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**Biodiversity Net Gain
Assessment, Monitoring
and Management Plan**

Brighstone, Botley Road, Horton
Heath

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Client:

Alderbury Homes Ltd

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Report	Biodiversity Net Gain Assessment, Monitoring and Management Plan
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1.0 INTRODUCTION

1.1 Background

Ecosupport Ltd. were commissioned by Alderbury Homes Ltd to undertake a Biodiversity Net Gain Assessment at Brighstone, Botley Road, Horton Heath.

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 Project Ecologist Darla Brown BSc (Hons).

This report should be read in conjunction with the submitted PEA report (Ecosupport 2023).

1.2 Site Location and Description

The site comprises of a bungalow (Brighstone), a large garage, three sheds, a greenhouse and associated garden and drive located off Botley Road, Horton Heath, Hampshire, SO50 7DQ (centred on OS grid reference SU 49551 16625) (**Fig 1**). The immediate wider environment is predominantly sub-urban with agricultural fields to the south and woodland parcels to the east. Additionally, the village of Horton Heath located to the north of the site.

Figure 1. Google aerial image of the site with approximate redline boundary (Google Earth 2023).



1.3 Development Proposals

The proposals involve the demolition of all buildings on site to make room for five residential dwellings with associated landscaping and access (**Fig 2**).

Figure 2. Plan of the proposed new development (GRK Architecture, Drawing Ref 20/001/100, April 2023).

2.0 METHODOLOGY

The methodology for the assessment follows the Natural England Biodiversity Metric 4.0 habitat condition assessment protocols and uses the Biodiversity Metric 4.0 calculation tool to calculate biodiversity losses and gains (Natural England, 2022).

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 1.1 (UKHab Ltd., 2020). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 4.0 calculation. The habitat definitions used were based on those identified during the PEA (Ecosupport, 2023). The PEA should be referred to for information on UKHab habitat classifications on site and plant species recorded.

A condition assessment, in line with the Biodiversity Metric 4.0 Technical Supplement, was carried out on site on the 20th February 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 (2020). Where there was disparity between the UK classification for habitat type and those present within the Biodiversity Metric 4.0 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 Biodiversity Metric 4.0 calculator tool and Technical Supplement (Natural England, 2022). 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 Biodiversity Metric 4.0 Technical Supplement (Natural England, 2022), which includes detailed assessment criteria for different habitats. Full results of the condition assessments can be found within **Section 3.0**. The condition of each habitat was assessed individually on site, but was found to be the same for each type across the site. Therefore, the results of the habitat condition for each habitat are grouped together for each habitat.

2.4 Limitations

There were not considered to be any significant limitations on the results of the habitat survey with all areas of the site accessible. Despite the survey being conducted outside of the optimal season for vascular flowering plants, given the nature of the habitat types present and the species recorded this is not considered to have affected the accuracy of the site's valuation.

3.0 EXISTING HABITATS AND DEVELOPMENT PROPOSALS

Information on the existing habitats was initially provided by Ecosupport's 'Preliminary Ecological Appraisal of Brighstone, Botley Road, Horton Heath' which covered the entire site. The following habitats were found within the site itself at that time (according to UKHab habitat types):

- Built-up Areas & Gardens (u1), with vegetated garden (secondary code: 230), scattered trees (secondary code: 11), introduced shrub (secondary code: 1160), and ruderal / ephemeral (secondary code: 17)
- Hedgerow (h2b)
- Developed land; sealed surface (u1b), with introduced shrub (secondary code: 1160)
- Buildings (u1b5)

The following sections provide the condition assessment undertaken with reference to the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2022).

3.1 Non-linear Habitats

Apart from Hedgerow (h2b), all of the aforementioned habitats in Section 3.0 are non-linear habitats. The habitat types which were not subject to a condition assessment included developed land; sealed surface, buildings, and built-up areas and gardens as they have a predetermined condition of 'N/A – Other' or 'Condition Assessment N/A' under current guidance within Metric 4.0.

3.2 Linear Habitats

Hedgerow (h2b) was the sole linear habitat identified on site, forming the northern and southern site boundary. The following table outline the condition assessment undertaken on the 20th February 2023.

