



BJ Collins
PROTECTED SPECIES SURVEYORS

PRELIMINARY ECOLOGICAL APPRAISAL AND BNG COVER REPORT

PROPOSED ARTIFICIAL PITCH
BURGESS HILL TOWN FOOTBALL CLUB
MAPLE DRIVE
BURGESS HILL
WEST SUSSEX

A report to:

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Report to:	Surfacing Standards Limited
Report Title:	Preliminary Ecological and BNG Metric cover report for the Proposed Artificial Pitch at Burgess Hill Town FC

Survey Site/Job:	Burgess Hill Town FC, Maple Drive, Burgess Hill, RH15 8DL
OS Grid Reference:	TQ 3181 2030

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Surveyed by:	Barry Collins MSc MCIEEM

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RELIANCE - The report describes the conditions and ecological features on the site (and possibly its environs) at the time of survey and that this may (is likely to) change over time. Reliance upon the findings of this report should be determined in accordance with the Chartered Institute of Ecology and Environmental Management guidance on the longevity of ecological surveys, see Advice Note (April 2019) *On the Lifespan of Ecological Reports and Surveys* CIEEM.

This specifies that after a period of 18 months from the date of the last relevant site survey, a professional ecologist will need to undertake a site visit and may also need to update desk study information (effectively updating the Preliminary Ecological Appraisal) to provide confidence that the ecological situation and status has not altered.

As a result, and given the transient nature of wildlife and habitats this report cannot be used in a formal "letter of reliance" beyond the period specified above.

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SUMMARY

This report provides the results of an extended preliminary ecological appraisal and condition assessment results in support of the proposal to replace the existing grass stadium pitch with an artificial one, whilst upgrading the outdated floodlighting scheme. The report also contains Biodiversity Net Gain Calculation results (Chapter 7).

Habitats and sites - the proposal will have no physical impact upon any designated or non-designated local wildlife site. The site shares its boundaries with a designated Local Nature Reserve and area of Ancient Woodland. This is categorised as a priority habitat. The boundary between the football stadium and this designated wildlife area is currently affected by extensive light pollution from the existing outdated floodlighting scheme. A new mitigated floodlighting scheme has been proposed which significantly reduces light pollution and spread onto the boundary habitats. This will have a significant positive impact, but the reduction in lighting from 3 nights a week will be slightly offset by lighting on every night of the week post-installation, although up to the same lighting curfew of 22:00 hours.

Bat roosting, commuting and foraging - there was no potential bat roosting habitat identified on the site, but potential bat roost features surround the stadium in the woodland and the residential properties. There was no trend identified within the extensive static monitoring period, during the maternity season, to suggest the location of a maternity colony close to the stadium. The potential bat roost features observed were all adversely affected by light spillage from the existing floodlighting scheme and this adverse impact will be removed as part of the new floodlighting proposal.

Hazel dormouse - the boundaries of the site contained some plant species suitable for Hazel dormouse but much of the ground cover was absent due to overshadowing. As the surrounding ancient woodland supports this species, along with a national monitoring program site, a habitat assessment for this species is provided under separate cover by a suitably qualified ecologist.

Amphibians and reptiles -There will be no impact upon amphibians and reptiles from the proposal, so long as the requirement to avoid storage on the stadium boundary is implemented. There are records of great crested newt within the local countryside with the nearest being over 500 m from the site. There was no obvious breeding habitat identified by the desktop survey or the site survey within the zone of potential impact.

[REDACTED] and Hedgehog - [REDACTED] There are records of Hedgehog from the local area and the potential that they could encounter excavations during the construction phase. Therefore precautionary actions are included within this document.

Scarce or Invasive Plant Species - No protected or notable plant species were recorded during the survey. No schedule 9 invasive plant species were noted during the survey.

Breeding birds - there is no breeding bird habitat affected by the proposed stadium modification. If there is a requirement to remove any hedgerow or tall vegetation on the boundaries then this must first be informed by recommendations within this document.

Further survey

Bats - further phase II bat surveys have been completed and are covered under a separate report in support of this proposal.

Hazel dormouse - an assessment for the potential for Hazel dormouse is included in a stand-alone document. This also takes into account the floodlight mitigation proposed.

Breeding birds - If it becomes necessary to undertake any vegetation clearance as part of this development and within the bird breeding season (March to mid-September inclusive) then a nesting bird survey will be required in advance. Any such work should avoid the breeding bird season.

Biodiversity Net Gain

There is a Statutory Biodiversity Net Gain Metric attached to this extended Preliminary Ecological Appraisal and Habitat Condition Assessment report. The installation of the artificial pitch on the area of football stadium (modified grassland) results in a loss of 1.65 habitat units from the site. As it is not possible to achieve the net gain target on site, the **owner and agent will be sourcing 1.65 Habitat units from one of the habitat banks.**

1. INTRODUCTION

This report has been prepared by B J Collins Protected Species Surveyors Limited for Surfacing Standards Limited on behalf of Burgess Hill Town Football Club. It provides the results of a preliminary ecological appraisal of a football stadium, in order to inform the installation of an artificial turf sports pitch, with upgraded floodlighting.

The site is located at Burgess Hill Town FC, off Maple Drive, Burgess Hill, West Sussex, RH15 8DL – Central Ordnance Grid Reference TQ 3181 2030.

The preliminary ecological appraisal, which involved a systematic walkover of the site, was undertaken in June of 2024. The objective was to assess the habitats on site with regards to protected habitats and species, in order to inform the potential ecological impact of the proposal.

This report also contains the results of Biodiversity Net Gain condition assessments in support of the associated Statutory Biodiversity Net Gain Metric, prepared for submission alongside this preliminary ecological appraisal and in support of this planning application.

The development plan involves the installation of a new artificial football pitch over the existing natural¹ grass pitch, with the existing outdated floodlighting scheme replaced with a modern mitigated design. See figure 1 below.

The legislation with regard to relevant protected species can be found appended to this report in Appendix 1.

