
4a	The parcel shows spatial variation and forms a mosaic of at least four early successional communities (a) to (h) PLUS bare substrate. (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland.		N/A
Additional Criterion - must be assessed for Bioswale and SUDS habitat types only			
4b	The water table is at or near the surface throughout the year. This could be open water or saturation of soil at the surface.		FALSE
Additional Criterion - must be assessed for green roof habitat types			
4c1	The roof has a minimum of 50% native and non-native wildflowers. 70% of the roof area is soil and vegetation (including water features).		N/A

4c2	The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers.	N/A
Total Score		3
Criteria Assessed		5
All Essential Criteria Met?		Yes
Condition		Moderate

Habitat Ref.	2, 3	
Broad Habitat	Grassland (g)	
Habitat Type	Other neutral grassland (g3c)	
Description	The other neutral grassland will be planted with a diverse seed mix) giving it a composition that would fall under this UKHab classification, however, given it's location and management it is unlikely to be an optimal example. The grassland is likely to require regular management which will likely ensure there are no significant areas of bare ground or encroachment of bracken, scrub or invasive species, however, it may also impact the diversity of species that can be achieved and restrict how variable the sward height can be.	
	Indicator	Condition
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for non-acid grassland types.	FALSE
2	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.	FALSE
3	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	TRUE
4	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	TRUE
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition ¹ 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.	TRUE
Additional Criterion - must be assessed for all non-acid grassland types.		
6	There are greater than 9 species per metre squared. NB - This criterion is essential for achieving good condition (non-acid grassland types only). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	FALSE
Total Score		3
All Essential Criteria Met?		No
Additional Criteria Met?		No
Condition		Poor

Habitat Ref.	1	
Broad Habitat	Grassland (g)	
Habitat Type	Modified grassland (g4)	
Justification	The modified grassland will seeded with a native seed mix (Emorsgate EL1 Flowering Lawn Mixture) and will be subject to intensive management in accordance with the Landscape and Ecological Management Plan. While this means that there will be no encroachment of scrub, bracken or invasive species and physical damage will be minimised, there will be limited opportunity to develop a varied sward height and it is considered likely that the sward diversity may not be high enough to achieve 6-8 vascular species per metre squared.	
	Indicator	Condition
A	There are 6-8 vascular plant species per m ² 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 m ² , 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.	FALSE
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	FALSE
C	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	TRUE
D	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	TRUE
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	TRUE
F	Cover of bracken less than 20%.	TRUE
G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).	TRUE
Total Score		5
All Essential Criteria Met?		No
Condition		Poor

Habitat Ref.	7
Broad Habitat	Urban
Habitat Type	Rain garden (850)
Justification	Although a variety of planting in rain gardens is proposed including trees, shrubs, forbs, ferns and grasses, in some cases one of these options may account for more than 80% of the total habitat area, so it has been conservatively assumed it will not meet this criteria.

	Indicator	Condition
Core Criteria - must be assessed for all urban habitat types		
1	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	FALSE
2	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	FALSE
3	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area.	TRUE
	Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	TRUE
Additional Criterion - must be assessed for Open moasic on previously developed land only		
4a	The parcel shows spatial variation and forms a mosaic of at least four early successional communities (a) to (h) PLUS bare substrate. (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland.	N/A
Additional Criterion - must be assessed for Bioswale and SUDS habitat types only		
4b	The water table is at or near the surface throughout the year. This could be open water or saturaton of soil at the surface.	N/A
Additional Criterion - must be assessed for green roof habitat types		
4c1	The roof has a minimum of 50% native and non-native wildflowers. 70% of the roof area is soil and vegetation (including water features).	N/A
4c2	The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers.	N/A
Total Score		1
Criteria Assessed		4
All Essential Criteria Met?		Yes
Condition		Poor

Appendix 6 Post-Development Created Hedgerow Habitats Target Condition

Habitat Ref.	H28, H57	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Species-rich native hedgerow (h2a5)	
Justification	Hedgerows within the Public Open Space will be allowed to develop to a height and width of at least 1.5 metres and will be subject to a management regime that ensures canopy continuity and a suitable gap at the hedge base, as well as ensuring that nutrient enrichment is minimised, there is no significant encroachment of invasive and neophyte species and that hedgerows are protected from damage caused by humans. Given the locations of these hedgerows with the Public Open Space, it is reasonable to assume a margin of at least 1m of undisturbed ground will be maintained at the base.	
	Indicator	Condition
A1	Height >1.5m average along length	TRUE
A2	Width >1.5m average along length	TRUE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	TRUE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	TRUE
C2	Undesirable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	TRUE
D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	TRUE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	N/A
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.	N/A
Group A Score:		2
Group B Score:		2

Group C Score:	2
Group D Score	2
Group E Score:	N/A
No. of failures:	0
Number of functional groups where both attributes failed:	0
Condition	Good

Habitat Ref.	H26, HR10_1	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Species-rich native hedgerow with trees (h2a5)	
Justification	Hedgerows within the Public Open Space will be allowed to develop to a height and width of at least 1.5 metres and will be subject to a management regime that ensures canopy continuity and a suitable gap at the hedge base, as well as ensuring that nutrient enrichment is minimised, there is no significant encroachment of invasive and neophyte species and that hedgerows are protected from damage caused by humans. Given the locations of these hedgerows with the Public Open Space, it is reasonable to assume a margin of at least 1m of undisturbed ground will be maintained at the base. As trees will be newly planted they are unlikely to reach maturity in the 'time to target condition' however the management regime will ensure that tree health is maintained.	
	Indicator	Condition
A1	Height >1.5m average along length	TRUE
A2	Width >1.5m average along length	TRUE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	TRUE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	TRUE
C2	Undesireable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte speies	TRUE
D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	TRUE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	FALSE

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.	TRUE
Group A Score:		2
Group B Score:		2
Group C Score:		2
Group D Score:		2
Group E Score:		1
No. of failures:		1
Number of functional groups where both attributes failed:		0
Condition		Good

Habitat Ref.	H10-24,h10-25,h10-26	
Broad Habitat	Hedgerows and lines of trees (h)	
Habitat Type	Native hedgerow (h2a6)	
Justification	Native hedgerows are proposed along the edge of car parks in the developed area, due to their location and purpose they are likely to be box cut to a low height and width and will have 'developed land; sealed surface' within 1 metre of their base, potentially on both sides (so this criteria as been conservatively failed). The hedgerows will be subject to will be subject to a management regime that ensures canopy continuity and a suitable gap at the hedge base, as well as ensuring that nutrient enrichment is minimised, there is no significant encroachment of invasive and neophyte species and that hedgerows are protected from damage caused by humans.	
	Indicator	Condition
A1	Height >1.5m average along length	FALSE
A2	Width >1.5m average along length	FALSE
B1	Gap - Hedge Base Gap between ground and base of canopy <0.5m for >90% of length (unless line of trees)	TRUE
B2	Gap - Hedge Canopy Continuity Gaps make up <10% of total length, and no canopy gaps > 5m	TRUE
C1	Undisturbed Ground and Perennial Vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on at least one side of the hedge	FALSE
C2	Undesirable Perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	TRUE
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	TRUE

D2	Current Damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	FALSE
Applicable to Hedgerows with Trees only		
E1	Tree Age At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	N/A
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.	N/A
Group A Score:		0
Group B Score:		2
Group C Score:		1
Group D Score		1
Group E Score:		N/A
No. of failures:		4
Number of functional groups where both attributes failed:		1
Condition		Moderate