Table 1: Condition assessment of h2b hedgerow.

Map location	Hedgerow (present along the northern and southern)		
Length	0.111km north hedgerow, 0.115km south hedgerow		
Distinctiveness	Low		
UK Hab Habitat Type	h2b – Hedgerow (native)		
Condition	Good condition (score 3): Passes all conditions but D2.		
	Hedgerow favourable condition attributes		
	Attributes and functional groupings (A, B, C, and D)	Criteria (the minimum requirements for 'favourable condition'	Description
	Core groups – applicable to all hedgerow types		
	A1. Height	>1.5m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees.

			Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5m height).
	A2. Width	>1.5m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they are >0.5m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).
	B1. Gap – hedge base	Gap between ground and base of canopy <0.5m for 90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable.
	B2 – Gap – hedge canopy continuity	• Gaps make up <10% of total length and • No canopy gaps >5m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5m criterion (as this is the typical size of a gate).
	C1. Undisturbed ground and perennial vegetation	>1m width of undisturbed ground with perennial vegetation for >90% of length:	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).

		• Measured from outer edge of hedgerow, and • Is present on one side of the hedge (at least)	Access points and gates contribute to the overall gappiness but are not subject to the >5m criterion (as this is the typical size of a gate).
	C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.
	D1. Invasive neophyte species	>90% of the hedgerow is free of invasive non-native and neophyte species.	Neophytes are plants that have naturalised in the UK since AD 1500.
	D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).
Note: Passes are emboldened in Table above. Condition categories for hedgerows with trees: ☒ Good condition (3): No more than 2 failures in total; AND No more than 1 failure in any functional group ☐ Moderate condition (2): No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition) ☐ Poor condition (1): Fails a total of more than 5 attributes; AND Fails both attributes in more than one functional group (e.g. fails attributes A1, A1, B1 & B2 = Poor condition)			

4.0 PROPOSED CREATED HABITATS & NET GAIN ASSESSMENT

4.1 On-site Proposals

Following consultation with Alderbury Homes Ltd, in order to minimise the loss of biodiversity on site, the following habitats are being provided / created (approximate spatial extent shown in the UK Habs map appended):

- Modified Grassland – Small public grassland areas will be planted on site adjacent to the roads and parking plots. It will be seeded with EM1 Basic general purpose Meadow mixture (available from Emorsgate).
 - This seed mixture includes, but is not limited to, Common Bent (*Agrostis capillaris*), Crested Dogstail (*Cynosurus cristatus*), Oxeye Daisy (*Leucanthemum vulgare*), Yarrow (*Achillea millefolium*), Ribwort plantain (*Plantago lanceolata*) and Meadow buttercup (*Ranunculus acris*). For management, the aim should be to achieve a mosaic of sward heights through rotational cutting of different parts of the grassland on a three-year cycle.

This will provide a range of thermal niches which will benefit wildlife in general. Any invasive, scrub or bracken species will be removed, and the areas replanted. Any patches of bare ground should be seeded as outlined above.

- Native Hedgerow – Although the existing native hedgerow is to be retained, new native hedgerow will be created on site adjacent to the new roads and parking plots.
 - These will be planted with species including Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*), Bramble (*Rubus fruticosus*), Spindle (*Euonymus europaeus*), Honeysuckle (*Lonicera periclymenum*) and Dog-rose (*Rosa canina*).

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).

- Urban Trees – 20 trees, categorised as ‘small’ will be planted across the site which was measured at 0.0814ha using the ‘Urban Tree Helper’ within the 4.0 metric
 - Recommended species planting includes Alder (*Alnus glutinosa*), Beech (*Fagus sylvatica*), Blackthorn, Hawthorn, Hazel, Oak, Wild Cherry (*Prunus avium*), Dog Rose (*Rosa canina*), Crab Apple (*Malus sylvestris*), Dog Wood (*Cornus sanguinea*), Elder (*Sambucus nigra*), Field Maple (*Acer campestre*), Guelder Rose (*Viburnum opulus*) and Small-leaved Lime (*Tilia cordata*).

