



BIODIVERSITY NET GAIN REPORT
THE PRINCE ALBERT
COPTHORNE BANK
CRAWLEY
RH10 3QX

OCTOBER 2024

ON BEHALF OF WESTCOAST DEVELOPMENTS



The Old Squash Court,
Rempstone Hall,
Rempstone,
Corfe Castle,
Wareham,
Dorset,
BH20 5JQ
www.ecological-services.co.uk

Telephone: 01929 477115
E-mail: enquiries@ecological-services.co.uk

Authorisation

	Name	Date
Report prepared by:	RM	01.10.2024
Report checked by:	SH	02.10.2024

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1.0 EXECUTIVE SUMMARY

- 1.1 This Biodiversity Net Gain Report, prepared by LC Ecological Services Limited, was undertaken to assess the potential to achieve Biodiversity Net Gain from the proposed development of a new supermarket, two dwellings, and associated infrastructure at The Prince Albert, Copthorne Bank, Crawley, RH10 3QX (Ordnance Survey grid reference TQ 31318 39404).
- 1.2 The purpose of this report is to identify the net percentage change in biodiversity value on-site post development and to establish whether a minimum of 10% Biodiversity Net Gain can be delivered in accordance with the mandatory national policy requirements.
- 1.3 The baseline site habitats include modified grassland with scattered trees, developed land, sealed surface (including buildings and hardstanding), ruderal/ephemeral, and other native hedgerow. The on-site baseline comprises 1.31 habitat units, and 0.42 hedgerow units.
- 1.4 The proposed post-intervention creation of habitats on site will provide -1.18 total net change in habitat units, and 0 total net change in hedgerow units for the site. This equates to a -90.08% net loss in habitat value and a 0% net gain in linear value.
- 1.5 The minimum target of 10% has not been achieved, therefore consideration for habitat creation and/or enhanced either on-site or off-site will be required, or credits will need to be purchased to meet the net gain requirements for BNG, with a deficit of 1.31 habitat units and 0.04 hedgerow units required. For this development, the estimated statutory cost of credits total 2.62 area units, and 0.08 hedgerow units, amounting to a total **estimated cost of £113,560.**
- 1.6 To ensure the habitats created on site reach their target condition, a Biodiversity Net Gain Habitat Management and Monitoring Plan (HMMP) will need to be created and implemented. The proposed habitats and features created on site will need to be managed and maintained over a minimum 30-year aftercare period, in line with the mandatory requirements.

2.0 INTRODUCTION

Project brief

- 2.1 This Biodiversity Net Gain Report, prepared by LC Ecological Services Limited, was undertaken to assess the potential to achieve Biodiversity Net Gain from the proposed development of a new supermarket, two dwellings, and associated infrastructure at The Prince Albert, Copthorne Bank, Crawley, RH10 3QX (Ordnance Survey grid reference TQ 31318 39404). This assessment is based on the site proposals as shown in appendix I.

Preparation of Biodiversity Net Gain Assessment

- 2.2 This assessment was conducted using the Statutory Biodiversity Metric (DEFRA, 2024).

Purpose of the report

- 2.3 The purpose of this report is to outline the following:
- To identify the net percentage change in biodiversity value on the site following the most recent design proposals.
 - To establish whether a minimum of 10% BNG can be delivered in accordance with the mandatory national planning policy.
 - To demonstrate that any biodiversity net gains can be obtained with reasonable and viable habitat creation which can be maintained on site or off-site in the long term.

Legislation

- 2.4 The Environmental Act 2021 sets out a mandatory minimum Biodiversity Net Gain of 10% required for all Town & Country Planning Act (TCPA) projects. There is also a mandatory requirement for a minimum 30-year aftercare period in which the post-intervention habitats are managed, maintained and monitored.