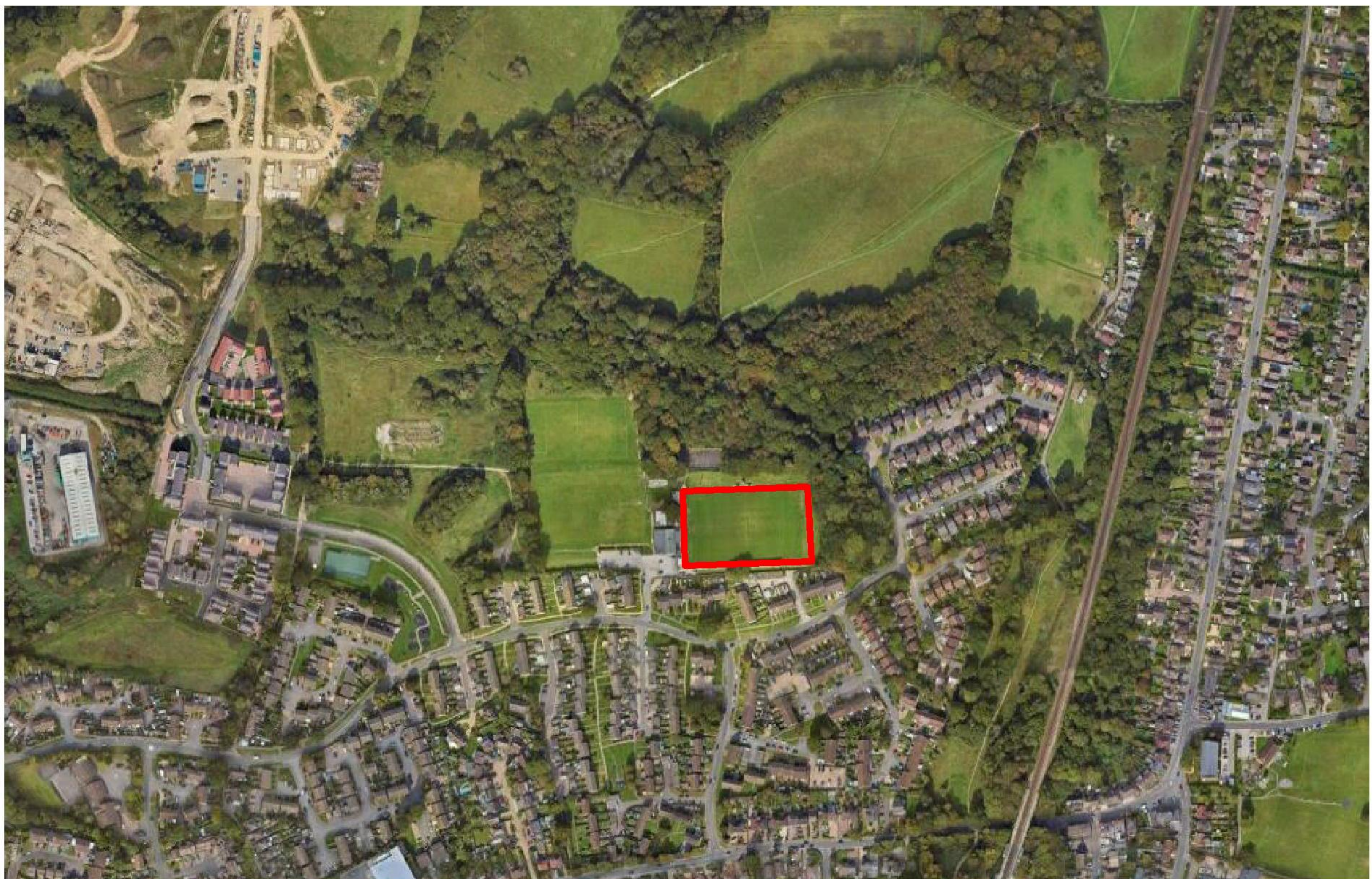


Figure 1: The location of Burgess Hill Town Football Club football stadium and the location for the proposed artificial pitch (red), courtesy of Google Earth.

¹ there is only one habitat category for 'modified grassland' and despite the extent of intensive management and use of this area of amenity grassland, including herbicide applications and fertiliser treatments along with intensive mowing and extensive erosion from foot traffic, there is no provision within UKhab to categorise this as the "unnatural habitat" that it represents to biodiversity.

2. SITE DESCRIPTION

2.1 The Habitats – on site

The area for the proposed artificial pitch sits directly over an existing pitch, comprising of an intensively managed and impacted area of amenity grassland (modified grassland).

The pitch is bounded by a variety of metal fencing and hardstanding walkways with a small stand.



Photograph 1: showing the existing football pitch, with the metal fence boundary and concrete surrounds with areas for small stands.

The habitats immediately off-site (surrounding but within the stadium boundary fence) were also reviewed and assessed in order to allow for consideration of the delivery of biodiversity net gain on site, and the current and potential impacts upon protected species associated with the boundaries of the football club grounds .

The surrounding area comprises of strips of infrequently mown modified grassland to the north, east and south of the pitch, with further areas of hardstanding and buildings to the west.

2.2 The Habitats – off-site

The site boundary to the north and east comprises part of the Bedelands Local Wildlife Site (LWS) an area of lowland broadleaved woodland and areas of open ground, with the areas of woodland surrounding the stadium categorised as ancient woodland. The southern boundary comprises timber residential fences, backing onto the housing development to the south, and over to the west is further metal fencing, with a mature oak tree, with a public open space of modified grassland beyond.



Photograph 2: The grassland area to the north of the pitch, taken from the north-west corner, showing the strip of modified grassland backing onto the woodland of the nature reserve.



Photograph 3: The grassland to the south of the pitch, behind the stand, with the timber fencing of the southern boundary and the housing developments behind.

3. SURVEY METHODOLOGY

3.1 Desktop Study

An ecological records search was commissioned from the Sussex Biodiversity Records Centre on the 20th of August 2024, comprising a request for records of wildlife species and designated statutory and non-statutory sites and habitats, for a 1km circumference from the centre of the proposed sports pitch. The search also included a search for bats within a 2km radius, and birds at 0.5km.

The desktop study also involved utilising the online government resource – MAGIC Map Application (<https://magic.defra.gov.uk/MagicMap.aspx>) – to undertake a search for optimal and priority habitat and previously granted protected species licences within a 2km radius.

3.2 Preliminary Ecological Appraisal

The site was subjected to a Preliminary Ecological Appraisal (as per CIEEM, 2018). This involved systematically walking over the site and classifying each parcel of land, utilising the UK Habitat Classification survey methodology (Butcher et al, 2023), on the basis of vegetation into one of approximately 47 habitat types (Level 4) alongside a list of secondary codes which give information on the environment and management (Butcher et al, 2023) of those habitats.

Notes were made on the structure and composition of habitats:

- Trees with potential to support features used by roosting bats were noted. Boundary features were assessed for their potential suitability for bat foraging and commuting.
- The suitability of habitats was assessed for nesting birds, including ground nesting birds.
- The suitability of habitats was assessed for terrestrial mammals, specifically dormouse (*Muscardinus avellanarius*), [REDACTED] and hedgehog (*Erinaceus europaeus*).
- The suitability of habitats was assessed for reptiles and amphibians, including specially protected great crested newt (*Triturus cristatus*).

A search for any invasive non-native species such as Japanese knotweed (*Fallopia japonica*) and Indian balsam (*Impatiens glandulifera*) was also carried out.

The ideal time to carry out a habitat survey is during the plant growing season (i.e. April-September) and this is also when most animals are active.

3.3 Biodiversity Net Gain Calculation

Each habitat identified on site through the Preliminary Ecological Appraisal, as above, was then subjected to a Statutory Metric condition assessment, downloaded from the Gov.uk website, which uses a series of criteria representing key physical characteristics of each habitat type to assess whether the habitats are in favourable condition.

Habitats were assessed as either poor, moderate or good condition.

The “Biodiversity Metric – QGIS Template” was downloaded from the Natural England publications webpage to accurately map the findings of the habitat survey, and to map the proposed development utilising plans provided by the client.

The Statutory Biodiversity Metric calculation tool was downloaded from the Gov.uk webpage to calculate the total habitat units for the Baseline and Proposed sites, and the Total Unit Net Change overall.

3.4 Surveyor Details

The above survey was undertaken by Mr B J Collins MSc MCIEEM (Natural England Class License: 2015-13152-CLS) and registered Low-Impact Class License Holder (RC110). An ecologist with over 20 years of experience. The survey was undertaken on the 5th of June 2024.

The QGIS mapping and subsequent BNG calculations were completed by Mr Patrick A Collins BSc (Hons), who has completed formal training for the Statutory Metric and the use of QGIS.

3.5 Limitations to Survey

The surveyor was able to access all areas of the site and there was no constraint to the survey results.

3.6 Ecological Evaluation Criteria

An ecological evaluation of the site was undertaken using a combination of evaluation criteria for habitats and species. The general framework follows that provided by the Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM 2006 and 2012).

