Gladman Developments Ltd

Land off Scamps Hill, Lindfield

ECOLOGICAL APPRAISAL

February 2024

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1.0 NON-TECHNICAL SUMMARY

Report Scope and Methodology

- FPCR were commissioned by Gladman Developments Ltd to undertake an Ecological Appraisal at Land off Scamps Hill, Lindfield, to provide an ecological baseline and to determine its ecological importance.
- Proposals are for a residential development of 90 dwellings with associated infrastructure and greenspace.
- A Preliminary Ecological Appraisal was undertaken by FPCR in November 2020, with the habitats classified using Phase 1 Habitat Methodology from JNCC (2010).
- An update UKHab survey and walkover were carried out on 16th October 2023 by FPCR, with an updated desktop study.
- A River Conditions Assessment of the Scrase stream was undertaken by FPCR in October 2023.

Key Findings

- Ashdown Forest Special Area of Conservation and Special Protection Area is located outside of the Zone of Influence which is 8km from Site.
- The Site is linked to Eastern Road Local Nature Reserve (LNR) (62m N) and Scrase Valley LNR (340m SW) by Scrase stream which runs outside the northern boundary of the blueline ownership boundary.
- The Site comprised three field compartments, with modified and species-poor neutral grassland. Mature hedgerows and lines of trees bound the Site, with small areas of bramble and blackthorn scrub.
- Northlands brook runs north along the south-east corner, into Little Walstead Wood.
- Three off Site ponds and one ditch were located within 250m of the Site; ponds P1 – P3 and ditch D3 were subject to eDNA surveys which returned negative results for GCN. There are no records of GCN within 1km of the Site.
- Two winter bird scoping surveys have been carried out in 2020 and 2023, these did not find substantial populations of notable winter bird species.
- A badger survey was undertaken in 2020, and any incidental observations were recorded between 2020 and 2023. The findings of the surveys are included in the Badger Survey Report (Appendix D).
- The Site provided suitable habitat for protected/notable species including bats, breeding birds, dormice, riparian mammals and reptiles. This report contains the results of one manual bat activity survey and one automated bat activity survey carried out in October 2023. Further surveys for the aforementioned species will be carried out in the 2024 survey season.
- The proposals provide a biodiversity net gain of 13.55% for habitats and 19.70% for hedgerows, as demonstrated by the DEFRA statutory Metric (v4.1). This will be achieved through habitat creation including SuDS, species-rich modified and other neutral grassland, mixed scrub, and the planting of species-rich hedgerows with scattered trees across the Site. Off-site enhancements will be undertaken within the blueline ownership boundary; grassland G3 to the north of the Site. The Biodiversity Net Gain Report is included in Appendix F.
- The River Condition Assessment was undertaken to gather baseline information on Scrase stream, which will inform any further requirement for drainage discharge from the proposals into this waterbody. Scrase stream was identified to be in Poor condition, and a slight negative impact due to an outflow connected to the SuDS. The proposals will not change the condition from Poor. The RCA Report is appended to the Ecological Appraisal (Appendix G).

Recommended Mitigation and Enhancements
• Further surveys for protected species will be carried out in 2024, as outlined above. Following these surveys, species-specific reports will be written which will outline the appropriate mitigation and enhancement to be undertaken for that species. • All mature trees on the site are being retained by the current framework plan, and the majority of the hedgerows will be retained. During the works, these features will be protected through the implementation of appropriate root protection areas and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, as indicated by the FPCR Arboricultural Assessment (2023). • Himalayan balsam was recorded within the off-site grassland G3 and scrub along the north boundary, close to Scrase stream. This is a Schedule 9 listed species of the Wildlife & Countryside Act 1981 (as amended), making it an offence to cause it to grow in the wild. Mitigation measures will need to be implemented to ensure it does not spread within the Site during management of this area to enhance the grasslands from Poor to Moderate condition. • A range of faunal enhancements in addition to planting have been proposed to enhance biodiversity which include log piles, hibernacula, hedgehog highways and bird and bat boxes. • Lighting will be sensitivity designed to avoid effects on nocturnal species, this will include dark corridors and where lightning is needed it will be downward facing, directional and activated by sensors and/or timers.

2.0 INTRODUCTION

2.1 The following Ecological Appraisal has been prepared by FPCR Environment & Design Ltd. On behalf of Gladman Developments Ltd (central OS Grid Reference: TQ 35218 24891) herein referred to as 'the Site'.

2.2 The scope and objectives of this report are to:

- present the findings of the site walkovers undertaken between 2020 and 2023.
- detail the findings of protected species surveys completed to date.
- detail any further surveys required.
- review the site proposals and provide recommendations for mitigation, compensation and enhancement.

2.3 A Preliminary Ecological Appraisal was undertaken by FPCR in November 2020, with the habitats classified using Phase 1 Habitat Methodology from JNCC (2010).

2.4 An update UKHab survey, walkover and Ground Level Tree Assessment were carried out on 16th October by FPCR, with an updated desktop study.

Site Location and Context

2.5 The Site is located within the village of Lindfield. Lindfield Rural is a parish located in the central eastern portion of Mid Sussex District in West Sussex, the parish is mainly rural in nature, comprising several small hamlets such as Walstead and East Mascalls.

2.6 The survey area measures approximately 6.6ha, consisting of one modified grassland compartment, and two species-poor neutral grassland field compartments, separated by mature hedgerows and trees.

2.7 Northlands brook flows northwards along the south-east boundary of the ownership boundary and Scrase stream runs outside the north of the ownership boundary; both lie >10m from the current Site boundary. A small industrial estate and residential houses lie to the north of Scrase stream. Scamps Hill Road defines the southern boundary and Little Walstead Wood (ancient woodland) demarcates the north-eastern boundary. Directly north there are Christmas tree plantations, with large communications masts, and two areas of broadleaved woodland (Little Walstead Wood and Beggars Grove). There is a new residential development immediately south of Scamps Hill, with arable field compartments and woodland blocks beyond this.

Site Proposals

2.8 Proposals are for a residential development of up to 90 dwellings. The Site will deliver a residential development with new public open space and equipped play facilities. The current framework plan (FPCR 9432-L-02) illustrates the opportunity for the Site to provide biodiversity benefits through the creation of SUD's, wildflower meadows, scrub planting, hedgerow creation within the large areas of green infrastructure (approximately 3.2ha to the south and 0.55ha (off-site) to the north of the development), as well as the retention of the intrinsic habitats on Site including the mature hedgerows, mature trees, and some of the grassland which will be enhanced by the proposals.

3.0 LEGISLATION AND POLICY

3.1 Detail on the relevant national and local policy and legislation for ecology in relation to development sites are provided in *Appendix A*. The national policy and legislation most relevant include:

- The Conservation of Habitats and Species Regulations (CHSR) 2017 (as amended) in relation to:
    - European Protected Species (EPS) great crested newt *Triturus cristatus* (GCN), bats (all species) and hazel dormouse *Muscardinus avellanarius*.
    - European protected sites – Special Areas of Conservation (SAC), Special Protection Areas (SPAs) and internationally protected Ramsar Sites (collectively known as "Natura 2000 sites").
- The Wildlife and Countryside Act (WCA) 1981 (as amended) in relation to:
    - All wild birds (including Schedule 1 species)
    - Schedule 5 species
    - Flora listed under Schedules 8 and 9
    - Sites of Special Scientific Interest (SSSI)
- Protection of Badgers Act (PBA) 1992.
- Natural Environmental and Rural Communities (NERC) Act 2006 in relation to various priority species and habitats.
- Hedgerow Regulations 1997.
- Environment Act 2021.
- National Planning Policy Framework (NPPF) 2023.
- Local Biodiversity Action Plans (LBAP).
- The Lindfield & Lindfield Rural Neighbourhood Plan 2014-2031; and
- Mid-Sussex District Plan 2014-2013

4.0 METHODOLOGY

Desk Study

4.1 In order to compile existing baseline information, relevant ecological information was requested from the following consultees and sources:

- Sussex Biodiversity Records Centre (SxBRC)
- Multi Agency Geographic Information for the Countryside (MAGIC) website[1];
- Colour 1:25,000 OS base maps[2];
- Aerial photographs from Google Earth[3].

4.2 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- 15km around the application area for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites).
- 2km around the application area for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs)).
- 1km around the application Site for sites of County Importance (e.g. Biological Heritage Sites (BHS) and species records (e.g. protected, Local Biodiversity Action Plan (LBAP) or notable species).

Habitat Survey

4.3 A previous survey of the Site carried out bv FPCR in November 2020 followed the methodology based on the Handbook for Phase 1 Habitat Survey (JNCC, 2010)[4]. This involved a systematic walk over of the survey area to classify the broad habitat types present and mark them on a survey map. Target notes (Tn) were used to record features or habitats of particular interest, as well as any sightings or evidence of protected or notable species.

4.4 Survey methods for the update UKHab survey carried out in October 2023 followed the extended UKHab Survey technique as recommended by Natural England[5] and the Chartered Institute of Ecology and Environmental Management[6]. This involved a systematic walkover of the Site to classify the broad habitat types and identify any Habitats of Principal Importance (HPI) for the conservation of biodiversity as listed within Section 41 (S41) of the NERC Act 2006. Habitats described in this report following UKHab naming convention, with specific habitat codes provided.

4.5 All habitats/habitat compartments were also assessed using technical guidance for the Defra Statutory Biodiversity Metric[7]. This provides a list of criteria for a range of broad habitat types which are used to categorise the habitats as having a ‘poor’, ‘moderate’ or ‘good’ condition score.

1 [Online]. http://magic.defra.gov.uk/

2 [Online]. www.ordnancesurvey.co.uk

3 [Online]. www.maps.google.co.uk

4 JNCC. (1990). Handbook for Phase 1 habitat survey – a technique for environmental audit. Peterborough: JNCC

5 Natural England, 2014. *Protected species and development: advice for local planning authorities*. (updated 2021) [online] Available at: https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications [Accessed 05/03/2021)

6 CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

7 DEFRA Statutory Biodiversity Metric) Available at: https://assets.publishing.service.gov.uk/media/65673fee750074000d1dee31/The_Statutory_Biodiversity_Metric_-_Draft_User_Guide.pdf

4.6 Consideration was given as to the presence of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) and the presence of any notable weeds including those covered under the Weed Act 1959 (where population is significant enough to be considered injurious).

Preliminary Protected Species Assessment

4.7 During the extended habitat survey, observations and signs of any species protected under the following list of Acts and Regulations (collectively referred to herein as 'protected species') were recorded:

- The CHSR 2017 (as amended).
- The WCA 1981 (as amended).
- The Protection of Badgers Act 1992.

4.8 Consideration was also given to the existence and use of the Site by other fauna listed as one or more of the following (collectively referred to herein as 'notable species'):

- Species of Principal Importance (SPI) for the conservation of biodiversity in England listed in S41 of the NERC Act 2006.
- Red Data Book (RDB) and Red List species.
- Birds of Conservation Concern (BoCC).
- Species listed on any Local Biodiversity Action Plan (LBAP) initiatives.
- Nationally scarce/notable invertebrate species.

4.9 The likely presence or absence of protected and notable species has been assessed against a number of factors outlined in *Table 1*.

Table 1: Criteria used for assessing likely presence/absence of protected/notable species

Likelihood of Presence	Example Criteria
Negligible	Where one or more of the following is true for the Site: it offers no suitable habitat; it is isolated from known areas of suitable habitats/species presence; displays no evidence of use by the species in question; it is outside of the known local/regional/national distribution for the species; and there are no desk study records are present during the data search.
Low	Where one or more of the following is true for the Site: the habitats present are of poor to moderate suitability; there is limited or restricted connectivity to areas of suitable offsite habitat or areas with known presence; it is in a location where the species distribution is known to be sparse at a local or regional scale; the desk study indicates the presence of the species in the locality in small to moderate numbers.
Moderate	Where one or more of the following is true for the Site: the habitats present are of moderate to high suitability; it is clearly connected to suitable offsite habitat or areas with known presence; it is in a location where the species is known to be well distributed; the desk study indicates the presence of the species in the locality in moderate to good numbers.

Likelihood of Presence	Example Criteria
High	Where one or more of the following is true for the Site: the habitats present are of optimal suitability; it is adjacent to areas of suitable offsite habitat or areas with known presence; it is in a location where the species is known to be well distributed; there are field signs evidencing that a species has been present on the Site; the desk study indicates the presence of the species has been historically present on or within the immediate vicinity of the Site.
Present	The species was observed using the Site during the extended phase 1 habitat survey or, where appropriate for certain species, field signs indicate the regular use of the Site i.e. the presence of a badger sett.

Bat Roost Assessments

4.10 There are no buildings within the Site, but trees were searched for potential roosting features (PRFs) from ground level with the aid of a torch and binoculars, where appropriate. Features[8] include:

- Natural holes (e.g. knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar.
- Man-made holes (e.g. cavities that have developed from flush cuts or cavities created by branches tearing out from parent stems).
- Woodpecker holes.
- Cracks/splits in stems or branches (horizontal and vertical).
- Partially detached, or loose bark plates.
- Cankers (caused by localised bark death) in which cavities have developed.
- Other hollows or cavities, including butt rots.
- Compression of forks with occluded bark, forming potential cavities.
- Crossing stems or branches with suitable roosting space between.
- Ivy stems with diameters more than 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk).
- Bat or bird boxes.

4.11 Trees were then placed into bat roost potential categories as per current guidance[9] and summarised in *Table 2*.

Table 2: Bat Roost Potential Categories for Trees and Buildings

Categories	Description for buildings	Description for trees
Confirmed Roost	Evidence of roosting bats in the form of live/dead bats, droppings, urine staining, fur oil staining etc.	

[8] BS 8596:2015 Surveying for bats in trees and woodland – Guide. British Standards Institute.

[9] Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn).* The Bat Conservation Trust, London.

Categories	Description for buildings	Description for trees
High Potential	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	A tree with one or more PRFs that are obviously suitable for large numbers of bats on a more regular basis and/or longer duration due to their size, shelter, suitable conditions (height above ground, light levels, etc), and surrounding habitat. Examples include, but are not limited to, woodpecker holes, large cavities, hollow trunks, hazards beams.
Moderate Potential	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (irrespective of species conservation status, which is established after presence is confirmed).	A tree with PRFs which could support one or more potential roost sites due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status e.g. large roost or maternity roost. Examples include, but are not limited to, rot holes, branch socket cavities, canker cavities, etc.
Low Potential	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features that offer very limited potential. Examples include, but are not limited to, shallow splits, upward facing holes, etc.
Negligible Potential	No obvious habitat features present likely to be used by roosting bats.	

Manual Bat Activity Surveys

4.12 The primary objective of walked transects is to identify foraging areas, commuting routes, species composition, and general species utilisation of the Site by local bat populations.

4.13 A transect route was designed to cover all habitats, where possible, within the Site with a particular focus on those considered to provide higher bat suitability. The transect was walked by a pair of suitably experienced ecologists with a Wildlife Acoustic Inc. Echo Meter Touch bat detector and Apple Inc. iPad.

4.14 The survey was carried out in suitable weather conditions (*Table 7*). The survey commenced at dusk and continued for two hours, with surveyors walking at a steady pace and recording all bat activity encountered. The transect route included five-minute point counts where surveyors would stop and record all bat activity at these specific points. Due to the small size of the Site the route was walked twice, with different point count locations used on the second pass.

4.15 Post-survey, bat calls were analysed using Kaleidoscope Lite© (Wildlife Acoustics, Inc version 5.5.0) software package, by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. From this, the level of bat activity across the Site, in relation to the abundance of individual species foraging and commuting along habitats, was assessed.

Automated/Static Bat Activity Surveys

4.16 A static bat detector was used to record the passing behaviours of bats from a fixed position. These detectors are deployed to supplement the manual transect survey data.

4.17 The Wildlife Acoustics Inc. Song Meter SM4BAT FS detector (hereafter referred to as 'SM4BAT detectors') was left to record for a minimum of five consecutive nights of suitable weather conditions each survey. The static was programmed to activate 30 minutes before dusk and record continuously until 30 minutes after sunrise.

4.18 Following collection, the recordings were analysed using Kaleidoscope software by experienced ecologists. Each sound file (15 seconds in length) was counted as a single bat pass or registration for each species visible in the sound file. The total number of registrations provides an indication of the relative importance of the Site and detector location for bats.

4.19 Due to the high level of variation in echolocation calls and the properties of zero-crossed frequency division recordings, it is not always possible to identify calls down to species level. These calls are therefore identified to genus level, which is sufficient for a suitable assessment of potential impacts.

4.20 The static detector units do not discern between individual bats or a single bat passing the microphone several times. Therefore, the data recorded can only provide an indication of bat activity as bat registrations per unit time.

Winter Bird Survey (WBS)

4.21 A single scoping survey was conducted in 2020 to ascertain the potential of the Site to support over-wintering bird species. The survey methodology employed was broadly based on the British Trust for Ornithology (BTO) Winter Farmland Birds Survey[10,11]. A route was mapped out prior to the survey being undertaken, with particular attention to linear features, such as hedgerows and tree lines, and natural features such as areas of scrub and waterbodies. The Site was walked over a one day period by an ecologist experienced in bird surveying, between 09:00 and 16:00. All birds encountered (seen or heard) were recorded on a field survey plan, using BTO species codes and symbols for bird activities where appropriate. The survey was not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results (*Table 3*).

4.22 In 2023, a single update scoping survey was conducted to ascertain whether the potential of the Site to support over-wintering birds remained the as that in 2020. The survey methodology employed was based on that by the Bird Survey & Assessment Steering Group[12], broadly similar to the methodology stated above. Again, the survey was not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results (*Table 3*).

Table 3: Winter Bird Survey Dates and Weather Conditions

Survey	Date	Cloud Cover (%)	Rain	Wind	Visibility
1	24th November 2020	50	None	Light Air	Very Good
2	20th November 2023	80	None	Light Air	Good

Assessment Methodology

4.23 The conservation value of bird populations has been measured using two separate approaches: nature conservation value and conservation status. The CIEEM guidance on Ecological Impact

[10] Bibby, C.J., N.D. Burgess & D.A. Hill (1992): Bird Census Techniques. London: Academic Press
[11] Gilbert, G., Gibbons, D.W., and Evans, J. (1998). Bird Monitoring Methods: a manual of techniques for key UK species. RSPB, Sandy
[12] Bird Survey & Assessment Steering Group. (2023). Bird Survey Guidelines for assessing ecological impacts, v.1.1.1. https://birdsurveyguidelines.org [29.11.23]

Assessment (EIA) assesses nature conservation value within a geographical context. To attain each level of value, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in *Table 4* below. In some cases, professional judgement may be required to increase or decrease the allocation of the specific value, based upon local knowledge.

4.24 The county annual bird report, The Sussex Bird Report 2019[13] published by the Sussex Ornithological Society, was consulted to inform the assessment.

Table 4: Evaluation Criteria for Wintering Bird Surveys

Nature Conservation Value	Selection Criteria
International	A species which is part of the cited interest of an SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).
Regional	Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC Red List and which regularly occurs in regionally important numbers.
County	Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above and which regularly occurs in county important numbers Species present in county important numbers (>1% of county population). Sustainable populations of species that are rare or scarce within a county, or listed as priority species for nature conservation under S41 of the NERC Act. A site designated for its county important assemblage of birds (e.g. a SINC Site). Species on the BoCC Red List and which regularly occur in county important numbers.
Local	Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List or listed as Priority Species under Schedule 41 of the NERC Act (2006) which are not covered above) regularly occurring in locally sustainable populations. Sustainable populations of species which are rare or scarce within the locality.
Site	Species that are common and widespread

4.25 Particular attention has been given to bird species with an associated conservation status as either WCA Schedule 1, NERC S41 species and / or BoCC Red or Amber list species. These species are likely to be of the greatest threat in relation to further decline and are commonly referred to as 'notable' species.

[13] The Sussex Bird Report. (2019) No. 72. The Sussex Ornithological Society

Herpetofauna

4.26 Terrestrial habitats were evaluated for their potential to support both amphibians and reptiles following guidance set out within the Herpetofauna Workers Manual[14]. These include assessment of any aquatic habitats, south facing banks, field margins, transitional areas between long and short vegetation, and other areas which provide basking and/or sheltering opportunities.

Habitat Suitability Index (HSI)

4.27 The HSI provides a measure of the likely suitability that a waterbody will support newts[15]. In general, waterbodies with a higher score are more likely to support GCNs than those with a lower score and there is a positive correlation between HSI scores and waterbodies with newts recorded. Ten separate attributes are assessed for each waterbody:

- Geographic location;
- Pond area;
- Pond drying;
- Water quality;
- Shade;
- Presence of water-fowl;
- Presence of fish;
- Number of linked ponds;
- Terrestrial habitat; and
- Macrophytic coverage.

4.28 A score is assigned according to the most appropriate criteria level set within each attribute and a total score calculated of between 0 and 1. Pond suitability is then determined according to the following scale:

Table 5: Habitat Suitability Index Scores and Pond Suitability

HSI Score	Pond Suitability
<0.5	Poor
0.5 - 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

eDNA Survey

4.29 To assess the presence or likely absence of GCN, eDNA sampling was undertaken in April 2021 on the off site waterbodies P1, P2 & P3 and Ditch D3 (along the boundary of little Walstead Wood)

14 Gent, T., & Gibson, S. [Eds.]. (2003) *Herpetofauna Workers Manual.* Peterborough: Joint Nature Conservation Committee.

15 Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.

in accordance with the protocol recommended by Natural England[16] by two appropriately experienced ecologists.

4.30 Samples of agitated water from 20 locations around each pond and mixing thoroughly; 15 ml of this water was then placed into each of the six sterile sample tubes containing preservative, precipitates and a DNA sequence that was used for degradation control. This was then transported under suitable conditions to the ADAS laboratory at Spring Lodge, Helsby for analysis.

4.31 Following analysis, results provided by the laboratory could have one of three outcomes, which are described in *Table 6* below.

Table 6: Possible Results of eDNA Analysis

Result	Description
Positive	A positive result means GCN eDNA was detected and they have been present within the water in the 20 days preceding sampling. A score is provided indicating the number of positive replicates from a series of twelve.
Negative	GCN eDNA was not detected. Where samples are negative, further testing for PCR inhibitors and degradation of the sample is undertaken.
Inconclusive	Controls indicate degradation or inhibition of the sample. Therefore, the lack of detection of GCN eDNA is not conclusive evidence for determining the absence of this species using the sample provided.

Survey Personnel and Conditions

4.32 The update habitat survey, walkover and GLTA were undertaken by an Ecologist with four years' experience in Ecological Consultancy, who is experienced in botanical surveys and has a Level 1 Bat Licence (ref: 2023-11489-CL17-BAT). The UKHab survey was undertaken on 16th October 2023 during clear weather with relatively high cloud cover (approximately 80%) with no rain and a light breeze (2 on the Beaufort Scale).

Table 7: Surveyor Details and Qualifications 2020 - 2023

Surveyor Details				
Initials	**Name and Position**	**Qualifications & Memberships**	**Class Licences**	**Years of Relevant Experience**
AU	Abigail Upham – Principal Ecologist	BSc (Hons)	FISC 4, GCN	10
LC	Lindsay Clark	BSc (Hons)	Hazel dormice	9
HG	Hazel Gisborne – Ecologist	BSc (Hons)	-	3
JG	James Gretton - Ecologist	BSc (Hons)	GCN, BatL1	4
RM	Rosie Murfitt – Ecologist	BSc (Hons), MSc	GCN, FISC 3	2
LM	Laura Mynard - Ecologist	BSc (Hons), MSc	GCN, FISC 3	6
SG	Sylvain Gilbert – Assistant Ecologist	BSc (Hons)	RCA	2
DG	Dominic Greves – Seasonal Ecologist	-	-	2

16 Biggs J., et. al, 2014. *Analytical and Methodological Development for Improved Surveillance of the Great Crested Newt*. Appendix 5: Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA, Freshwater Habitats Trust, Oxford.

Surveyor Details		
Surveys and Personnel		
Survey	**Date(s)**	**Personnel**
Extended Phase 1 Habitat Survey	Nov 2020	AU & HG
GCN eDNA Survey	April 2020	HG
Badger Survey	Nov 2020	AU, HG, SG
Wintering Bird Survey	Nov 2020	LC
Wintering Bird Survey	Nov 2023	RM
Bat Transect Surveys	Oct 2023	DG, JG
RCA Survey	Oct 2023	SG
Update Extended Protected Species Survey, GLTA, UKHab Survey, BNG Conditions Assessment	Oct 2023	JG

Survey Limitations

4.33 Given the transient nature of natural processes, ecological data should never be relied upon for more than two-years from completion of surveys.

4.34 The Phase 1 Habitat survey in November 2020 and the UKHab survey in 2023 were undertaken outside of the optimal survey season, where the grassland types and conditions were based on indicator species present at the time. The same conclusion was drawn in 2020 and 2023, with species lists from both surveys used to inform the classification of the grassland types.

4.35 One manual bat activity survey and one automated/static bat activity survey have been carried out in October 2023. No further bat surveys have been carried out to date, and therefore the data assessed is based on a very small period and does not successful evaluate the extent of the Site use by the local bat population during the different seasons, where is it know that certain bats species will utilise different habitat types and foraging greater distance during certain periods of the year. Further surveys will be undertaken in 2024.