3.0 LEGISLATION AND POLICY CONTEXT

3.1 Chapter 15 of the National Planning Policy Framework (NPPF, 2023) ‘*Conserving and enhancing the natural environment*’ sets out the Government’s policies on biodiversity, landscape, and geological conservation. Relevant paragraphs within this chapter include:

- **Paragraph 180:** Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - i. protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils
 - ii. recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.
 - iii. minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; and
 - iv. preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.
- **Paragraph 181:** Plans should: distinguish between the hierarchy of international, national, and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- **Paragraph 185:** To protect and enhance biodiversity and geodiversity, plans should:
 - a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national, and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration, or creation; and
 - b) promote the conservation, restoration, and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
- **Paragraph 186:** When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.
 - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest.
 - c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶⁷ and a suitable compensation strategy exists; and
 - d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
- **Paragraph 187:** The following should be given the same protection as habitats sites:
 - a) potential Special Protection Areas and possible Special Areas of Conservation.
 - b) listed or proposed Ramsar sites; and
 - c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

3.2 From 12th February 2024, delivery of 10% Biodiversity Net Gain became mandatory for most developments, through the Environment Act 2021. Small developments were required to achieve this net gain from 2nd April 2024. Current regulations and guidance have been included here for context (DLUHC, 2023):

- **The Environment Act 2021 (Commencement No.8 and Transitional Provisions) Regulations 2024:** Establishes the official start date for the mandatory requirement of Biodiversity Net Gain (BNG) for most types of new planning applications in England. It also outlines transitional provisions to ensure a smooth transition from the existing system to the new BNG requirement.

- **The Biodiversity Net Gain Requirements (Exemptions) Regulations 2024:** Specifies categories of development that are exempt from the BNG requirement, such as projects deemed to have minimal impact on biodiversity. This regulation aims to ensure that BNG is focused on developments that have a significant impact on the natural environment.
- **The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024:** Amends existing planning regulations to incorporate provisions related to BNG, including requirements for planning applications, Biodiversity Gain Plans, and phased developments. This regulation aims to streamline the delivery of BNG and ensure it is effectively integrated into the planning process.

3.3 Relevant planning policies within the Crawley Borough Local Plan 2015-2030 (Dec 2015) include:

- ENV1: Green Infrastructure
- ENV2 –Biodiversity
- ENV3: Local green space

4.0 ASSESSMENT METHODOLOGY

Study Area

- 4.1 The application site is 0.251 hectares and located at central Ordnance Survey (OS) grid reference TQ 31318 39404 (refer to appendix I).

Sources of information

- 4.2 The initial walkover survey was undertaken by ecologist Robert McCalman on the 27th June 2024. The habitats present were classified according to the UK Habitat Classification Version 2.0 (UKHABS, 2023) methods and criteria for this assessment.
- 4.3 The habitat survey recorded the habitat types across the site with a record made of the botanical interest in each area. A condition assessment was then conducted using the data obtained from this survey.
- 4.4 The BNG Metric was completed by David Caplin BSc. (Hons.), MSc. David provides expertise in land management and Geographic Information Systems (GIS). He has run training courses for ecologists in the use of GIS in conservation. He has gained experience in BNG in the last year and a half, and is developing further experience with BNG, including new workflows and data accountability.
- 4.5 Habitats recorded on site were transposed into a digital map using QGIS coordinate referencing system OSGB 1936/ British National Grid.
- 4.6 Habitats recorded on site were measured using the derived areas (Ellisoidal – EPSG 7001) and all habitat areas are provided in hectares. Linear features were measured using the derived length (Ellisoidal – EPSG 7001) and the measurements provided in kilometres.

Limitations

- 4.7 Whilst every effort has been made to accurately map the habitats on site there may be discrepancies associated with the projected coordinate reference system. However, the National Grid transformation is considered to be the most accurate with an accuracy level of less than 1 metre.
- 4.8 The most recent botanical survey was undertaken in June 2024 during the optimal botanical survey period; however, some early flowering species could have been missed.
- 4.9 The are of ruderal/ephemeral habitat was recently cut when observed during the survey, and as such distinguishing species present was difficult due to damage.

- 4.10 The condition assessment was undertaken based on the results of the botanical survey. The condition can only be determined on the day of the survey. Some of the criteria associated with the condition of the habitats could change such as sward height, physical damage, bare ground, and cover of undesirable species, and thus impacting the overall score if assessed at a different time of the year.

5.0 BASELINE

Habitats

- 5.1 The site comprised an area of managed land, consisting of a pub garden, to the east of The Prince Albert public house. The area is primarily grassland, with areas of hardstanding and a small section brickwork. A series of wooden tables are situated throughout the grassland, with two pieces of outdoor play equipment located in the centre of the grassland area. The grassland is managed regularly to a short sward. A native hedgerow is present on the southern boundary of the site.
- 5.2 The baseline habitats recorded on site are summarised in full below and a habitat map of the site is included in appendix II. The relevant habitat condition assessment sheets are included in appendix III.