Where relevant the evaluation was made with reference to the statutory protection afforded to species and habitats. Legal protection does not always correspond to conservation value. Some species [REDACTED] are protected for reasons of animal welfare rather than conservation. Others are of national conservation value but are not protected by law (e.g. some Red Data Book species and UK BAP species).

4. SURVEY RESULTS

4.1 Desk Study

4.1.1 Statutory and Non-statutory Sites

4.1.1.1 Statutory wildlife sites

The local records centre search identified one statutory designation within the 1km radius of the site. This was the Bedelands Farm Nature Reserve LNR, the south and west boundaries of which form the north and east boundaries of the football stadium. This is an extensive area of designated nature reserve containing wildflower meadows, ancient hedgerows and woodland and a range of scarce flora.

The search of the Magic Mapping Database for a 2km radius from the site identified a Site of Special Scientific Interest, namely the Ditchling Common (SSSI), a 66.5-hectare area located to the south-east of the site, an area totally unaffected by this proposal.

4.1.1.2 Non-statutory wildlife sites

The local records centre search identified four non-statutory designations within the 1km radius of the site, one of which is the Bedelands LNR site as detailed in the section above but is also categorised as a Local Wildlife Site. There are two other Local Wildlife Sites, namely the Burges Hill Railway Lands (LWS) and Keymer Tile Works (LWS), along with a Local Geological Site located at the Keymer Tile Works within the search area but unaffected by this proposal.

4.1.2 Optimal and Priority Habitat

The search identified 60 areas of Ancient Woodland, known to be an optimal habitat type, within a 2km radius of the site. Some of these woodland areas form part of the wider area of the Bedelands Farm and are adjacent to the stadium boundaries.

Areas of semi-natural and replanted Ancient Woodland occurring largely in a northerly direction from the football stadium, the total area of this habitat type is 106.72-hectares.

Additionally, the search identified 76 areas of Deciduous Woodland, a Priority Habitat, within a 2km radius, with a combined area of 215.15-hectares. There were two records of Traditional Orchards and two areas of Wood pasture and Parkland, both Priority Habitats.

4.1.3 Protected Species Licences

The search of the MAGIC mapping software identified 27 European Protected Species Licences from 14 sites, including for Bats, Amphibians and Other Mammals. This included the following:

Table 1 - European protected species derogation licences from 1 km of the site

Licence number	Species	Licence Start Date	Impact of the Licence
2014-689-EPS-MIT-4	Great Crested Newt	13/01/2021	Breeding Site 2014-1016
2014-572-EPS-MIT-5	Great Crested Newt	14/01/2021	Breeding Site 2014
2015-13175-EPS-MIT	Great Crested Newt	13/04/2016	Breeding Site 2014
EPSM2010-2596	Great Crested Newt	20/08/2013	Breeding Site 2013
2017-28201-EPS-MIT-1	Great Crested Newt	09/05/2017	Resting Place 2017
2017-28542-EPS-MIT-1	Great Crested Newt	19/10/2017	Resting Place 2017
2016-26440-EPS-BDX	Common Pipistrelle	12/10/2016	Breeding Site
2020-50065-EPS-MIT	Brown Long-eared Soprano Pipistrelle	29/10/2020	Resting Place

2014-2981-EPS-MIT	Soprano Pipistrelle	19/09/2014	Breeding Site
2017-28572-EPS-MIT	Hazel or common dormouse	15/05/2017	Resting Place
2020-44380-EPS-MIT-2	Hazel or common dormouse	26/10/2020	Breeding Site
2020-45515-EPS-MIT-1	Hazel or common dormouse	24/03/2020	Breeding Site
2020-48403-EPS-MIT	Hazel or common dormouse	24/09/2020	Breeding Site
2021-50974-EPS-MIT	Hazel or common dormouse	26/02/2021	Breeding Site

4.1.4 Records of protected species

The following species records are included within the desktop study:

- There are 99 records for bat species in the 2km search area, these are discussed in greater detail in the associated phase II bat survey report.
- There are 413 records of notable bird species within 0.5km of the site.
- There are 135 records of amphibians within a 1km radius, including 26 records of the specially protected Great Crested Newt. The closest record of some 570 m from the site. The distribution of the species with regards to the site is provided within the relevant section
- There are 50 records of reptiles within a 1km radius, including two records of Adder (*Vipera berus*).
- There are 40 records of Hazel dormouse. These are all centred upon the local nature reserve to the north, and in particular focused on the national dormouse monitoring program site of 'Big Wood NDMP Site' to the north of the extensive area of woodland.
- There are then 38 records of Hedgehog within the 1 km search radius, the records are scattered throughout the town but is considered highly likely that they are present on the boundary of the football stadium and may occasionally venture into the area to forage or commute.
- There are records of invasive floral species, of particular relevance is Japanese knotweed and Himalayan balsam. This is recorded within the vicinity of Burgess Hill but was not recorded on the site.

Potential impact upon protected species

The potential impact from the proposal is limited in scale and due to the location of records, habitat available and impact from the proposed artificial pitch the principal impact is likely to be upon bats. This is dealt with under a separate stand-alone phase II survey report.

The lighting impact for bats is also one which could impact upon Hazel dormouse and as a habitat assessment has been undertaken to rule out the potential impact on this protected species, and included under a separate report cover. The recorded National Dormouse Monitoring Program site is located a significant distance from the pitch within the adjacent LNR.

Other impacts are likely to occur on hedgehog and other persecuted mammal species and precautionary actions are recommended.

4.2 Preliminary Ecological Appraisal

4.2.1 Habitat Types

The following habitat types were recorded on the survey area, which is the football stadium and the wider surrounds within the boundary fence. With regards to biodiversity net gain the measured area comprises the redline boundary included within section of this document. The UKHab Alphanumeric codes have been provided in brackets beside each entry for reference:

On-site habitats

- Modified grassland (g4 (64, 510)) - intensively managed
- Modified grassland (g4)- Boundaries of the site
- Concrete surrounds and stands, buildings etc (u1b)

The distribution and extent of the habitat types recorded on the site are described below and the location of any relevant target notes are shown at the end of this section.

4.2.2 On-site Habitat descriptions and Condition Assessment

4.2.2.1 Modified grassland (g4 (128))- intensively managed.

This is the principal habitat on-site with regard to BNG and the only one that will be adversely impacted from the installation of the new pitch.

This is an area of intensively managed and intensively used amenity grassland including for a domination of Perennial rye-grass (*Lolium perenne*) and red fescue (*Festuca rubra*), Creeping bent (*Agrostis stolonifera*) and to a lesser degree Annual meadow-grass (*Poa annua*). There were no herb species present due to the intensive management of the stadium pitch.



Photograph 5 - showing the sward associated with the football stadium

4.2.2.2 BNG Condition Assessment of Modified Grassland (g4 (64, 510))

Statutory condition assessment sheet 5A was utilised for this assessment of the grassland within the stadium.

The grassland sward of the stadium pitch failed assessment criteria A, as it lacks any species diversity. It fails criterion B in that the sward height is not variable, it passes criterion C as there are obviously no areas of scrub, it fails criterion D in that no more than 5% of the grassland is damaged throughout the season, although at the time of the study extensive areas of re-seeding were evident and irrigation was ongoing, it is likely to fail this criterion at the end of the playing season. It passes criterion E on the extent of bare ground due to this extensive management. Finally there is clearly no cover of bracken and there is an absence of invasive non-native plants.

It therefore passes 3 criteria at most and is therefore **categorised as of "poor condition"**.

