

K4 Keppel
Daedalus Park
Daedalus Drive
Lee on the Solent
PO13 9FX

16th October 2024

Dear Lisa Malter,

RE: Ecology response 10/10/24 for F/23/96629 Land at Fieldfare Road, adjacent to the roundabout with Winchester Road. October 2024.

This letter serves to provide additional information in response to the ecology consultee comments from Eastleigh Borough Council dated 10th October 2024.

Biodiversity Net Gain (BNG)

Baseline Habitats

As stated in 'Boorley Green Ecology Rebuttal March 2024' the baseline habitats on site have been adjusted to the habitats present on site during December 2020 to adopt a precautionary approach and account for the historic baseline and management of this site (as per CIEEM BNG guidance). It is considered the modified grassland that was present on-site prior to the commencement of the surrounding 'Land North West of Boorley Green' development is representative of the condition of the relic grassland on-site.

The following habitats were found on site and categorised according to UK Hab (2023) classifications:

Broad Habitat	Habitat Type	Condition	UK Habs Code	Area (hectares)
Grassland	Modified grassland	Poor	g4	0.663
Urban	Urban Tree (3)	Good	n/a	0.122

For the extent of the habitats on site please refer to **Fig 1** below.



Legend

 Redline boundary

 Individual trees

 Modified grassland (g4)
Secondary code(s):
(100) Grazed



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Map	Pre development UK Habs Map
Site	Land at Boorley Gardens
Client	Halebourne Group
Date	16/10/2024
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Post-development Habitats

The following habitats are proposed to be created on site (see ADG Drawing H2161- ADG- ZZ- XX- DR, September 2024).

Broad Habitat	Habitat Type	Condition	UK Habs Code	Area (hectares)
Grassland	Modified grassland	Poor	g4	0.112
Urban	Developed land; sealed surface	N/A - Other	u1b	0.224
Urban	Buildings	N/A - Other	u1b5	0.166
Grassland	Other neutral grassland	Good	g3c	0.155

For the extent of the habitats on site please refer to **Fig 2** below.



Legend

— Redline boundary

 Trees (Retained)

 Modified Grassland

 Wildflower meadow / species-rich grassland

 Buildings

 Developed Land



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Biodiversity Net Gain (BNG) Results

In accordance with the assessed condition assessment completed of habitats during the walkover, and the proposed site plan produced by ADG Architects (2024), calculations for the net gain to biodiversity completed in the Statutory Biodiversity Metric has **achieved a net gain of +6.56% (or +0.19 habitat units)** with the trading rules satisfied. As there are no linear features on site there is no change to hedgerow units.

Figure 3. Screenshot taken from the Statutory Biodiversity Metric calculation headline results.

On-site baseline	Habitat units	2.94	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	3.13	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	0.19	6.56%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.19	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.19	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	6.56%	
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

Biodiversity Enhancements

Tree / Shrub Planting

As a general enhancement, any new landscape planting will aim for a minimum 70:30 ratio in favour of native species over non-natives and ornamentals (in line with the CIEEM guidance outlined within Smith & Day (2012). Species that can be considered within any planting include: Rowan (*Sorbus aucuparia*), Alder (*Alnus glutinosa*), Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*), Silver Birch (*Betula pendula*), Small-leaved Lime (*Tilia cordata*) and Willow (*Salix* spp.). Non-natives and ornamentals should only be given a bias in formal locations where aesthetics is a priority.

Planting a mixture of flowering plants, trees (including fruit trees) and shrubs encourages a diversity of insects to sustain bats. It is beneficial that the flowers vary in colour (although pale flowers are more easily seen in poor light and so attract insects at dusk), fragrance, shape, amount of nectar and time of flowering. (It is important to provide native flowering plants, shrubs and trees throughout spring, summer and autumn). Flowers with 'landing platforms' for insects increase opportunities for insects and in turn foraging bats and these will be included within marginal habitats where appropriate.

Bat Bricks

It is recommended that the new building should incorporate three bat bricks or suitable alternatives. The bat bricks used should be the ibstock bat brick B as they are available in a variety of different brick colours and require no maintenance (**Fig 4**). These should also be positioned as close to the eaves as possible, away from windows/artificial light and in a position that will receive some direct sunlight.

Figure 4. The Ibstock bat brick 'B' that will be incorporated into the converted derelict buildings.



Bat Boxes

To enhance the site for roosting bats, two Schwegler 2F general purpose bat boxes will be erected on suitable retained trees around the site (**Fig 5**). This bat box is designed as a summer roosting space for crevice-dwelling species such as Pipistrelles. The bat box maintains a stable temperature inside and is painted black to absorb warmth. This box should be erected 3-6m high and in an open, sunny position (preferably facing a southern elevation). Once the works have been completed this box should be left in perpetuity to provide an additional long-term enhancement for local bats.