4.1.1 Metric Calculation Conclusion

Following the incorporation of the above measures into the Defra 4.0 metric, **on site there is a net gain of +27.46% in habitats (or +0.13 habitat units), a net gain of +39.99% in hedgerows (or +0.54 hedgerow units), and the trading rules are satisfied (Fig 3)**. Therefore, no additional measures are required in regards to achieving a biodiversity net gain on site.

Figure 3. Screenshot of the 'headline results' output from the BNG assessment undertaken for the site using the Defra 4.0 metric.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.13
	Hedgerow units	0.54
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	27.46%
	Hedgerow units	39.99%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

5.0 HABITAT MANAGEMENT

5.1 Protection of Retained Habitats

All the existing hedgerows and trees that will be retained will be protected from damage during the works. All the site boundaries including the buffers outside the area of impact will be fenced using Heras fencing or similar to prevent access by machinery. Where large mature trees are present, they will be protected using standard arboricultural tree protection measures which include protection of the canopy and prevents root compaction.

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

5.2 Modified Grassland

The areas of modified grassland will be sown with Emorsgate EL1 – Flowering Lawn Mixture. This seed mixture includes but is not limited to Common Knapweed (*Centaurea nigra*), Birdsfoot Trefoil (*Lotus corniculatus*), Ribwort Plantain (*Plantago lanceolata*), Cowslip (*Primula veris*), Meadow Buttercup (*Ranunculus acris*), Tufted Vetch (*Vicia cracca*), Common Bent (*Agrostis capillaris*), Crested Dogstail (*Cynosurus cristatus*) and White Clover (*Trifolium repens*). Further recommended species planting includes Rye grasses (*Lolium* spp.), Timothy (*Phleum pratense*), Yorkshire-fog (*Holcus lanatus*), and Cock's-foot (*Dactylis glomerata*) as well as Dandelion (*Taraxacum officinale*), Creeping Buttercup (*Ranunculus repens*) and Greater Plantain (*Plantago major*). The sowing of the seeds will be completed either during the spring or the autumn when the temperatures are warm, and the ground is dry. The seed must be surface sown at an even distribution throughout the entire grassland area.

During the first year the grassland areas must be regularly maintained to a height of 40-60mm every 3-4 weeks during the growing season to prevent the establishment of weeds. All arisings must be taken from site to prevent the addition of too many nutrients into the soil. If necessary, glyphosate-based weed killer can be used to spot treat any areas with dense patches of Nettles, Bracken or Bramble.

Once the seed is established after the first year, a management regime will be adopted to allow the flowering of herbaceous species to provide maximum benefit to local wildlife. Mowing is to be relaxed from late June for 4 – 8 weeks. However, regular mowing is expected within this habitat area which will cause sward height structure to vary throughout the management periods, cutting no lower than 25-40mm. All arisings should be collected and moved from the site.

5.3 Individual (Urban) Trees

Recommended species planting includes Field Maple (*Acer campestre*), European Hornbeam (*Carpinus betulus*), Hawthorn (*Crataegus monogyna*), Small-Leaved Lime (*Tilia cordata*) and Rowan (*Sorbus aucuparia*). These trees will require additional management to ensure that they remain in

good condition and develop correctly. Weeding will be undertaken around the base of the trees in all years. Wood chips or raked hay can be used to suppress weed growth, if desired, if deposited around the base of the scattered trees as mulch. Trees that are fruiting will not be cut to ensure the formation of fruiting bodies.

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

Years 1-2: The newly planted trees will be inspected annually to assess their condition. These monitoring visits will assess the general health of the trees and determine if any remedial action is required. Any plants that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season.

Years 3-5: The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms. Dead or diseased trees will be replaced as outlined in Years 1 and 2.

5.4 Native Hedgerow

5.4.1 Planting and Management

Recommended species planting for the proposed created hedgerows includes a mix of shrub and tree species such as Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Hazel (*Corylus avellana*), Field Maple (*Acer campestre*), Ash (*Fraxinus excelsior*), Dog Rose (*Rosa canina*) and Holly (*Ilex aquifolium*) interwoven with climbers including Traveller's-joy (*Clematis vitalba*) and Honeysuckle (*Lonicera periclymenum*).