4.2.2.3 Modified grassland (g4)- Boundaries of the site

There is then a strip of grassland surrounding the pitch on the north, northwest corner, east and southeast, between the boundary fence and the concrete surrounds of the stadium pitch. The west is all hard standing associated with the pavilions and stands.

The widest grassland strip is located to the north boundary of the stadium which is 20 m wide and the length of the football pitch, there is then a 9 m wide boundary to the east and a 5 m boundary to the south which covers only the south-east half of the southern boundary.

The grassland in this location comprises of Yorkshire fog (*Holcus lanatus*), perennial ryegrass, smooth stock meadow-grass (*Poa pratensis*), wall barley (*Hordeum murinum*) and annual meadow-grass (*Poa annua*). There is a wide range of herbs within the sward including for creeping buttercup (*Ranunculus repens*), creeping cinquefoil (*Potentilla reptans*), Dandelion (*Taraxacum officinale* agg.), Daisy (*Bellis perennis*), knapweed (*Centaurea nigra*), Nettle (*Urtica dioica*), Lesser yellow trefoil (*Trifolium dubium*), white clover (*Trifolium repens*), small-flowered cranesbill (*Geranium pusillum*), common mouse-ear (*Cerastium fontanum*), self-heal (*Prunella vulgaris*), ribwort plantain (*Plantago lanceolata*), greater plantain (*Plantago major*), Speedwell species (*Veronica* sp.), Bird's-foot trefoil (*Lotus corniculatus*), common cat's-ear (*Hypochaeris radicata*), oxeye daisy (*Leucanthemum vulgare*) and barren strawberry (*Potentilla sterilis*).



Photograph 6: typical view of the off-site grassland between the stadium and the boundary fence

4.2.2.4 BNG Condition Assessment of Modified Grassland (g4 (64, 510))

Statutory condition assessment sheet 5A was utilised for this assessment of the grassland between the stadium boundary path and the boundary fence. It was categorised as modified grassland based upon the nature of the sward and its management.

The grassland sward marginally failed assessment criteria A, whilst there was some floral diversity, the assessment made of 10x1 m circumference sample quadrats recorded between 3 and 7 species. It fails criterion B in that the sward height is not variable, it passed all the other criteria.

It resulted in 5 criteria being achieved and therefore therefore is **categorised as of "moderate condition"**.

4.2.3 Off-site Habitat descriptions and Condition Assessment

4.2.3.1 Woodland to the North and East

The woodland to the north comprises both mature and immature tree species with the largest extent of canopy closure.

Species present include for Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Hazel (*Corylus avellana*), Elder (*Sambuca nigra*), Silver birch (*Betula pendula*), goat willow (*Salix caprea*), Holly (*Ilex aquifolium*), Beech (*Fagus sylvatica*) and Blackthorn (*Prunus spinosa*) the latter growing as a tree species. Ground flora was limited due to the extent of canopy closure but in areas comprised of Bramble (*Rubus fruticosus* agg.), Smooth sow thistle (*Sonchus asper*) and broadleaved dock (*Rumex acetosella*).

The eastern boundary comprises of a line of mature *Leylandii* hedging with mature Oaks to the rear. The ground below the conifer canopy was largely bare but with areas of nettle bed, smooth sow thistle, herb robert (*Geranium robertianum*) and rose (*Rosa canina*).

The south-east boundary comprised of grassland and garden fencing. The west boundary comprised of concrete standing areas, buildings and stands



Photograph 7 - showing the form of east and north boundaries beyond the boundary fence.

4.2.4 Faunal Species

4.2.4.1 Amphibians and Reptiles

There are records of common amphibians from the local area and records of the specially protected great crested newt (*Triturus cristatus*).

There was no potential breeding habitat (i.e. standing open water) for amphibians on site and no ponds evident from the search of the MAGIC website within 500 m of the site. The closest record is from a former quarry site some 570 m to the west.

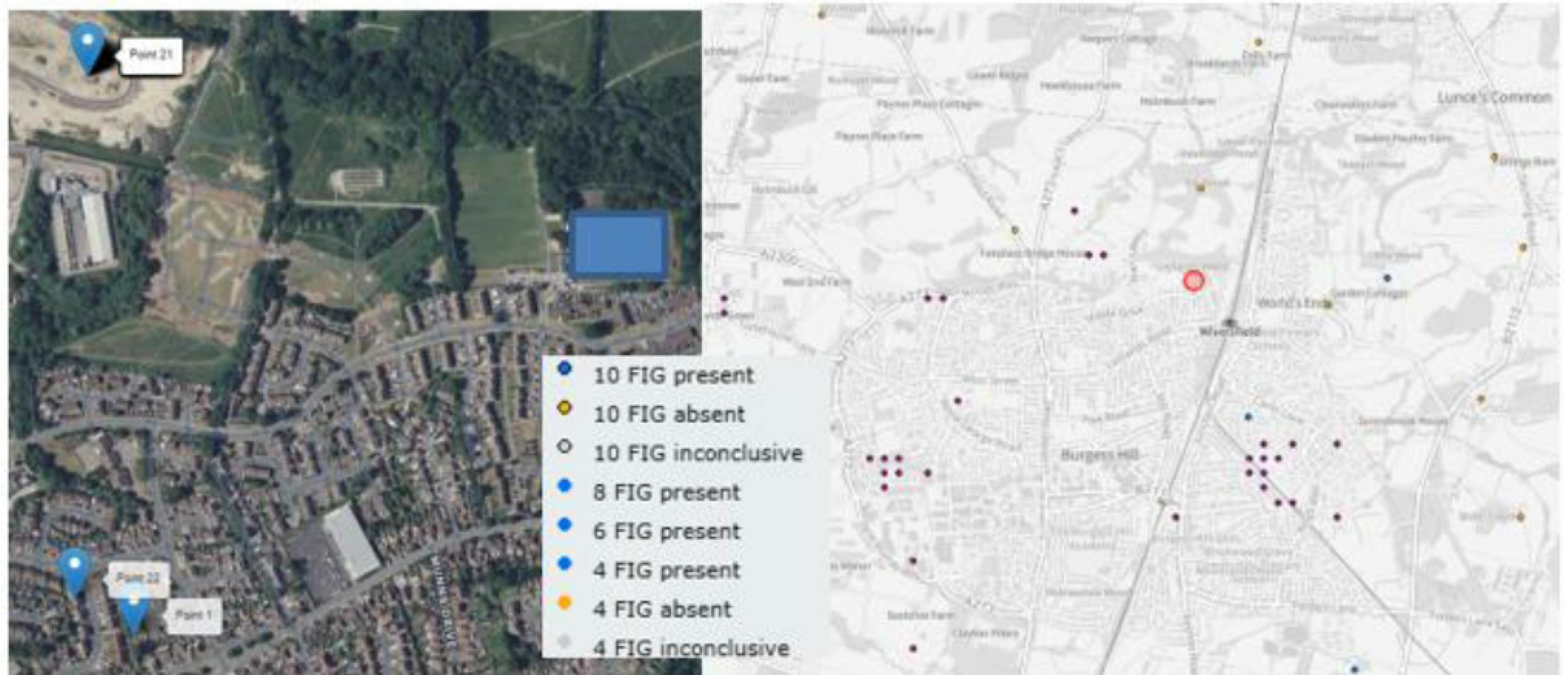


Figure 2 - the proximity of records of great crested newt to the football stadium

