

Technical Note

T: 07914 928532

E: anna@croftecology.co.uk



Project: Eurospark, Lodge Farm, Stapleton LE9 8JE **Our Reference:** 241020.BNG

To: Mr K Skubala

Date: 18 December 2024

Subject: Biodiversity Net Gain Statement

Prepared by: Anna Scott-Swift MCIEEM

Introduction and methodology

Croft Ecology was commissioned by Mr K Skubala to provide the necessary supporting information on Biodiversity Net Gain for a forthcoming planning application at Eurospark, Lodge Farm, Stapleton LE9 8JE (central grid reference: SK 43018 00633) for a proposed unit and additional parking spaces.

The purpose of this Technical Note is to present the on-site baseline information for the Site that was used as the basis for the Statutory Metric Biodiversity Net Gain (BNG) calculations.

A baseline habitat survey at the site was undertaken on 26 November 2024 and included the following:

- An assessment of the baseline habitats within the red line boundary (including a baseline map to UK Hab) – Appendix A.
- A condition assessment of all on-site habitats – Appendix B.

This data was then used to complete the on-site baseline information of the Statutory Biodiversity Metric and the associated condition assessment sheets. Post-development calculations for on-site habitats were also undertaken and are summarised in the Indicative Biodiversity Gain Plan for Eurospark (Croft Ecology, December 2024) which should be read in conjunction with this Technical Note.

Personnel

The survey and assessment were undertaken by Anna Scott-Swift MCIEEM, Director and Principal Ecologist at Croft Ecology. Anna has over 20 years of experience working in the field of ecology and has undertaken and reviewed dozens of walkover surveys/baseline habitat surveys and has been using UK Hab survey methodology for the last three years.

Survey Date and Conditions

The Site was visited on 26 November 2024 and included land within the red line boundary (see Figure 1).

Weather conditions at the time of the survey were dry with light air, 60% cloud cover, and a temperature of 9°C.



Figure 1. Site boundary (shown in red)

UK Hab Field Survey

A UK Hab¹ Field Survey was undertaken following the methodology described within v2.0 documentation (2023). It was used as the basis for subsequent completion of the Statutory Biodiversity Metric and its associated condition sheets.

A fine-scale minimum mapping unit (of 25m² or 5m) was deemed appropriate for use at the Site given its relatively small scale, consequently, only habitats with an area of 25m² or greater, or linear features 5m in length or greater, were mapped.

The UK Hab uses primary codes whereby habitats are categorised by an increasingly detailed hierarchy until a match is discovered. Secondary codes describe environmental factors that provide additional information such as management regime, hydrology or similar. In this case, each habitat was assigned a Primary Code¹ at the Level 4 hierarchy and secondary codes were applied where these could provide greater context.

During the field survey, all habitats within the Site were thoroughly observed, described, and mapped. A DAFOR abundance (D = dominant, A = abundant, F = frequent, O = occasional, R = rare) was assigned to each botanical species identified in each habitat and nomenclature followed Stace (Stace, 2019).

¹ UKHab Ltd (2023) <https://www.ukhab.org/>

Results

Red line boundary

Parcel Reference: AU1 – Artificial unvegetated, unsealed surface

Running from the main road west to the entrance of Lodge Farm was a bare earth access track with hardcore and small amounts of moss.



Photo 1. Existing access track AU1

Parcel Reference: DL1 – Developed land; sealed surface

This comprised the tarmac car parking areas and access through the centre of the Site as well as a number of modern farm buildings.



Photo 2. Tarmac access through the centre of the Site with buildings on either side



Photo 3. Modern farm building in the centre west of the Site

Parcel Reference: G1 – Modified grassland

In the centre west of the site was a quarter circle of modified grassland sandwiched between existing car parking and a building. The sward height was a uniform 15cm appearing to have been recently mown and with a patch of burnt ground where a recent bonfire had taken place. The grassland was dominated by perennial rye grass *Lolium perenne* with frequent creeping buttercup *Ranunculus repens*, and occasional white clover *Trofolium repens*, daisy *Bellis perennis* and dandelion *Taraxacum officinale* agg.



Photo 4. Modified grassland G1 looking south

The modified grassland was assessed as being in poor condition because it was damaged by a recent bonfire, its sward height was not varied and it averaged only 4 species/m².