Developed land, sealed surfaces (u1b5, u1b6)

- 5.3 This habitat includes a concrete walkway leading from the car park into the pub garden area and other paving areas around the building. A building comprising The Prince Albert public house was located on the western boundary of the site.

Modified grassland with scattered trees (g4)

- 5.4 Modified grassland covers the majority of the site area, and comprised two main areas, the pub garden, and a separate fenced section of garden. The grassland was regularly managed and kept short, with some taller sward patches also present in obstructed areas and on the southern site boundary. The fenced garden section was un-managed and had a longer sward of vegetation. Species present included perennial rye-grass (*Lolium perenne*), Yorkshire-fog (*Holcus lanatus*), false-oat grass (*Arrhenatherum elatius*), and wall barley (*Hordium murinum*), with ribwort plantain (*Plantago lanceolata*), creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum officinale* agg.), and white clover (*Trifolium repens*). Scattered trees were present within the pub garden modified grassland, consisting of a single cherry (*Prunus avium*), a single crab apple (*Malus sylvestris*) and several leylandii (*Lleylandii* sp) trees.
- 5.5 Patches of bare ground were prevalent in areas with heavy footfall, including the areas surrounding wooden seating and play equipment.
- 5.6 Modified grassland is a **low distinctiveness** habitat type in good and moderate condition. The condition assessment sheet is included in appendix III.

Ruderal/ephemeral

- 5.7 An area that was formerly ruderal/ephemeral habitat in moderate condition is present within the modified grassland adjacent to the southern boundary of the site, however, it had been recently cut to ground level when the survey was undertaken.

Other native hedgerow

- 5.8 A native hedgerow is present on the site's southern boundary with abundant amounts of bramble (*Rubus fruticosus*) and honeysuckle (*Lonicera sp*), occasional amounts of hawthorn (*Crataegus monogyna*), and rare amounts of holly (*Ilex aquifolium*), and dog rose (*Rosa canina*). The understory comprises a continuation of species found in the adjacent modified grassland however, occasional amounts of cleavers (*Galium aparine*) is also present.
- 5.9 Other native hedgerow is a **low distinctiveness and** was in good condition.

Summary of baseline value

- 5.10 The overall baseline value of the habitats on site is 1.31 habitat units, and 0.42 linear units. Table 1 below provides a summary of the baseline habitat values

Table 1: Summary of baseline habitat values

Habitat type and condition	Area (hectares/ kilometres)	Length (kilometres)	Habitat value (Units)
Habitats			
Developed land, sealed surface	0.019	NA	0
Developed land, sealed surface	0.069	N/A	0
Ground level planters (Condition N/A)	0.001	N/A	0
Modified grassland (Good condition)	0.092	N/A	0.55
Modified grassland (Moderate condition)	0.055	N/A	0.22
Scattered trees	0.0401	N/A	0.47
Ruderal/ephemeral	0.016	N/A	0.06
Total	0.29		1.31
Linear			
Other native hedgerow (Poor condition)	0.07	0.07	0.42
Total	0.07		0.42

6.0 BNG GOOD PRACTICE PRINCIPLES FOR DEVELOPMENT

- 6.1 As part of the BNG process there are ten good practice principles that help to achieve BNG if they are followed. Each principle is described below and how the project has addressed each principle.

Apply the Mitigation Hierarchy

- 6.2 The design of the development has tried to utilise the mitigation hierarchy by avoidance to any adverse impacts on habitats and species on site.
- 6.3 Species recorded on site are considered to be of low ecological value, and no priority habitats were recorded.
- 6.4 The development has not resulted in any adverse impacts by following the mitigation hierarchy.

Avoid losing biodiversity that cannot be offset by gains elsewhere

- 6.5 Habitats which are considered 'irreplaceable' are those which would be technically difficult to recreate, replace, or restore once destroyed. Habitats such as ancient woodland and veteran trees are considered irreplaceable due to the time it takes to reach such condition. Irreplaceable habitat includes factors which contribute to the condition of that habitat including age, environmental context, achievability to recreate and its geographical position within the landscape.
- 6.6 The site does not support any habitats of principal importance.