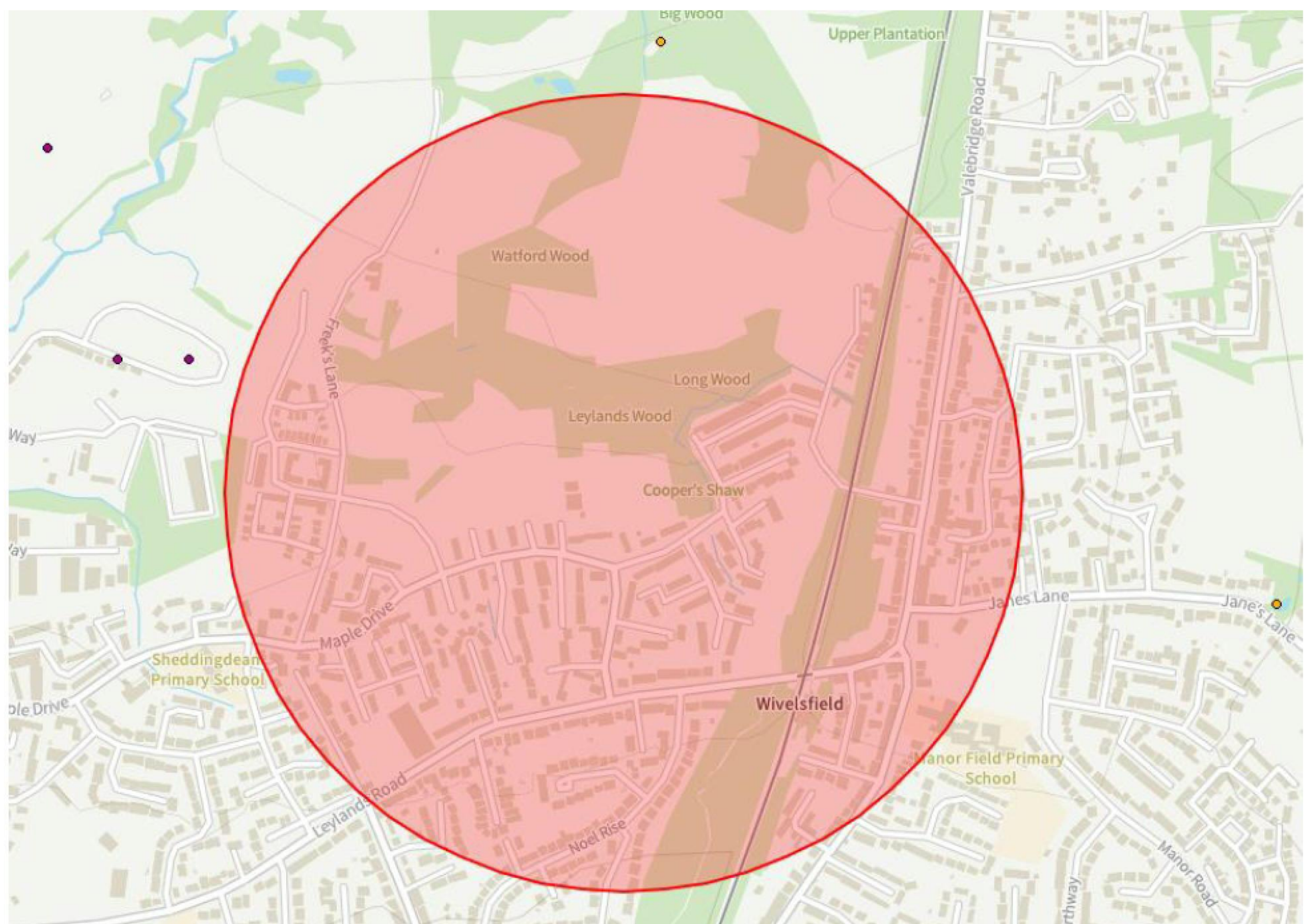


Figure 3 - showing an absence of water bodies on the MAGIC website within 500 m of the stadium

There are four other common amphibians from the local area including for common toad (*Bufo bufo*), common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*) and records of the less common palmate newt (*Lissotriton helveticus*).

There are also 4 species of reptile located from the search area. None of these are associated with the site. These include Slow-worm (*Anguis fragilis*) with a distribution of the species to habitats further south and east of the sportsground. The other species with no real distribution but historic records within the search area include Grass snake (*Natrix Helvetica*), common lizard (*Zootoca vivipara*) and two historic records of adder (*Vipera berus*).

None of the above species were associated with the site or habitats immediately adjacent.

4.2.4.2 Bats – Records

There are 99 records of bats from the desk top search area. These comprise the following:

- 22 records of Myotis bats with 16 records of Natterer's bat, 1 record of Daubenton's bat, 1 record of Brandt's bat, 1 record of Whiskered bat and 3 records of Whiskered/Brandt's.
- 16 records of Plecotus bats, the bulk of those being attributed to the Brown long-eared bat.
- 41 records of Pipistrellus bat with 37 of those for common pipistrelle for soprano pipistrelle.
- 2 records of Serotine bat and 1 record a Noctule bat
- 17 records attributed to species or pipistrelle species only

There are at least 5 bat species which are categorised as being sensitive to artificial lighting in their commuting and foraging phases in this dataset.

There were no bat roosts of light-sensitive species within close proximity to the football ground.

The distribution of bat records and the relevance to the proposal is described in greater detail in the subsequent phase II bat survey report for the site.

4.2.4.3 Hazel dormouse

This species has a similar response to artificial lighting as bats and is therefore relevant with regards to the habitat surrounding and the proposed floodlighting scheme. There are 40 records of Hazel dormouse (*Muscardinus avellanarius*) from the 1 km search surrounding the football stadium. These are all centred upon the local nature reserve to the north, but in particular focused on the national dormouse monitoring program site of 'Big Wood NDMP Site' and the central grid reference identified in the figure below.

It is likely that the mitigation specified with regards to bat species will have similar beneficial impacts upon dormouse. As is evident from this figure the sportsground represents a limited area of linear habitat compared to the woodland edge surrounding and associated with the wider nature reserve. Nevertheless, it is recommended that an assessment of the dormouse habitat is undertaken by a suitably qualified specialist ecologist, the survey is complete and a stand-alone report is in production.

