



BNG Habitat Management & Monitoring Plan

**Barton Peveril College
External Works**

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Report	Biodiversity Net Gain Assessment & Habitat Management and Monitoring Plan
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Client	Bidwells
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1.0 INTRODUCTION

1.1 Background

Ecosupport Ltd were commissioned by Bidwells to undertake a Biodiversity Net Gain Assessment for a site called 'Barton Peveril College' in Eastleigh.

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

This report has been prepared by Assistant Ecologist Grace Roberts MSci (Hons).

1.2 Site Location and Description

The site comprises of an access road, pavements and associated hedgerow. The site is located at Barton Peveril College, Chestnut Ave, Eastleigh, SO50 5ZA (centered on OS grid reference SU 44543 18277) (**Fig 1**). The immediate wider environ is predominantly urbanised with residential houses located to the north and west, Chestnut Ave to the south and the surrounding college to the west.

Figure 1. Approximate site boundary (redline) (Google Satellite, 2024).



1.3 Development Proposals

It is understood that the proposals entail the removal of hedgerow to create new parking along the service road at Barton Peveril College (**Fig 2**).

Figure 2. Proposed site layout (Stride Treglown 2024).



2.0 METHODOLOGY

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

2.1 Habitat Assessment

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Statutory Biodiversity Metric calculation.

A condition assessment, in line with the Statutory Biodiversity Metric Condition Assessment Supplement, was carried out on the site on 7th June 2023. The area of identified habitats is calculated in hectares (ha), ignoring linear features or ditches (the area is measured to the centre line of such features). The length of linear features is measured separately in kilometres (km). The dominant habitat type was selected, according to those defined by UKHab Ltd (2023). Where there was disparity between the UK classification for habitat type and those present within the Statutory Biodiversity Metric calculator tool, this was noted within the condition assessment tables.

2.2 Habitat Distinctiveness

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

2.3 Habitat Condition

The condition of each habitat was assessed following criteria set out in the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024), which includes detailed assessment criteria for different habitats. Assistant Ecologist Grace Roberts MSci (Hons) undertook the survey on the 19th June 2024, to undertake a condition assessment of the habitats present on site. Full results of the condition assessments can be found below. The condition of each habitat was assessed individually on site.

2.4 Limitations

It is not considered there were any limitations at the time of any of the survey. The walkover was undertaken at a suitable time of year for identifying botanical species and all surveys followed the relevant best practice guidelines, with all areas of the site accessible. This survey does not constitute a full site assessment for invasive species, such as Japanese Knotweed (*Fallopia japonica*).

NB: The details of this report will remain valid for a period of 18 months (i.e. until December 2025). Beyond this period, if works have not yet been undertaken, it is recommended that a review of the validity of the conclusions are undertaken. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the development layout which this report was based upon.

3.0 EXISTING HABITATS AND DEVELOPMENT PROPOSALS

Sections 3.1 & 3.2 provides tables outlining the Condition Assessment undertaken with reference to the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024). For these assessments, the current habitats on site were categorised according to UK Hab (2023) classifications.

3.1 Baseline Non-linear Habitats

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

- Developed land; sealed surface (u1b) (**Fig 3**)

Figure 3. Developed Land; Sealed Surface present over the whole site.



NB. Developed land; sealed surface does not require a condition assessment as it has a predetermined condition of 'Condition Assessment N/A' under current guidance within the statutory metric.

3.2 Baseline Linear Habitats

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

- Non-native and Ornamental Hedgerow (h2b) (**Fig 4**)

Figure 4. Non-native and Ornamental Hedgerow proposed for removal.



NB. Non-native & Ornamental Hedgerow does not require a condition assessment as it has a predetermined condition of 'Poor' and a distinctiveness of 'Very Low' under current guidance within The Statutory Biodiversity Metric.

4.0 PROPOSED CREATED HABITATS & NET GAIN ASSESSMENT

4.1 On Site

Following a consultation with Bidwells, in order to achieve a 10% gain on-site, the following habitats are being enhanced, and created as set out within **Sections 4.1.1 & 4.1.2** (please refer to the landscape areas plan appended for information on the locations of these habitats on site). Tables have been provided as appropriate to indicate the targeted condition for each of the habitat types and which criteria will need to be met in order to achieve the desired condition within **Section 4.1.3**.