To maintain the required hedgerow structure and maximise benefit for local wildlife, the following management prescriptions will be employed (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.
- A proportion of hedges (at least 30%) should be left to grow for at least 7 – 10 years.
- 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.

All arisings from the management must be taken from site to prevent the addition of too many nutrients into the soil. Targeted removal of invasive and undesirable species can also be conducted as needed and, if necessary, glyphosate-based weed killer can be used to spot treat any areas adjacent to the hedgerow with dense patches of Nettles or Bramble.

5.4.2 Monitoring

Annual monitoring will take place of the newly planted hedgerows for the first 3 years, with bi-annual monitoring between 4-10 years. The existing hedgerows / tree lines will be monitored during the first, third and fifth year. 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 hedgerows and determine if any remedial action is required (some of which are outlined below such as replacement planting or altering the frequency of cuts).

5.4.3 Remedial Action

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. If hedgerows become very thin, coppicing of selected plants / laying of short lengths of hedgerow may be required and will be beneficial to promote vigorous, dense regrowth. Such works must be undertaken during the period October – February to avoid the breeding bird season.

5.5 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. The compliance check will be carried out during a suitable time of year and in suitable weather conditions. The ecologist will check all biodiversity ecological enhancements set out to assess if they have been completed and make an assessment if any recommended changes are required to management.

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

- Assessment of habitats against the objectives defined in this management plan
- Any presence of target species noted during the compliance check
- Date stamped photographic evidence taken from fixed monitoring points, of which will be the central point of each land parcel per habitat type as listed in **Section 4.0**, during the first compliance check after the construction phase
- Detailed site notes including a condition assessment for each habitat type listed in **Section 4.0** using the condition criteria within the Technical Supplement (Natural England, 2023).
 - The layout for these notes should use the Condition Assessment Proforma (Natural England 2023) (**Figure 4**)
- Detailed specific recommendations on management actions to promote growth and establishment of target species / habitats including timescales for undertaking actions (if required) and marked site plans to show the actions
- Management of the above recommended actions must be carried out in the next phase and report of any details

- Each BNG monitoring report will be sent to the LPA

Figure 4. Condition Assessment Proforma (Natural England 2021) to be used during each compliance check for each habitat type.**ANNEX 2: CONDITION ASSESSMENT PROFORMA**

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 3.0 - AREA BASED HABITATS														
Date					Metric 3.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)									
Weather conditions														
Surveyor name(s)					Unique polygon reference(s)									
Project / development name					Metric 3.0 habitat type									
Site name or location					Condition assessment required? (y/n)									
Onsite or offsite?					Condition sheet used									
Reason for assessment (if not baseline condition survey)														
Limitations (if applicable)														
Habitat description														
Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria. For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criterion assessed.														
Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	TOTAL
Result														
Photo ref														
Target note ref														
Are any criteria non-negotiable? (Y/N) If Yes are they passed?							Condition (Good/Moderate/Poor):							
Suggested enhancement interventions to improve condition score														

5.6 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.

5.7 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.

5.8 Management Responsibilities

Alderbury Homes 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. Upon the transfer of land, the new landlords shall bear responsibility for the management and maintenance of habitats within their curtilage. All management works as described above will need to be secured by a Section 106 agreement for the site that will legally oblige Alderbury Homes or other agreed party to carry out the works. 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 5.5**).
- 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 first year (as per **Sections 4.0 and 5.0**).

General Activity	Specific Activity	Dates / Timing	Description
Habitat retention Native Hedgerow (Sections 4.1 & 5.1)	Installation of post and rail fence for protection	Anytime	Post and rail fences will be installed around the boundary hedgerows to prevent public access and to prevent them from damage during works.
	Year 1 Monitoring	Anytime	Annual monitoring will take place of the newly planted hedgerow for the first 3 years
Habitat creation Modified Grassland (Sections 4.1 & 5.2)	Creation of grassland	Ideally Autumn or Spring	The areas of modified grassland will be sown with Emorsgate EL1 – Flowering Lawn Mixture.
	Year 1 Management	July - August	- Annual weeds may be arising from the soil seed bank and by grass growth during the first year. - This should be controlled by mowing to 40-60mm throughout the first year to minimise competition and weed seed production
Habitat creation Individual (urban) trees (Sections 4.1 & 5.3)	Planting	Late Autumn ideally, in suitable weather	- Native tree species will be planted across site. - Rootgrow or Bonemeal will be applied to the new plants to encourage healthy root growth.
	Year 1 Management	Anytime	- The newly planted trees will be inspected to assess their condition and determine if any remedial action is required. - Any plants that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season.
Habitat creation Hedgerows	Creation of hedgerow	Late Autumn ideally, in suitable weather	Hedgerow to be created through planting of native shrub and tree species