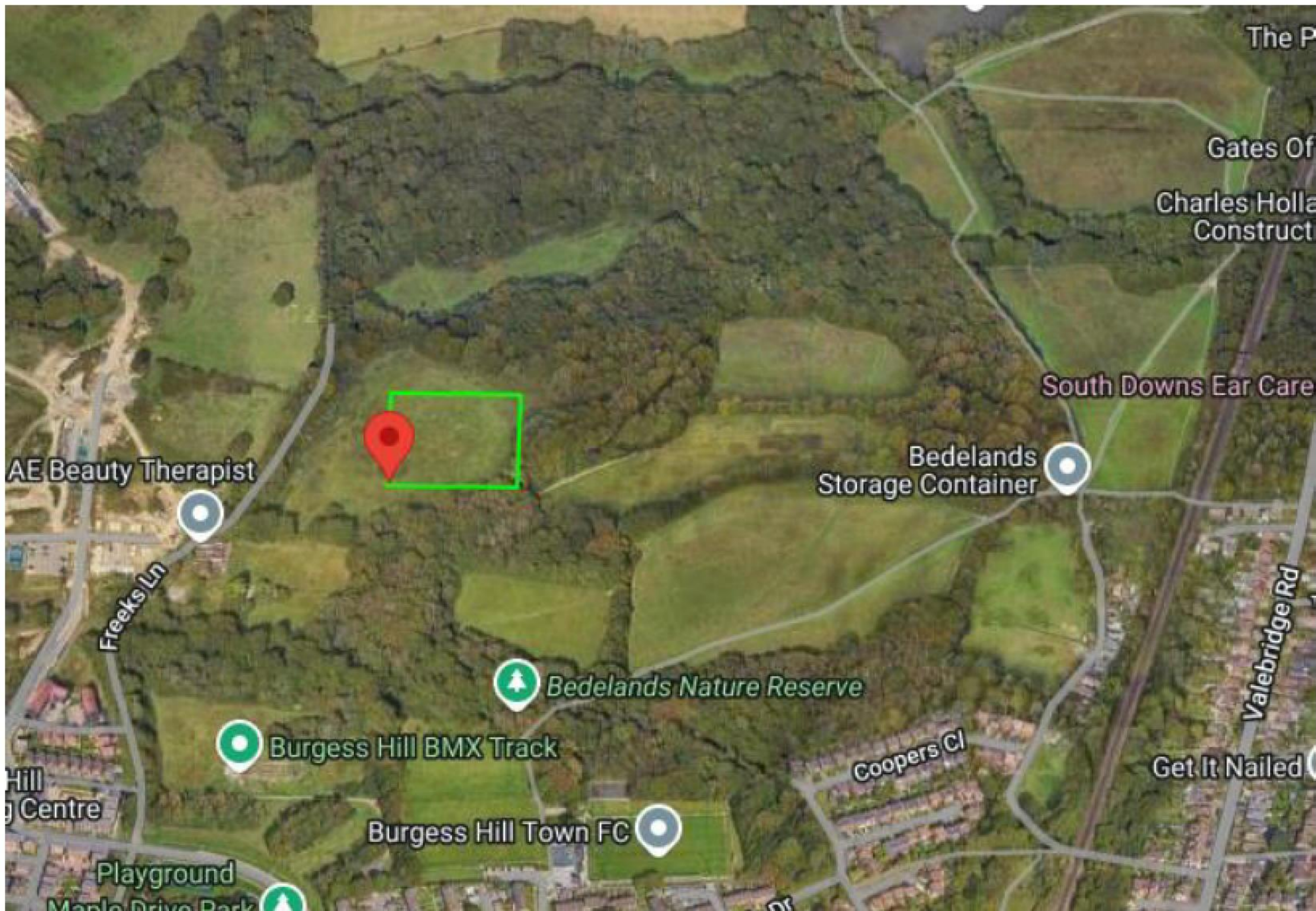


Figure 4 - showing the distribution of Hazel dormouse records from the local area.

4.2.4.4 [REDACTED] Hedgehog and Fox

[REDACTED]

The desktop study contained records of Hedgehog from the adjacent town and the big hedgehog map (<https://bighedgehogmap.org/>) has multiple record of this species scattered across the town. It is considered likely that this is a constituent of the surrounding landscape potentially seeking refuge in the woodland edge or adjacent gardens and possibly foraging across the stadium boundaries throughout the night.

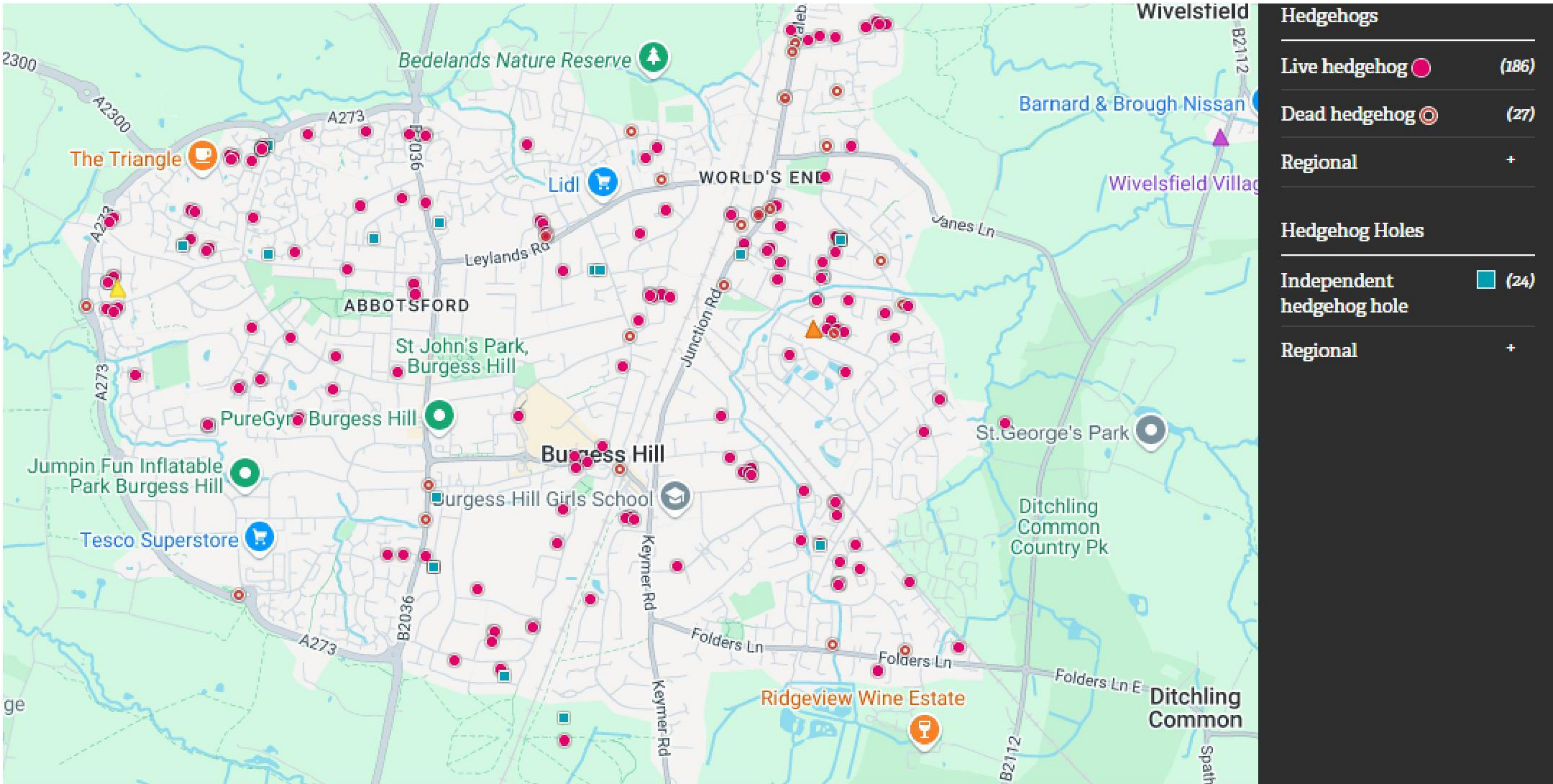


Figure 5 - showing the distribution of hedgehog records from the “big hedgehog map”

4.2.4.5 Nesting Birds

Habitat with good potential to provide for nesting birds is provided by the woodland edge surrounding the stadium. The stadium itself supports no breeding bird potential.

4.2.4.6 Floral Species

No protected or notable plant species were noted during the survey. No invasive plant species were noted during the survey. No further mitigation or management action is recommended within this document.