Parcel Reference: G2 – Modified grassland

Running along the south of the unvegetated access track AU1 was a 1-2m wide road verge of modified grassland, located between the track and a native hedgerow with tree (H2). This had also been recently mown with a uniform sward height of c.10cm. Again, the grassland was dominated by perennial rye grass with occasional creeping buttercup, white clover and rarely recorded dandelion

and daisy.



Photo 5. Modified grassland G2 looking east

The modified grassland was assessed as being in poor condition because its sward height was not varied and it averaged only 4 species/m².

Parcel Reference: Native hedgerow (H1)

Located along the northern and eastern boundary of modified grassland G1 was a hedgerow that had recently been cut back to c.30cm above ground level. However, 3m of this hedgerow was retained at its northwestern extent and the retained stumps enabled the ecologist to identify the species that were present in the hedgerow. The retained section of the hedgerow was 1.8m high and 1.6m wide. The hedgerow was dominated by hawthorn *Crataegus monogyna* with occasional dog rose *Rosa canina*.

This hedgerow was assessed as being in good condition. It met all of the condition assessment criteria except for lacking a 1m margin of undisturbed ground along 90% of its length (due to the mown G1 and bonfire activity and the car parking area to the rear), and most of the hedgerow was not free of damage caused by human activities as there were many stored items at the base of the hedgerow on the car parking side.



Photo 6. Retained section of H1 in the northwest



Photo 7. Recently removed remainder of H1, looking east

Parcel Reference: Native hedgerow with trees (H2)

Located along the south of the access track AU1 and immediately adjacent to G2 was a native hedgerow with trees, measuring 1.3m high and wide. The hedgerow was dominated by hawthorn with occasional dog rose, blackthorn *Prunus spinosa* and rarely recorded cherry *Prunus sp.*. Ash standards were also present and were all of a similar age. northern and eastern boundary of modified grassland G1 was a hedgerow that had recently been cut back to c.30cm above ground level. However, 3m of this hedgerow was retained at its northwestern extent and the retained stumps enabled the ecologist to identify the species that were present in the hedgerow. The retained section of the hedgerow was 1.8m high and 1.6m wide. The hedgerow was dominated by hawthorn *Crataegus monogyna* with occasional dog rose *Rosa canina*.

This hedgerow was assessed as being in moderate condition. It met many of the condition assessment criteria except for lacking a 1m margin of undisturbed ground along 90% of its length (due to the regularly mown G2), it lacked height and width and whilst the trees appeared in a healthy condition, they were not of differing ages.