(Sections 4.1 & 5.4)	Year 1 Monitoring	Anytime	• Annual monitoring will take place of the newly planted hedgerow for the first 3 years
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5.9 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
Modified Grassland (Sections 4.1 & 5.2)	Regular mowing	Anytime	- Regular mowing is expected within this habitat area which will cause sward height structure to vary throughout the management periods, cutting no lower than 25-40mm - All arisings should be collected and moved from the site.
	Relaxed mowing period	Late June for 4 – 8 weeks	Once the seed is established after the first year, a management regime will be adopted to allow the flowering of herbaceous species to provide maximum benefit to local wildlife.
Individual (urban) trees (Sections 4.1 & 5.3)	Years 1 - 2 Management	Anytime	- The newly planted trees will be inspected annually to assess their condition. These monitoring visits will assess the general health of the trees and determine if any remedial action is required. - Any plants that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season.
	Years 3 – 5 Management	October	- The trees will be subject to light pruning as required to ensure that they are developing healthy growth forms. - Dead or diseased trees will be replaced as outlined in Years 1 and 2.
Hedgerows (Sections 4.1 & 5.4)	Monitoring	Late Winter – early Spring	- The existing hedgerows / tree lines will be monitored during the first, third and fifth year. - The new hedgerow will be monitored annually for the first 3 years and bi-annually between years 4 – 10. - This will be carried out by a suitably experienced ecologist during late winter – early spring of each year.

	Plant removal / planting	Late Autumn ideally, in suitable weather	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.
	Coppicing	October – February	- If hedgerows become very thin, coppicing of selected plants / laying of short lengths of hedgerow may be required and will be beneficial to promote vigorous, dense regrowth. - Such works must be undertaken during the period October – February to avoid the breeding bird season.
	Hedgerow trimming regime	Cutting: 3 year cycle	- 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) - Hedgerows will be allowed to develop into a tall, dense, bushy structures and maintained at a height of 3 – (preferably 4) meters. - A proportion of hedges (at least 30%) should be left to grow for at least 7 – 10 years. - Not all hedgerows should be cut in any one year, so some heavy fruiting hedges are always present.
Compliance Check (Section 5.5)	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