Be inclusive and equitable

- 6.7 Discussions have been had and shared to demonstrate how the design can achieve a better outcome for BNG.

Address risks

- 6.8 All habitats have been calculated within the red line boundary, including habitats within the development footprint. No additional land for the construction phase and site compounds has been included within the calculator.
- 6.9 Sections of modified grassland and sections of other native hedgerow are to be retained on site.
- 6.10 Habitats to be created will be done so by appointed contractors who have experience in habitat creation, with the guidance of the appointed ecologist.

Make a measurable Net Gain contribution

- 6.11 The proposed development has been measured against The Statutory Biodiversity Metric. The development has reduced its overall impact throughout the design of the scheme where possible.
- 6.12 The site, is currently intensively managed. Created habitats will be managed for people as well as biodiversity and will directly contribute towards nature conservation.

Create a Net Gain legacy

- 6.13 Long-term benefit to biodiversity will be able to be monitored through habitat management.

Optimise sustainability

- 6.14 The landscaping plan for the development aims to be as sustainable as possible and providing net gain on site in an environment which will be managed by UHD.

Be transparent

- 6.15 Through the progression of the development the design team and client have all been made aware of the communications and outcomes of the BNG.

7.0 IMPACT ASSESSMENT

7.1 The proposed development will result in the loss of areas of modified grassland on site, to facilitate the creation of a new supermarket, two dwellings, and associated infrastructure. All structures within the pub garden area will also be removed. The proposals aim to minimise the loss of biodiversity and achieve the best result in terms of Biodiversity Net Gain through the application of the mitigation hierarchy. Table 2 below provides a summary of the habitat losses through this proposal.

Table 2: Habitat and unit loss scores.

Habitat type	Habitat lost in the application area (hectares)	Biodiversity Units lost
Modified grassland	0.124	0.77
Ruderal/ephemeral	0.016	0.06
Scattered trees	0.0401	0.47
Total	0.28	1.31

Baseline retained habitats

7.2 Baseline retained habitats include areas of modified grassland on the western, boundary, and other native hedgerow on the southern boundary through these proposals.

Proposed on-site habitat

7.3 The proposals for on-site habitat include developed land, sealed surface, and modified grassland. A plan showing the proposed post-intervention habitat layout for the site has been provided in appendix V.

7.4 The creation of the proposed habitats on site will provide 0.13 habitat units. There are no created linear units. Overall, there will be a net loss of 1.18 habitat units which equates to -90.08% net loss for habitats on site. The trading rules are not satisfied, and the proposals cannot deliver the target 10% biodiversity net gain on the site, thereby not meeting the mandatory requirements.

7.5 Unless habitat can be created and/or enhanced either on-site or off-site, credits will need to be purchased in order to meet the net gain requirements for BNG. Credits can be purchased from providers such as Environment Bank¹, and Gaia². The cost for statutory units from the United Kingdom government, and a calculator of

¹ <https://environmentbank.com/>

² <https://marketplace.gaiacompany.io/hub/marketplace>

estimated cost can be found at the footnoted websites¹. If credits are attained through offsite means using the aforementioned providers, 1.31 habitat area units and 0.04 hedgerow units will need to be offset. If using statutory biodiversity credits from the government, the required units equate to 2x the actual unit deficit identified by the metric, due to the spatial risk multiplier applied. The estimated statutory cost of credits would total 2.62 area units, and 0.08 hedgerow units, amounting to a total **estimated cost of £113,560.**

Proposed off-site habitat

- 7.6 There are currently no proposals for off-site habitat within the plans, as the entire area is encompassed within the redline boundary.
- 7.7 Figure 1, below, shows the final BNG metric calculation results as the outcome of the proposals, demonstrating that the required mandatory net gain in biodiversity value for habitat and hedgerow units has been exceeded.