4.1.1 Non-Linear Habitats

Habitat Creation

- New areas of Developed Land; Sealed Surface will be created throughout the site; however, these have a predetermined condition of 'N/A – Other', and 'Condition Assessment N/A' under current guidance within the Statutory Metric. These habitats have a pre-determined distinctiveness of 'Very Low'.

4.1.2 Linear Habitats

Habitat Creation

- Native Hedgerow – 0.007km of 'Poor' condition to be created on the eastern boundary to compensate for the loss of 0.01km of non-native and ornamental hedgerow.

4.1.3 Post Development Condition Assessments

The following table (**Table 1**) outlines the condition assessments for the created and enhanced non-linear and linear habitats proposed, post-development.

Table 1. Linear habitats to be created on site including details as to the condition assessment criteria that must be met in order to achieve the targeted condition (the necessary planting and management required to achieve the stated condition criteria is detailed in **Section 5.0**).

Habitat Type	Action	Length (km)	Target Condition	Condition Assessment Notes	Parcel Reference - Location Notes
Native Hedgerow	Created	0.007	Poor	Native hedgerow will be created targeting poor condition in line with the Statutory Biodiversity Metric Condition Assessments (DEFRA, 2024). Although the target condition aim is listed as poor, higher criteria will be aimed to be met and Criterion B1, B2, C2, and D1 will be targeted for achievement.	Along the eastern boundary

4.2 Metric Calculations

Following the incorporation of the above measures into the Statutory Defra metric, **on site there is no net loss of habitat units** and **a net gain of +18.47% hedgerow units**, and **the trading rules are satisfied** (see Fig 5 below).

Figure 5. Screenshot of the 'headline results' output from the BNG assessment undertaken for the site using the Defra Statutory metric following the off-site incorporation.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.00%
	Hedgerow units	18.47%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

NB. Since there are no non-linear habitat types identified which are of value pre development, there is no net loss in habitat units.

5.0 HABITAT MANAGEMENT

5.1 Protection of Retained Habitats

To ensure the existing hedgerow to be retained will be protected from damage during the works, this will be identified to be blocked off. It is recommended that Heras fencing or similar is used to prevent access by machinery. If this is not possible due to the limited space in the works area, the hedgerow will be identified with caution tape or a similar barrier with all workers briefed prior to commencement that this is to be retained. As this retained habitat is of limited value and not well-connected it is not considered more significant measures are required for protection.

5.2 Native Hedgerow

5.2.1 Proposed Planting

One native hedgerow will be planted along the eastern boundary to ensure the site results in a net gain in hedgerow units. Species to be considered comprise of:

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

5.2.2 Management

To enable a successful outcome, the hedgerow will require ongoing management works. The more favourable approach to managing hedgerows for the benefits of wildlife is to encourage minimal interference and ensure when there is any cutting, it does so after autumn fruiting (so late winter is preferable). However, as the target condition is poor, no specific management targets are required.

Where possible, the key points of the management prescriptions will be as follows (adopting recommendations as outlined within Bright and MacPherson 2002):

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

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

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

5.2.3 Monitoring & Replacement

Annual monitoring will take place during the compliance checks, as detailed below. This will be carried out by a suitably experienced ecologist during late winter – early spring of each year. These monitoring visits will assess the general health of the hedges and recommend potential remedial actions. Any plants that are removed, die or become seriously damaged or defective during the 10-year monitoring period of planting shall be replaced like for like in the next planting season.

5.3 Compliance Check

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

As only poor condition habitat is being targeted, it is not considered a detailed BNG monitoring report or condition assessment is required as target conditions are not required to be met for this habitat. However, a brief BNG monitoring report will be compiled at each monitoring visits and include:

- Assessment of habitats against the objectives defined in this management plan
- Date stamped photographic evidence
- Any specific recommendations on management actions to promote growth and establishment of target habitats
- Each BNG monitoring report will be sent to the LPA

5.4 Safeguarding

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

5.5 Post-Construction Habitat Creation

Table 2 below depicts the indicative timings associated with the habitat creation and enhancements to be undertaken after all construction works on site have been completed. This is considered to be year 1 of the management plan. For those activities that can be undertaken at any time of year, the earliest possible time is recommended. Each area will be created at different times due to the phased nature of the project.