Figure 5. Schwegler 2F bat box (general purpose)



Bird Bricks

To act as biodiversity enhancement, the new building should include at least three Swift bricks or suitable alternative. The 'CJ Wildlife Swift maxi nesting box' (**Fig 6**) with entrance via a CJ Wildlife 'Cambridge Swift full-face brick' (The Cambridge System is a concept comprising an entrance piece and a nest box embedded in the cavity and inner leaf. It is particularly suited to gable ends at roof-space level). If this model is not suitable for the building specifications, an alternative swift box with internal floor space exceeding 400cm squared must be used. A list of swift boxes can be found on the RSPB website via the following link (<https://www.rspb.org.uk/globalassets/downloads/about-swifts/swift-bricks.pdf>) however it is worth noting that some of these do not have an internal floor space exceeding 400cm squared and are therefore not considered appropriate.

Figure 6. A schematic of how the Cambridge full face Swift brick leads into a cavity created by the prior installation of the Swift maxi nesting box.



Insect Hotels

To provide a further ecological enhancement, two bee homes will be installed onto fence panels within the garden that have a southern facing aspect or within the ancient woodland (**Fig 7**). The homes are made from natural materials and provide a variety of nesting options for attract bees, butterflies, ladybirds and other insects.

Figure 7. Wooden invertebrate house available from Woodside that will be erected onto fence panels around the boundary of the site.



The location of the enhancements can be seen below in **Fig 8**.



Legend

— Redline boundary

 Trees (Retained)

 Modified Grassland

 Wildflower meadow / species-rich grassland

 Buildings

 Developed Land

Enhancements

 Bat bricks (3)

 Bat box (2) - Schwegler 2f

 Swift bricks (3)

 Invertebrate hotel (2)



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Proposed Created Habitats

Following a consultation with Halebourne Group, in order to minimise the loss of biodiversity on site, the following habitats are being provided / created (please refer to the post development plan in **Fig 2** for the extents of these habitats):

Species-rich Grassland

Habitat Creation

0.155ha of species rich grassland is to be created around the boundaries of the site. Recommended grass species for this habitat type may include Perennial Rye-grass (*Lolium perenne*), Common Bent (*Agrostis capillaris*), False Oat-grass (*Arrhenatherum elatius*), Yorkshire-fog (*Holcus lanatus*), Rough Meadow-grass (*Poa trivialis*) and Cock's-foot (*Dactylis glomerata*). Herb planting may include Yarrow (*Achillea millefolium*), Ribwort Plantain (*Plantago lanceolata*), Red Clover (*Trifolium pratense*), Common Knapweed (*Centaurea nigra*), Bird's-foot Trefoil (*Lotus corniculatus*), Common Mouse-ear (*Cerastium fontanum*), Meadow Buttercup (*Ranunculus acris*), Self-heal (*Prunella vulgaris*).

Management

The areas of wildflower grassland on site are to be established through the sowing of a wildflower mixture such as Emorsgate EM4 – Meadow Mixture for Clay Soils or Emorsgate EM6 – Meadow Mixture for Chalk and Limestone Soils.

The below management methods will be followed:

Wildflower areas do not require any additional watering or fertilizer. Cutting a meadow and removing the clippings retains low nutrient levels in the soil and suppresses coarse grasses which would otherwise out-compete the wildflowers. It is recommended the wildflower grassland undergoes two annual cuts. The growth should be cut back to a height of 50-75mm. The cut grass should be dried on site. Cuttings should be left in situ for approximately one week, after this the arisings are to be removed from site.

First year management: Perennial species take at least a full year to establish. For newly sown areas the first summer will be dominated by annual weeds arising from the soil seed bank and by grass growth. This should be controlled by mowing throughout the first year to minimise competition and weed seed production.

Management Once Established: During the second year it is recommended that the wildflower areas are left to flower and will be cut in mid-summer. However, this should not be cut in May or early June due to nesting birds. Mowing in mid-June brings a premature end to the flowers and can compromise nesting birds, which do not fledge until late July, insects and other wildlife. If some mowing has to take place at

this time, sections should be cut at different dates to prolong the overall flowering season and give wildlife a chance to move. The second annual cut should be undertaken during late Autumn.

Grassland which is consistently cut late in the season, in August and September, year on year reduces species diversity as late cutting gives more time for coarse grasses and other dominant plants to grow unchecked. To maintain maximum diversity and flowering interest the buffer should be managed in sections at different times from late June to the end of August. Varying the mowing times from year to year is the best way to maintain a diverse balanced sward.

Modified Grassland

Habitat Creation

The grassland areas directly adjacent to the building 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 Dogtail (*Cynosurus cristatus*) and White Clover (*Trifolium repens*). The species recommended in the section above should also be considered. The sowing of these 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 landscaped area.

Management

During the first year the landscaped 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 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.

Kind regards,

Lewis Lakudzala MRes, ACIEEM

Project Ecologist

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