5.0 RESULTS

Desk Study

Statutory Sites

Statutory Sites of International Conservation Value

5.1 Ashdown Forest Special Area of Conservation (SAC) and Special Protection Area (SPA) is located approximately 8km north-east of the Site. It is designated as an SAC due to the dry and wet heathland habitats present, and for the presence of Great Crested Newt (GCN) *Triturus cristatus.* The site is designated as an SPA due to the presence of breeding nightjar *Caprimulgus europaeus* and Dartford warbler *Sylvia undata*.

Statutory Designated Sites

5.2 There are two, Mid-Sussex Council-managed Local Nature Reserves (LNR) within 500m of the Site, which are linked via the Scrase stream, which runs along the northern boundary.

- Eastern Road LNR lies 62m north of the Site boundary. This has a mosaic of woodland, scrub, rough grassland and wetland which supports a diverse range of plants, insects and birds. The wetland areas support healthy populations of frogs, newts and aquatic insects[17].
- Scrase Valley LNR lies 340m southwest of the Site. It comprises 15 acres of woodland, marsh, scrub and flood meadows. The Scrase stream runs through it as does a ProW linking Lindfield with Haywards Heath. This is important both as a mosaic of semi-natural habitats in a built-up environment and the marshy grassland supports two plants which are rare in a County context; meadow thistle *Cirsium dissectum,* and marsh cinquefoil *Potentilla palustris.*

Non-Statutory Sites

5.3 Costells, Henfield and Nashill Woods lie 800m east of the Site boundary. This ancient woodland, located to the north of Scaynes Hill, contains overgrown birch coppice with oak standards, some hornbeam, oak and beech, with occasional conifers. There are several ponds and streams.

5.4 Walstead Cemetery LWS 225m from the Site boundary, this is a small graveyard which supports short, species-rich grassland. It has clumps of exotic trees and a small garden of rest which is planted up with rose bushes and not included in the SNCI boundary.

5.5 Western Road Cemetery LWS 300m south-west, which consists of two parts. The area to the north is used as a cemetery and is managed by mowing, where it supports a variety of habitats, including acid, neutral and marshy grassland with woodland. The southern part is unmanaged rough grassland, scrub and woodland.

5.6 The Location of Statutory and Non-Statutory Designations in relation to the Site location are shown in *Figure 1*.

Protected/Notable Species

5.7 A summary of the species records considered to be of relevance to the Site assessment are provided in *Table 8* below, with the locations shown on *Figure 2*.

5.8 Otters *Lutra lutra* became extinct in Sussex and many other parts of the UK in the late 1960s however recent improvements to the state of watercourses and a reduction in persecution have led to the slow return of the otter to the southeast. There are no recent breeding otter records and very few resident otters in Sussex, however over the last 20 years signs of otter activity have been found in most of the Sussex river catchments. No consultation records were returned for otter in 2023 within 1km of the Site.

5.9 A search of Magic was undertaken for records of GCN licences within 1km of the Site. Two Natural England Mitigation Licences were noted, one granted in 2010, 480m NW of the Site, and one granted in 2017, 1.2km NW of the Site (2017-28100-EPS-MIT). The licences permitted the destruction of resting places. No GCN Class Survey Licence Returns or DLL survey ponds were identified within 1km of the Site.

17 Eastern Road LNR Citation. Available at: https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1481523&SiteName=&countyCode=46&responsiblePerson=&SeaArea=&IFCAArea=

5.10 There was one record within the data set that placed the recorded species within the Site boundary; common toad *Bufo bufo* (2017).

5.11 Multiple bat records were returned by the data search. These included records of grounded bats, bats encountered using bat detectors, and records of bat roosts of species including *Myotis spp,* common pipistrelle *Pipistrellus pipistrelle,* and soprano pipistrelle *Pipistrellus pygmaeus* and brown-long eared bats *Plecotus auratus* within 1km of the Site.

Table 8: Desktop Study Results (2023) – Protected and Notable Species within 1km

Species	Latest Record	Conservation Status	Closest Record to the Site
Mammals - Bats			
Brown long-eared *Plecotus auritus*	2021	Hab Dir, Hab Reg, WCA, NERC, UK BAP Priority	702 m W
Common Pipistrelle *Pipistrellus pipistrellus*	2015	Hab Dir, Hab Reg, WCA, NERC, UK BAP Priority	192 m W
Myotis sp. *Myotis sp.*	2016	Hab Dir, Hab Reg, WCA, NERC, UK BAP Priority	702 m W
Soprano pipistrelle *Pipistrellus pygmaeus*	2016	Hab Dir, Hab Reg, WCA, NERC, UK BAP Priority	702 m W
Mammals - Terrestrial			
European Water Vole *Arvicola amphibius*	2020	WCA, NERC, UK BAP Priority	77 m SW
Hazel Dormouse *Muscardinus avellanarius*	2019	Hab Reg, WCA, NERC, UK BAP Priority	115 m S
West European Hedgehog *Erinaceus europaeus*	2021	NERC, UK BAP Priority	200 m N
Herpetofauna			
Common Frog *Rana temporaria*	2022	WCA	85 m SE
Common Lizard *Zootoca vivipara*	2018	WCA, NERC , UK BAP Priority	50m S
Common Toad *Bufo bufo*	2017	WCA, NERC, UK BAP Priority	Within the Site boundary
Grass Snake *Natrix helvetica*	2018	WCA, NERC, UK BAP Priority	64 m SW
Palmate Newt *Lissotriton helveticus*	2017	WCA	568 m N

Birds			
Kingfisher *Alcedo atthis*	2016	Birds Dir, WCA, BoCC Amber	229 m W
Invertebrates			
Brown Hairstreak *Thecla betulae*	2016	WCA, NERC, UK BAP Priority	187 m SW
Plants			
Bluebell *Hyacinthoides non-scripta*	2019	WCA	789 m W
Invasive non-native species			
Tree cotoneaster *Cotoneaster frigidus*	2016	WCA Sch 9	700 m NW
Giant Hogweed *Heracleum mantegazzianum*	2023	WCA Sch 9	85 m SE
Himalayan Balsam *Impatiens glandulifera*	2019	WCA Sch 9	Closest record returned was 427 m W, however Himalayan balsam was observed along the Scrase stream during the survey in 2023

5.12 Other notable bird species were recorded at low-resolution (4-figure grid references), and therefore could not be accurately mapped or distances calculated, these included barn owl *Tyto alba,* hawfinch *Coccothraustes coccothraustes* and turtle dove *Streptopelia turtur*.

Habitats/Flora

5.13 The habitats described below are illustrated in *Figure 3* and site photographs are provided in *Appendix B*. This application is accompanied by a Biodiversity Net Gain Report (FPCR, January 2024), where further details on the habitats and recommendations are provided.

Grassland

Modified Grassland

5.14 The field parcel (G1) to the south of the Site was classified as modified grassland, due to the dominance of palatable grasses, and the managed short sward. The field was dominated by cock's foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus*, with abundant red fescue *Festuca rubra* and occasional false-oat grass *Arrhenatherum elatius*. Forbs present included abundant common sorrel *Rumex acetosa*, white clover *Trifolium repens* and creeping thistle *Cirsium arvense*, with frequent creeping buttercup *Ranunculus repens*, and occasional bracken *Pteridium aquilinum*, common nettle *Urtica dioica* and bird's foot trefoil *Lotus corniculatus*, and some occurrences of soft rush *Juncus effusus* and common chickweed *Stellaria media* present.

5.15 G1 was assessed as being in Poor condition, due to being species-poor, having a uniform short sward, and having <1% bare ground.

5.16 Grasslands G2 and G3 were categorised as other neutral grassland.

5.17 G2 still showed signs of management, with a short sward, however there were some tussocks within the sward. Species indicative of neutral grassland including abundant smooth meadow grass *Poa pratensis*, lesser knapweed *Centaurea nigra*, frequent ribwort plantain *Plantago lanceolata*, occasional common ragwort *Jacobaea vulgaris* and rough meadow grass *Poa trivalis* were noted. Soft rush was also frequently recorded in this area.

5.18 Grassland G3 lies partly inside, and partly outside of the Site boundary. G3 had a similar composition to that of G2, with some scattered blackthorn *Prunus spinosa* scrub within the off-site area of the grassland, with some blackthorn suckers also encroaching from the boundary hedgerows, especially H1. There were large areas of tall forbs within G3 which were dominated by soft rush and creeping thistle, indicating that this area of grassland is enriched, and is sometimes inundated. Other tall forbs included nettles, common hogweed *Heracleum sphondylium*, spear thistle *Cirsium vulgare*, and willowherb *Epilobium spp*. These areas were not mapped separately as the wider grassland community was still strong within the patches. The invasive and Schedule 9 species Himalayan balsam *Impatiens glandulifera* was recorded in the off-site area of G3, backing onto Scrase stream.

Scrub

5.19 Two dense areas of bramble scrub were recorded; BS1 was recorded in the centre of the Site and was dominated by bramble *Rubus fruticosus* with one oak *Quercus spp* and one blackthorn bush also present. BS2 was recorded in the off-site habitats along Scrase stream, which was dominated by bramble and Himalayan balsam, with abundant creeping thistle.

5.20 An area of poor condition blackthorn scrub (B) was recorded just outside of the Site boundary, in the blueline ownership boundary, within grassland G3. No other plant species were identified within the area of scrub. The scrub was in Poor condition due to being 100% blackthorn, not possessing a good age range, not having a developed edge, and there not being any clearings or rides within the scrub.

Trees

5.21 There were 28 individual trees recorded within the Site, and one individual tree recorded off-site (T29). The trees comprised mature and semi-mature oak trees, mature red oak *Quercus rubra*, semi-mature ash *Fraxinus excelsior*, common lime *Tilia eurpoaea* and semi-mature horse chestnut *Aesculus hippocastanum*.

5.22 The majority of the trees were medium sized trees (T2-T12, T16-T24, T26, T29) and large trees (T13-T15, T25, T27-T28, T30). T1 was off-site and not included within this report. Due to the size and condition of these trees, so their intrinsic value it is important should be retained by the proposals from an ecological perspective alone. A lot of these trees were noted to possess some potential for roosting bats.

5.23 Trees T2 – T11 were classified as being medium sized trees in moderate condition. These trees were mainly horse chestnut trees, with one ash and one oak. T13 was a medium sized tree in good condition and T13-15 were medium and large trees in good condition; these trees were all mature oaks. T16 was a mature red oak tree in moderate condition. T17 and T18 were both mature oak

trees in good condition. T19 – T25 comprised medium-sized small lime trees in moderate condition. T25 – T30 were all large, mature oak trees, in good condition.

5.24 The lime trees (T19-T25) are non-native species, which lacked features for wildlife, but were not considered mature for their species but still met the size requirements for medium sized trees, and/or showed signs of being impacted by anthropogenic activities.

5.25 The trees assessed as being in good condition were native species, and generally possessed niches for wildlife, were mature trees, did not show any negative signs from human activity, over-sailed vegetation. Some of these trees did show signs of management/impacts from human activity, but passed all other criteria.

Hedgerows

5.26 There were four hedgerows bounding the field compartments within Site. All the hedgerows supported a variety of native species, including mature and semi-mature trees frequently recorded throughout.

5.27 All hedgerows were classified as NERC S41 Habitats of Principal Importance, due to at least 80% of their canopy comprising native species.

5.28 None of the hedgerows were considered 'important' under The Hedgerow Regulations 1997 due to a lack of high species diversity and associated features.

5.29 H1 and H4 were classified as native hedgerows with trees, while H2 and H3 were classified as native hedgerows. H1 was dominated by hazel *Corylus avellana*, with abundant hawthorn *Crataegus monogyna*, frequent bramble and blackthorn, and some ash. H2 was dominated by hazel, with frequent holly *Ilex aquifolium*, bramble and bracken. H3 was dominated by blackthorn, with abundant hawthorn, bramble, and infrequent hazel. H4 was dominated by holly and oak, with abundant bramble, blackthorn, hawthorn, hazel, ash and wild cherry *Prunus avium*.

5.30 The hedgerows were all assessed as being in moderate condition. There was a lack of vegetated surface to the side of the hedgerows, plants indicative of enrichment covered >20% of the ground around the base of the hedgerows, and >90% of the hedgerow length was not free of damage caused by human activities. H2 and H3 also failed as they did not have a width of >1.5m. H1 also failed for not having trees every 30m.

Line of Trees

5.31 Three lines of trees were present within Site along the south-east, north and south boundaries.

5.32 TL1 was dominated by common lime, with some horse chestnut and ash trees. TL2 comprised oak and ash trees. TL3 was dominated by hazel, with abundant hawthorn, frequent ash, and some field maple trees. Bramble was frequently recorded throughout the understory.

5.33 The tree lines were in poor and moderate condition, due to having gaps within the canopy, trees not having ecological niches, and there not being an undisturbed naturally vegetated strip of at least 6m on both sides of the lines of trees.

Streams

5.34 Two streams were recorded off-site; northlands brook to the south-east of the Site, and Scrase stream to the north of the Site. The stream and brook are over 10m from the current redline boundary, but are adjacent to the ownership boundaries. An RCA was carried out on Scrase stream in 2023 as some impacts are possible due to the possible need for an outflow from the on-site SuDS.

5.35 Scrase stream flows in an easterly direction along the northwest ownership boundary, connecting two LNR's on either side of Scamps Hill Road. At the most western corner of the Site it has 90 degree engineered bank sides, comprising of timber panels between galvanised posts. The section of stream within the Site is approximately 2-3m wide, with banks that were steep in places being approximately 2m in height and 80 degrees in places. Varying water depths were observed along its meandering route, providing some exposed substrate and slow flowing areas. The stream was open and not heavily overshaded providing a dense bankside vegetation cover. Inundated and marginal species including rosebay willowherb, bramble, pendulous sedge *Carex pendula*, common figwort *Scrophularia nodosa*. Himalayan balsam was recorded along its reach during the surveys in 2023.

5.36 Northlands brook flows in a northerly direction under Scamps Hill Road via a small road bridge and into Little Walstead Wood. The brook is sectioned by wiers along its length through the site. The brook is approximately 0.5m in width with a shallow (>40cm) but flowing channel, the banksides were densely vegetated at the southern end becoming sparser as the stream heads north, as a result of shrub and woodland overshading. Varying water depths were observed along its meandering route, providing some exposed substrate and slow flowing sections. Inundated and marginal species included hemlock water dropwort *Oenanthe crocata*, pendulous sedge and common figwort.

Fauna

Badgers

5.37 The grassland provides suitability foraging habitat for badgers. The hedgerows and boundary features provide suitable commuting habitat and habitat for sett creation. Off-site habitats including broadleaved and plantation woodland to the north of the Site provide suitable habitat for badgers.

5.38 Due to confidentiality, the results of the badgers survey carried out in November 2020 and any incidental observations made during further surveys are contained in the Badger Survey Report (FPCR, January 2024).

Bats

5.39 The habitats within the Site including scrub, grassland and lines of trees and hedgerows provide commuting and foraging opportunities for bats. The Site is well connected to suitable habitat for roosting, foraging and commuting for bats by hedgerows, treelines, the off-site Scrase stream and woodlands compartments adjacent, which include Costells Wood, Henfield Wood, and Nashgill Wood, there are also smaller pockets/copses of woodland with the wider area providing stepping stone habitats linking to the Site.

5.40 Forty-six bat records were returned by the data search from the last ten years within 1km of the Site, including records of grounded bats, observations, bat emergences, and roost records, from a

range of common and widespread species including common pipistrelle, soprano pipistrelle and brown long-eared bats.

5.41 Five trees were identified during the 2023 walkover survey as having moderate to high potential for roosting bats (see *Table 9*).

5.42 All of the mature trees within the Site and off-site habitats are retained within the current framework plan. The trees will be appropriately buffered during the works according to the root protection areas (RPA) (FPCR, Tree Schedule and Tree Survey Plan, December 2023). The identified trees with bat roosting features are located within hedgerow H1, within the grassland G1, and within the group of trees to the north-east of the bramble scrub BS1.

Table 9: Trees with Bat Potential

Tree	Species	Roosting Bat Potential	Features
T13	Oak	Moderate	Multiple split limbs and scars, where limbs have broken off.
T15	Oak	Moderate	Two branch tear-puts, two rot holes/woodpecker holes on N aspect.
T25	Oak	Moderate	Three branch tear-outs which could lead to cavities. Multiple torn limbs.
T26	Oak	Moderate	One hole in dead branch which appears to lead to a cavity. Dense ivy coverage which may be obscuring features.
T27	Oak	High	Three knot holes on large limbs. 1 knot hole/flush cut on the main trunk.

Manual Bat Activity Survey

5.43 One manual activity survey was undertaken on 16th of October 2023, where a total of 37 contacts were recorded, comprising three bat species/species groups. These were common pipistrelle, soprano pipistrelle and *Myotis* sp. Much of the activity occurred along the northern boundary of the Site (26 out of the 37 contacts), with a small proportion of activity occurring along treeline TL2, hedgerow H1 and hedgerow H3. These linear features provide links between the northern and southern boundaries, as well woodland habitats in the wider area. Bats behaviours were mainly commuting calls, but some foraging activity was recorded on hedgerow H4 to the north of the Site possibly associated with the adjacent to off-site woodland.

5.44 Results of the manual bat activity survey are summarised in *Table 10* below, with the distribution of encounters shown on *Figure 4*.

Table 10: October 2023 Manual Bat Activity Survey Results and Weather Conditions

Date	Total Contacts	Species Recorded (No. Contacts)
16th October 2023	37	Transect • 16 common pipistrelle • 4 soprano pipistrelle • 1 *Myotis* sp. Point Count • 11 common pipistrelle • 4 soprano pipistrelle • 1 *Myotis* sp.

Date	Total Contacts	Species Recorded (No. Contacts)
Nocturnal Survey Timings and Weather Conditions: Sunset Time: 18:06; Start Time: 18:06; Finish Time: 20:10 Weather conditions: 9-11°C; 40-60% cloud cover; 1 wind; 0 rain		

Automated/Static Bat Activity Survey

5.45 During October (2023), one static unit was deployed on Site, located in hedgerow H2, along the southern boundary. This recorded a total of 3034 registrations from nine bat species/groups. The species recorded included common pipistrelle (93%), soprano pipistrelle (0.63%), *Myotis* species (0.40%), long-eared bat spp. (0.20%), pipistrelle spp. (0.17%), Nathusius' pipistrelle (0.07%), noctule (0.03%), *Nyctalus* spp. (0.03%) and serotine (0.03%) bats.

5.46 Results of the automated activity survey are summarised in *Table 11* below, with the static detector location illustrated in *Figure 4*.

Table 11: October 2023 Automated Bat Activity Survey Results

Dates	Unit Reference	Total Registrations	Species & Registration Count	
16th – 21st October 2023	Unit 1	3034	Common pipistrelle - 2987 Soprano pipistrelle - 19 *Myotis* sp. - 12 Long eared sp. - 6 Pipistrelle sp. - 5	Nathusius' pipistrelle - 2 Noctule - 1 *Nyctalus* sp. - 7 Serotine - 1

Birds

5.47 On-site habitats including rough grassland, scrub, scattered trees, lines of trees and hedgerows were considered suitable to support a range of common and widespread species. The off-site woodlands and Scrase stream provide additional habitat for notable and protected bird species.

5.48 The wintering bird survey completed in November 2020 identified 24 species within the Site; which including five notable species of medium or high conservation concern; herring gull, marsh tit, redwing, dunnock, and house sparrow. All recorded species are fairly common to very common in Sussex and the UK. A small flock of redwing comprising 38 individuals was recorded in association with the edge habitats of Little Walstead Wood, largely within the north-eastern-most field (G3). In addition, two marsh tit were noted.

5.49 An update wintering bird scoping survey was carried out in November 2023, identified 13 species, with four of them considered notable species (*Table 12*).

5.50 No large over-wintering flocks, or notable farmland bird species were recorded on either survey.

5.51 The full results of the winter bird scoping surveys carried out in 2020 and 2023 are provided in *Appendix C*.

Table 12. NERC and/or BoCC Red- and Amber-Listed Bird Species Recorded on Site during the Winter Bird Surveys

Species	2020	2023	Conservation Status	Recent Status in Sussex[18]
Kestrel	-	1	Amber	Fairly common resident and passage migrant.
Herring gull	1 flyover	-	NERC, Red	Very common resident; status uncertain as passage migrant and winter visitor.
Woodpigeon	154	27 (+ 4 flyovers)	Amber	Abundant resident and winter visitor.
Stock dove	-	1	Amber	Common resident and possible winter visitor.
Marsh tit	2	-	NERC, Red	Fairly common resident.
Wren	5	-	NERC, Amber	Very common resident.
Redwing	34	3 flyovers	W&C, Amber	Common, occasionally very common, passage migrant and winter visitor.
Dunnock	1	-	NERC, Amber	Abundant resident and passage migrant.
House sparrow	1 colony	-	NERC, Red	Very common but possibly declining resident.

Dormice

5.52 The habitats on Site including scrub, hedgerows and lines of trees were suitable for dormice. The site is well connected to other habitat suitable for dormice including broadleaved woodland and thick hedgerows. Owing to records returned from approximately 115m south of the Site, it is likely that dormice are present.

Great Crested Newts

5.53 No consultation records for great crested newts were provided within 1km of the Site boundary. However, the Site provided areas of suitable terrestrial and potential breeding habitat for this species and three off-site ponds (P1, P2 and P3) were identified within 250m of the Site boundary, see Figure 5.

5.54 The grassland, scrub and hedgerows within the Site provided suitable terrestrial habitat for great crested newts. The Site has good connectivity to off-site suitable habitats including woodland, scrub, and other areas of tussocky grassland.

5.55 The ponds P1 and P2 were assessed as providing 'Good' suitability for GCN and pond 3 'Below average' in 2020 using the Habitat Suitability Index.

[18] The Sussex Bird Report. (2019) No. 72. The Sussex Ornithological Society

5.56 All ponds and a wet ditch D3, along the eastern boundary of Little Walstead Wood), were subject to eDNA testing in 2021. All ponds and ditch (which connect to P2) returned a negative result for GCN (Appendix E). There are also no records of GCN within 1km of the Site from the last 10 years.

Reptiles

5.57 The grassland, woodland edges, scrub and hedgerows within the Site, and along Scrase stream adjacent to the Site boundary, were considered to provide suitable habitat for sheltering, basking and foraging reptiles. The habitats adjacent to the Site boundary offer suitable habitat for reptile species such as slow-worm *Anguis fragilis* and grass snake.

Riparian Mammals

5.58 The Scrase stream provides suitable linear commuting and foraging habitat for riparian mammals. The banks of Scrase stream were noted to be steep (80 degrees in places and approximately 1-2m in height) providing optimal habitat for burrows. Tall ruderal and marginal vegetation, with over hanging trees and scrub was present along the bank-sides providing cover and a suitable foraging resource for water vole and otter.

5.59 During the survey in 2020 small burrows were observed in the bank of Scrase stream at the north-eastern end of the Site, although these could not be conclusively determined as water vole. No further evidence was recorded.

Other Species

5.60 The urban edge-rural location of the site provides suitable habitats for the western European hedgehog *Erinaceus europaeus.* The grassland, woodland and mature hedgerows provide suitable foraging, hibernating and commuting habitat for this species. Multiple records of hedgehog within 1km of the Site were returned by the data search, with the closest record 260m north of the Site.

6.0 DISCUSSION AND RECOMMENDATIONS

6.1 The proposals have been assessed against the current ecological baseline to review the potential impacts anticipated and to provide recommendations for mitigation, compensation and/or ecological enhancement where appropriate. The assessment of impacts and recommendations for mitigation are based on the most up to date Illustrative Framework Plan for the Site (FPCR, Drawing ref: *9432-L-02).*

Desk Study

Statutory and Non-Statutory Designated Sites

Statutory

6.2 Following consultation with Natural England, Mid Sussex District Council has undertaken a Habitats Regulations Assessment (HRA) to test whether the Mid Sussex District Plan, in combination with other plans and projects, is likely to have an adverse effect on the integrity of Ashdown Forest. The HRA report on the District Plan identifies that proposed new housing close to Ashdown Forest is likely to increase the number of visitors to the Forest. Such visitors could increase disturbance to rare ground-nesting bird populations (in particular Dartford warbler and nightjar). The HRA identified a 7 km 'zone of influence' within which new housing developments must counter its effect by putting in place measures which reduce visitor pressure.

6.3 Ashdown Forest SPA and SAC is approximately 8km north-east of the site, and in accordance with the Mid-Sussex's Map of 7km Boundary around the Ashdown Forest[19], the area of Haywards Heath falls outside of the recognised 7km 'zone of influence', therefore no contributions to the strategy are required; to confirm this Natural England will be contacted via their Discretionary Advice Service.

Local Nature Reserves

6.4 Eastern Road LNR is approximately 62m north of the Site and Scrase Valley LNR 340m to the south-west, both of which can be easily accessed on foot from the development by footpaths and roads through Lindfield.

6.5 Scrase Valley LNR appears to have surfaced paths which run along the stream whereas Eastern Road LNR appears to be more informal. Current use of these two Mid-Sussex council managed sites is unknown, however, the development site is likely to result in an increase in visitor numbers utilising these areas.

6.6 Therefore, in accordance with NPPF and the District Plan, the Illustrative Framework provides alternative recreational areas on Site through the provision of play areas and open space for dogs to be exercised off the lead, to alleviate any potential recreational pressure on the nearby sensitive sites. The current proposals include the enhancement or creation of approximately 3.2ha of grassland and scrub to the south-east of the developed area and 0.75ha of grassland and play areas to the north-west of the development.