4.3 Habitat Map – Aerial Image



Figure 6: Habitat map of the stadium and playing fields

5. ECOLOGICAL EVALUATION

5.1 Designated Nature Conservation Sites

There is one statutory designated conservation site, Bedelands LNR, that forms the northern and eastern boundary of the football stadium. This is also categorised as a local wildlife site. The existing sports turf floodlighting scheme has a significant impact upon this feature, specifically from light spillage. The proposed artificial floodlighting scheme reduces this dramatically, this is demonstrated by figure 7 below. The mitigated floodlighting scheme is such that there is insignificant spillage onto the boundaries of this protected site, in contrast to the extensive area of spillage from the current scheme.

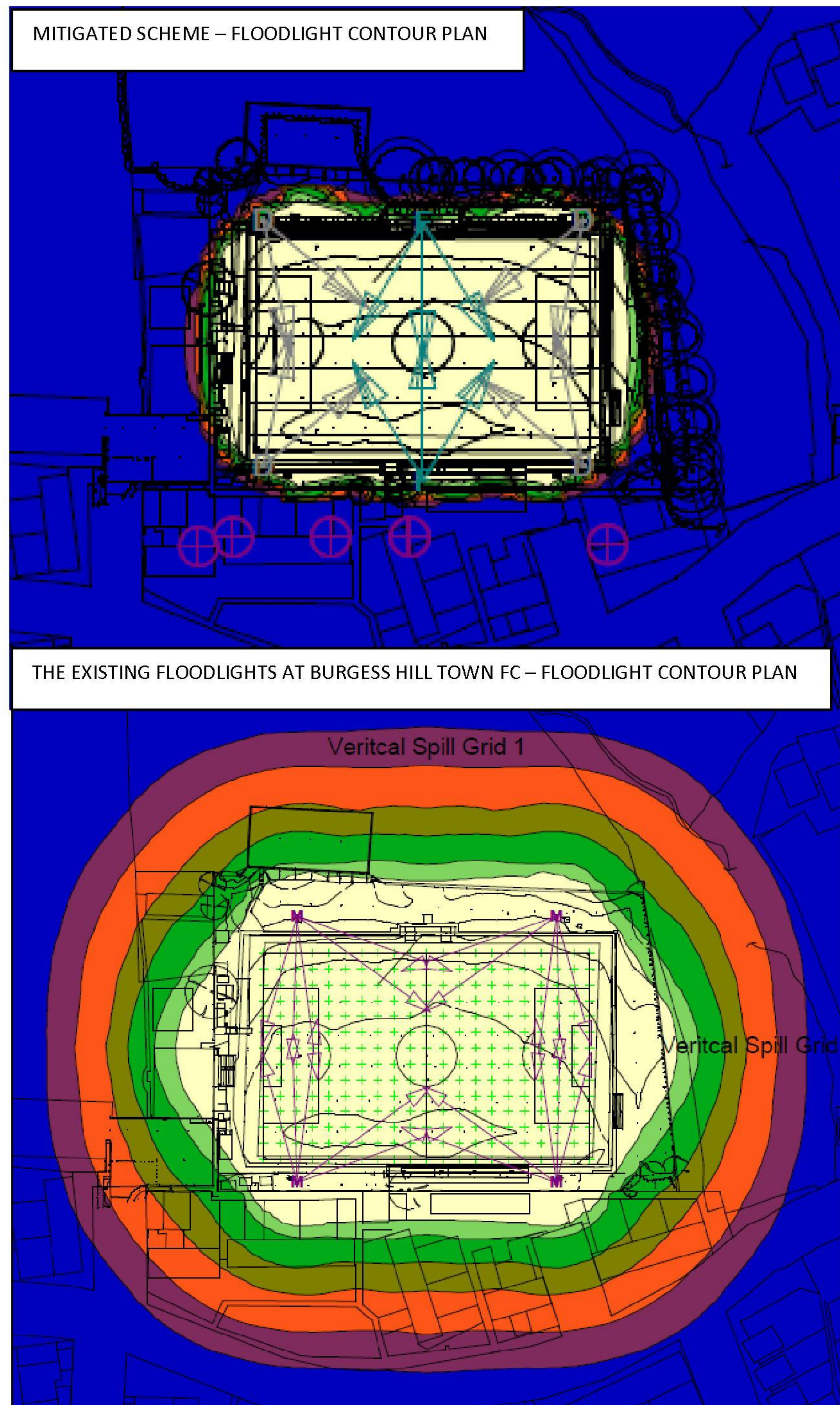


Figure 7 - identifying the extent of light spillage from the mitigated lighting scheme above and the existing 'outdated' floodlighting scheme below.

There are also three local wildlife sites within the search area. The only one potentially impacted by the proposal is the Bedelands Local Wildlife Site, and the impact upon this is described above.

The impact upon the adjacent local wildlife site will be positive in the reduction of light pollution from the existing sports turf floodlighting scheme. This significant reduction will be achieved through a modern mitigated LED floodlight design, however some of the benefit of this mitigated system will be potentially offset by the increased usage of the floodlighting on site, with the same lighting curfew but operating 7 days a week, as opposed to the three days at present.

Overall, the modern mitigated floodlighting scheme will have a positive impact upon light pollution in the local area.

5.2 Habitats

The main habitat to be affected by the development proposal is an area of managed and heavily disturbed modified grassland associated with the football stadium and there will be no significant biodiversity impact from the loss of this feature to the new proposal.

The woodland boundaries and residential development adjacent are already affected by extensive light spillage, with the existing outdated stadium floodlighting scheme. The supporting phase II bat survey report describes the effectiveness of the mitigation with regards to the new proposed mitigated floodlighting.

To conclude, the overall impact of floodlighting of the existing and proposed artificial pitch on the nocturnal biodiversity on the site, measured on site by the presence and abundance of bat species, is described within the Phase II bat survey.

There is a significant reduction in light pollution from the revised floodlighting scheme (see figure 7 above).

5.3 Protected/ Notable Species

5.3.1 Floral Species

None of the plant species recorded from the site are listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

The site supported no evidence of invasive plant species, in particular the two most commonly encountered being Japanese knotweed and Himalayan balsam.

There is no potential impact from the proposal from either notable or invasive plant species.

5.3.2 Faunal Species

5.3.2.1 Amphibians and reptiles

The desktop study has records of amphibians and reptiles from the 1 km circumference of the site. There are however no records of any species of conservation significance within 500 m of the stadium

There is no potential habitat of significance for reptiles or amphibians associated with the football stadium but there is the potential for these to use the boundaries. As a result, storage of materials and equipment during the construction phase should be away from the north and east boundaries of the football stadium.

The evaluation of risk for amphibians and reptiles is negligible, so long as materials storage is on areas of existing hardstanding and away from the north and east boundaries.

5.3.2.2 Hazel dormouse

The extensive area of ancient woodland to the north of the sportsground supports Hazel dormouse and there is a national monitoring scheme occurring in the northern area of wood. Records of the species are segregated from the site by areas of dense woodland. There is however some linear

features on the woodland edge with some marginal potential for the species and therefore this report recommends a supplementary assessment by a suitably qualified dormouse ecologist.

The evaluation of risk to Hazel dormouse requires clarification but given the extent of floodlight mitigation and light pollution reduction it is likely that the impact of the species will be positive in the immediate vicinity of the sports stadium, if potentially present.

5.3.2.3 Hedgehog

The footprint of the proposed pitch offers no habitat potential for terrestrial mammals. In contrast, the off-site habitat provides some limited refuge and foraging habitat for hedgehog in the local area. Some precautionary mitigation is therefore proposed. 


The evaluation of risk to hedgehogs is considered to be a low risk in the absence of mitigation.