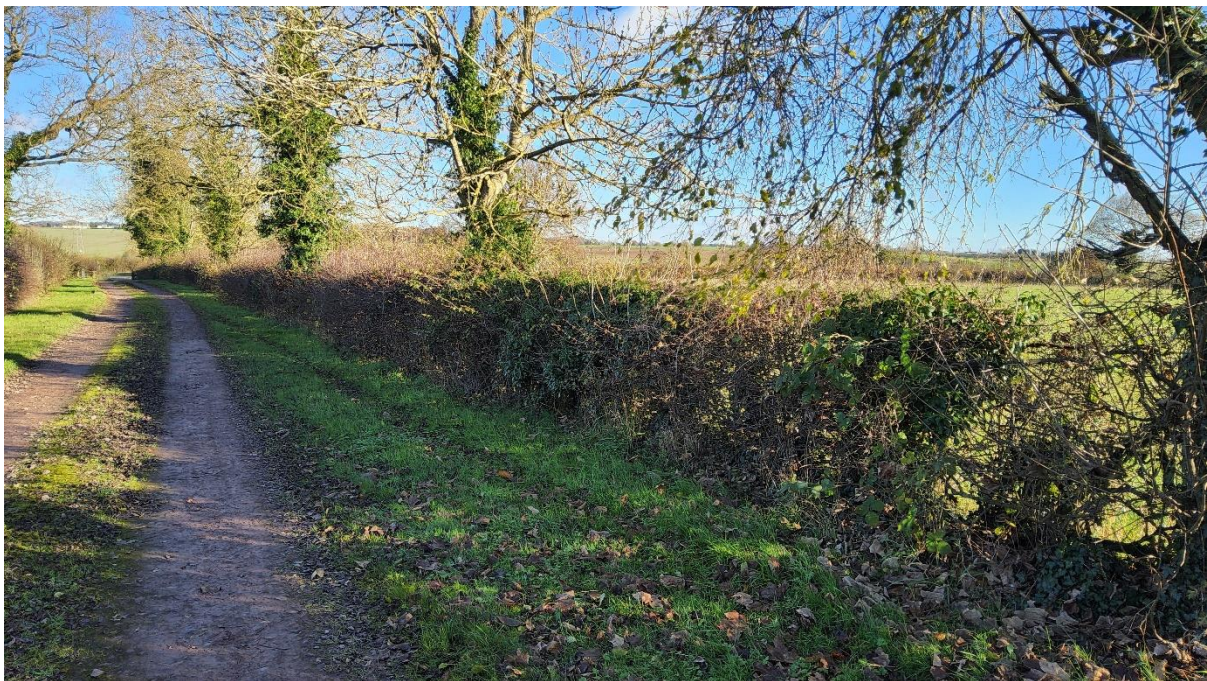


Photo 8. Native hedgerow with standard ash visible (H2) along the southern boundary of the access track AU1 and verge G2

It is understood that planning permission would be subject to the biodiversity gain condition.

A UK Hab Map of the baseline habitats at the Site is provided in Appendix A.

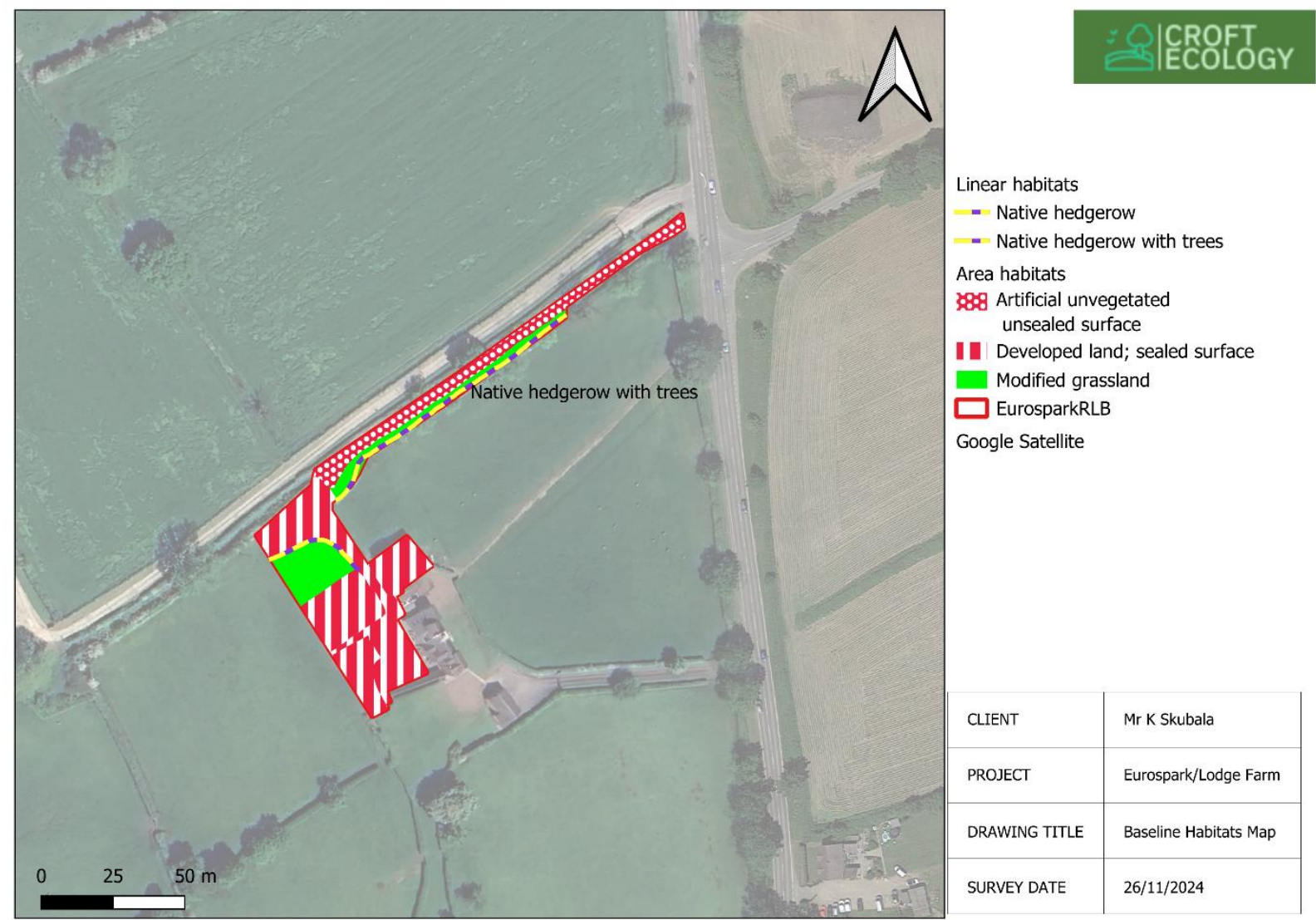
The completed Statutory Biodiversity Metric for the pre-development and post-development value of the on-site and off-site habitats is included within the accompanying Indicative Biodiversity Gain Plan for Eurospark by Croft Ecology (December 2024).