6.7 Management of the onsite open spaces should include the following:

[19] Protecting Ashdown Forest, Mid-Sussex District Council. https://www.midsussex.gov.uk/planning-building/protecting-ashdown-forest/

- Home-owner packs to inform residents of the sensitivity of surrounding sites, and what measures should be taken when visiting;
- interpretation boards to raise awareness of the existing wildlife and value of the habitats;
- well signed footpaths in more sensitive areas; and
- litter/dog waste bins at footpath entrances to help reduce potential change in nutrient levels.

Habitats & Biodiversity Net Gain

6.8 The habitats present within the Site comprise low and medium distinctiveness habitat types including modified grassland, other neutral grassland, lines of trees and hedgerows. The species present comprise common and widespread species which can easily be replaced and improved with the over-seeding of grasslands or the in-filling of hedgerows with native species to improve diversity.

6.9 The proposals include the retention of areas of modified grassland around the residential areas. Additionally, a play area comprising mainly modified grassland will be created in the northeast of the Site. The proposals include the enhancement of a large area of modified grassland (2.65ha) to other neutral grassland in the south of the Site, the creation of large areas of mixed scrub and SuDS, and the planting of 53 small-sized native trees across the Site.

6.10 Some off-site habitat enhancement will be undertaken to the north of the Site, within the blueline ownership boundary. This will target enhancing the other neutral grassland in this area from Poor to Moderate condition. The enhancement of this grassland will improved the habitats along Scrase stream, and will retain a vegetated buffer between the Site and Scrase stream, which is >10m from the current Site boundary. The drainage plan is yet to be defined for the development, but may need to incorporate a drainage channel through this area between the SuDS and Scrase stream.

6.11 Multiple scattered mature trees were present throughout the Site. Trees are classed as medium distinctiveness habitats and are therefore of high value in terms of biodiversity net gain. The trees within the Site are all being retained by the current proposals. During construction works, all retained trees will need to be protected through the implementation of appropriate measures including root protection areas and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, as indicated by the Arboricultural Assessment (FPCR, 2023). T29 within the off-site habitats to the north of the Site will also be retained by the proposals.

6.12 The majority of the hedgerows and all of the lines of trees will be retained by the proposals. Small lengths of hedgerow will be lost for the creation of access routes within the Site. The proposals include the planting of 149m of native species-rich hedgerows to compensate for this loss. The hedgerows must include at least 5 native woody species per 20m, such as hazel, blackthorn, hawthorn, spindle, hornbeam, dogrose, honeysuckle, wild privet, wild cherry and guelder rose. As recommended above, standard trees should also be planted at the ends of hedgerows where gaps are created, to create ‘hop-overs’ for bats.

6.13 The most up to date Illustrative Framework Plan (FPCR, 2023; ref: 9432-L-02) has been assessed using the Defra Statutory Biodiversity Metric tool and this has demonstrated that the proposals will lead to a net gain of 4.57 habitat units, representing a +13.55% change in biodiversity units, and an uplift of 0.83 hedgerow units equating to a +19.22% gain in the Site’s hedgerow resource (for details refer to the Biodiversity Net Gain Report by FPCR, January 2024).

6.14 An RCA of the Scrase stream was completed in October 2023. The RCA concluded that the Scrase stream is in Poor condition currently, and that the proposals will have a slight negative impact on the stream due to proposed additional reinforcement and an outfall, associated with the proposed SuDS. The drainage plan for the Site is still being discussed and this was a high-level assessment to collect baseline information. The RCA concludes that the condition of the stream will not be impacted by the proposals and will remain in Poor condition. No enhancements have been recommended for the stream at this point as the stream is outside of the clients' ownership.

6.15 Additional benefits to wildlife will be achieved through the Illustrative Framework Plan, as illustrated in Figure 2 in the Biodiversity Net Gain Report (Appendix F). A Habitat Management and Monitoring Plan (HMMP) should be produced, which will detail the planting and landscape information, and the management and monitoring of the proposed and enhanced habitats for a minimum of 30 years in accordance with the Environment Act;

- Species-rich flowering grassland mixes, for example EM2 Standard General Purpose Meadow Mix from Emorsgate Seeds or EL1 Flowering Lawn Mix, will be used to plant the proposed modified grasslands, and to over-seed the grassland which will be enhanced to neutral grassland on-site. The existing grasslands were recorded as being species-poor and were therefore the proposals will enhance the overall floristic diversity of the scheme and provide additional habitat for invertebrates;
- The off-site grassland G3 which is to be enhanced from Poor to Moderate condition should be over-seeded with a species-mix appropriate for an area which is prone to flooding, such as EM8 Meadow Mixture for Wetlands from Emorsgate Seeds;
- New tree planting will utilise a mix of native species. These are to be confirmed, but should include species such as hazel, silver birch *Betula pendula,* wild cherry*,* rowan and field maple *Acer campestre.* These trees are fruiting and flowering species which will provide additional habitat and food sources for invertebrates, small mammals, birds and other wildlife.
- Proposed native scrub planting will comprise a mix of woody species. This will include the following species; alder, downy birch *Betula pubescens,* hawthorn, hazel, bird cherry, dogwood, wild cherry, goat willow and mountain ash. A mix of native species will provide berries and flowers as a food source for a range of wildlife, as well as providing shelter and breeding habitat for wildlife including reptiles, small mammals, birds, hedgehogs and invertebrates.
- The SuDS will be planted with a range of native marginal and aquatic plant species suited to areas which are seasonally wet, including irises and rushes. The SuDS must be monitored and managed to ensure Himalayan balsam does not spread to this area, as this invasive species has been recorded within the grassland along the Scrase stream.
- Native species-rich hedgerows will include a mix of native species; these may include a mix of field maple, hazel, bird cherry *Prunus padus,* hornbeam *Carpinus betulus,* dogwood *Cornus sanguinea,* alder *Alnus glutinosa,* beech *Fagus sylvatica* and spindle *Euonymus europaeus.* The species will provide visual appeal and additional habitat and food sources for pollinators, birds and small mammals.

Schedule 9 Invasive Species

6.16 Stands of Himalayan balsam were observed along Scrase stream and within the northern edge of the grassland G3 during the walkover and RCA surveys in 2023. Himalayan balsam is listed under

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and it is therefore an offence to allow it to or cause it to spread.

6.17 There is a risk of biosecurity if Himalayan balsam is not handled and/or treated property during vegetation removal works, especially within grassland G3. Potential for spread to new locations within the Site though removal whilst in seed or spread of contaminated material, such as being tracked out on vehicles or via the export of topsoil.

6.18 Himalayan balsam is classed as 'controlled waste' and can only be disposed of in a registered landfill site, unless appropriate on-site treatment and disposal is undertaken. The Water Resources Act 1991[20] requires care to be taken when spraying or treating such species in the presence of a watercourse.

6.19 It is recommended that a biodiversity method statement for working around Himalayan balsam is written to ensure that Himalayan balsam is not spread within the Site or into the wider environment during the proposed off-site enhancement of the grassland.

Ancient Woodland – Little Wanstead Wood

6.20 Little Wanstead Wood, an area of ancient broadleaved woodland lies adjacent to the north boundary. The woodland edges provide a complex structure of vegetation that are of value to a large number of invertebrates and other wildlife, but particularly bats the will use the canopies for foraging and as navigational feature.

6.21 At buffer of at least 15m will be implemented and managed around Little Walstead Wood, where no development will take place. The existing scrub and mature trees at the edge of the woodland will be enhanced and perpetuated, retaining this rich foraging resource for invertebrates, mammals and birds. This is in accordance with best practice guidelines and the District Plan, which recommends a minimum buffer of 15m is maintained between ancient woodland and development.

6.22 The proposals include the retention of the habitats around the boundary adjacent to Little Wanstead Wood, and the planting of additional native mixed scrub planting, and modified grassland around the SuDS area. Planting of additional scrub will enhance the woodland edge by creating a more diverse age structure and introducing a more diverse range of species. The scrub boundary will also create a physical barrier between the woodland and the Site to help to further dissuade public access into the woodland, which is private land.

Protected and/or Notable Species

Badger

6.23 Details provided in the FPCR Badger Report (2024).

Bats

6.24 Five of the trees on Site were deemed to provide moderate to high potential for roosting bats, all of which are currently retained within the proposals. Therefore, no surveys are required at this stage. Should the requirement to remove or manage any of the trees arise due to changes to the framework/masterplan further survey work will be required. The assessment would consist of an

20 Water Resources Act 1981. Available at: https://www.legislation.gov.uk/ukpga/1991/57/contents

aerial assessment by roped access bat workers and / or nocturnal survey during the optimal survey season (May to August). Following additional assessments, trees may be upgraded or downgraded based on findings. After completion of survey work, a precautionary working method statement may be required. If a roost site is confirmed a licence from Natural England will be required.

6.25 The proposal will retain and buffer the majority of the hedgerows and treelines within the Site, maintaining important corridors for bat species to the woodland habitats in the wider landscape. Small openings in hedgerows H1 and H2 will be made for access points and roads. To maintain linkages across the gaps created by the road access it is recommended that 'hop overs', in the form of standard trees planted at the edge of the gaps, are created to minimise habitat and species fragmentation. Additional tree, scrub and hedgerow planting with the creation of a sustainable urban drainage feature (SuDs) and the creation of more diverse grassland habitats will increase floral and invertebrate diversity within the Site, providing improved foraging resources for local bat species. To compensate the loss of hedgerows 149m of species-rich hedgerows will be planted through the middle of the Site, screening the green space to the south from the development. The proposed tree and hedgerow planting will strengthen the commuting route around the Site.

6.26 A single automated activity survey was undertaken in October 2023, which falls within the recommended survey period for the south east, where the climate and weather conditions are more stable in accordance with BCT guidance 2023; however it is accepted that a single survey at the later end of the survey period might not present the full representation of the Site's use by the local bat population. It is however important to note that 3034 registrations during this period does represent a habitat that is still being used by common species, 93% of which were common pipistrelles. Monthly surveys are scheduled for 2024, which will better inform the species present and which parts of the are more frequently used.

6.27 A Bat Survey Report will be written and submitted following the completion of the surveys in 2024 which will contain recommendations for mitigation and enhancement. Generally, it is recommended that at least four 1HE Schwegler brick boxes and at least two Schwegler 1FF bat boxes are installed within buildings and on mature trees within the Site. If the specific models specified are not available at the time needed, similar models should be accepted in their place. Bat box entrances should be placed in an area away from artificial light and installed as per the manufacturer's instructions.

6.28 Furthermore, it is recommended that all proposed lighting should limit light spill above the horizontal plane, and where possible should be timed or sensory lighting to limit the effect of the proposals on nocturnal species. During the works, and the lighting scheme for the development, should avoid any light being cast onto woodlands (especially Little Wanstead Wood), mature trees which have been identified as having potential for roosting bats, and onto Scrase stream which provides a good corridor for foraging bats.

Birds

6.29 Across both single surveys (2020 and 2023), a total of 29 bird species were recorded including nine notable species. All recorded species are fairly common to abundant birds in Sussex and the UK. The bird assemblage present was typical of edge-of-settlement farmland with common and widespread generalist woodland / garden species present.

6.30 Notable species recorded utilising the habitats on-site during the WBS included one redwing *Turdus iliacus.* A small flock comprising 38 individuals were recorded during the 2020 survey in

association with the edge habitats of Little Walstead Wood, largely within the north-eastern-most field. A smaller count of three individuals was recorded in 2023, all of which were flying over the Site.

6.31 Two marsh tit, were recorded within woody vegetation during the WBS in association with the stream that flows into Little Walstead Wood, and one colony of house sparrow were recorded within a hedgerow in the south-eastern corner of the site, both on the 2020 survey occasion, with neither species recorded in 2023. Stock dove *Columba oenas*, woodpigeon *Columba palumbus*, dunnock, and wren *Troglodytes troglodytes* were all recorded utilising the hedgerow habitats as well as the trees. The remaining notable species comprised a single herring gull which was recorded flying over western-most field in 2020 and a single kestrel *Falco tinnunculus* flying over the eastern-most field in 2023.

6.32 Owing to the very limited number of notable species recorded during the WBS, and the absence of any species recorded in significant wintering numbers, wintering birds are not considered to pose a constraint to development and no further wintering bird surveys are required.

6.33 It is recommended that a full suite of breeding bird surveys is completed in 2024. As per the current bird survey guidelines, breeding bird surveys will comprise six survey visits during mid-March to mid-July, in accordance with the standard British Trust for Ornithology (BTO) methods.

6.34 The proposals include the loss of large areas of tussocky neutral grassland (G2 and G3), and small lengths of hedgerows. The proposals do include the enhancement of G1 to other neutral grassland, and the creation of areas of native mixed scrub around the boundaries of the Site, as well as the inclusion of 53 small trees, twenty-two of which will be fruiting species. The proposed planting and habitat creation will include species-rich grassland mixes, and flowering and fruiting native woody species which will be beneficial to bird species such as redwing and, and those typical of urban environs including house sparrow and starling.

6.35 A Breeding Bird Report will be produced following the completion of the breeding bird surveys in 2024 which will contain recommendation for mitigation and enhancement on the Site.

6.36 Generally, the landscape plan should include faunal features including 2 1SP Schwegler sparrow terraces and 2 1B Schwegler (or similar nest boxes). The proposed nest boxes will provide additional nesting opportunities for generalist species. Furthermore, due to the special protection afforded to breeding birds, any removal of vegetation (including tussocky grassland and woody vegetation) should be undertaken outside of the bird breeding season (March to August inclusive) to minimise the risk of disturbance to breeding birds. If this is not possible, such vegetation should be checked prior to removal by a suitably experienced ecologist. If active nests are found, vegetation should be left untouched and suitably buffered from works until all birds have fledged as advised by a suitably qualified ecologist.

Dormice

6.37 Several records of dormice were returned by the data search, with the closest record 115m south of the Site.

6.38 The blackthorn and bramble scrub and the hedgerows within the Site contain native species, which have the potential to support hazel dormice, particularly within southern counties of the UK. Sussex is a good county for the hazel dormouse, where they are widespread within suitable habitats.

6.39 The proposals include the retention of the majority of the hedgerows on the Site, with only very small losses for access, this is compensated for through the creation of scrub habitats, and the planting of native species-rich hedgerows which will provide additional habitat for dormice and improve connectivity around the Site and into the surroundings.

6.40 It is important that the status of this species within the Site will be determined by an appropriate presence/likely absence survey, which are scheduled for 2024 and will involve the installation of 50+ dormice tubes within suitable habitats on-site during March / April, which will be checked each month between May and October. A Dormouse Survey Report will be written following the surveys in 2024, which will provide specific recommendations for mitigation and enhancement based on the survey results.

GCN

6.41 The eDNA surveys of surrounding ponds returned negative results and no records for GCN were returned from the desk study. It is therefore considered likely that GCN are absent from the local area and no constraints from this species are posed to the redevelopment of the Site.

Reptiles

6.42 Suitable habitat for reptiles on-site included grassland, woodland edges, scrub and hedgerows. Records of reptiles returned by the data search within 1km of the Site boundary included grass snake and common lizard, 64m south-west and 50m south.

6.43 A reptile survey has been commissioned for 2024, which will identify any reptiles present on the Site and the areas which they are utilising. The surveys will comprise one visit to lay artificial refugia within suitable habitat and then seven visits to check these refugia, in suitable weather conditions, between April and October.

6.44 The proposals include the creation of mixed scrub, species-rich neutral grassland and SuDs, and the planting of species-rich hedgerows, which will provide suitable habitat for sheltering, basking and hibernating reptiles. Furthermore, it is recommended that log piles and hibernacula are installed in the GI to the south of the Site and around the SuDS to the north of the Site to provide additional habitat for reptiles. These habitats will also provide habitats for amphibians, small mammals and invertebrates.

6.45 A Reptile Survey Report will be written following the survey which will detail specific mitigation and compensation required, which may include a translocation, utilising the area of greenspace to the south of the Site which is to be retained and enhanced to species-rich other neutral grassland as a receptor site.

Riparian Mammals

6.46 The watercourses including Scrase stream and Northlands Brook were considered to offer foraging, commuting and resting habitat that could be used by otter and water vole. The watercourses will be buffered from the proposed development by off-site retained habitat to the south, and off-site enhancement to the north.

6.47 One record of water vole from the last 10 years was returned by the data search 77m south-west of the Site.

6.48 Due to the potential impact of the proposals on Scrase stream due to the creation of an outflow from the SuDS, two surveys for riparian mammals will be carried out on Scrase stream in 2024 to

assess the waterbody for the presence of riparian mammals. The surveys will record signs including droppings/spraints, footprints, latrines, feedings signs and slides. The first survey will be carried out between April and June, with the second survey in July and September.

6.49 A Riparian Mammal Survey Report will be written following the surveys which will outline any required mitigation or enhancement measures.

Other Species

Hedgehogs

6.50 Multiple records of hedgehog were returned by the data search, with the closest being approximately 300m north of the Site. The Site provided some habitat for foraging and sheltering hedgehogs, including scrub, tussocky grassland, and hedgerows.

6.51 It is recommended that hedgehog highways (13cm x 13cm gaps) are incorporated into the base of any close-board fencing installed on the Site to maintain movement throughout the Site for this species. The proposed habitats including hedgerows, native scrub, and other neutral grassland will provide good commuting, foraging and sheltering habitat for hedgehogs.

6.52 During the works, all excavations should be made safe if left overnight by way of a 45^{o} slope or mammal ladders. In addition, any scrub clearance works should be undertaken outside of the hibernation season for hedgehogs (October – March), or the habitat should be searched by a suitably qualified ecologist prior to clearance, and any animals found moved to a hedgehog house which is placed on Site, away from the area of works.

Key

- **Redline Boundary**
- **Blueline Ownership Boundary**
- **1km**
- **2km**
- **15km**
- **Special Area of Conservation (SAC)**
- **Special Protected Area (SPA)**
- **Local Nature Reserves (LNR)**

Grattons Park
Tilgate Forest
Target Hill Park
Warnham
Weirwood Reservoir
Ashdown Forest (SPA)
Ashdown Forest (SPA)
Ashdown Forest (SAC)
Rowhill Copse
Ardingly Reservoir
Eastern Road Nature Reserve
Blunts and Paiges Wood
Ashenground and Bolnore Woods
Chailey Common
Chailey Common
Chailey Common
Chailey Common
Chailey Common
Bedelands Farm
West Park, Uckfield
Eastern Road Nature Reserve
Scrase Valley
0 250 500 m
Stanmer Park/Coldean
Railway Land Lewes
0 5 10 km

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client
Gladman Development Ltd.

project
Walstead Grange,
Lindfield

drawing title
CONSULTATION PLAN - STATUTORY DESIGNATED SITES

scale @ A3
1:120900

drawn
EB / AU / CHK

issue date
26/1/2024

drawing / figure number
Figure 1
Rev A

Key

- Redline Boundary
- Blueline Ownership Boundary
- 1km Search Radius

Species

- A Flowering Plant
- Bluebell
- Cherry Laurel
- Common Frog
- Common Lizard
- Common Pipistrelle
- Common Toad
- European Water Vole
- Giant Hogweed
- Grass Snake
- Green-winged Orchid
- Hazel Dormouse
- Himalayan Balsam
- Horse-Chestnut Leaf-miner
- Japanese Knotweed
- Kingfisher
- Long-eared Bat species
- Mallard
- Myotis Bat
- Palmate Newt
- Smooth Newt
- Soprano Pipistrelle
- Spanish Bluebell
- Swift
- Tree Cotoneaster
- West European Hedgehog
- Winter Heliotrope

client
Gladman Developments Ltd.

project
Walstead Grange,
Lindfield

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CONSULTATION PLAN - SPECIES RECORDS

scale @ A3
1:9300

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EB / AU / CHL

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23/1/2024

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Figure 2
Rev A

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Key

- **Redline Boundary**
- **Blueline Ownership Boundary**

Baseline Habitats

- **Blackthorn scrub**
- **Bramble scrub**
- **Modified grassland**
- **Other neutral grassland**

Baseline Hedgerows

- **Line of trees**
- **Native hedgerow**
- **Native hedgerow with trees**

Baseline Watercourses

- **Other rivers and streams**

Baseline Trees

- **Existing Large Urban Tree**
- **Existing Medium Urban Tree**

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project
Land off Scamps Hill, Lindfield

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BASELINE HABITATS

scale @ A3
1:1,600

drawn
DS / AU / CHK

issue date
24/1/2024

drawing / figure number
Figure 3
Rev A

Key

- Redline Boundary
- Blueline Ownership Boundary
- Start Point
- Finish Point
- Point Count Locations
- Transect Route
- Flight Paths
- Static Detector Location (with ref.)

Bat Contacts

- Common Pipistrelle
- Soprano Pipistrelle
- Myotis Species

Map Ref.	Time	Species	Behaviour	Passes
Start	18:06			
PC A	18:09-18:14	No Bats		
PC B	18:17-18:22	No Bats		
1	18:26	C.Pip	Commuting	1
PC C	18:29-18:34	No Bats		
2	18:35	C.Pip	Commuting	2
3	18:36	C.Pip	Foraging	Cont.
4	18:39	C.Pip	Commuting	1
5	18:47	C.Pip	Commuting	1
PC D	18:49-18:54	No Bats		
6	18:55	C.Pip	Commuting	2
7	18:58	S.Pip	Commuting	2
PC E	19:02-19:07			
8	19:06	C.Pip	Commuting	1
9	19:15	C.Pip	Commuting	1
10	19:15	C.Pip	Commuting	3
11	19:17	S.Pip	Commuting	1
12	19:17	C.Pip	Foraging+Social	4
13	19:18	Myotis Sp.	Commuting	1
14	19:19	C.Pip	Foraging+ Social	Cont.
15	19:19	S.Pip	Foraging+Social	3
PC F	19:20-19:25			
16	19:21	C.Pip	Commuting	2
17	19:22	S.Pip	Foraging+Social	2
18	19:23	C.Pip	Foraging	Cont.
19	19:24	S.PIp	Foraging	Cont.
20	19:24	C.Pip	Commuting	1
21	19:26	C.Pip	Commuting	1
22	19:30	S.PIp	Commuting+Social	1
23	19:30	C.Pip	Commuting+Social	1
24	19:31	C.Pip	Commuting	1
PC G	19:34-19:39			
25	19:35	C.Pip	Commuting	1
26	19:37	C.Pip	Commuting	1
27	19:49	C.Pip	Commuting	1
PC H	19:52-19:57			
28	19:52	C.Pip	Foraging	3
29	19:53	Myotis Sp.	Commuting	1
30	19:55	C.Pip	Commuting	1
31	19:55	S.PIp	Commuting	1
32	19:56	C.Pip	Foraging	3
33	19:57	C.Pip	Commuting	2
34	19:57	S.PIp	Commuting	2
35	19:59	C.Pip	Foraging	Cont.
36	20:04	C.Pip	Commuting	1
PC I	20:05-20:10			
37	20:09	C.Pip	Commuting	1
Finish	20:10			

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0 50 100 m

client
Gladman Developments

project
Walstead Grange,
Lindfield

drawing title
BAT TRANSECT SURVEY RESULTS PLAN - OCTOBER 2023

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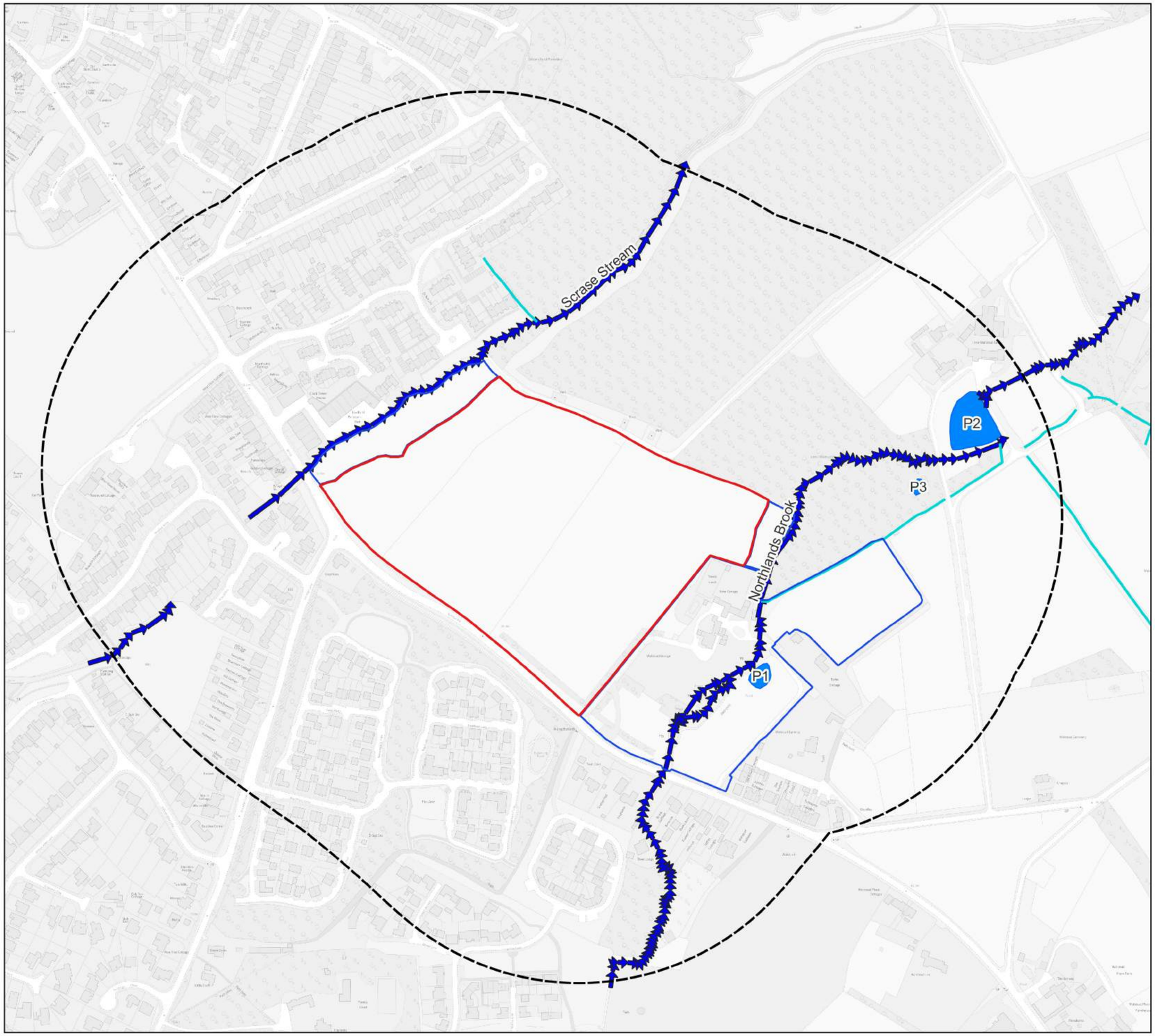
drawing / figure number **Figure 4** | rev -

K:\9400\9432\ECO\QGIS\QGIS 2.14\Plans\Bat Figures\Bat Transect Survey Results Plan [Oct-2023]\Bat Transect Survey Results Plan [Oct-2023].qgs



Key

- Redline Boundary
- Blueline Ownership Boundary
- 250m buffer

Waterbodies

- Ponds
- Ditches
- Streams

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client
Gladman Development's Ltd

project
Land off Scamp's Hill, Lindfield

drawing title
WATERBODY LOCATION PLAN

scale @ A3
1:3,700

drawn
CHK

issue date
24/1/2024

drawing / figure number
Figure 5

APPENDIX A: RELEVANT LEGISLATION, POLICY AND GUIDANCE

Legislative Framework

1.1 The applicable legislative framework is summarised as follows:

- Natural Environment and Rural Communities (NERC) Act 2006.
- Wildlife and Countryside Act (WCA) 1981 (as amended).
- The EC Birds Directive (Directive 79/409/EEC) as translated into UK law by The Conservation of Habitats and Species Regulations (CHSR) 2017 (as amended).
- The EC Habitats Directive (Directive 92/43/EEC) as translated into UK law by the CHSR 2017 (as amended).
- Environment Act 2021.
- The Protection of Badgers Act (PBA) 1992.