Figure 1: Headline results from the statutory metric calculation

Headline Results		Return to results menu		
Scroll down for final results ▲				
On-site baseline	Habitat units	1.31		
	Hedgerow units	0.42		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.13		
	Hedgerow units	0.42		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	-1.18	-90.08%	On-site net gain is less than target set ▲
	Hedgerow units	0.00	0.00%	On-site net gain is less than target set ▲
	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%	

¹ <https://www.gov.uk/guidance/statutory-biodiversity-credit-prices> and <https://www.gov.uk/guidance/estimate-the-cost-of-statutory-biodiversity-credits>

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-1.18	
		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	-1.18	
		Hedgerow units	0.00	
		Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-90.08%	Total net gain achieved is less than target set ▲
		Hedgerow units	0.00%	Total net gain achieved is less than target set ▲
		Watercourse units	0.00%	
Trading rules satisfied?		No - Check Trading Summaries ▲		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	1.31	1.44	1.31
Hedgerow units	10.00%	0.42	0.46	0.04
Watercourse units	10.00%	0.00	0.00	0.00
No additional watercourse units required to meet target				

8.0 CONCLUSION

- 8.1 It is concluded from this assessment and the BNG metric calculation that the proposed development will have a deficit of **1.31 habitat units, which equates to a -90.08% decrease in value**, and a deficit of **0.04 hedgerow units, which equates to a +0% increase in value**. **This demonstrates that the required mandatory net gain in biodiversity value for habitat and hedgerow units has not been reached. To achieve net gain, offsite credits will need to be purchased through offsite providers, or through the governments statutory scheme.**
- 8.2 To ensure the habitats created reach their target condition, a Biodiversity Net Gain Habitat Management and Monitoring Plan will need to be created and implemented. The proposed habitats and features created on site will need to be managed and maintained over a minimum 30-year aftercare period, in line with the mandatory requirements.

9.0 REFERENCES

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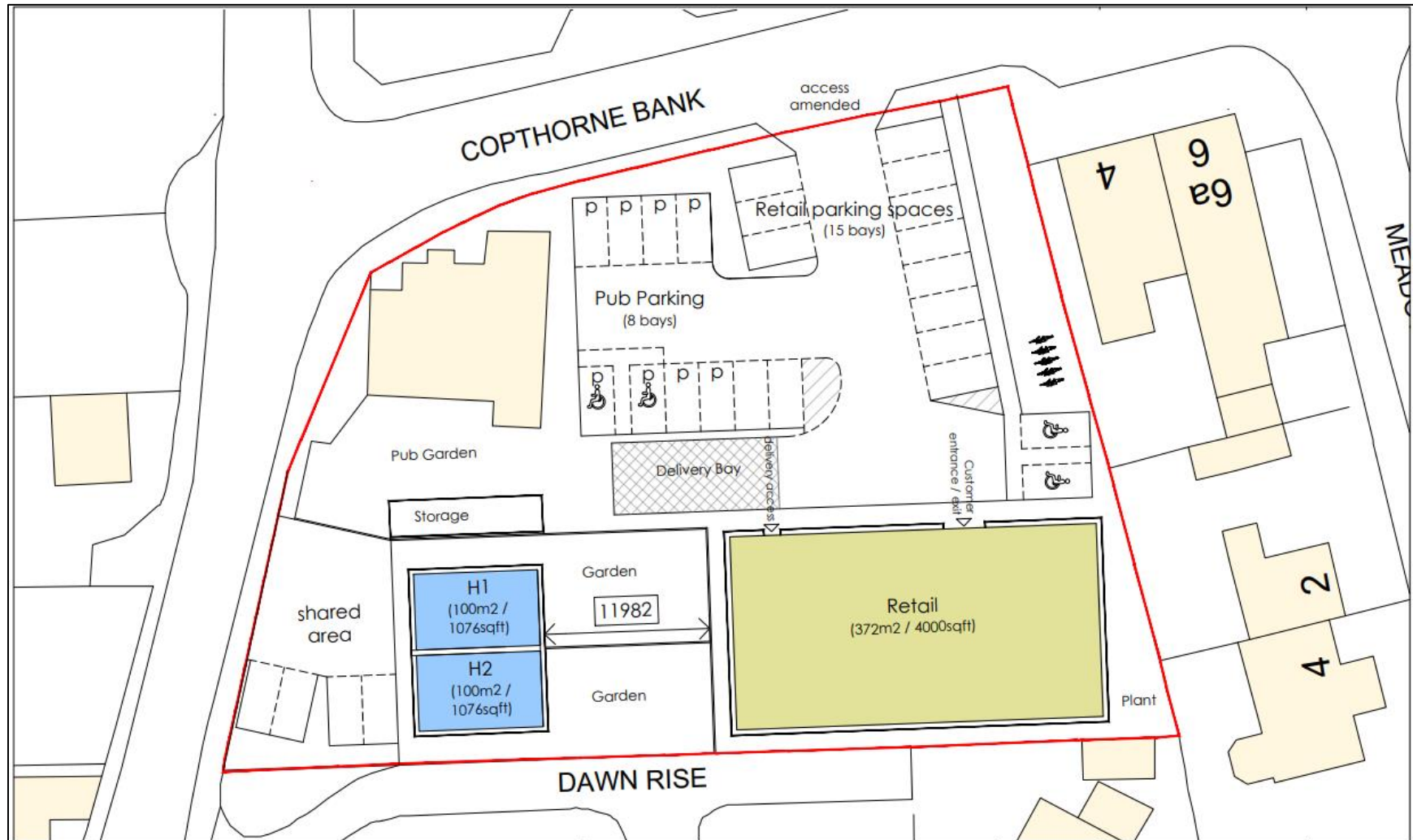
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APPENDIX I: Site Location Plan