Recommendations

Development is already largely focused on areas of low distinctiveness habitat and linear features (modified grassland and native hedgerow) and areas scoring zero on the BNG metric (developed land). The hedgerow H1 will be removed to facilitate an extension to the car parking spaces, whilst a section of modified grassland G1 will be removed to facilitate the proposed unit. Consequently, outstanding compensation and enhancement measures are included below:

- The loss of a small area of modified grassland in poor condition could be compensated for with the planting of 7no. native fruit trees or smaller broadleaf trees such as field maple *Acer campestre* or rowan *Sorbus aucuparia* within the retained area of grassland to the west of the proposed unit. This would help to screen the existing unit and would tie in nicely with the retained hedgerow to the north that runs directly towards the access track in the east. This would provide a 18% area habitat BNG.
- There is a loss of 32m of native hedgerow to create the additional car parking spaces, hence to provide a minimum 10% biodiversity net gain, 10m of native hedgerow will be planted in the retained area of grassland G1 around its boundary, whilst 100m of H2 native hedgerow with trees will be enhanced to 'good' condition by allowing the hedgerow to grow taller and wider and avoiding any over-zealous cutting. The new native hedgerow should comprise native, broadleaf species (at least four woody species from the following list) such as hawthorn, blackthorn, elder *Sambucus nigra*, hazel *Corylus avellana*, elm *Ulmus sp.*, field maple *Acer campestre* or guelder rose *Viburnum opulus*. These two activities combined will provide a 19% linear habitat BNG.

APPENDIX A – Eurospark Baseline Habitats Map



APPENDIX B – Eurospark Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)													
UK Habitat Classification (UKHab) Habitat Type													
Grassland - Modified grassland													
Habitat Description													
Modified grassland - species poor. Located in the centre of the site as a quarter circle and also along the southern verge of the access.													
ukhab – UK Habitat Classification													
On-site or off-site, site name and location	On-site, Eurospark/Lodge Farm, Stapleton	Survey date and Surveyor name		26.11.24 Anna Scott-Swift									
		Survey reference (if relating to a wider survey)		UK Hab Baseline Survey									
Limitations (if applicable)	n/a	Habitat parcel reference										Notes (such as justification)	
		26434934	26497564										
Condition Assessment Criteria		Grid reference											
		SK 4299600638	SK 4302700687										
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). 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 (excluding those listed in Footnote 1), 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.	No	No									4-5 species per sqm	
		B	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 vertebrates and invertebrates to live and breed.	No	No								No, all less than 20cm
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	Yes									Absent	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No	Yes									Remains of a bonfire in the quart circle grassland had damaged the grass	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Yes	Yes										
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes	Yes									Absent	
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes	Yes									Absent	
Essential criterion achieved (Yes or No)		No	No										
Number of criteria passed		4	5										
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√											
Passes 6 or 7 criteria including passing essential criterion A	Good (3)												
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)												
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	Yes	Yes										
Suggested enhancement interventions to improve condition score													

Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	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 >5 m criterion (as this is the typical size of a gate).		Yes	Yes										
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.		No	No										
C2.	Nutrient-enriched 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, does not exceed the 20% cover threshold.		Yes	Yes										
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .		Yes	Yes										
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 (for example, excessive hedgerow cutting).		No	Yes										
Additional group - applicable to hedgerows with trees only																
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.			No										
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.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.			Yes										

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees

Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2

Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		3
Condition categories for hedgerows with trees		
Category	Category Requirements	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		1
Suggested enhancement interventions to improve condition score		
H2 could be improved by increasing its height and width		