1.2 Section 41 (S41) of the NERC Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity, and to consult Natural England before doing so.

1.3 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

1.4 The Environment Act 2021 came into force on 9th November 2021. Of particular relevance is the requirement for all developments subject to the Town and Country Planning Act to provide an at least 10% biodiversity net gain (BNG), with habitat used for net gain to be secured for a minimum of 30 years. Delivery of BNG may be on site, off-site or undertaken using statutory biodiversity credits. The requirement for BNG does not over-ride the need to apply the mitigation hierarchy (avoidance, mitigation and compensation) when considering biodiversity assets and their loss and does not change existing environmental and wildlife legal protection.

1.5 Whilst the Act mandates a 10% BNG delivery and for this to be a condition of planning permissions (Part 6 section 98 and Schedule 14 part 1), section 147 (3) states that this will only come into force once the secondary legislation is in place to support this requirement. Therefore, there is a transition period (the length of which is not defined but anticipated as being around 2 years) until the mandated 10% is required under law.

Habitats

1.6 The degree to which habitats receive consideration within the planning system relies on many mechanisms, including:

- Inclusion within a specific policy, for example, veteran trees, ancient woodland and linear habitats within the National Planning Policy Framework (NPPF) December 2023, or local planning policies.
- A non-statutory site designation (e.g. Local Wildlife Site).
- Habitats of Principal Importance for the conservation of biodiversity and species as listed within Section 41 of the NERC Act 2006.
- Habitats identified as being a Priority Habitat within the Local Biodiversity Action Plan (LBAP).

Protected/Notable Species

1.7 Principal pieces of legislation protecting wild species are Part 1 of the WCA 1981 (as amended) and the CHSR 2017 (as amended). Some species, for example badgers, also have their own protective legislation (PBA 1992). The impact that this legislation has on the planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

1.8 This guidance states that the presence of protected species is a material consideration in any planning decision, and it is therefore essential that the presence or otherwise of protected species, and the extent to which they are affected by proposals, is established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions, for example.

1.9 In addition to protected species, there are those that are of conservation merit, such as those listed as species of principal importance for the purpose of conserving biodiversity under the NERC Act 2006. These are recognised in the NPPF which advises that when determining planning applications, local planning authorities (LPAs) should aim to conserve and enhance biodiversity by applying a set of principles including:

- If significant harm resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development proposals where the primary objective is to conserve or enhance biodiversity should be encouraged.

Bats

1.10 Bats and their habitats are protected under the WCA 1981 (as amended) and by the CHSR 2017 (as amended). In summary, this makes it an offence to:

- Damage destroy or obstruct any place used by bats for breeding and shelter.
- Disturb a bat, or kill, injure or take a bat.

1.11 Seven bat species are listed as Species of Principal Importance under the NERC Act 2006: Barbastelle *Barbastella barbastellus,* Bechstein's *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum* and lesser horseshoe *R. hipposideros*.

Birds

1.12 The WCA 1981 (as amended) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected bylaw and it is an offence, with certain exceptions, to recklessly or intentionally:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while in use or being built.
- Take or destroy the egg of any wild bird.

1.13 Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are specially protected at all times.

Great Crested Newts

1.14 Great crested newts *Triturus cristatus* and the places they use for shelter or protection are protected under the CHSR 2017 (as amended) and Schedule 2 of the WCA 1981 (as amended). In summary, it is an offence to:

- Deliberately or recklessly to take, injure or kill a great crested newt.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for breeding, shelter or protection by the species.
- Intentionally or recklessly disturb while it is occupying a structure or place which it uses for such purpose; or intentionally take or destroy the eggs of a great crested newt.

Hazel Dormice

1.15 Hazel dormice *Muscardinus avellanarius* and their places of shelter are protected under CHSR 2017 (as amended) and Schedule 5 of the WCA 1981 (as amended). This is also a species of principal importance for the conservation of biodiversity under S41 of the NERC Act 2006. In summary, it is an offence to:

- Intentionally or deliberately kill, injure or capture dormice.
- Intentionally, deliberately or recklessly disturb dormice in such as a way as to significantly affect their ability to survey, breed, rear/nurture their young or significantly affect their local distribution and abundance.
- Intentionally or recklessly damage, destroy or obstruct access to places used by dormice for shelter or protection (whether occupied or not) or disturb a dormouse whilst occupying such places.
- Damage or destroy a dormouse breeding site or resting place.
- Possess or transport a dormouse (or any part thereof) unless under licence and sell or exchange dormice.

Reptiles

1.16 All common reptile species (grass snake *Natrix helvetica*, slow worm *Anguis fragilis*, common lizard *Zootoca vivipara* and adder *Vipera berus*) are partially protected under the Wildlife and Countryside Act 1981. In summary, this legislation protects the species from intentional killing, injury or sale, offering for sale, or possessing, transporting or publishing advertisements for the purposes of sale.

Relevant Planning Policy

National Planning Policy Framework (NPPF)

1.17 The latest version of the NPPF was published in December 2023. The premise of '*presumption in favour of sustainable development*' embedded within the previous versions of the NPPF has been carried forward to the current version. The NPPF considers that to achieve this, the planning system has three overarching objectives: economic, social and environmental. It considers these to be inter-dependent with a need for them to be mutually supportive of one another. For specific development proposals the NPPF considers applying a presumption in favour of sustainable development means:

"…c) approving development proposals that accord with an up-to-date development plan without delay…" [para.11].

"They [decision makers] *should use the full range of planning tools available, including brownfield registers and permission in principle, and work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area".* [para. 38.].

"When determining planning applications, local planning authorities should apply the following principles:

…d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements 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 biodiversity." [para. 185].

1.18 In terms of 'environmental objects' (one of the three core planning objectives), the NPPF states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) 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;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) 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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate". [para 174].

Relevant Local Planning Policy

1.19 The Mid-Sussex District Plan 2014-2031 include the following policies of note:

Policy DP37: Trees, Woodland and Hedgerows

"The District Council will support the protection and enhancement of trees, woodland and hedgerows, and encourage new planting. In particular, ancient woodland and aged or veteran trees will be protected.

Development should be positioned as far as possible from ancient woodland with a minimum buffer of 15 metres maintained between ancient woodland and the development boundary.

Trees, woodland and hedgerows will be protected and enhanced by ensuring development:

- *incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and*
- *prevents damage to root systems and takes account of expected future growth; and*
- *where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and*
- *has appropriate protection measures throughout the development process; and*
- *takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance on-site green infrastructure and increase resilience to the effects of climate change; and*

- *does not sever ecological corridors created by these assets.*

Proposals for works to trees will be considered taking into account:

- *the condition and health of the trees; and*
- *the contribution of the trees to the character and visual amenity of the local area; and*
- *the amenity and nature conservation value of the trees; and*
- *the extent and impact of the works; and*
- *any replanting proposals."*

Policy DP38: Biodiversity

"Biodiversity will be protected and enhanced by ensuring development:

- *Contributes and takes opportunities to improve, enhance, manage and restore biodiversity and green infrastructure, so that there is a net gain in biodiversity, including through creating new designated sites and locally relevant habitats, and incorporating biodiversity features within developments; and*
- *Protects existing biodiversity, so that there is no net loss of biodiversity. Appropriate measures should be taken to avoid and reduce disturbance to sensitive habitats and species. Unavoidable damage to biodiversity must be offset through ecological enhancements and mitigation measures (or compensation measures in exceptional circumstances); and*
- *Minimises habitat and species fragmentation and maximises opportunities to enhance and restore ecological corridors to connect natural habitats and increase coherence and resilience; and*
- *Promotes the restoration, management and expansion of priority habitats in the District; and*

  Avoids damage to, protects and enhances the special characteristics of internationally designated Special Protection Areas, Special Areas of Conservation; nationally designated Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty; and locally designated Sites of Nature Conservation Importance, Local Nature Reserves and Ancient Woodland or to other areas identified as being of nature conservation or geological interest, including wildlife corridors, aged or veteran trees, Biodiversity Opportunity Areas, and Nature Improvement Areas.

Designated sites will be given protection and appropriate weight according to their importance and the contribution they make to wider ecological networks".

APPENDIX B: SITE PHOTOGRAPHS

	
Photo 1: Modified grassland G1 with H4 in the background.	Photo 2: Modified grassland G1 with hedgerow H2 and trees T2-T10.
	
Photo 3: Grassland G2 and T15 - T25.	Photo 4: Grassland G2 to the left and grassland G3 to the right.
	
Photo 5: Grassland G3, which is dominated by tall forbs including creeping thistle, soft rush and nettles. There were many other neutral grassland indicators present within the sward.	Photo 6: Grassland G3 and a mature oak T30

	
Photo 7: Log pile with bramble growing over the top, in the north-east corner of G3	Photo 8: Tree stump covered in bramble with potential for small mammals, amphibians and reptiles to use for shelter in the centre of G3
	
Photo 7: Tree line TL3	Photo 8: Large areas of soft rush *Juncus effusus* within G3

Appendix C: Scamps Hill, Lindfield – Winter Bird Survey Results

Survey	Surveyor	Date	Cloud (%)	Rain	Wind	Visibility
1	LC	24.11.20	50	0	1	Very Good
2	REM	20.11.23	80	0	1	Good

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Conservation Status & Protection
Pheasant	*Phasianus colchicus*	2	-	Not listed
Cormorant	*Phalacrocorax carbo*	1	(1 flyover)	Green list
Buzzard	*Buteo buteo*	1	-	Green list
Kestrel	*Falco sparverius*	-	(1 flyover)	Amber list
Herring gull	*Larus argentatus*	1	-	Red list NERC S.41
Woodpigeon	*Columba palumbus*	154	27 (+ 4 flyovers)	Amber list
Stock dove	*Columba oenas*	-	1	Amber list
Great spotted woodpecker	*Dendrocopos major*	1	-	Green list
Green woodpecker	*Picus Viridis*	-	1	Green list
Jay	*Garrulus glandarius*	-	2	Green list
Magpie	*Pica pica*	15	7	Green list
Jackdaw	*Corvus monedula*	19	24 (+ 1 flyover)	Green list
Carrion crow	*Corvus corone*	7	5	Green list
Goldcrest	*Regulus regulus*	2	-	Green list
Blue tit	*Cyanistes caeruleus*	11	3	Green list

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Conservation Status & Protection
Great tit	*Parus major*	1	-	Green list
Marsh tit	*Poecile palustris*	2	-	Red list NERC S.41
Long-tailed tit	*Aegithalos caudatus*	2 Families	-	Green list
Nuthatch	*Sitta europaea*	1	-	Green list
Wren	*Troglodytes troglodytes*	5	-	Amber list
Blackbird	*Turdus merula*	7	1	Green list
Redwing	*Turdus iliacus*	34	(3 flyovers)	Amber list WCA Sch.1
Robin	*Erithacus rubecula*	9	4	Green list
Dunnock	*Prunella modularis*	1	-	Amber list NERC S.41
House sparrow	*Passer domesticus*	1 Colony	-	Red list NERC S.41
Pied wagtail	*Motacilla alba*	4	-	Green list
Goldfinch	*Carduelis carduelis*	15	-	Green list
Siskin	*Spinus spinus*	3	-	Green list
Total No. Species		24	13	29

Gladman Developments Ltd.

Land off Scamps Hill, Lindfield

APPENDIX D - BADGER SURVEY REPORT

CONFIDENTIAL

February 2024

THIS DOCUMENT CONTAINS INFORMATION ON THE LOCATION OF BADGER SETTS AND ACTIVITY. DUE TO THE SENSITIVE NATURE OF THESE RECORDS AND THE CURRENT PUBLIC AWARENESS, THIS DOCUMENT SHOULD REMAIN CONFIDENTIAL FOR THE USE OF THE PLANNING APPLICATION AND SHOULD NOT BE MADE PUBLICLY AVAILABLE.

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Rev	Issue Status	Prepared / Date	Approved / Date
-	Final	DLS / EB / CHK / 11.12.23	DAH / 02.01.24
A	Final	CHK / 24.01.2024	
B	Final	AU / 12.02.24	

CONTENTS

FIGURES

1.0 NON-TECHNICAL SUMMARY

1.1 FPCR Environment Ltd was commissioned by Gladman Developments Ltd to undertake badger surveys at Land off Scamps Hill, Lindfield, to provide an ecological baseline and to determine its ecological importance for badgers. Proposals are for a residential development comprising 90 units with associated access and Green Infrastructure (GI).

1.2 The survey area was dominated by modified and other neutral grassland, divided into three field compartments by hedgerows and trees. Mature hedgerows and lines of trees bound the Site, with small areas of bramble and blackthorn scrub present.

1.3 Evidence of badger activity was observed during surveys in 2020, 2021, and 2023. On-Site evidence included one latrine identified in 2021, and a further two latrines and one snuffle hole found in 2023. Two outlier setts were identified off-Site: the first had two holes and was found to the southeast of the Site in 2020 and 2021; the other sett had three holes and was found just outside of the northern boundary in 2023. Both setts showed no evidence of digging or bedding and were regarded as being partially used or disused. The built development is separated from these setts by a large area of GI, therefore there will be no direct damage to these, and occurrence in third-party land means that impacts will be negligible.

1.4 The proposed green infrastructure including a wildflower meadow, scrub, and retained and enhanced hedgerows will ensure continued access for badgers, with enhanced foraging opportunities.

1.5 Limited evidence of badger was identified within the Site, but as badgers are transient in nature, some precautionary mitigation measures during construction will be undertaken to ensure badger (and other mammals) do not become trapped, harmed or injured during the proposed works.

2.0 INTRODUCTION

2.1 The following Badger report has been prepared by FPCR Environment & Design Ltd. on behalf of Gladman Developments Ltd (central OS Grid Reference: TQ 35218 24891) herein referred to as 'the Site'.

2.2 An assessment of badger evidence was made in conjunction with any potential effects of the proposals from the presence of this species; walkover surveys were completed in 2020, 2021, and 2023.

2.3 Due to the sensitive nature of this species and potential effects that could result from releasing badger evidence and sett locations, this document is considered to be confidential and should not be released into the public domain, however, it is still to be considered as part of the planning application.

Site Context

2.4 The Site is located within the village of Walstead, on the south-eastern fringe of the town of Lindfield and Haywards Heath. Lindfield Rural is a parish located in the central-eastern portion of Mid Sussex District in West Sussex, the parish is mainly rural in nature, comprising several small hamlets such as Walstead and East Mascalls.

2.5 The Site measures approximately 6.6ha, consisting of one modified grassland compartment, and two species-poor neutral grassland field compartments, separated by mature hedgerows and trees.

2.6 Northlands brook flows northwards along the south-east boundary of the ownership boundary and Scrase stream runs outside the north of the ownership boundary; both lie >10m from the current Site boundary. A small industrial estate and residential houses lie to the north of Scrase stream. Scamps Hill Road defines the southern boundary and Little Walstead Wood (ancient woodland) demarcates the north-eastern boundary. Directly north there are Christmas tree plantations, with large communications masts, and two areas of broadleaved woodland (Little Walstead Wood and Beggars Grove). There is a new residential development immediately south of Scamps Hill, with arable field compartments and woodland blocks beyond this.

2.7 Proposals are for a residential development of 90 dwellings. The Site will deliver a residential development with new public open space and equipped play facilities. The current framework plan (FPCR 9432-L-02-Rev T) illustrates the opportunities within the green infrastructure (GI) provide biodiversity benefits through the creation of SUD's, wildflower meadows, scrub planting, hedgerow creation, as well as the retention of the intrinsic habitats on Site including the mature hedgerows, mature trees, and some of the grassland which will be enhanced by the proposals.

Objectives

2.8 This report has been produced as part of an Ecological Appraisal (FPCR 2024) and presents the results of field surveys completed using standard survey methodologies appropriate to badger *Meles meles*. The objectives of the work were to:

- Locate any setts and badger activity within the Site and immediate surroundings (where access permitted);

- Determine the number of social groups of badger resident within the area, their likely ranges, feeding areas, access routes and other relevant parameters to their survival;
- Provide an evaluation of the likely impact of the proposals on badgers; and
- Provide details of the measures required in order to mitigate for the impacts of the scheme.

2.9 The survey findings are presented in this report, together with an assessment of impact of the proposed work and any recommendations for mitigation.

3.0 LEGISLATION

3.1 Badgers are protected under the Protection of Badgers Act 1992[1]. This Act is based on the need to protect badgers from baiting and from deliberate harm or injury, and makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempted to do so; and
- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access routes.

3.2 A sett is defined as:

"*Any structure or place that displays signs indicating current use by a badger*"

3.3 Work that disturbs badgers whilst occupying a sett is illegal without a licence from Natural England; badgers may be disturbed by work near the sett even if there is no direct interference or damage to the sett.

3.4 Guidance from Natural England[2] suggests that the potential for such disturbance might not be as great as originally assumed, due to the relatively high tolerance level of badgers. Whether disturbance will be caused should take into account the sett characteristics, current usage and proposed extent of works with the need for a licence being assessed on a site-by-site basis.

3.5 Licences only allow works to be carried out between July and November inclusive.

3.6 The law relates only to the places and structures of habitation and the foraging grounds of badgers are not directly protected. The ODPM 06/2005 Government Circular on Biodiversity and Geological Conservation does however state that*:*

"The likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions."

[1] The Protection of Badgers Act 1992 (as amended). London: HMSO [Online]. Available from: http://www.legislation.gov.uk/ukpga/1992/51/contents

[2] Natural England 2009. Protection of Badgers Act 1992 (as amended) Interpretation1 of 'Disturbance' in relation to badgers occupying a sett.

4.0 METHODOLOGY

Desk Study

4.1 Local badger records were requested from Sussex Biodiversity Records Centre (SxBRC) (2023).

4.2 Further inspection of online resources was undertaken to provide additional context and identify any features of potential importance for badgers, using:

- Multi Agency Geographic Information for the Countryside (MAGIC) website[3];
- Colour 1:25,000 OS base maps[4];
- Aerial photographs from Google Earth[5].

Field Surveys

4.3 Standard methodology[6] was followed during surveys completed between 2020 – 2023, whereby a thorough search for evidence indicating the presence of badgers, both on-Site and within the immediate proximity (where access permitted), was undertaken, including the identification of:

- Setts: including earth mounds, evidence of bedding and runways between setts;
- Latrines: often located close to setts, at territory boundaries, or adjacent to favoured feeding areas;
- Prints and paths or trackways;
- Hairs caught on rough wood or fencing; and
- Other evidence: including snuffle holes, feeding and playing areas, and scratching posts. The identification of these signs on their own does not necessarily provide conclusive evidence of the presence of badgers. A number of such signs need to be seen in conjunction before badgers can be confirmed as being present.

4.4 Where setts are found, their status and level of activity is noted. Sett status is broadly categorised as follows:

- *Main sett* – usually continuously used with many signs of activity around, a large number of holes and conspicuous spoil mounds;
- *Annexe sett* – usually located close to a main sett and connected to it by well-used paths. Annexe's may not be continuously occupied;
- *Subsidiary sett* – lesser used setts comprising a few holes and without associated well-used paths. Subsidiary setts are not continuously occupied; and
- *Outlier sett* – one or two holes without obvious paths. These are used sporadically.

4.5 Level of activity is described as:

[3] [Online]. http://magic.defra.gov.uk/
[4] [Online]. www.ordnancesurvey.co.uk
[5] [Online]. www.maps.google.co.uk
[6] Cresswell, P., Harris, S. & Jefferies, D.J. 1989. *Surveying Badgers.* The Mammal Society Publication No.9 Mammal Society

- *Well-used* – clear of debris, trampled soil mounds and obviously active, with signs of activity such as presence of prints, dislodged guard hairs around the entrances;
- *Partially-used* – some associated debris or plants at the entrance. Could be used with minimal excavation and usually with signs of activity within the vicinity, for example, badger pathways; and
- *Disused* – partially or completely blocked entrances.

Constraints

4.6 It was not always possible to fully access areas outside of the Site boundary within third-party land, however, observations were made from the edges, such as looking for well-used paths/push throughs through dense vegetation.

4.7 An attempt to classify all setts has been made based on the number of entrance holes, size of spoil heaps, location, evidence of use, and proximity to other setts. It should be noted however, that sett classification is not 'clear cut' and can be difficult to apply in the field, particularly within dense vegetation, and where no other badger field signs have been identified.

5.0 RESULTS

Desk Study

5.1 The Sussex Badger Group was consulted in 2023 and two records of badger *Meles meles* were returned within 1km of the Site; one record 1km north of the Site and one 450m west of the Site.

Field Survey

5.2 Two outlier setts were identified off-Site (*Figure 1*). The first sett (*S1*) was identified southeast of the Site in November 2020, which was also confirmed in April 2021; during 2020 the excavation looked fresh with spoil outside the holes, but no badger prints were seen. These were narrow but could not be discounted as badgers as there were no field signs of rabbits which have narrow entrances and were assessed as being partially used outliers. In October 2023, these two holes were hard to identify as the surrounding grass had encroached covering the entrances, this sett was now a disused outlier.

5.3 The second sett (*S2*) was found just outside of the northern boundary only in 2023. As with the above these three entrances were narrow with no signs of any spoil that would suggest a major exaction of tunnels or chambers, these did look more like rabbit, but again no evidence was seen. There was a large degree of leaf litter recorded in October 2023, so of which looked to have been there for a while as it had rotted slightly and there was also ground ivy near the front; which suggests that if this was a badger sett it is no more than an outlier, but not in use.

5.4 Evidence found on-Site (*Figure 1*) included a single small, active latrine along hedgerow H1 in 2021 that contained one deposit that was fresh at the time. In 2023 this latrine was not used but there was a new latrine further north along hedgerow H1, which had a large fresher deposit. A second latrine was found along hedgerow H3 in 2023, this was small and fresh, and this was also associated with a potential snuffle hole.

6.0 DISCUSSION AND RECOMMENDATIONS

6.1 Consultation have confirmed that badgers are present in the wider area, however the Site is not used for any resting or refuge as setts were not identified. There were limited field signs that suggest that badgers have frequented the site, however the latrine did not exhibit the size or historic use that would suggest they are being used consistently to mark out a clan's territory. A single snuffle hole would also suggest that the Site does not represent a significant foraging resources, as more activity would have been recorded over the three years worth of surveys.

6.2 Sett S1 is not active at the moment, and the construction would indicate that it would not be substantial enough to provide more opportunities than just an outlier as spoil heaps were very small. Even if this sett is occupied in the future it is suitably buffered from the proposals where there will be no impacts.

6.3 Sett S2 is only a couple of metres from the northern boundary of the proposals, however the current framework indicates that the immediate areas within the Site near the sett will consist public open spaces, thus if this sett was to be colonised in the future impacts would be negligible, however as the sett is currently disused there are no constraints.