APPENDIX II: Proposed Site Plan



APPENDIX III: Baseline habitats



APPENDIX IV: Condition assessment sheets

Modified Grassland

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	PRINCECO	Survey date and Surveyor name	R McCalman - 27.06.2024
Limitations (if applicable)	None	Survey reference (if relating to a wider survey)	
Grid reference	TQ 31318 39404	Habitat parcel reference	N/A
Habitat Description			
Area 1 - No brackets, Area 2 - Brackets			
ukhab - UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
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.	Yes (Yes)	6-8 species per quadrat
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 (Yes)	Sward is varied, but area less than 20% (Sward very varied)
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 (No)	Scrub areas less than 20%, if ruderal/scrub area allowed to grow back then No (Scrub greater than 20%)
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.	Yes (Yes)	Grassland in mostly good condition, no signs of damage, but some slightly worn areas (Unmanaged areas)
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Yes (No)	Areas of bare ground concentrated around seating benches and play equipment (Concrete foundations more than 10%)
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes (Yes)	No bracken present (No bracken)

G	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁴).	Yes (Yes)	No invasives noted (no invasives)
Essential criterion achieved (Yes or No)			Yes
Number of criteria passed			
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x1✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	Yes	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	(Yes)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		
Suggested enhancement interventions to improve condition score			
Footnotes			
Footnote 1 – Creeping thistle <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , greater plantain <i>Plantago major</i> , white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i> . 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).			

Scattered Trees

Condition Sheet: INDIVIDUAL TREES Habitat Type			
Habitat Types			
Individual trees – Urban trees Individual trees – Rural trees Complete a condition sheet for each tree or block of trees.			
<i>Please see the separate Line of trees condition sheet for a line of rural trees. You should only use the Line of trees condition assessment and record that habitat type in rural locations.</i>			
Habitat Description			
Silver Birch – Good (DBH – 42cm Mature), Oak – good (DBH – 7.5cm Juv), Cherry – moderate (DBH – 22cm), Apple – good (DBH – 22 cm largest trunk), Llyelandii – good			
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.			
Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.			
On-site or off-site, site name and location	PRINCECO	Survey date and Surveyor name	R McCalman – 27.06.2024
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	Yes	
B	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).	Yes – auto	
C	The tree is mature (or more than 50% within the block are mature) ¹ .	Yes	
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Yes	

F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	
Number of criteria passed			
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved */✓	
Passes 5 or 6 criteria	Good (3)	Yes	
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)		
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.			
Suggested enhancement interventions to improve condition score²			
Footnotes			
Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk) Footnote 2 - Enhancement of this habitat type is only possible by improving the habitat so that it meets all Criteria B, D and F. It is not possible or appropriate to enhance individual tree/s through meeting just one or two of those Criteria, nor by meeting Criteria A, C or E.			