5.6 Management Responsibilities

Barton Peveril College will assume responsibility for the management and maintenance of the newly created and enhanced habitats. When required, responsibility will include ensuring all management works are completed and qualified ecologists, arborists or landscape managers are contracted, etc. An annual management timeline of all habitats has been provided in **Table 3** and management works should continue in perpetuity.

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

- A suitably qualified ecologist will visit the site to conduct the compliance check (detailed in **Section 5.3**).
- The compliance check will include the write up and submission of a BNG monitoring report
- The ecologist will review the success for BNG that the previous recommendations or management actions have for the target species / habitats
- The project manager is contacted by the ecologist and is informed of the recommendations or management actions which have not been fulfilled to identify what or who is responsible
- The BNG monitoring report will include a section addressing any raised issues identified during the compliance check
- The BNG monitoring report is submitted to the LPA for review and comment

Table 2. Schedule of habitat retention, enhancement and creation works to be carried out in the first year (as per **Sections 4.0 and 5.0**).

General Activity	Specific Activity	Dates / Timing	Description
Habitat retention Non-native and ornamental hedgerow (Section 5.1)	Installation of fence or caution tape	Anytime – pre-commencement of works	Protective fencing or caution barrier tape will be installed around the retained non-native and ornamental hedgerow to ensure it is not damaged during the works
Habitat creation Native Hedgerow (Section 5.2)	Planting	Late Autumn ideally, in suitable weather	Native species will be planted (with species recommendations in Section 5.2).
	Year 1 Management – Hedgerow	Winter i.e. October - February (outside of bird nesting season)	- Begin 3 year cutting cycle in which a portion of the hedges on site are cut in the first year, another portion in the second year and no cutting in the third year. - Use hand tools and avoid the use of flails. - Weed around newly planted hedge as necessary. - Water whenever necessary during the first growing season. - Replace any dead plants like-for-like.

5.7 Years 2 – 30 Management / Monitoring Table

Once the initial works covering the first year of management / monitoring have been completed as outlined in **Table 2**, the longer-term management objectives for the ecological features on site will need to be implemented (which have been outlined in detail in the above sections). **Table 3** below provides an overview of the actions required and the timings of when they should be complete (covering years 2– 30 post construction).

Table 3. Schedule of monitoring and management in Years 2 – 30 for all habitats (as per **Sections 4.0 and 5.0**).

General Activity	Specific Activity	Dates / Timing	Description
Native Hedgerow (Section 5.2)	Yearly monitoring	Anytime	Annual monitoring will take place of the newly enhanced native hedge areas for the first 5 years
	Replacement planting	Late Autumn ideally, in suitable weather	Any plants that are removed, die or become seriously damaged or defective during the 30-year monitoring period of planting shall be replaced like for like in the next planting season.
	Management (Recommended to maintain in healthy condition)	Hedgerow trimming regime	- Cutting should be done on a 3-year cycle (part of the hedges on site cut during the first year, another part of the hedges cut during second year and no cutting during the third year). - Hedgerows / scrub should be allowed to develop into a tall, dense, bushy structures and ideally maintained at an ideal height of 3 –4 metres, but a minimum of 2m - Not all hedgerows should be cut in any one year, so some heavy fruiting hedges are always present.
Compliance Check (Section 5.3)	Monitoring report	Annually for the first 5 years, then every 5 years until year 30 Must be conducted during a suitable time of year and weather conditions	- A report will be produced by an ecologist to provide details on all management, assessment of habitats, additional management requirements (if required), management to be carried out in the next phase and reporting on any delays - Each report will be sent to the LPA

6.0 REFERENCES

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

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

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



Legend

 Site Boundary

 u1b - Developed Land; Sealed Surface

 Non-native and Ornamental Hedgerow

K4 Keppel, Daedalus Park
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Map	Pre Development Map
Site	External Works, BPC
Client	Bidwells
Date	25/06/2024

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Legend

— Site Boundary

■ u1b - Developed Land; Sealed Surface

- - - Non-native and Ornamental Hedgerow

- - - Native Hedgerow

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Map	Post Development Map
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Site	External Works, BPC
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Client	Bidwells
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Date	25/06/2024
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