6.4 Surveys and consultations have recorded badger activity within the wider area, and they do frequent the Site occasionally, potential for navigational purposes, so it is considered that there is some risk that badgers or other mammals, may become trapped or harmed during the construction phase. Precautionary mitigations measures are therefore advised during the construction phase of works to ensure that badgers (and other mammals) are not harmed (thus maintaining legal compliance):

- During construction any pipes greater than 250mm in diameter will be capped if they are left open overnight, thereby preventing badgers from becoming trapped;
- Any pits or trenches will similarly be covered overnight, or left with a suitable means of escape, e.g. a stout timber plank forming a ramp;
- During the construction phase, operations shall be restricted to daylight hours as far as practicable, in order to minimise the potential for adverse impacts to badger (and other nocturnal and crepuscular wildlife) through disturbance, and
- Construction offices, material compounds and security buildings will be located in appropriate locations away from retained habitats in order to reduce the potential for accidental damage to habitats or interruption to regularly used badger runs. All waste materials are to be appropriately stored, in particular domestic waste from construction site welfare units that may attract badgers, in heavy duty bins with lids.

Operation Enhancements

6.5 The proposed development will retain the majority of existing hedgerow and treelines across the Site and will ensure that green corridors are maintained for badgers into the wider area. In addition, the new habitats to be created, such as the areas of wildflower meadow and bordering scrub, will provide enhanced foraging opportunities. Scrub planting should include a range of fruit baring species to provide additional optimal foraging habitat for badgers.

6.6 Enhancement and creation of species-rich and tussock-forming grassland within hedgerow buffers/GI would provide good conditions for earthworms which make up a large proportion of badger's diets. Tussocky grassland also provides opportunities for small mammals which provide a food source for many animals, including badgers.

CD1.9

Key

- Redline Boundary
- Blueline Ownership Boundary

Badger Evidence

- Outlier Sett (with ref.)
- Latrine
- Snuffle Hole

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

0 25 50 m

client
Gladman Developments Ltd.

project
Land off Scamp's Hill, Lindfield

drawing title
BADGER SURVEY PLAN

scale 1:1,700 | drawn DLS / AU | issue date 24/1/2024

drawing / figure number **Figure 1** | rev **9432-E-01**

P:\XXXX\XXXX\QGIS\Plans\XXXX-E-01 Consultation Request Plan.qgs

APPENDIX E: eDNA SURVEY RESULTS, 2021

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Client: Abigail Upham,
FPCR Environment and Design Limited

ADAS
Spring Lodge
172 Chester Road
Helsby
WA6 0AR

Tel: 01159 516747
Email: Helen.Rees@adas.co.uk

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Sample ID: ADAS-0203	Condition on Receipt: Good	Volume: Passed
Client Identifier: 9432 Pond 1	Description: pond water samples in preservative	
Date of Receipt: 19/04/2021	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	21/04/2021
Degradation Control[§]	Within Limits	Real Time PCR	21/04/2021
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	21/04/2021
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	28/04/2021	Date of issue:	28/04/2021

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Client: Abigail Upham,
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Sample ID: ADAS-0204	Condition on Receipt: Good	Volume: Passed
Client Identifier: 9432 Pond 2 (large pond)	Description: pond water samples in preservative	
Date of Receipt: 19/04/2021	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	27/04/2021
Degradation Control[§]	Within Limits	Real Time PCR	27/04/2021
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	27/04/2021
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
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Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
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[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Client: Abigail Upham,
FPCR Environment and Design Limited

ADAS
Spring Lodge
172 Chester Road
Helsby
WA6 0AR

Tel: 01159 516747
Email: Helen.Rees@adas.co.uk

www.adas.uk

Sample ID: ADAS-0205	Condition on Receipt: Good	Volume: Passed
Client Identifier: 9432 Woodland Pond 3	Description: pond water samples in preservative	
Date of Receipt: 19/04/2021	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	21/04/2021
Degradation Control[§]	Within Limits	Real Time PCR	21/04/2021
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	21/04/2021
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	28/04/2021	Date of issue:	28/04/2021

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Client: Abigail Upham,
FPCR Environment and Design Limited

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Sample ID: ADAS-0217	Condition on Receipt: Medium Sediment	Volume: Passed
Client Identifier: 9432 D3	Description: pond water samples in preservative	
Date of Receipt: 19/04/2021	Material Tested: eDNA from pond water samples	

Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control[†]	2 of 2	Real Time PCR	26/04/2021
Degradation Control[§]	Within Limits	Real Time PCR	26/04/2021
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	26/04/2021
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)[#]	4 of 4	Real Time PCR	As above for GCN

Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
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eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

[†] Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.

[§] No degradation is expected within time frame of kit preparation, sample collection and analysis.

[#]Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.

Appendix 1: Interpretation of results

Sample Condition

Upon sample receipt we score your samples according to quality: good, low sediment, medium sediment, high sediment, white precipitate, and presence of algae.

There are three reasons as to why sediment should be avoided:

1. It is possible for DNA to persist within the sediment for longer than it would if it was floating in the water which could lead to a false positive result i.e. in this case GCN not recently present but present a long time ago
2. In some cases sediment can cause inhibition of the PCR analysis used to detect GCN eDNA within samples which could lead to an indeterminate result.
3. In some cases sediment can interfere with the DNA extraction procedure resulting in poor recovery of the eDNA which in turn can lead to an indeterminate result.

Algae can make the DNA extraction more difficult to perform so if it can be avoided then this is helpful.

Sometimes samples contain a white precipitate which we have found makes the recovery of eDNA very difficult. This precipitate can be present in such high amounts that it interferes with the eDNA extraction process meaning that we cannot recover the degradation control (nor most likely the eDNA itself) at sufficient levels for the control to be within the acceptable limits for the assay, therefore we have to classify these type of samples as indeterminate.

What do my results mean?

A positive result means that great crested newts are present in the water or have been present in the water in the recent past (eDNA degrades over around 7-21 days).

A negative result means that DNA from the great crested newt has not been detected in your sample.

On occasion an inconclusive result will be issued. This occurs where the DNA from the great crested newt has not been detected but the controls have indicated that either: the sample has been degraded and/or the eDNA was not fully extracted (poor recovery); or the PCR inhibited in some way. This may be due to the water chemistry or may be due to the presence of high levels of sediment in samples which can interfere with the DNA extraction process. A re-test could be performed but a fresh sample would need to be obtained. We have successfully performed re-tests on samples which have had high sediment content on the first collection and low sediment content (through improved sample collection) on the re-test. If water chemistry was the cause of the indeterminate then a re-test would most likely also return an inconclusive result.

The results will be recorded as indeterminate if the GCN result is negative and the degradation result is recorded as:

1. evidence of decay - meaning that the degradation control was outside of accepted limits
2. evidence of degradation or residual inhibition - meaning that the degradation control was outside of accepted limits but that this could have been due to inhibitors not being removed sufficiently by the dilution of inhibited samples (according to the technical advice note)

Gladman Developments Ltd.

Land off Scamps Hill, Lindfield

APPENDIX F - BIODIVERSITY NET GAIN REPORT

February 2024

FPCR Environment and Design Ltd
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Rev	Issue Status	Prepared / Date	Checked /date	Approved/Date
-	Final	CHK / 20.12.2023	JW / AU / 05.01.24	
A	Final	CHK / 24.01.2024		
B	Final	AU / 12.02.24		

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FIGURES

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Appendix F-3: Statutory Biodiversity Metric 4.1 Calculations

1.0 INTRODUCTION

1.1 The following report has been prepared by FPCR Environment and Design Ltd on behalf of Gladman Developments Ltd for the development proposals of Land off Scamps Hill, Lindfield (Central OS Grid Ref: TQ 35218 24891).

1.2 The parcel of land where the development is proposed, including soft landscaping, housing, and associated hardstanding is hereafter referred to as 'the Site'. An area of land under the same ownership is included for context, and as some off-site enhancements are proposed to the North of the Site; this area is referred to as the 'ownership boundary'.

Site Location and Context

1.3 The Site is located within the village of Walstead, on the south-eastern fringe of the town of Lindfield and Haywards Heath. Lindfield Rural is a parish located in the central-eastern portion of Mid Sussex District in West Sussex, the parish is mainly rural in nature, comprising several small hamlets such as Walstead and East Mascalls.

1.4 The survey area measured approximately 6.6ha, consisting of one modified grassland compartment, and two species-poor grassland field compartments, separated by mature hedgerows and trees.

1.5 Northlands brook flows northwards along the south-east boundary of the ownership boundary and Scrase stream runs outside the north of the ownership boundary; both lie >10m from the current Site boundary. A small industrial estate and residential houses lie to the north of Scrase stream. Scamps Hill Road defines the southern boundary and Little Walstead Wood (ancient woodland) demarcates the north-eastern boundary. Directly north there are Christmas tree plantations, with large communications masts, and two areas of broadleaved woodland (Little Walstead Wood and Beggars Grove). There is a new residential development immediately south of Scamps Hill, with arable field compartments and woodland blocks beyond this.

Site Proposals

1.6 Proposals are for a residential development of up to 90 dwellings. The site will deliver a residential development with new public open space and equipped play facilities. The current framework plan (FPCR 9432-L-02) illustrates the opportunity for the Survey area to provide biodiversity benefits through the creation of SUD's, wildflower meadows, scrub planting, hedgerow creation, as well as the retention of the intrinsic habitats on site including the mature hedgerows, mature trees, and some of the grassland which will be enhanced by the proposals.

Aims and Objectives

1.7 This Biodiversity Net Gain Report is broadly based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance[1]. The scope and objectives of this report are to:

1 CIEEM (2021) Biodiversity Net Gain Report and Audit Templates Chartered institute of Ecology and Environmental Management, Winchester, UK.

- Summarise the results of the baseline UKHab Survey undertaken on the Site and present the results of habitat condition assessment surveys following the Statutory Biodiversity Metric 4.1 Technical Guidance[2].
- Provide an overview of the proposed habitats following completion of the scheme.
- Present the results of the Statutory Biodiversity Metric 4.1 assessment completed for the proposals.
- Assess the feasibility of the proposals to achieve a net gain in biodiversity through the Statutory Biodiversity Metric 4.1.
- Make recommendations for the proposals to maximise their biodiversity potential.

1.7 This report has been prepared to support the Ecological Appraisal (FPCR, December 2023) prepared for the Site, which provides a detailed description of the habitats present. This report should be read in conjunction with this Ecological Appraisal.

1.8 A River Conditions Assessment (RCA) was carried out of Scrase stream by FPCR in October 2023. The stream is off-site, adjacent to the north boundary. The RCA was a high-level assessment, undertaken to gather baseline information, as the drainage scheme for the proposed development is still being refined. The stream was assessed as being in Poor condition. The RCA found a slight negative impact on the Scrase stream, due to proposed additional bank reinforcement and an outflow connected to the SuDS, but this will not change the condition from Poor. The RCA Report is appended to the Ecological Appraisal (Appendix G).

Legislative and Policy Context

1.9 The UK Government, as signatory to the Rio Convention on Biological Diversity, is committed to conserving and enhancing biodiversity. This commitment is further enforced in the Natural Environment and Rural Communities Act (NERC) 2006 and the Natural Environment White Paper (June 2011).

1.10 DEFRAs 25 Year Environment Plan (2018) seeks to embed a 'net environmental gain' principle for development to deliver environmental improvements locally and nationally. Current policy is that the planning system should provide biodiversity net gains where possible; however, this is moving towards a mandatory requirement.

1.11 The NPPF (2023)[3] seeks to ensure that the planning system contributes to and enhances the natural and local environment, protect, and enhance biodiversity and geodiversity by:

"174. d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

179. 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."

1.12 The Lindfield & Lindfield Rural Neighbourhood Plan 2014-2031[4] has been guided by some key principles within the NPPF, including minimising the impact on biodiversity, conserving and

2 DEFRA Statutory Biodiversity Metric) Available at: https://assets.publishing.service.gov.uk/media/65673fee750074000d1dee31/The_Statutory_Biodiversity_Metric_-_Draft_User_Guide.pdf

3 National Planning Policy Framework, Updated September 2023. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

4 Lindfield & Lindfield Rural Neighbourhood Plan 2014-2031. Available at: https://www.midsussex.gov.uk/media/2825/lindfield-and-lindfield-rural-neighbourhood-plan.pdf

enhancing the natural environment, conserving the landscape in AONBs, and the designation of Local Green Spaces.

1.13 The Mid-Sussex District Plan 2014-2031 includes the following policies of note;

Policy DP37: Trees, Woodland and Hedgerows

"The District Council will support the protection and enhancement of trees, woodland and hedgerows, and encourage new planting. In particular, ancient woodland and aged or veteran trees will be protected.

Development should be positioned as far as possible from ancient woodland with a minimum buffer of 15 metres maintained between ancient woodland and the development boundary.

Trees, woodland and hedgerows will be protected and enhanced by ensuring development:

- *incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and*
- *prevents damage to root systems and takes account of expected future growth; and*
- *where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and*
- *has appropriate protection measures throughout the development process; and*
- *takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance on-site green infrastructure and increase resilience to the effects of climate change; and*
- *does not sever ecological corridors created by these assets.*

Proposals for works to trees will be considered taking into account:

- *the condition and health of the trees; and*
- *the contribution of the trees to the character and visual amenity of the local area; and*
- *the amenity and nature conservation value of the trees; and*
- *the extent and impact of the works; and*
- *any replanting proposals."*

Policy DP38: Biodiversity

" Biodiversity will be protected and enhanced by ensuring development:

- *Contributes and takes opportunities to improve, enhance, manage and restore biodiversity and green infrastructure, so that there is a net gain in biodiversity, including through creating new designated sites and locally relevant habitats, and incorporating biodiversity features within developments; and*
- *Protects existing biodiversity, so that there is no net loss of biodiversity. Appropriate measures should be taken to avoid and reduce disturbance to sensitive habitats and species. Unavoidable damage to biodiversity must be offset through ecological enhancements and mitigation measures (or compensation measures in exceptional circumstances); and*

- *Minimises habitat and species fragmentation and maximises opportunities to enhance and restore ecological corridors to connect natural habitats and increase coherence and resilience; and*
- *Promotes the restoration, management and expansion of priority habitats in the District; and*

  Avoids damage to, protects and enhances the special characteristics of internationally designated Special Protection Areas, Special Areas of Conservation; nationally designated Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty; and locally designated Sites of Nature Conservation Importance, Local Nature Reserves and Ancient Woodland or to other areas identified as being of nature conservation or geological interest, including wildlife corridors, aged or veteran trees, Biodiversity Opportunity Areas, and Nature Improvement Areas.

Designated sites will be given protection and appropriate weight according to their importance and the contribution they make to wider ecological networks".

The Environment Act 2021

1.14 The Environment Act[5] requires all development including land extraction schemes in England to deliver a mandatory 10% biodiversity net gain, to be maintained for 30 years. It should be noted that this has not passed into law. At the time of the writing of this report we are in a transition period, to enable development projects to account for these new requirements. The transition period is expected to end in February 2024, when it will become a legal requirement.

Measurable Net Gain

1.15 Biodiversity Net Gain seeks measurable improvements for biodiversity, by enhancing habitats or creating better ones. Defra's Statutory Biodiversity Metric v4.1 is used to measure changes in biodiversity, by assigning habitats a 'unit value' according to their relative value for biodiversity.

5 Environment Act 2021. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

2.0 METHODOLOGY

Baseline Habitat Assessment

2.1 This report accompanies an Ecological Appraisal for the Site which has been undertaken to inform the development proposals and to provide recommendations for mitigation and enhancement (of which measurable biodiversity net gain will form a part).

2.2 A walkover survey of the site was originally carried out in November 2020, and the habitats were classified using the Phase 1 Habitat Survey methodology (JNCC, 2010)[6].

2.3 An update survey using UKHab habitat classifications was completed by ecologist James Gretton on 16th October 2023. James has four years' experience in ecological consultancy and is experienced in botanical surveys. The survey broadly followed UKHab Survey technique as recommended by Natural England and the Chartered Institute of Ecology and Environmental Management. Habitat Conditions Assessments in accordance with the Natural England's Statutory Biodiversity Metric (v4.1) Technical Annex 1 were also carried out at the same time.

2.4 A desktop study was undertaken by consulting Sussex Biodiversity Records Centre (SxBRC) (September 2023), and the Multi-Agency Geographic Information for the Countryside (MAGIC) website.

2.5 Full details of the survey methodologies employed during the above surveys are provided in the Ecological Appraisal (FPCR, January 2023).

Natural England's The Statutory Biodiversity Metric (v4.1)

2.6 Natural England's published biodiversity net gain metric is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the habitats, linear features and watercourses separately, and is based on pre-determined values, along with published written guidance, set by a Natural England-led team of experts. The latest version of this metric is the Statutory Biodiversity Metric v4.1, published in November 2023.

2.7 To facilitate this, the Site has been mapped and digitised using QGIS, with the existing habitats identified and areas automatically generated. In accordance with the 4.1 Metric User Guide, habitats have been defined under UK Habitat Classification. The detailed landscaping proposals for the Site were then uploaded into QGIS, and the proposed habitats mapped and digitised to generate areas for each of the habitats proposed for creation.

2.8 These pre- and post-development habitat areas were then inputted into the Statutory Biodiversity Metric Calculation tool. Pre-development habitats were grouped into their habitat type and condition based on the results of the UKHab and condition assessment surveys, while post-developments were classified into their UKHab type as identified through the proposed habitats within the landscaping plans and their target condition. The metric assigns a habitat distinctiveness score for each of the baseline and proposed habitats which are pre-assigned scores based on the habitat type.

[6] JNCC. (1990). Handbook for Phase 1 habitat survey – a technique for environmental audit. Peterborough: JNCC

2.9 The strategic significance of the habitats was also assessed for both the pre- and post-development habitats based on the location of the Site, its proximity to existing areas of biodiversity interest and its setting within wider habitat corridors.

2.10 The metric then assigns a range of pre-assigned factors to each of the proposed habitats. These have been advised by subject knowledge experts and are universal multipliers generated by the metric itself for the following variables relevant to habitat creation, enhancement or restoration proposals:

- Difficulty of creating or restoring/enhancing a habitat: This pre-assigned score is based on how difficult a particular habitat type is to create or restore/enhance.
- Temporal risk: This is the 'time to target condition' for any particular habitat and determines how long a particular habitat type is likely to take to reach the condition score that the desired condition score assigned to it.
- Spatial Risk: This score is based on the distance between the Site of habitat loss and any habitats creation or enhancement proposals at any offsite offsetting solutions.

2.11 Full details of the calculation methodology used is provided in the Statutory Biodiversity Metric (v4.1) – User Guide[7].

Limitations

2.12 Data provided by third party sources collated during the desktop study is generally made up from a wide range of sources including (but not limited to) those submitted by ecological consultancies, wildlife conservation organisations and volunteers. As such, this data is typically focused on areas of known nature conservation, is reliant upon formal surveys having been undertaken within an area or the presence of an expert within the locality (particularly for invertebrate records) and as such this data can never be fully relied upon as a complete ecological dataset for any given area. Rather, this data is used as a guide to likely presence of notable ecological features and can never be relied upon for likely absence.

2.13 The UKHab map has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the client. The accuracy of this figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

2.14 The UKHab survey and BNG Conditions Assessments were carried out in October 2023, outside of the optimal survey season. The habitat classifications and species present are largely the same as those present in 2020, and the habitat types which represent the majority of the habitats present on the Site including modified grassland, other neutral grassland, and hedgerows are unlikely to show variation in condition between seasons.

7 DEFRA Statutory Biodiversity Metric) Available at:
https://assets.publishing.service.gov.uk/media/65673fee750074000d1dee31/The_Statutory_Biodiversity_Metric_-_Draft_User_Guide.pdf

3.0 BASELINE CONDITIONS

Desktop Study

Statutory and Non-Statutory Sites of Nature Conservation Importance

Statutory Sites of International Conservation Value

3.1 Ashdown Forest Special Area of Conservation (SAC) and Special Protection Area (SPA) is located approximately 8km north-east of the Site. It is designated as an SAC due to the dry and wet heathland habitats present, and due to the presence of Great Crested Newt (GCN) *Triturus cristatus.* The Site is designated as an SPA due to the presence of breeding nightjar *Caprimulgus europaeus* and Dartford warbler *Sylvia undata*.

Statutory Designated Sites

3.2 There are two, Mid-Sussex Council-managed Local Nature Reserves (LNR) within 500m of the site and they are linked to the Site by Scrase stream, which runs along the northern boundary.

- Eastern Road LNR lies 62m north of the Site boundary. The site has a mosaic of woodland, scrub, rough grassland and wetland which supports a diverse range of plants, insects and birds. The wetland areas support healthy populations of frogs, newts and aquatic insects.
- Scrase Valley LNR lies 340m southwest of the Site. It comprises 15 acres of woodland, marsh, scrub and flood meadows. The Scrase stream runs through it as does a PRoW linking Lindfield with Haywards Heath. The site is important both as a mosaic of semi-natural habitats in a built-up environment and because the marshy grassland supports several plants which are rare in a County context.

Non-Statutory Designated Sites

3.3 Costells, Henfield and Nashill Woods Local Wildlife Site (LWS) lies 800m east of the Site boundary. This is an ancient woodland, located to the north of Scaynes Hill. It is a fairly uniform area of overgrown birch coppice with oak standards, some hornbeam, oak and beech, and occasional conifers. There are several ponds and streams.

3.4 Walstead Cemetery LWS 225m from the site boundary, this is a small graveyard which supports short, species-rich grassland. It has clumps of exotic trees and a small garden of rest which is planted up with rose bushes and not included in the Site of Nature Conservation Importance (SNCI) boundary.

3.5 Western Road Cemetery LWS 300m south-west, which consists of two parts. The area to the north is used as a cemetery and is managed by mowing. It supports a variety of habitats, including acid, neutral and marshy grassland and woodland. This diversity is reflected in an impressive species list. The southern part is unmanaged rough grassland, scrub and woodland. The site is surrounded by housing.

Strategic Significance

3.6 The Site does not lie within the Zone of Influence or Buffer Zone of any internationally designated sites (SPA, SAC) or nationally designated sites (SSSI's). It is not expected that the proposals will have any impact on the non-statutory designated sites due to their reasons for notification, and the distances between the sites and the application Site (225m-800m away). This has been further addressed within the Ecological Appraisal (FPCR, December 2023).

3.7 The Site is linked to Eastern Road LNR (62m N) and Scrase Valley LNR (340m SW) by Scrase stream which runs along the north boundary of the Site. Mitigation should be provided to ensure the development does not negatively impact on these statutory designated sites.

3.8 An area of ancient woodland (Little Walstead Wood) lies adjacent to the north-east boundary of the Site.

Biodiversity Units

Habitats

3.9 The survey area comprised a compartment supporting modified grassland and two further fields supporting neutral grassland, with some areas of blackthorn scrub and bramble scrub. Native hedgerows were present within the Site and around the Site boundaries, and a line of trees was present along the south-east boundary. Scattered trees were present throughout the Site, notably along the south boundary and in the centre of the Site where an area of scrub is also present. Hedgerows are being retained wherever possible across the Site, and all the trees present within the Site will be retained as part of the proposals.

3.10 Some habitats within the ownership boundary were surveyed, and are targeted for off-site habitat enhancement. These habitats comprised part of field parcels G1 and G3, which comprised modified grassland and other neutral grassland respectively. A treeline was also present along the north boundary, along Scrase stream, and an area of blackthorn scrub and bramble was present in the off-site habitats in G3 also.

3.11 A summary of the baseline habitats is provided in *Table 1* below and an illustration is provided in *Figure 1*.

3.12 The biodiversity units for each habitat on the Site have been calculated and the cumulative units are presented in *Table 1*. A brief description of the habitats and their baseline conditions are also detailed below. Full survey results and condition assessment scores are provided in *Appendix A*.