Hedgerow

Condition sheet: HEDGEROW Habitat Types				
Habitat Type				
Native hedgerow				
Native hedgerow - associated with bank or ditch				
Native hedgerow with trees				
Native hedgerow with trees - associated with bank or ditch				
Species-rich native hedgerow				
Species-rich native hedgerow - associated with bank or ditch				
Species-rich native hedgerow with trees				
Species-rich native hedgerow with trees - associated with bank or ditch				
Habitat Description				
Good condition (2 failures)				
ukhab - UK Habitat Classification				
On-site or off-site, site name and location	PRINCECO		Survey date and Surveyor name	R McCalman - 27.06.2024
Limitations (if applicable)			Survey reference (if relating to a wider survey)	
Grid reference	TQ 31318 33404		Habitat parcel reference	
Condition Assessment Details				
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A - E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.				
This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook.				
Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.				
Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D, E)	Criteria - the minimum requirements for 'favourable condition'	Criteria description	Criterion passed (Yes or No)	Notes (such as justification)
Core groups - applicable to all hedgerow types				
A1. Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the 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 >1.5 m height).	Yes	
A2. Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m 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).	No	Less than 1.5 meters wide with average

B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	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 (see page 65 of the Hedgerow Survey Handbook).	Yes	
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	
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 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 30% 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	Mowed up to hedgerow
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	Less than 20% coverage
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	
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).	Yes	Mostly intact
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.		
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.		
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 Does not fail both attributes 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 Fails both attributes 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 Does not fail both attributes 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 Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		
Suggested enhancement interventions to improve condition score		
Footnotes		
Footnote 1 - DEFRA (2007) <i>Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.</i> [online] Available on: layout.hedgeline.org.uk Footnote 2 - STALEY, J.T. ET AL. (2020) <i>Definition of Favourable Conservation Status for Hedgerows.</i> [online] Available on: Definition of Favourable Conservation Status for Hedgerows - BP2343 (naturalengland.org.uk) Footnote 3 - Wildlife and Countryside Act 1981 (as amended). Footnote 4 - CHEFFINGS, C. M. et al. (2005) <i>The Vascular Plant Red Data List for Great Britain.</i> Species Status 7: 1-116. [online] Available on: The Vascular Plant Red Data List for Great Britain (Species Status No. 7) JNCC Resource Hub Footnote 5 - BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). <i>Definitions: wild, native or alien?</i> [online] Available on: Definitions: wild, native or alien? - Botanical Society of Britain & Ireland (bsbi.org) Footnote 6 - BSBI and Biological Records Centre (BRC) (2022) <i>Online Atlas of the British and Irish Flora.</i> [online] Available on: Acknowledgements Online Atlas of the British and Irish Flora (brc.ac.uk) Footnote 7 - GB NON-NATIVE SPECIES SECRETARIAT (GBNNS) (2022) Available on: Home » NNS (nonnativespecies.org) Footnote 8 - See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)		

Ruderal/ephemeral

Condition Sheet: URBAN Habitat Type			
Habitat Types			
Sparsely vegetated land - Ruderal/Ephemeral Sparsely vegetated land - Tall forbs Urban - Allotments Urban - Biodiverse green roof Urban - Bioswale Urban - Cemeteries and churchyards Urban - Facade-bound green wall Urban - Ground based green wall Urban - Intensive green roof Urban - Open mosaic habitats on previously developed land Urban - Rain garden Urban - Sustainable drainage system (SuDS) Urban - Vacant or derelict land Urban - Bare ground			
Habitat Description			
Recently mowed area of ruderal/ephemeral vegetation			
See the Statutory Biodiversity Metric User Guide for green roofs and UK Habitat Classification (UKHab) for other habitats:			UKHab - UK Habitat Classification
On-site or off-site, site name and location	PRINCECO	Survey date and Surveyor name	R McCalman - 27.06.2024
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all urban habitat types :			
A	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.	Yes	Mixture of species, no one species more than 80%
B	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.	Yes	Evidence of variety of plant species
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ¹ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Yes	Less than 5% cover of invasives so mod condition

Essential criteria relevant for habitat type achieved (Yes or No)			No
Number of criteria passed			3
Condition Assessment Result	Condition Assessment Score	Score Achieved x1✓	
Results for habitats requiring assessment of 3 core criteria only (all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs):			
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C.	Good (3)		
• Passes 2 of 3 core criteria; OR • Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	Yes	
• Passes 0 or 1 of 3 core criteria.	Poor (1)		

APPENDIX V: Proposed habitats