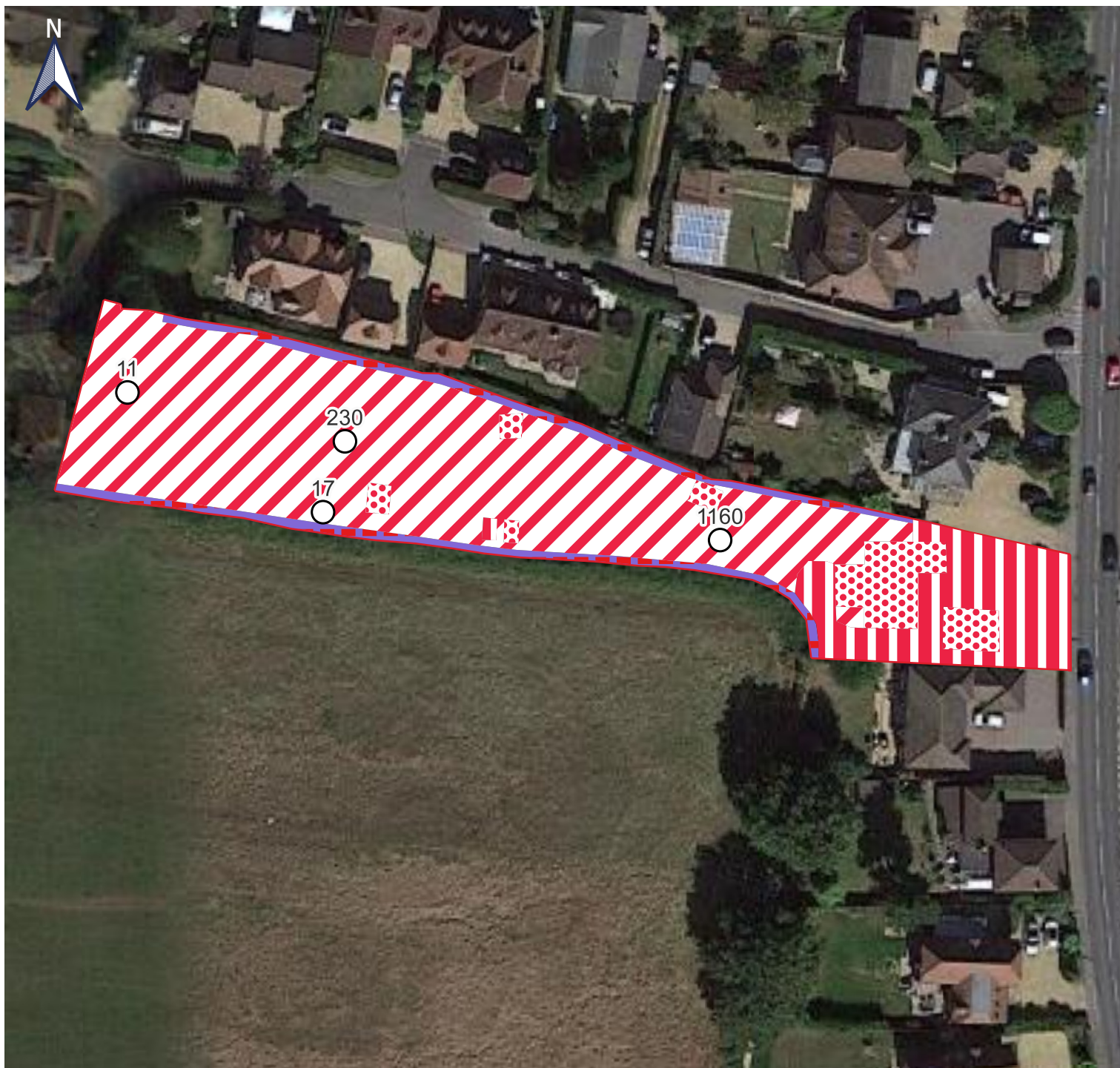
Ecosupport (2023) Preliminary Ecological Assessment. Brighstone, Botley Road, Horton Heath.

Emorsgate Seeds (2021). *EL1 – Flowering Lawn Mixture*. Available at: <https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/flowering-lawn-mixture/>

Natural England (2022). *The Biodiversity Metric 4.0 (JP039)*. Available from: <http://publications.naturalengland.org.uk/publication/6049804846366720>

Panks, S., et al (2022) Biodiversity metric 4.0: Auditing and accounting for biodiversity – User Guide. Natural England

UKHab Ltd. (2020). *UK Habitat Classification – Habitat Definitions Version 1.1* (September 2020).



Legend

— Redline boundary

Other hedgerows (h2b)

Built-up areas and gardens (u1)
 Secondary habitat code:
 11 - Scattered trees
 17 - Ruderal / ephemeral
 230 - Garden
 1160 - Introduced shrub

Buildings (u1b5)

Developed land. sealed surface (u1b)
 Secondary habitat code:
 1160 - Introduced shrub



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Map UK Habs Map

Site Brighstone, Horton Heath

Client Alderbury Homes Ltd

Date 13/06/2023

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Legend

- Redline boundary
- Modified grassland (g4)
- Other hedgerows (h2b)
- Built-up areas and gardens (u1)
- Buildings (u1b5)
- Developed land. sealed surface (u1b)
- Trees (Minimum of 20 - Please refer to GRK Architecture drawing 20/001/100 April 2023)



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Map	UK Habs Map : Post-Development
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Site	Brighstone, Horton Heath
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Client	Alderbury Homes Ltd
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Date	16/06/2023
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