Table 1: Summary of On-Site Baseline Habitats

Habitat	Description	Area	Condition	Distinctiveness	Biodiversity Units
Modified grassland	Grassland G1 to the south of the Site was dominated by cock's foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus,* with abundant red fescue *Festuca rubra* and occasional false oat grass *Arrhenatherum elatius*. Forbs present included abundant common sorrel *Rumex acetosa*, white clover *Trifolium repens* and creeping thistle *Cirsium arvense*, frequent creeping buttercup *Ranunculus repens*, and occasional bracken *Pteridium aquilinum*, common nettle *Urtica dioica* and bird's foot trefoil *Lotus corniculatus,* and some soft rush *Juncus effusus* and common chickweed *Stellaria media* present. The grassland showed signs of regular management, and due to the low number of forbs recorded, and dominance of palatable grasses G1 was classified as modified grassland. G1 was assessed as being in Poor condition, due to being species-poor, having a uniform short sward, and having <1% bare ground.	3.0952	Poor	Low	6.19
Other neutral grassland	Grassland G2 had a similar species composition to G1, however it was more tussocky, and in addition to the species recorded in G1 (and minus white clover) abundant smooth meadow grass *Poa pratensis*, lesser knapweed *Centaurea nigra*, frequent ribwort plantain *Plantago lanceolata* and occasional common ragwort *Jacobaea vulgaris* and rough meadow grass *Poa trivalis* were noted. Soft rush was also frequently recorded in this area. Therefore G2 was classified as being a species-poor example of other neutral grassland. Grassland G3 had a similar composition to that of G2, however this unmanaged grassland most resembled g3c8 Holcus-Juncus other neutral grassland in character, although the vegetation composition wasn't consistent enough to classify it. Some scattered blackthorn *Prunus spinosa* scrub was present within the grassland, encroaching from the hedgerows, especially H1. There were large areas of tall forbs within G3 which were dominated by soft rush and creeping thistle, indicating that this area of grassland is enriched, and is sometimes inundated, possibly by the Scrase stream. Other tall forbs included nettles, common hogweed *Heracleum sphondylium*, spear thistle *Cirsium vulgare*, and willowherb *Epilobium spp*. These areas were not mapped separately as the wider grassland community was still strong within the areas of tall forbs.	3.4502	Poor	Medium	13.80

	Himalayan balsam *Impatiens glandulifera* was recorded in the north of G3 where the grassland backs onto Scrase stream. G2 and G3 were assessed as being in Poor condition, as neither grassland had indicators immediately obvious within the grasslands. There was also a lack of bare ground within the grasslands, and the cover of species indicating sub-optimal condition, including creeping thistle and nettle was >5%. The grasslands were species poor, with <10 species present per m^2.				
Bramble scrub	One areas of bramble scrub were recorded within the Site. BS1 in the centre of the Site was dominated by bramble *Rubus fruticosus* with one oak *Quercus spp* and one blackthorn bush also present. BS2 was recorded along the north boundary of the Site, along Scrase stream. BS2 was dominated by bramble and Himalayan balsam, with abundant creeping thistle. Bramble scrub does not require a conditions assessment, as it can never meet more than Poor condition within the Metric.	0.0344	Condition Assessment N/A	Medium	0.14
Individual trees	There were 28 individual trees recorded within the Site. These trees comprised mature and semi-mature oak trees, mature red oak *Quercus rubra,* semi-mature ash *Fraxinus excelsior,* common lime *Tilia eurpoaea* and semi-mature horse chestnut *Aesculus hippocastanum*. The majority of the trees were medium sized trees (T2-T12, T16-T24, T26) and large trees (T13-T15, T25, T27-T28, T30). Due to the size and condition of these trees and their intrinsic value it is important that they are being retained by the proposals from an ecological perspective. A lot of these trees were noted to possess some potential for roosting bats.	0.6229	Moderate	Medium	4.98
	Trees T2 – T11 were classified as being medium sized trees in Moderate condition. These trees were mainly horse chestnut trees, with one ash and one oak. T13 was a medium sized tree in Good condition and T13-15 were medium and large trees in Good condition; these trees were all mature oaks. T16 was a mature red oak tree in moderate condition. T17 and T18 were both mature oak trees in Good condition. T19 – T25 comprised medium-sized small lime trees in Moderate condition. T25 – T30 were all large, mature oak trees, in Good condition. The trees assessed as being in Moderate condition were non-native species, lacked features for wildlife, were not considered mature for their species though still meeting the size requirements for medium sized trees, and/or showed signs of being impacted by anthropogenic activities. The trees assessed as being in Good condition were native species, and generally possessed niches for wildlife, were mature trees, did not show any negative signs from human activity, over-sailed vegetation. Some of	0.7184	Good	Medium	8.62

	these trees did show signs of management/impacts from human activity, but passed all other criteria.				
Total On-Site Baseline Habitat Units					**33.73**

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

Table 2: Summary of Off-Site Baseline Habitats

Habitat	Description	Area	Condition	Distinctiveness	Biodiversity Units
Modified grassland	A small area of the grassland G1, as described above, is excluded from the development boundary. This habitat will be retained by the proposals.	0.1609	Poor	Low	6.51
Other neutral grassland	A large proportion of Grassland G3 as described above was excluded from the development boundary. This area is prone to flooding, from the Scrase stream, which flows along the northern boundary of the grassland G3. This grassland will be enhanced by the proposals.	0.5518	Poor	Medium	0.32
Blackthorn scrub	An area of blackthorn scrub (B) was recorded within G3. No other plant species were identified within the area of scrub. The scrub was in Poor condition due to being 100% blackthorn, not possessing a good age	0.0248	Poor	Medium	0.10

	range, not having a developed edge, and there not being any clearings or rides within the scrub. The scrub will be retained by the proposals.				
Rural tree	One tree was recorded within the off-site habitats, to the north-west of the Site. T29, a medium sized oak tree in Good condition. The tree was assessed as being in Good condition as it was a native species, and possessed niches for wildlife. The tree is a mature oak, and does not show any negative signs from human activity. The tree canopy also over-sails grassland. The tree will be retained by the proposals.	0.0163	Good	Medium	0.20
Bramble scrub	BS2 was recorded along the north boundary of the Site, along Scrase stream. BS2 was dominated by bramble and Himalayan balsam, with abundant creeping thistle. The scrub will be retained by the proposals. Bramble scrub does not require a conditions assessment, as it can never meet more than Poor condition within the Metric.	0.0181	Condition Assessment N/A	Medium	0.07
Total Off-Site Baseline Habitat Units					**2.90**

Linear Features: Hedgerows and Lines of Trees

3.13 There were four hedgerows bounding the field compartments within the survey area. All the hedgerows supported a variety of native species, including mature and semi-mature trees frequently recorded throughout.

3.14 There were also lines of trees present along the south-east and south boundaries of the Site.

3.15 One line of trees was present in the off-site habitats, along Scrase stream.

3.16 Condition assessments are provided in Appendix A.

Table 3: Existing On-Site Hedgerows Biodiversity Units

Habitat	Description	Ref, (Figures)	Length (km)	Condition	Biodiversity Units
Hedgerows	Four hedgerows were present within the survey area, bounding the field compartments. All hedgerows were classified as NERC S41 Habitats of Principal Importance, due to at least 80% of their canopy comprising native species. None of the hedgerows were considered 'important' under The Hedgerow Regulations 1997 due to a lack of high species diversity and associated features. H1 and H4 were classified as native hedgerows with trees, while H2 and H3 were classified as native hedgerows. H1 was dominated by hazel *Corylus avellana,* with abundant hawthorn *Crataegus monogyna,* frequent bramble and blackthorn, and some ash. H2 was dominated by hazel, with frequent holly *Ilex aquifolium*, bramble and bracken. H3 was dominated by blackthorn, with abundant hawthorn and bramble, and infrequent hazel. H4 was dominated by holly and oak, with abundant bramble, blackthorn, hawthorn, and some hazel, ash and wild cherry. Part of H4 extends outside of the Site boundary, and is classed as an off-site habitat. The hedgerows were all assessed as being in Moderate condition. There was a lack of vegetated surface to the side of the	H1 H2 H3 H4	0.211 0.236 0.061 0.123	Moderate Moderate Moderate Moderate	1.69 0.94 0.24 0.98

	hedgerows, plants indicative of enrichment covered >20% of the ground around the base of the hedgerows, and >90% of the hedgerow length was not free of damage caused by human activities. H2 and H3 also failed as they didn't have a width of >1.5m. H1 also failed for not having trees every 30m.				
Lines of Trees	Two lines of trees were present within the Site. TL1 was dominated by common lime, with some horse chestnut and ash trees. TL2 comprised oak and ash trees. The tree lines were in Poor and Moderate condition, due to having gaps within the canopy, the trees not having ecological niches, and there not being an undisturbed naturally vegetated strip of at least 6m on both sides of the lines of trees.	TL1 TL2	0.09 0.064	Poor Moderate	0.18 0.26

Table 4: Existing Off-Site Hedgerows Biodiversity Units

Habitat	Description	Ref, (Figures)	Length (km)	Condition	Biodiversity Units
Hedgerows	Part of H4 extended outside of the Site boundary, and it therefore classed as an off-site hedgerow. H4 was classified as a native hedgerow with trees, It was dominated by holly and oak, with abundant bramble, blackthorn, hawthorn, and some hazel, ash and wild cherry. The hedgerow was assessed as being in Moderate condition, as outlined in Table 3 above.	H4	0.021	Moderate	0.17
Lines of Trees	One line of trees was present in the off-site habitats, along Scrase stream. TL3 was dominated by hazel, with abundant hawthorn, frequent ash, and some field maple trees. Bramble was frequently recorded throughout the understory.	TL3	0.199	Poor	0.40

	The tree lines was in Poor due to having gaps within the canopy, the trees not having ecological niches, and there was not being an undisturbed naturally vegetated strip of at least 6m on both sides of the lines of trees.				

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

4.0 PROPOSED DESIGN

4.1 The proposed habitats are shown in *Figure 2,* with habitat retention illustrated in *Figure 3;* based on the Illustrative Framework Plan by FPCR Environment and Design Ltd (Drawing Number 9432-L-02). A summary of the proposed habitats and proposed hedgerow creation and enhancement is provided in *Table 5 – Table 8*.

4.2 A brief outline of the management required to achieve the target condition for each habitat type is given, however a Habitat Management and Monitoring Plan (HMMP) should be produced, which will outline the planting and landscape information, and the management and monitoring of the proposed and enhanced habitats for a minimum of 30 years in accordance with the Environment Act. This can be submitted as part of a planning condition, to be submitted and discharged prior to the commencement of works.

Habitats

Habitat Retention/Loss (*Figure 3*)

4.3 The majority of the neutral grassland within the Site in field compartments G2 and G3 will be lost to allow for the development proposals. This will be compensated for through habitat creation, including more species rich grasslands in better condition and enhancement of retained grasslands to other neutral grassland. Some off-site enhancement will also be undertaken, especially in reference to grassland G3.

4.4 The mature broadleaved trees throughout the Site will be retained by the proposals. The majority of the hedgerows will be retained, with small openings created to allow for access points and roads. The hedgerows and mature trees which are retained will be adequately buffered according to the root protection areas (RPA) (FPCR, Tree Schedule and Tree Survey Plan, December 2023).

4.5 The following buffers will be implemented during construction to ensure protection and ongoing ecological use of these habitat features across the Site;

- Scrase stream – 10m buffer
- Little Walstead Wood (ancient woodland) - 15m

Habitat Creation / Enhancement (*Figure 2*)

4.6 The modified grassland in the south of the Site (G1) will be retained and enhanced to other neutral grassland in Moderate condition. The off-site area of G1 will be retained as modified grassland in Poor condition.

4.7 Margins of existing other neutral grassland (Poor condition) around the development area, including around hedgerows and trees which will be retained are marked as being lost by the proposals. This is due to the areas to be retained being too small to sustain a sward indicative of 'other neutral grassland'. These areas are therefore proposed to be modified grassland in Poor or Moderate condition, depending on the size of the areas and probability of achieving 6-8 species per m^2.

4.8 The area of other neutral grassland within the LEAP in the north-east will be lost and will be reseeded with a species-rich mix; this area will target Poor condition.

4.9 Mixed scrub will be created around the north, north-east and eastern boundaries of the Site; and area of blackthorn scrub will also be enhanced to mixed scrub in Moderate condition.

4.10 A SuDS will be created in the northern-most corner of the Site. The SuDS targets moderate condition; it will need to be planted with a diversity of marginal vegetation to achieve this condition.

4.11 The proposals include the planting of an additional 53 small trees across the Site. The trees will mainly be comprised of native species and will be planted around the developed area and within the grassland to the south, and along the boundaries. Twenty-two of these trees will be fruiting trees, which will be planted in the north-east corner of the Site and will create a community orchard.

4.12 The Scrase stream, adjacent to the north of the Site boundary, will be retained by the proposals. It is recommended that a 10m buffer is implemented; the Site boundary is more than 10m from the Stream, and no construction is proposed within the off-site habitats in the north of the Site. The grasslands in this area are to be enhanced from Poor condition to Moderate condition through off-site habitat enhancement.

4.13 The bramble scrub, blackthorn scrub and treeline TL3 in the off-site area to the north of the Site will be retained by the proposals.

4.14 All works around invasive non-native species such as Himalayan balsam should be carried out under a Biodiversity Method Statement to ensure the species is not spread within the Site or into the wider environment. This is especially important in the north of the Site, where Himalayan balsam was noted growing along the Scrase stream and encroaching on the grassland G3. Himalayan balsam is classed as 'controlled waste' and can only be disposed of in a registered landfill site, unless appropriate on-site treatment and disposal is undertaken. The Water Resources Act 1991[8] requires care to be taken when spraying or treating such species in the presence of a watercourse.

Hedgerows

Hedgerow Retention (Figure 3)

4.15 The majority of hedgerows will be retained across the Site. Two gaps will need to be created within H2 and H1 to allow for access roads.

Hedgerow Creation (Figure 2)

4.16 To compensate for the loss of hedgerows on-site, 149m of species-rich hedgerows are proposed between the build development and the green space to the south of the site. This will create

8 Water Resources Act 1981. Available at: https://www.legislation.gov.uk/ukpga/1991/57/contents

linkages between the existing trees and scrub in the centre of the Site and existing hedgerows and the proposed areas of scrub to the north and north-east.

Table 5: Summary of Proposed Habitat Creation

Habitat (UKHab Type)	Targets for Creation/Management	Area (ha)	Target Condition	Distinctiveness	Proposed Biodiversity Units
Modified grassland	Areas of modified grassland will be created around the development area, including the LEAP and in areas where hedgerows and trees are being retained, but it is unlikely the existing other neutral grassland in these areas will persist as the retained areas are small. To achieve the target Moderate condition, the grasslands must contain 6-8 species per m^2, including 2 forbs, and in addition must pass at least three of the following criteria; 1) the grassland will need to have a varied sward height, 2) scattered scrub must account for <20% of the grassland area 3) signs of physical damage must be <5%, 4) cover of bare ground must be between 1 and 10%, 5) cover of bracken must be <20%, 6) invasive non-native species listed on Schedule 9 of WCA 1981 must be absent. This will be achieved by over-seeding with a species-rich mix suitable for managed areas such as lawns, management through cut-and-collect mowing to ensure nutrients are removed from the grassland, and light management of some of the grassland margins (at least 20% of the grassland area) to allow a diverse sward height. Grassland diversity should be monitored to ensure uptake of species is successful, and additional seeding and/or harrowing undertaken if necessary. The presence of bracken, scrub and invasive species such as Himalayan balsam within the grassland must be monitored, and these must be removed where observed.	0.6477	Moderate	Low	2.25

Modified grassland	Some smaller areas of grassland will be retained around hedgerows and trees in the residential area to the north of the Site. Due to their small size, they will not be able to be retained as other neutral grassland, and are therefore proposed to be Modified grassland. These areas have a target Poor condition due to their small size making it unlikely that they will be able to achieve 6-8 species per m^2. These small areas of grassland will also be over-seeded with a species-rich mix suitable for managed areas such as lawns and management through cut-and-collect mowing to ensure nutrients are removed from the grassland. The presence of bracken, scrub and invasive species such as Himalayan balsam within the grassland should be monitored, and they must be removed where observed.	0.081	Poor	Low	0.16
Other neutral grassland	A small area of other neutral grassland will be created in the south of the Site by the proposals. This will be linked to wider areas of other neutral grassland which are being enhanced from modified grassland within this area. These grasslands will be seeded with an appropriate species-rich seed mix, for example EM2 Standard General Purpose Meadow Mix from Emorsgate Seeds, or seeded through the introduction of green hay from an appropriate local donor site. To achieve the target Moderate condition, the grasslands must freely exhibit indicator species for the grassland type, and will need to pass at least two of the following criteria; 1) the grassland will need to have a varied sward height, 2) cover of bare ground must be <5%, 3) cover of bracken must be <5%, 4), combined cover of species indicative of sub-optimal condition and signs of physical damage must be <5%. This will be achieved by over-seeding with a species-rich mix, and cut-and-collect mowing or lightly grazing the grasslands to achieve a diverse sward	0.0307	Moderate	Medium	0.21

	height and ensure nutrients are removed from the grassland. The margins should be lightly managed to create a diverse sward height. The presence of scrub encroachment should be monitored. Grassland diversity should be monitored to ensure uptake of species is successful, and additional seeding and/or harrowing undertaken if necessary.				
Mixed scrub	An area of mixed scrub will be created along the east, north-east and north boundaries of the Site. The created scrub should comprise native woody species including hawthorn, holly, hazel, blackthorn, common dogwood *Cornus sanguinea*, goat willow *Salix caprea* and mountain ash *Sorbus aucuparia*. For the scrub to meet the targeted Moderate condition, the planting will need to ensure that no one species dominates more than 75% of the areas and it will be subject to a program of management to encourage natural regeneration. Monitoring will ensure no non-native invasive species establish.	0.4529	Moderate	Medium	3.03
SuDS	A Sustainable urban Drainage System will be created in the northern corner of the Site. The SuDS is expected to dry out seasonally, and not hold water all year round. The SuDS should be planted with a range of native marginal and aquatic plant species suited to areas which are seasonally wet, including irises and rushes. The SuDS must be monitored and managed to stop the spread of Himalayan balsam, as this invasive species has been recorded in the north of the Site. To achieve the target Moderate condition the SuDS will need to pass 3 or 4 criteria, including; having a varied vegetation structure, containing different plant species beneficial to wildlife, having <5% cover of invasive non-native species, plant species comprising mainly native species, and the vegetation present being suited to a wetland situation.	0.1503	Moderate	Medium	0.36

Urban trees (small)	The proposals include the planting of an additional 53 small trees across the Site. The trees will mainly be comprised of native species, and will be planted around the developed area and within the grassland to the south, and along the boundaries. Twenty-two of these trees will be fruiting trees, which will be planted in the north-east corner of the Site and will create a community orchard. Due to the time required for trees to reach 'Good' condition (30 years), the trees will target 'Moderate' condition. The trees will be subject to a program of management to ensure they maintain healthy growth. Urban trees will be monitored and any individual failures will be replaced on a like for like basis.	0.2158	Moderate	Medium	0.66

Table 6: Summary of Proposed On-Site Habitat Enhancement

Baseline Habitat (UKHab Type) Change	Targets for Enhancement/Management	Length (km)	Habitat Condition Change	Distinctiveness change	Biodiversity Units
Modified grassland to Other neutral grassland	A large area of other neutral grassland will be created by the proposals in the south of the Site, by enhancing the retained modified grassland in Poor condition to other neutral grassland in Moderate condition. The grassland will be seeded with an appropriate species-rich seed mix, for example EM2 Standard General Purpose Meadow Mix from Emorsgate Seeds, or seeded through the introduction of green hay from an appropriate local donor site. Any proposed over-seeding of the grassland should include yellow rattle *Rhinanthus minor*, which is a semi-parasitic plant which helps to control the dominance of palatable grasses including perennial rye grass, improving the sward diversity.	2.6532	Poor - Moderate	Low – Medium	16.45

	Due to the management history of the Site and possible inundation from the Scrase stream, and from grazing by livestock, it is expected that the soil may be nutrient enriched, and therefore further management may be required to suppress outbreaks of undesirable species including creeping thistle, nettle and broad-leaved dock. Monitoring and additional management will be required to suppress outbreaks of undesirable species across the sward. To achieve the target moderate condition, the grasslands will need to meet the same criteria as the created other neutral grasslands above and be managed using the same methods.				
Other neutral grassland	A small area of existing other neutral grassland within the north-west of G3 which falls within the Site boundary will be enhanced from Poor condition to Moderate condition, forming a large block of better-quality neutral grassland, with the off-site grasslands. Due to the flood risk in this area of the Site it is expected that the soil may be nutrient enriched, and therefore further management may be required to suppress outbreaks of undesirable species including creeping thistle, nettle and broad-leaved dock. Monitoring and additional management will be required to suppress outbreaks of undesirable species across the sward. A species-mix suited to floodplain conditions should be selected for over-seeding the grasslands in the north of the Site, such as EM8 Meadow Mixture for Wetlands from Emorsgate Seeds. To achieve the target moderate condition, the grasslands will need to meet the same criteria as the created other neutral grasslands above and be managed using the same methods.	0.0054	Poor - Moderate	Medium – Medium	0.04

Table 7: Summary of Proposed Off-Site Habitat Enhancement

Baseline Habitat (UKHab Type) Change	Targets for Enhancement/Management	Length (km)	Habitat Condition Change	Distinctiveness change	Biodiversity Units
Other neutral grassland	The grassland G3 which falls outside of the Site boundary, but is still within the ownership boundary, will be managed and enhanced as an off-site habitat from Poor condition to Moderate condition. Due to the flood risk in this area of the Site it is expected that the soil may be nutrient enriched, and therefore further management may be required to suppress outbreaks of undesirable species including creeping thistle, nettle and broad-leaved dock. Monitoring and additional management will be required to suppress outbreaks of undesirable species across the sward. A species-mix suited to floodplain conditions should be selected for over-seeding the grasslands in the north of the Site, such as EM8 Meadow Mixture for Wetlands from Emorsgate Seeds. To achieve the target moderate condition, the grasslands will need to meet the same criteria as the created other neutral grasslands above and be managed using the same methods.	0.5518	Poor - Moderate	Medium – Medium	3.75

Table 8: Summary of Proposed Hedgerow Creation

Habitat (UKHab Type)	Targets for Creation/Management	Length (km)	Target Condition	Distinctiveness	Biodiversity Units
Native species-rich hedgerow	149m of species-rich hedgerow with trees will be planted between the build development and the green space to the south of the site. This will link the current trees and scrub within the centre of the Site to existing hedgerows and the proposed areas of scrub to the north and north-east. The hedgerows will be comprised of native species to provide shelter, pollen, nectar and berries for local wildlife. The hedgerow will target Moderate condition. To achieve this, the following management measures need to be implemented, which will allow the criteria within *Appendix B* to be achieved; Failed specimens will be replaced during establishment on a like-for-like basis; Hedgerows will be managed to encourage tall (>1.5m), wide (>1.5m) and bushy features; Fertiliser and herbicide use will be prohibited around the hedgerows to reduce nutrient enrichment; A minimum of 2m adjacent to the hedgerows will be managed as 'undisturbed' ground wherever possible.	0.149	Moderate	Medium	1.00

5.0 STATUTORY BNG METRIC

5.1 The habitat retention, enhancement and creation proposals highlighted within this report have all been inputted into the Statutory Biodiversity Metric v4.1. *Table 9* provides a summary of the headline results of the assessment completed for the proposals. The full metric has been provided in *Appendix C*.

Table 9: Statutory Biodiversity Metric 4.1 Headline Results

On-Site		
Baseline	Habitat Units	33.73
	Hedgerow Units	4.30
	Watercourse Units	0.00
Post-Intervention	Habitat Units	36.76
	Hedgerow Units	5.12
	Watercourse Units	0.00
Off-Site		
Baseline	Habitat Units	2.90
	Hedgerow Units	0.57
	Watercourse Units	1.32
Post-Intervention	Habitat Units	4.44
	Hedgerow Units	0.57
	Watercourse Units	1.32
Total Net Unit Change	Habitat Units	**+4.57**
	Hedgerow Units	**+0.83**
	Watercourse Units	**0.00**
Total Net Percentage Change	Habitat Units	**+13.55%**
	Hedgerow Units	**+19.22%**
	Watercourse Units	**0.00%**

Habitat Trading

Trading Summary

5.2 The vast majority of habitat to be lost across the Site comprised other neutral grassland which is a medium distinctiveness habitat. The existing neutral grassland on the Site is in Poor condition and is not a good representation of this habitat type, with indicator species not readily observed, and with a low number of forbs per m^2. The modified grasslands to be created on site in their place will mostly (excluding some small area margins) target 6-8 species per m^2 and will be managed to target at least Moderate condition. Where other neutral grassland is targeted (in existing areas of modified grassland) these will target Moderate condition, which will off-set for the loss of these Poor condition grasslands. The trees across the Site will be retained by the proposals, with additional tree planting proposed, which will target small trees in Moderate condition. The proposals provide sufficient amounts of on-site and off-site (within the ownership of the client) habitat creation and enhancement to offset impacts to medium distinctiveness habitats through habitat creation and enhancement.

5.3 Low distinctiveness habitats which will be lost as part of the proposals include modified grassland in Poor condition. The majority of the existing modified grassland will be enhanced to other neutral grassland in Moderate condition, and areas of mixed scrub in Moderate condition will also be

created in its place along the Site boundaries. The proposals provide sufficient amounts of habitat creation to offset impacts to low distinctiveness habitats through habitat creation.

5.4 Small sections of a native hedgerow with trees H1 (10m) and a native hedgerow H2 (20m) will be lost as part of the proposals to allow access roads to be created. The proposals include the planting of 149m of species-rich native hedgerow, which will compensate for the loss of hedgerows on-site. The proposals provide sufficient hedgerow creation to offset impacts through hedgerow creation measures alone.

5.5 *Table 10* summarises the habitat trading summaries across the Site.

Table 10: Habitat Trading Summary

Trading Summary		
Distinctiveness Group	**Trading Rule**	**Trading Satisfied?**
Very High	Bespoke compensation likely to be required	N/A
High	Same habitat required	N/A
Medium	Same broad habitat or a higher distinctiveness habitat required	Yes
Low	Same distinctiveness or better habitat required	Yes

Additional Faunal Enhancements

5.6 The Ecological Appraisal (FPCR, January 2023) also recommends that nest boxes for birds and roost boxes for bats are incorporated in the scheme. The Habitat Management and Monitoring Pan which may be conditioned as part of this application may also include the final Ecological Mitigation and Enhancement Plan that shows the location of wildlife boxes and other proposed features.

6.0 CONCLUSION

6.1 The approach to habitat creation and enhancement has aimed to maximise the future biodiversity value on the Site through the creation of species-rich modified and other neutral grasslands, areas of mixed scrub, SuDS, and the planting of additional tree and hedgerows. Faunal enhancements will also be integrated to the proposals to support the restoration of the Site for wildlife. A considered planting scheme will be produced in close communication with an ecologist, which has been the approach to the proposal from the outset.

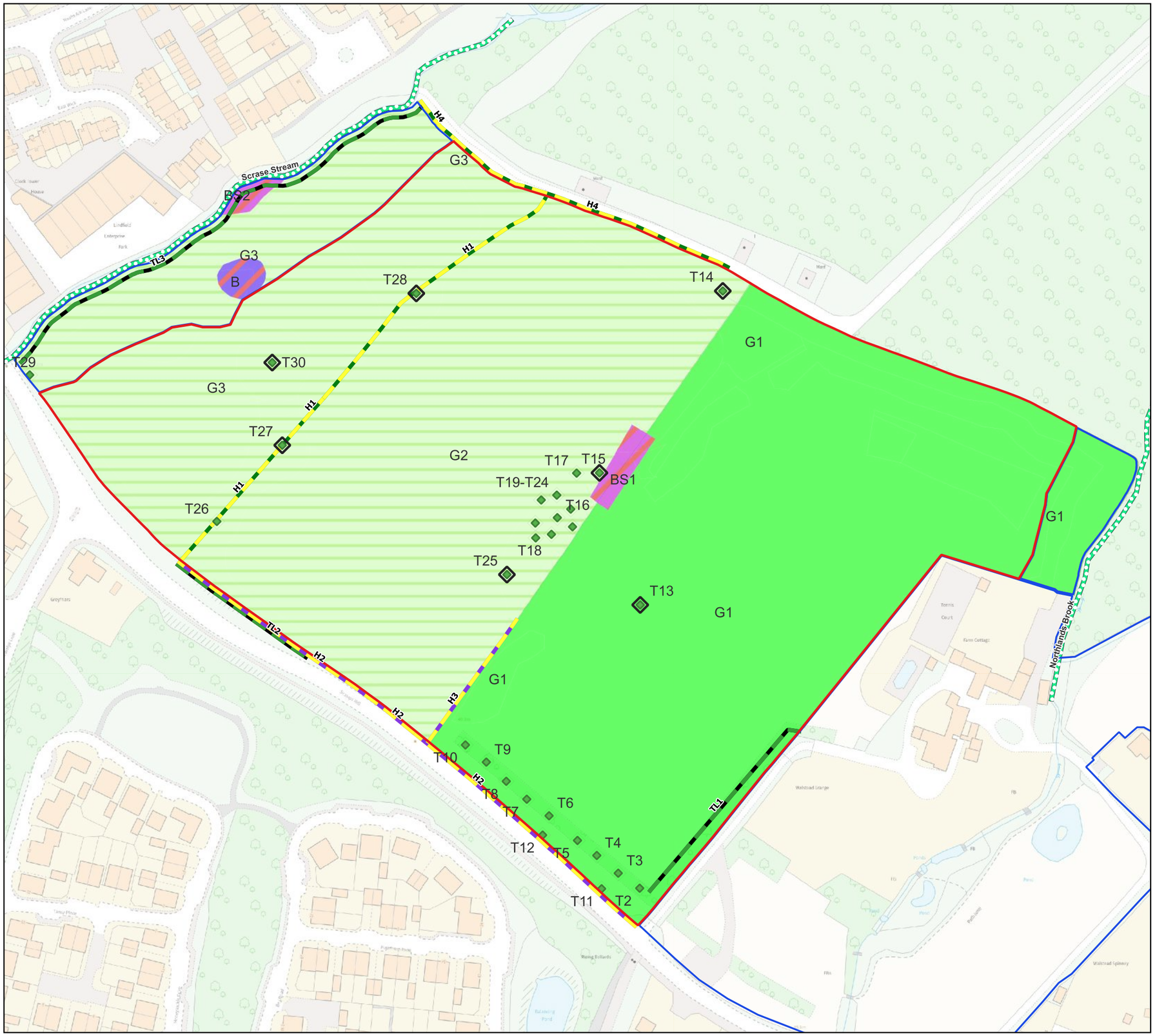
6.2 Biodiversity Net Gain has been used to inform the habitat creation and enhancement proposals for the scheme and the resulting habitats will provide a betterment for local wildlife.

6.3 The results of the assessment demonstrate that the proposal will lead to an overall gain of 4.57 biodiversity habitat units, and an increase of 13.55% and 0.83 hedgerow units, an increase of 19.22%.

6.4 The Scrase stream, which is off-site adjacent to the north boundary, was assessed under the River Conditions Assessment and found to be in Poor condition. The stream will be retained by the proposals, and is over 10m from the current Site boundary, although an outflow may be created from the SuDS which will drain into the stream. The grassland habitats along the stream will be

enhanced through off-site management, from Poor to Moderate condition other neutral grasslands. No enhancements have been recommended for the stream at this point as the stream is outside of the clients' ownership. The proposals currently have a neutral effect on watercourse units. No ditches or other watercourses have been proposed as part of the current framework plan.

6.5 The proposals have demonstrated the ability for the Site to lead to the delivery of a net gain for habitats and hedgerows in line with the NPPF's policies on "2. Sustainable Development" and "Conserving and enhancing the natural environment".



Key

- Redline Boundary
- Blueline Ownership Boundary

Baseline Habitats

- Blackthorn scrub
- Bramble scrub
- Modified grassland
- Other neutral grassland

Baseline Hedgerows

- Line of trees
- Native hedgerow
- Native hedgerow with trees

Baseline Watercourses

- Other rivers and streams

Baseline Trees

- Existing Large Urban Tree
- Existing Medium Urban Tree

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

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client
Gladman Developments Ltd.

project
Land off Scamps Hill, Lindfield

drawing title
BASELINE HABITATS

scale @ A3
1:1,600

drawn
DS / AU / CHK

issue date
23/1/2024

drawing / figure number
Figure 1
Rev A

Key

- Redline Boundary
- Blueline Ownership Boundary

Proposed & Retained Habitats

- Blackthorn scrub
- Bramble scrub
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Sustainable drainage system

Proposed & Retained Hedgerows

- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Species-rich native hedgerow

Retained Watercourses

- Other rivers and streams

Proposed & Retained Trees

- Proposed Large Urban Tree
- Proposed Large Rural Tree
- Proposed Medium Urban Tree
- Proposed Medium Rural Tree
- Proposed Small Rural Tree

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project
Land off Scamps Hill, Lindfield

drawing title
PROPOSED HABITATS

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scale @ A3
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drawn
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issue date
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drawing / figure number
Figure 2
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Key

- **Redline Boundary**
- **Blueline Ownership Boundary**

Habitat Retention

- **Enhanced**
- **Retained**
- **Lost**

Hedgerow Retention

- **Retained**
- **Lost**

Watercourse Retention

- **Retained**

Individual Tree Retention

- **Created**
- **Retained**

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client
Gladman Developments Ltd.

project
Land off Scamps Hill, Lindfield

drawing title
HABITAT RETENTION

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drawn
DS / AU

issue date
24/1/2024

drawing / figure number
Figure 3
Rev A

Key

- Redline Boundary
- Blueline Ownership Boundary

Baseline Habitat Condition

- Poor
- Condition Assessment N/A

Baseline Habiutat Distinctiveness

- Medium
- Low

Baseline Hedgerow Condition

- Moderate
- Poor

Baseline Hedgerow Distinctiveness

- Medium
- Low

Baseline Watercourse Condition

- Poor

Baseline Watercourse Distinctiveness

- High

Baseline Individual Tree Condition

- Moderate
- Good

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client
Gladman Developments Ltd.

project
Land off Scamps Hill

drawing title
BASELINE HABITAT CONDITION / DISTINCTIVENESS

scale @ A3 1:1,600 | drawn DS / AU | issue date 23/1/2024

drawing / figure number
Figure 4
Rev A

Key

Redline Boundary

Blueline Ownership Boundary

Proposed & Retained Habitat Condition

Moderate

Poor

N/A - Other

Condition Assessment N/A

Proposed Habitat Distinctiveness

Medium

Low

V.Low

Proposed & Retained Hedgerow Condition

Moderate

Poor

Proposed & Retained Hedgerow Distinctiveness

Medium

Low

Proposed & Retained Individual Tree Condition

Moderate

Good

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

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client
Gladman Developments Ltd.

project
Land off Scamps Hill, Lindfield

drawing title
PROPOSED HABITAT CONDTION / DISTINCTIVENESS

scale @ A3
1:1,600

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Figure 5
Rev A

APPENDIX F-1: BASELINE HABITAT CONDITIONS ASSESSMENTS – DEFRA Metric 4.0

GRASSLAND (LOW DISTINCTIVENESS)
(Grassland – modified grassland)

Vegetation dominated by a few fast-growing grasses on fertile, neutral soils. It is frequently characterised by an abundance of rye-grass *Lolium spp.* and white clover *Trifolium repens.* Palatable grasses dominate, and usually cover over 75%. Species poor <9 species per m^2.

Condition Criteria	Grassland Reference													
	G1													
1 There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. **NB - this criterion is non-negotiable for achieving moderate or good condition.**	F													
2 Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	F													
3 Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus agg*. may be present). Patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. .	P													
4 Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	P													
5 Cover of bare ground between 1% and 10%, including localised areas, for example, rabbit warrens.	F													
6 Cover of bracken less than 20%.	P													
7 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981)	P													
Total Passes	4													
Condition	**Poor**													
Passes 6 or 7 criteria including non-negotiable criterion — **Good (3)**														
Passes 4 or 5 criteria including non-negotiable criterion — Moderate (2)														
Passes 3 or fewer criteria — Poor (1) **OR** **Passes 4 – 6 criteria (excluding non-negotiable criterion)**														

GRASSLAND (MEDIUM, HIGH AND VERY HIGH DISTINCTIVENESS) (Grassland - Lowland calcareous grassland, Lowland dry acid grassland, Lowland meadows, Other lowland acid grassland, Other neutral grassland, Tall herb communities (H6430) [Note Tall herb habitat that does not meet the Annex 1 definition should be recorded as "Other neutral grassland"], Upland acid grassland, Upland calcareous grassland, Upland hay meadows Sparsely vegetated land - Calaminarian grassland)							
Condition Criteria 4.0	**Grassland Reference**						
	G2	**G3**					
1 The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. **NB – this criterion is essential for achieving moderate or good condition (non-acid grassland types only).**	F	F					
2 Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	F	P					
3 Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	F	F					
4 Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	P	P					
5 Combined cover of species indicative of sub-optimal condition* and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive plants listed on Schedule 9 of WCA, 1981 are present this criterion is automatically failed.	P	F					
Additional Group (Non-acid types only)							
6 There are 10 or more species per metre squared (excluding those indicative of sub-optimal condition) **NB – this criterion is essential for achieving good condition (non-acid grassland types only)**	F	F					
Total Passes	2	2					
Non-Acid Grassland Types — **Condition** Passes 5 or 6 criteria, including essential criterion 1 and 6 — Good (3) Passes 3-5 criteria including essential criterion 1 — Moderate (2) Passes 2 or fewer criteria OR Passes 3 or 4 criteria excluding criterion 1 and 6 — Poor (1)	**Poor**	**Poor**					
Species indicative of sub-optimal condition for this habitat type include: 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*.							

HEDGEROW

(Native hedgerow, - associated with bank or ditch, - with trees, - with trees - associated with bank or ditch,
Native species rich hedgerow, - associated with bank or ditch, - with trees, - with trees - associated with bank or ditch)

Functional Group	Condition Criteria 4.0	Hedgerow Reference														
		H2	H3	H1	H4											
A	**A1** Height >1.5m average along length	P	P	P	P											
	A2 Width >1.5m average along length	F	F	P	P											
B	**B1** Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	P	P	P	P											
	B2 Gaps make up <10% of total length and no canopy gaps >5 m (access points and gates excluded from <5m)	P	P	P	P											
C	**C1** >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow, and is present on at least one side of the hedge (at least)	F	F	F	F											
	C2 Plant species indicative of nutrient enrichment (nettles, docks, cleavers) dominate <20% cover of the area of undisturbed ground	F	F	F	F											
D	**D1** >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte (recently introduced) *spp*	P	P	P	P											
	D2 >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	F	F	F	F											
Additional group – applicable to hedgerows with trees only																
E	**E1** There is more than one age-class (or morphology) of trees present (young, mature, veteran, ancient) and there is on average at least one present per 20-50m of hedgerow. (A mature tree is one that is at least 2/3 expected fully mature height for the species)	NA	NA	F	P											
	E2 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	NA	NA	P	P											
	Total Fails	4	4	4	3											
	Condition	**Moderate**	**Moderate**	**Moderate**	**Moderate**											

No more than 2 total failures; AND no more than 1 failure in any functional group	**Good**
For Hedgerows with no trees: No more than 4 total failures; AND does not fail both attributes in more than one functional group **For Hedgerows with trees:** No more than 5 total failures; AND does not fail both attributes in more than one functional group	**Moderate**
For Hedgerows with no trees: No more than 4 total failures; OR fails both attributes in multiple functional groups **For Hedgerows with trees:** Fails more than 5; OR fails both attributes in multiple functional groups	**Poor**

INDIVIDUAL TREES
(Urban trees, Rural trees)

Covers the following topographical formations most commonly found in urban areas:

- Individual Trees: Young trees over 7.5cm diameter at breast height whose canopies are not touching
- Perimeter Blocks: Groups or stands of trees within and around boundaries of land, former field boundary trees incorporated into developments, individual trees in gardens whose canopies overlap continuously
- Linear Blocks: Lines of trees along streets, highways, railways and canals whose canopies may or may not overlap continuously.

Condition Criteria	Urban Trees Reference													
	T1	**T2-T10**	**T11**	**T12**	**T13**	**T14**	**T15**	**T16**	**T17+T18**	**T19-T24**	**T25**	**T26**	**T27**	**T28**
1 The Tree is a native species (or more than 70% within the block are native species	F	F	P	P	P	P	P	F	P	P	P	P	P	P
2 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).	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3 The tree is mature (or more than 50% within the block are mature). A mature tree is 2/3 its expected fully mature height for the species	P	F	F	P	P	P	P	P	F	F	P	P	P	P
4 There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	P	P	P	P	P	F	P	P	P	P	P	F	P	P
5 Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	F	F	F	P	P	P	P	F	P	F	P	P	P	P
6 More than 20% of the tree canopy area is oversailing vegetation beneath.	P	P	P	P	P	P	P	F	P	P	P	P	P	P
Total Passes	4	3	4	6	6	5	6	3	5	4	6	5	6	6
Condition	**Moderate**	**Moderate**	**Moderate**	**Good**	**Good**	**Good**	**Good**	**Moderate**	**Good**	**Moderate**	**Good**	**Good**	**Good**	**Good**

Passes 5 or 6 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)

Note - All ancient trees are veteran trees, but not all veteran trees are ancient. A veteran tree may not be very old, but it has decay features, such as branch death and hollowing. These features contribute to its biodiversity, cultural and heritage value. Veteran trees can be classified if they have four out of the five following features:

1. Rot sites associated with wounds which are decaying >400cm^2;
2. Holes and water pockets in the trunk and mature crown >5 cm diameter;
3. Dead branches or stems >15 cm diameter;
4. Any hollowing in the trunk or major limbs;
5. Fruit bodies of fungi known to cause wood decay.

INDIVIDUAL TREES
(Urban trees, Rural trees)

Covers the following topographical formations most commonly found in urban areas:

- Individual Trees: Young trees over 7.5cm diameter at breast height whose canopies are not touching
- Perimeter Blocks: Groups or stands of trees within and around boundaries of land, former field boundary trees incorporated into developments, individual trees in gardens whose canopies overlap continuously
- Linear Blocks: Lines of trees along streets, highways, railways and canals whose canopies may or may not overlap continuously.

Condition Criteria	Urban Trees Reference														
	T29	**T30**													
1 The Tree is a native species (or more than 70% within the block are native species	P	P													
2 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).	P	P													
3 The tree is mature (or more than 50% within the block are mature). A mature tree is 2/3 its expected fully mature height for the species	P	P													
4 There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	P	P													
5 Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark.	P	P													
6 More than 20% of the tree canopy area is oversailing vegetation beneath.	P	P													
Total Passes	6	6													
Condition Passes 5 or 6 criteria — Good (3) Passes 3 or 4 criteria — Moderate (2) Passes 2 or fewer criteria — Poor (1)	**Good**	**Good**													

LINE OF TREES

(Line of trees, – associated with bank or ditch, - (ecologically valuable), - (ecologically valuable) – associated with bank or ditch)

A line of trees at least 20 metres in length, with open habitat on each side.

Inclusions: grown out hedgerows, avenues, narrow windbreaks, willows and alders along watercourses.
Exclusions: Overgrown hedgerows still capable of being laid into a stockproof hedge.

Condition Criteria	Line of Trees Reference													
	TL1	**TL2**	**TL3**											
1 More than 70% of trees are native species.	P	P	P											
2 Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	F	P	F											
3 One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates; presence of standing and attached deadwood, cavities, ivy or loose bark	F	P	F											
4 There is an undisturbed naturally vegetated strip of at least 6m on both sides to protect the line of trees from farming and other anthropogenic operations. **Where veteran trees are present root protection areas should follow standing advice**	F	F	F											
5 At least 95% of the 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.	P	P	P											
Total Passes	2	4	2											
Condition	**Poor**	**Moderate**	**Poor**											

Passes 5 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)

SCRUB (Heathland and shrub - Blackthorn scrub, Gorse scrub, Hawthorn scrub, Hazel scrub, Mixed scrub, Sea buckthorn scrub (Annex 1), Willow scrub)															
Condition Criteria	**Scrub Reference**														
	Blackthorn														
1 Habitat is representative of UKHab description (where in its natural range) and closely matches the characteristics of the scrub type. At least 80% of the scrub is native, and there are at least three woody species, with no one species comprising more than 75% of the cover (except hazel, common juniper, sea buckthorn or box, which can be up to 100% cover).	F														
2 There is a good age range – all of the following are present: seedlings, saplings, young shrubs and mature/veteran shrubs.	F														
3 There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition* make up less than 5% of ground cover.	P														
4 The scrub has a well-developed edge with scattered scrub and tall grassland and/or forbs present between the scrub and adjacent habitat(s).	F														
5 There are clearings, glades or rides present within the scrub, providing sheltered edges.	F														
Total Passes	1														
Condition Passes 5 criteria – Good (3) Passes 3 or 4 5 criteria – Moderate (2) Passes 2 or fewer criteria – Poor (1)	**Poor**														
*Species indicative of sub-optimal condition for this habitat type include: tree-of-heaven *Alianthus altissima*, holm oak *Quercus ilex*, turkey oak *Quercus cerris*, creeping thistle *Cirsium arvense*, common nettle *Urtica dioica*, cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos* spp., buddleia *Buddleja spp*., cotoneaster *Cotoneaster* spp., Spanish bluebell *Hyacinthoides hispanica* (or hybrids).															

APPENDIX F-2: PROPOSED HABITAT CONDITION TARGETS (BNG METRIC 4.1)

Conditions Assessment Criteria for grasslands (Medium Distinctiveness)

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).[1] **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**		
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 insects, birds and small mammals to live and breed.		
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].		
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.		
E	Combined cover of species indicative of suboptimal condition[3] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed.		
	Additional Criterion - must be assessed for all non-acid grassland types		
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**		
	Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		
	Number of criteria passed		

Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓
Acid grassland types (Result out of 5 criteria)		
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	
Non-acid grassland types (Result out of 6 criteria)		
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)	
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	

Footnote 1 - Professional judgement should be used alongside the UKHab description.

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Footnote 3 - Species indicative of suboptimal condition for this habitat type include: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* . There may be additional relevant species local to the region and or site.

Footnote 4 – 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, by applying professional judgement.

Footnote 5 – Wildlife and Countryside Act 1981 (as amended).

Conditions Assessment Criteria for grasslands (Low Distinctiveness)

	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.		
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.		
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.		
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.		
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].		
F	Cover of bracken *Pteridium aquilinum* is less than 20%.		
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).		
		Essential criterion achieved (Yes or No)	
		Number of criteria passed	

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓
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)	

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).

Conditions Assessment Criteria for Scrub

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).[1] - At least 80% of scrub is native, - There are at least three native woody species[2], - No single species comprises more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* or box *Buxus sempervirens*, which can be up to 100% cover).		
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran[3]) shrubs are all present.		
C	There is an absence of invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) and species indicative of suboptimal condition[6] make up less than 5% of ground cover.		
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.		
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.		
		Number of criteria passed	

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	

Footnotes

Footnote 1 – Professional judgement should be used alongside the UKHab description.

Footnote 2 – Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) *Hedgerow Survey Handbook: A standard procedure for local surveys in the UK.* 2nd ed. [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk).

Footnote 3 – See gov.uk standing advice on ancient and veteran species. 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 4 – 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 5 – Wildlife and Countryside Act 1981 (as amended).

Footnote 6 – Species indicative of suboptimal condition for this habitat type may include: non-native conifers, tree-of-heaven *Alianthus altissima*, holm oak *Quercus ilex*, European turkey oak *Quercus cerris*, cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos* spp., shallon *Gaultheria shallon*, American skunk cabbage *Lysichiton americanus*, buddleia *Buddleja* spp., cotoneaster *Cotoneaster* spp., Spanish bluebell *Hyacinthoides hispanica* and hybrid bluebells *Hyacinthoides x massartiana*. There may be additional relevant species local to the region and or site.

Conditions Assessment Criteria for Tree Lines

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	At least 70% of trees are native species.		
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.		
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.		
D	There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice[2].		
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). 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.		
		Number of criteria passed	

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	

Footnotes

Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook: A standard procedure for local surveys in the UK*. 2nd ed [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk).

Footnote 2 – Where ancient and veteran trees are present, 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)

Conditions Assessment Criteria for Individual Trees

	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).		
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).		
C	The tree is mature (or more than 50% within the block are mature)[1].		
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.		
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.		
F	More than 20% of the tree canopy area is oversailing vegetation beneath.		
		Number of criteria passed	

Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 5 or 6 criteria	Good (3)	
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.		

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)

Conditions Assessment Criteria for Sustainable Urban Drainage Systems (SuDS)

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.		
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.		
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[3]. **Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).**		
Additional Criteria - must be assessed for **Bioswale and SuDS** habitat types only:			
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife[4].		
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.		

Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓
Results for **Bioswale or SuDS** (requiring assessment of **5 criteria** - core criteria plus additional criteria specified for habitat type):		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C; AND • Passes all additional criteria relevant to specific habitat type (Group E)	Good (3)	
• Passes 3 or 4 of 5 criteria; OR • Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 2 or fewer of 5 criteria.	Poor (1)	

Conditions Assessment Criteria for Hedgerows

Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and 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).		
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 *Prunus spinosa* 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).		
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).		
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).		
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.		
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 *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.		
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].		
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).		
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:	

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:	

Footnotes
Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.* [online] Available on: layout (hedgelink.org.uk)
Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows.* [online] Available on: Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.u
Footnote 3 – Wildlife and Countryside Act 1981 (as amended).
Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain.* 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). *Definitions: wild, native or alien?* [online] Available on: Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org)
Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora.* [online] Available on: Acknowledgements | Online Atlas of the British and Irish Flora (brc.ac.uk)
Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on: Home » NNSS (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)

APPENDIX F-3: BIODIVERSITY METRIC 4.1 CALCULATIONS

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Land off Scamp's Hill, Lindfield

Headline Results

Scroll down for final results ⚠

Return to results menu

On-site baseline	*Habitat units*	33.73		
	Hedgerow units	4.30		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	36.76		
	Hedgerow units	5.12		
	Watercourse units	0.00		
On-site net change (units & percentage)	*Habitat units*	3.02	8.97%	On-site net gain is less than target set ⚠
	Hedgerow units	0.83	19.22%	
	Watercourse units	0.00	0.00%	
Off-site baseline	*Habitat units*	2.90		
	Hedgerow units	0.57		
	Watercourse units	1.32		
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	4.44		
	Hedgerow units	0.57		
	Watercourse units	1.32		
Off-site net change (units & percentage)	*Habitat units*	1.55	53.37%	
	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*	4.57		
	Hedgerow units	0.83		
	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*	4.57	
	Hedgerow units	0.83	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	13.55%	
	Hedgerow units	19.22%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	33.73	37.11	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	4.30	4.73	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

CD1.9

CD1.9

Project Name: Land off Scamp's Hill, Lindfield Map Reference:

A-1 On-Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu

Area habitat summary	
Total Net Unit Change	4.57
Total Net % Change	15.59%
Trading Rules Satisfied	Yes ✓

	Existing area habitats				Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline						Bespoke compensation agreed for losses of VH/DH or irreplaceable habitat	Comments		
Ref	Broad Habitat	Habitat Type	Irreplaceable habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost		User comments	Planning authority comments	Habitat reference number
1	Grassland	Modified grassland	No	0.442	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required 2+	0.88	0	0	0.00	0.00	0.44	0.88				
2	Grassland	Modified grassland	No	2.6532	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required 2+	5.31	0	2.6532	0.00	5.31	0.00	0.00				
3	Grassland	Other neutral grassland	No	3.4448	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2+)	13.78	0	0	0.00	0.00	3.44	13.78				
4	Grassland	Other neutral grassland	No	0.0054	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2+)	0.02	0	0.0054	0.00	0.02	0.00	0.00				
5	Heathland and shrub	Bramble scrub	No	0.0344	Medium	4	Condition Assessment N/A	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2+)	0.14	0	0	0.00	0.00	0.03	0.14				
6	Individual trees	Rural tree	No	0.622940124	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2+)	4.98	0.6229401	0	4.98	0.00	0.00	0.00				
7	Individual trees	Rural tree	No	0.718394276	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (2+)	8.62	0.7183943	0	8.62	0.00	0.00	0.00				
8																							
9																							
10																							
11																							
12																							
			Total habitat area	7.02									33.73	1.34	2.66	13.60	5.33	3.92	14.80				
			Site Area (Excluding area of individual trees, green walls, interstitial hard structures)	6.58																			

Total area lost (excluding area of individual trees, green walls and interstitial hard structures)	3.92

m² to hectares conversion tool:	Select a unit	Hectares	m²

Project Name: Land off Scamp's Hill, Lindfield Map Reference:
A-2 On-Site Habitat Creation

Condense / Show Columns | Condense / Show Rows | Main Menu

Area habitat summary	
Total Net Unit Change	4.87
Total Net % Change	15.50%
Trading Rules Satisfied	Yes ✓
Area Check	Area Acceptable ✓

Post intervention habitats

Ref	Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness		Condition		Strategic significance			Temporal multiplier				Difficulty multipliers				Habitat units delivered	Comments		
				Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Standard time to target condition (years)	Habitat created in advance (years)	Delay in starting habitat creation (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied		User comments	Planning authority comments	Habitat reference number
1	Grassland	Modified grassland	0.6477	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	4	0	0	Standard time to target condition applied	4	0.867	Low	Standard difficulty applied	Low	1	2.25			
2	Grassland	Modified grassland	0.081	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1	0	0	Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.16			
3	Grassland	Other neutral grassland	0.0307	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	0.21			
4	Heathland and shrub	Mixed scrub	0.4529	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	3.03			
5	Urban	Developed land; sealed surface	2.5586	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	0	0	Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Low	1	0.00			
6	Urban	Sustainable drainage system	0.1503	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3	0	0	Standard time to target condition applied	3	0.899	Medium	Standard difficulty applied	Medium	0.67	0.36			
7	Individual trees	Urban tree	0.215709716	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local	Low Strategic	1	27	0	0	Standard time to target condition applied	27	0.382	Low	Standard difficulty applied	Low	1	0.66			
8																								
9																								
10																								
11																								
12																								
		Total habitat area	4.14																Total Units	6.68				

Site Area (Including area of individual trees, green walls, intertidal hard structures)	5.93

m² to hectares conversion tool:	Select a unit	Hectares	m²

CD1.9

Project Name: Land off Scamp's Hill, Lindfield   Map Reference:

A-3 On-Site Habitat Enhancement

Condense / Show Columns   Condense / Show Rows

Main Menu

Area habitat summary	
Total Net Unit Change	4.87
Total Net % Change	13.88%
Trading Rules Satisfied	Yes ✓

Baseline ref	Baseline habitats									
	Baseline habitat	Total habitat area (hectares)	Baseline distinctiveness band	Baseline distinctiveness score	Baseline condition category	Baseline condition score	Baseline strategic significance category	Baseline strategic significance score	Baseline habitat units	Required Action to Meet Trading Rules
2	Grassland - Modified grassland	2.6532	Low	2	Poor	1	Low Strategic Significance	1	5.31	Same distinctiveness or better habitat required ≥
4	Grassland - Other neutral grassland	0.0054	Medium	4	Poor	1	Low Strategic Significance	1	0.02	Same broad habitat or a higher distinctiveness habitat required (≥)

Baseline ref	Post intervention habitats												
	Proposed Habitat (Broad habitat pre-populated but can be overridden)		Change in distinctiveness and condition		Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance		
	Proposed Broad Habitat	Proposed habitat	Distinctiveness change	Condition change						Strategic significance	Strategic significance	Strategic significance multiplier
2	Grassland	Other neutral grassland	Low - Medium	Lower Distinctiveness Habitat - Moderate	2.6532	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1
4	Grassland	Other neutral grassland	Medium - Medium	Poor - Moderate	0.0054	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1
				Total habitat area	2.66							

Baseline ref	Temporal risk multiplier						Difficulty risk multipliers				Habitat units delivered	Comments		
	Standard time to target condition (years)	Habitat enhanced in advance (years)	Delay in starting habitat enhancement (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier	Standard difficulty of enhancement	Applied difficulty multiplier	Final difficulty of enhancement	Difficulty multiplier applied		User comments	Planning authority comments	Habitat reference number
2	10	0	0	Standard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	1	16.45			
4	10	0	0	Standard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	1	0.04			
											16.49			

CD1.9

Project Name: Land off Scamp's Hill, Lindfield Map Reference: X

D-1 Off-Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu

Area habitat summary	
Total Net Unit Change	4.57
Total Net % Change	13.55%
Trading Rules Satisfied	Yes ✓

	Existing area habitats				Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Spatial risk multiplier	Ecological baseline
Ref	Broad habitat	Habitat type	Irreplaceable habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		Spatial risk category	Total habitat units
1	Grassland	Modified grassland	No	0.1609	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	Compensation inside LPA boundary or NCA of impact site	0.32
2	Grassland	Other neutral grassland	No	0.5518	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (>)	Compensation inside LPA boundary or NCA of impact site	2.21
3	Heathland and shrub	Blackthorn scrub	No	0.0248	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (>)	Compensation inside LPA boundary or NCA of impact site	0.10
4	Heathland and shrub	Bramble scrub	No	0.0181	Medium	4	Condition Assessment N/A	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (>)	Compensation inside LPA boundary or NCA of impact site	0.07
5	Individual trees	Rural tree	No	0.016286016	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required (>)	Compensation inside LPA boundary or NCA of impact site	0.20
6														
7														
8														
9														
			Total habitat area	0.77										2.90

Ref	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost	Bespoke compensation agreed for losses of VHDH or irreplaceable habitat	Comments: User comments	Planning authority comments	Habitat reference	Off-site reference
1	0.1609	0	0.32	0.00	0.00	0.00		Units will need to be secured under a legal agreement. Off-site references are not currently available			X
2	0	0.5518	0.00	2.21	0.00	0.00					X
3	0.0248	0	0.10	0.00	0.00	0.00					X
4	0.0181	0	0.07	0.00	0.00	0.00					X
5	0.016286	0	0.20	0.00	0.00	0.00		T29			X
6											
7											
8											
9											
	0.22	0.55	0.69	2.21	0.00	0.00					

Site Area (Excluding area of individual trees, green walls, intertidal hard structures)	0.76
Total area lost (excluding area of individual trees, green walls and intertidal hard structures)	0.00

M² to hectares conversion tool:	Select a unit	Hectares	M²

CD1.9

Project Name: Land off Scamp's Hill, Lindfield   Map Reference: X

D-3 Off-Site Habitat Enhancment

Condense / Show Columns | Condense / Show Rows | Main Menu

Area habitat summary	
Total Net Unit Change	4.57
Total Net % Change	13.85%
Trading Rules Satisfied	Yes ✓

Baseline ref	Baseline habitats										Post intervention habitats: Proposed Habitat (Broad habitat pre-populated but can be overridden)	
Baseline ref	Baseline habitat	Total habitat area (hectare	Baseline distinctiveness band	Baseline distinctiveness score	Baseline condition category	Baseline condition score	Baseline strategic significance category	Baseline strategic significance score	Baseline habitat units	Required Action to Meet Trading Rules	Proposed Broad Habitat	Proposed Habitat
2	Grassland - Other neutral grassland	0.5518	Medium	4	Poor	1	Low Strategic Significance	1	2.2072	Same broad habitat or a higher distinctiveness habitat required	Grassland	Other neutral grassland

Baseline ref	Change in distinctiveness and condition							Strategic significance			Temporal multiplier					
Baseline ref	Distinctiveness change	Condition change	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Standard time to target condition (years)	Habitat enhanced in advance (years)	Delay in starting habitat enhancement (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier
2	Medium - Medium	Poor - Moderate	0.5518	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	10	0	0	Standard time to target condition applied	10	0.700
	Total habitat area	0.55														

Baseline ref	Difficulty multipliers				Spatial risk multiplier		Comments			
Baseline ref	Difficulty of enhancement category	Applied difficulty multiplier	Difficulty	Difficulty multiplier applied	Spatial risk category	Habitat units delivered	User comments	Planning authority comments	Habitat reference	Off-site reference
2	Low	Standard difficulty applied	Low	1	Compensation inside LPA boundary or NCA of impact site	3.75				X
						3.75				

Project Name: Land off Scamp's Hill, Lindfield Map Reference:

B-1 On-Site Hedge Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu

Hedgerow summary	
Total Net Unit Change	0.83
Total Net % Change	19.32%
Trading Rules Satisfied	Yes ✓

	Existing hedgerow habitats			Distinctiveness		Condition		Strategic significance				Ecological baseline							Comments		
Ref	Hedge number	Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Required Action to Meet Trading Rules	Total hedgerow units	Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	User comments	Planning authority comments	Habitat reference number
1	TL1	Line of trees	0.09	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.18	0.09	0	0.18	0.00	0.00	0.00			
2	TL3	Line of trees	0.064	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.26	0.064	0	0.26	0.00	0.00	0.00			
3	H1	Native hedgerow with trees	0.076	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.61	0.076	0	0.61	0.00	0.00	0.00			
4	H2	Native hedgerow	0.119	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.48	0.119	0	0.48	0.00	0.00	0.00			
5	H3	Native hedgerow	0.061	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.24	0.061	0	0.24	0.00	0.00	0.00			
6	H2	Native hedgerow	0.019	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.08	0	0	0.00	0.00	0.02	0.08			
7	H2	Native hedgerow	0.098	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.39	0.098	0	0.39	0.00	0.00	0.00			
8	H1	Native hedgerow with trees	0.012	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.10	0	0	0.00	0.00	0.01	0.10			
9	H1	Native hedgerow with trees	0.123	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.98	0.123	0	0.98	0.00	0.00	0.00			
10	H4	Native hedgerow with trees	0.123	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.98	0.123	0	0.98	0.00	0.00	0.00			
11																					
12																					
13																					
14																					
15																					
			0.79									4.30	0.75	0.00	4.12	0.00	0.03	0.17			

Project Name: Land off Scamp's Hill, Lindfield	Map Reference:
B-2 On-Site Hedge Creation	

Condense / Show Columns | Condense / Show Rows

Main Menu

Hedgerow summary	
Total Net Unit Change	0.83
Total Net % Change	18.33%
Trading Rules Satisfied	Yes ✓

	Proposed habitats			Distinctiveness		Condition		Strategic significance			Temporal multiplier					Difficulty risk multipliers				Hedge units delivered	Comments		
Ref	New hedge number	Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Standard Time to target condition (years)	Habitat created in advance (years)	Delay in starting habitat creation (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied		User comments	Planning authority comments	Habitat reference number
1		Species-rich native hedgerow	0.024	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	0.16			
2		Species-rich native hedgerow	0.125	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	0.84			
3																								
4																								
5																								
6																								
7																								
			0.15																		1.00			

roject Name: Land off Scamp's Hill, Lindfield Map Reference:

E-1 Off-Site Hedge Baseline

Condense / Show Columns | Condense / Show Rows

Main Menu

Hedgerow summary	
Total Net Unit Change	0.83
Total Net % Change	16.22%
Trading Rules Satisfied	Yes ✓

	Existing hedgerow habitats			Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Spatial risk multiplier	Ecological baseline							Comments			
Ref	Hedge number	Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		Spatial risk category	Total hedgerow units	Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	User comments	Planning authority comments	Habitat reference	Off-site reference
1	TL3	Line of trees	0.199	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	Compensation inside LPA boundary or NCA of impact site	0.40	0.199	0	0.398	0	0.00	0.00				X
2	H4	Native hedgerow with trees	0.021	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	Compensation inside LPA boundary or NCA of impact site	0.17	0.021	0	0.168	0	0.00	0.00				X
3																							
4																							
5																							
6																							
7																							
			0.22										0.57	0.22	0.00	0.57	0.00	0.00	0.00				

Project Name: Land off Scamp's Hill, Lindfield Map Reference: X

F-1 Off-Site WaterC' Baseline

Condense / Show Columns | Condense / Show Rows

Main Menu

Watercourse summary	
Total Net Unit Change	0.09
Total Net % Change	0.90%
Trading Rules Satisfied	Yes ✓

Existing watercourse type			Distinctiveness		Condition		Strategic significance			Watercourse encroachment		Riparian encroachment		Required Action to Meet Trading Rules	Spatial risk multiplier	Ecological baseline						Bespoke compensation agreed for losses of YHDH	Comments			
Ref	Watercourse type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Extent of encroachment	Multiplier	Extent of encroachment for both banks	Multiplier		Spatial risk category	Total watercourse units	Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost		User comments	Planning authority comments	Habitat reference	Off-site reference
1	Other rivers and streams	0.2	High	6	Poor	1	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	No Encroachment	1	No Encroachment/ No Encroachment	1	Same habitat required ++	Within waterbody catchment	1.32	0.2	0	1.32	0.00	0.00	0.00					X
2																											
3																											
4																											
5																											
6																											
		0.20														1.32	0.20	0.09	1.32	0.00	0.00	0.00					

Gladman Developments Ltd.

Land off Scamps Hill, Lindfield

Appendix G - River Condition Assessment Report

January 2024

FPCR Environment and Design Ltd
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Rev	Issue Status	Prepared / Date	Checked / Date	Approved/Date
-	Draft	SG / 26.01.24	Oli G / 20.12.23	
			AU 26/01/24	

1.0 INTRODUCTION

1.1 This technical report has been produced as an Appendix to the Biodiversity Net Gain Report (FPCR, January 2024) for the site at Land off Scamps Hill, Lindfield.

2.0 METHODOLOGY

2.1 The River Condition Assessment (RCA) was completed by Sylvain Gilbert, Assistant Ecologist, experienced and accredited in conducting Modular River Physical Survey (MoRPh[1]).

2.2 A single offsite watercourse was surveyed which is known as the Scrase stream. It is a tributary of the River Ouse, it rises at Cuckfield, flows along Lindfield to the south and east, through Scrase Valley Nature Reserve and then flows into the River Ouse near East Mascalls (coordinates: 51.003429, -0.042988). It is mostly a rural catchment consisting of a mixture of agricultural and horticultural land. The river ran along the northern ownership boundary, approximately 30m from the Site boundary.

2.3 The field survey was undertaken on 25th October 2023, during low/normal flow conditions with weather conditions being cloudy with sunny intervals throughout the survey, with no rain and light breeze wind.

2.4 The Scrase stream measured approx. 2m wide and a single sub-reach was surveyed, titled SR1 which comprised five 10m module (MoRPh5) in accordance with MoRPh survey methodology. The locations of the five modules are shown in *Figure 1*.

2.5 The assessment was used to inform a Natural England Biodiversity Metric (statutory v4.1) calculation, with the survey data used to generate the watercourse condition scores, that run along Habitats and Linear features.

Limitations and Assumptions

2.6 The MorPh5 surveys require modules to be surveyed contiguously and therefore only captures a proportion of the works extent within the red line boundary. The survey area was chosen as it captures a proportionate representation of the different options being considered and typical habitats currently present.

2.7 During the survey, Himalayan balsam *(Impatiens glandulifera)* was observed along both banks. The left bank appears to be more affected, with a sparse presence on the face and top of the bank. This suggests that this Non-native Invasive Species (NNIS) is present both upstream and downstream of the site. Construction works around this species should be carried out methodically to avoid an offence which relates to the spread of this species to surrounding areas.

[1] https://cartographer.io/

3.0 RESULTS

3.1 The Scrase stream is a straight-sinuous stream with the average bed material being silt and is therefore of river type K. It has a sinuosity index of 1.31, indicating it is almost entirely straight, with few meanders.

3.2 *Table 1* below provides the conditions class / scores for the sub-reach. The statutory Biodiversity Net Gain (BNG) metric (v4.1) used for this scheme requires a river to be marked down based on the river shape index.

Table 1. Final Condition class / scores Pre-Project and Scenario Post Project- River Beult

River Beult	Preliminary Condition Score	Condition Class / Score (prior to overdeepness assessment)	River Shape Index	Condition Class / Score following River Shape Index Review[2]
SR1 Pre-project	-0.073	Fairly Poor / 2	0.89	**Poor / 1**
SR1 Scenario Post Project	-0.251	Fairly Poor / 2	0.89	**Poor / 1**

3.3 The Scrase stream has been recorded in the statutory BNG metric as 'other river and stream' (type K - Straight/sinuous). The 50m length surveyed has been scored as being in poor condition.

3.4 The Preliminary Condition Score is equal to the average of all negative river condition indicator scores + the average of all positive river condition indicator scores. The result of -0.073 shows a negative overall score and indicates a Fairly poor condition of the river.

3.5 The river shape index is at a level where the watercourse is considered likely to be over deep and disconnected from its floodplain, which reduces the Final Condition Score by one class, from **Fairly Poor to Poor condition**.

3.6 The proposals include the creation of a conveyance swale from the SUDS basin proposed, routing down along the northwest Site and ownership boundaries, meeting the stream with an outfall. The design of the swale and the outfall pipe will be further detailed at reserved matters, including calculation of the total depths and discharge level required, as well as the length and height of the bank reinforcement required.

3.7 A few metres of the right bank-side will be altered to facilitate the installation of the headwall, which will include sensitive vegetation clearance that will be reinstated following completion of the works. The rest of the area adjacent to the river will be left for wildlife/habitat enhancement which could include restricting public access.

3.8 The part of the stream flowing through the site is linear and compressed between two steep/vertical banks, with the right bank composed mainly of scrub and semi-improved grassland, and the left bank comprising a large amount of urban development and a reinforced bank.

[2] Modular River Survey (2023) Considering Connectivity in River Condition Assessments [Online]. Available from: https://modularriversurvey.org/river-shape [Accessed 30.05.2023]

3.9 *Table 2* below summarises the positive and negative scores which determine the condition score for the sub-reach of the Scrase stream.

Table 2. Positive and Negative Scores Pre-Project / Scenario – Scrase stream

Location	Feature	Code	Scores (Pre-Project)	Scores (Scenario / Post-Project)
Bank top	Vegetation structure	B1	1	1
	Tree feature richness	B2	0	0
	Water-related features	B3	2	2
	NNIPS cover	B4	-2	-2
	Managed ground cover	B5	-4	-4
Bank face	Riparian vegetation structure	C1	1	1
	Tree feature richness	C2	0	0
	Natural bank profile extent	C3	2	2
	Natural bank profile richness	C4	2	3
	Natural bank material richness	C5	1	1
	Bare sediment extent	C6	3	3
	Artificial bank profile extent	C7	0	-1
	Reinforcement extent	C8	-3	-4
	Reinforcement material severity	C9	-2	-3
	NNIPS cover	C10	-3	-3
Channel margin	Aquatic vegetation extent	D1	1	1
	Aquatic morphotype richness	D2	0	0
	Physical feature extent	D3	2	2
	Physical feature richness	D4	1	1
	Artificial features	D5	-1	-1
Channel bed	Aquatic morphotype richness	E1	0	0
	Tree features richness	E2	1	1
	Hydraulic features richness	E3	1	1
	Natural features extent	E4	2	2
	Natural features richness	E5	1	1
	Material richness	E6	1	1
	Siltation	E7	0	0
	Reinforcement extent	E8	0	0
	Reinforcement severity	E9	0	0
	Artificial features severity	E10	0	0
	NNIPS extent	E11	0	0
	Filamentous algae extent	E12	-1	-1
Positive Index Average			**1.16**	**1.21**
Negative Index Average			**-1.23**	**-1.46**
Preliminary Condition Score			**-0.073**	**-0.251**
Condition Score (Adjusted for river shape)			**Poor**	**Poor**
0 to +4 for positive indicators (green) or 0 to - 4 for negative indicators (red)				

3.10 Generally, the watercourse length supports average riparian vegetation structure (Code: C1), natural bank profile extent and richness (C3, C4), some bare sediments on the right bank face (C6), and channel bed features and material richness (E2 to E6). Low-scoring areas comprise the managed ground cover (B5), the presence of NNIPS on both faces and tops of both banks (B4, C10), reinforcement extent on the left bank face (C7 to C10), some artificial features on the channel margin (D5), and the presence of filamentous algae (E12).

3.11 The stretch of river studied has a population of Himalayan balsam, an invasive non-native species, on the faces and tops of both banks.

3.12 The development simulation, referred to here as the post-project scenario, shows that the works will have a small negative impact on module 3, reducing the already negative scores for bank reinforcement from -3 to -4.

4.0 DISCUSSION AND RECOMMENDATIONS

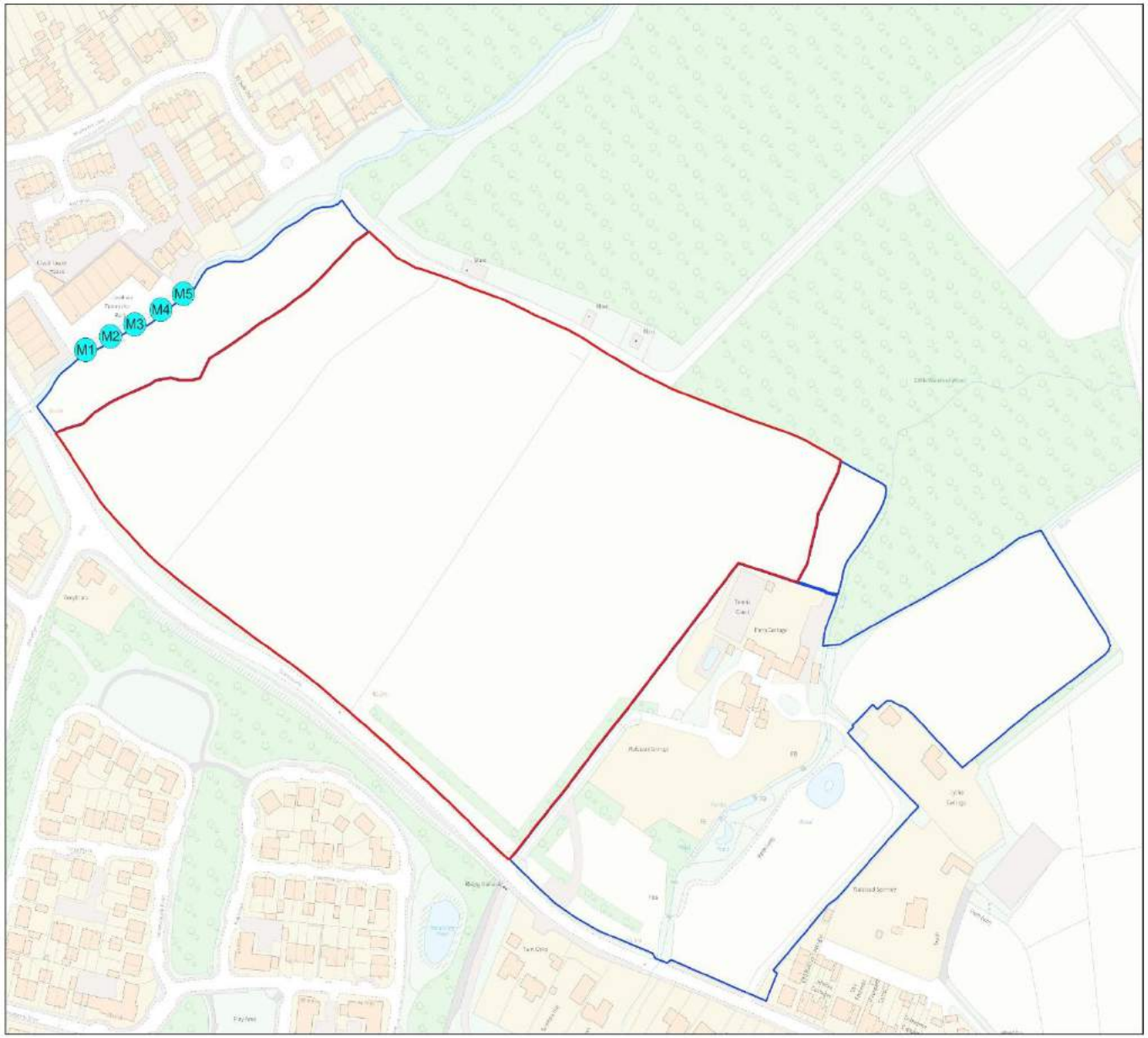
4.1 Following the assessment of the 5 Modules, the final score of the scenario (-0.251 poor) is only slightly lower than that of the pre-project score (-0.073 poor) and therefore, the proposed impact from the development is considered to be **negligible**.

4.2 The proposed development will require an outfall pipe from the SuDs basin into the Scrase stream. The location of the reinforcement and an outfall pipe has not yet been determined however, the addition of such a feature will result in a slightly negative impact on the bank face of the stream.

4.3 The creation of a swale could have a slight positive impact, by altering the richness of the natural bank profile and providing a wet grassland habitat. The structure of the vegetation at the top of the bank could also be improved by diversifying it.

4.4 The design of the outfall, wherever possible, will ensure a gentle fall of water into the river with gentle bank slopes. At the junction of the headwall and the watercourse, riprap rockwork cobbles can be implemented to slow down the water before it flows into the stream.

4.5 Sections of the stream are affected by the NNIS Himalayan balsam on the bank top, bank face and channel bed. A robust management plan will need to be implemented to control and prevent the spread of this species along the river and into the Site.



Key

- Redline Boundary
- Blueline Ownership Boundary
- Module locations

0 50 100 m

Client: Gladman Development's Ltd

Project: Land off Scamp's Hill, Lindfield

Drawing title: River Condition Assessment Plan

Scale @ A3: 1:2,000 | Drawn: SG/LW | Issue date: 26/01/2024

Drawing / figure number: **Figure 1**

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

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