5.3.2.4 Bats

There is no potential bat roost features associated with the football stadium but buildings and trees with bat roost potential occur within the immediate vicinity. The examination of extensive static monitoring over the peak breeding season did not identify any trend to suggest the presence of a bat roost close to the site, this is covered under a separate phase II bat survey report.

There is an outdated sports floodlighting scheme in existence for the football stadium with significant light spillage, and this is currently floodlighting all of the features observed. Associated with the new artificial football pitch is a modern mitigated LED floodlighting option. This will reduce light spillage from the stadium significantly, although the change of surface will result in a greater use of that floodlighting, albeit constrained by the same current lighting curfew.

The potential impact from this is described within the phase II bat survey report.

Overall, the evaluation of risk to bat foraging and commuting is described by the associated phase II bat survey report. The impact is likely to be positive as a result of the floodlight mitigation.

5.3.2.5 Nesting Birds

A variety of birds are likely to nest in the woodland edge and any tree or shrub on the boundary of the football stadium. It is therefore likely that there will be no impact upon breeding bird habitat by the pitch installation so long as work on pounds and storage areas are retained away from the pitch boundaries.

If there is any requirement to encroach upon or remove any tall or dense vegetation or trees as part of this development proposal then that work should be completed outside of the breeding bird season which runs from March to mid-September annually, or a precautionary pre-commencement survey should be carried out.

Overall, the evaluation of risk to breeding birds is negligible, taking into account the lack of breeding bird habitat affected by the proposal.

5.4 Main Potential Ecological Issues/ Impacts

The main ecological impacts/constraints are as follows:

- Local nature reserve/ ancient woodland - this important habitat forms the north and east boundary of the stadium. The proposed floodlighting scheme will reduce light pollution onto this habitat significantly and result in a positive influence. The modern floodlighting scheme restricts light pollution and spillage but there will be increasing light operation up to the lighting curfew each night, as the new surface will provide for sporting activity 7 days a week, compared to the existing 3 days. This is described within the phase II bat survey report.

- Bats – there is an existing potential impact upon commuting and foraging bat species from floodlighting and a mitigated floodlighting scheme is proposed along with extended hours of use of the facility. This is described within a separate stand-alone report
- Hazel dormouse - the local nature reserve supports this species and there is a national monitoring site located to the north of the woodland area. The mitigation proposal for bats and the reduction in light spillage will also benefit this species. Further assessment is required as to the potential value of the habitat on the boundaries of the woodland for the species.
- Mammals - there is a limited potential impact on hedgehog which may forage across the stadium boundaries. Mitigation actions are included within this document.
- Common amphibians and reptiles - there is a limited potential impact on common amphibians and reptiles from the construction phase and therefore mitigation actions are included within this document.

Mitigation (Section 6) is provided within this report to address any potential ecological issues and impacts.

6. RECOMMENDATIONS AND MITIGATION

6.1 Mitigation Recommendations

6.1.1 Habitats

The proposed pitch installation affects an area of low biodiversity value. Produced in tandem with this preliminary ecological appraisal is a statutory biodiversity net gain metric which sets out the extent of biodiversity loss and a mitigation strategy to deliver towards a 10% biodiversity net gain from the installation.

The boundary habitats are of high conservation value for wildlife and they must remain entirely unaffected by the physical installation activity for the new facility. The only impact upon these is upon faunal species, and that is from the existing and proposed sports turf floodlight spillage and the potential species to be using the edges of those habitats. Here there is likely to be a significant improvement in current impacts from the football stadium.

6.1.2 Faunal Species

6.1.2.1 Bats

Impacts and recommendations with regards to the impact of the artificial turf pitch and a revised and mitigated floodlighting scheme are included within the associated phase II bat survey report for this site.

6.1.2.2 Hazel Dormouse

The area of ancient woodland to the north of the sportsground supports Hazel dormouse and there is a national monitoring scheme further north occurring in that area. The monitoring site is segregated from the site by an area of dense woodland. There are however linear features on the woodland edge with some marginal potential for the species and therefore this report recommends a supplementary assessment by a suitably qualified dormouse ecologist.

6.1.2.3 Hedgehog

There will be a minimal potential risk to hedgehog from the installation of the new artificial facility.

Once development commences, if any trenches dug during works activities are left open overnight, then they should be left with a sloping end or ramp to allow any animal that may fall in a route to escape.

Any pipes over 100mm in diameter should be capped off at night to prevent animals entering.

If any animals are located in excavations during works, then they should be carefully placed into a clean receptacle, such as a bucket, and translocated to a safe environment outside of the area of works. This should be the woodland to the north of the football stadium.

6.1.2.4 Common amphibians and reptiles

There is considered to be a limited potential of common amphibians or reptiles encountering construction storage areas. This is because of the connectivity between the adjacent woodland block and the grassland strips surrounding the stadium.

To that end there must be no storage of equipment, machinery or materials on the north and east boundary grassland strips around the stadium pitch.

As a result, in tandem with the items described in 6.1.2.3 above, all excavations should be checked for amphibians in advance of the commencement of work each day. If an amphibian is located it must be placed into a clean receptacle, such as a bucket, and transferred to the woodland to the north of the stadium without delay.

6.1.2.5 Breeding birds

There is no breeding bird habitat affected by the proposed change of surface from sports turf to artificial turf.

If there becomes any requirement to affect any tall vegetation, specifically the mature trees and shrubs within the boundary fence line of the stadium, then this work must be carried outside of the breeding bird season, which runs from May to mid-September annually, or alternatively the area must be checked by an ecologist prior to its removal.

6.2 Further Survey Recommendations

6.2.1 Bats - phase II activity surveys

At the time of production of this document static bat monitoring surveys and a single bat transect is complete and reported under separate cover.

6.2.2 Hazel dormouse habitat assessment

An assessment of the boundaries of the stadium for Hazel Dormice is required by a suitably qualified individual/ecologist, this is in preparation at the time of this report issue.

6.2.3 Breeding birds

If it becomes necessary to undertake any vegetation clearance as part of this development and within the bird breeding season (March to mid-September inclusive) then a nesting bird survey will be required in advance. Any such work should avoid the breeding bird season.

7. BIODIVERSITY NET GAIN

There is a Statutory Biodiversity Net Gain Metric attached to this Preliminary Ecological Appraisal and Habitat Condition Assessment report.

7.1 Habitats affected

The only habitat directly affected by the proposal is the grass stadium pitch.

This habitats was assessed using Statutory condition assessment sheet 5A.

Stadium pitch - The grassland sward of the stadium pitch failed assessment criteria A, as it lacks any species diversity. It fails criterion B in that the sward height is not variable, it passes criterion C as there are obviously no areas of scrub, it fails criterion D in that more than 5% of the grassland is damaged throughout the season, although at the time of the study extensive areas of re-seeding were evident and irrigation was ongoing. It passes criterion E on the extent of bare ground due to this extensive management. Finally there is clearly no cover of bracken and there is an absence of invasive non-native plants.

It therefore passes 3 criteria at most and is therefore **categorised as of "poor condition"**.

7.2 Other adjacent habitat

Grassland surrounds - Statutory condition assessment sheet 5A was again utilised for the assessment of the grassland verge is that surround the concrete paths surrounding the football stadium pitch itself. The grassland between the stadium boundary path and the boundary fence contained a greater range of grasses and herbs than the football stadium due to the more relaxed mowing regime and a lack of herbicide.

The grassland sward around the stadium 'marginally' failed assessment criteria A, whilst there was some floral diversity the assessment made of 10 x 1m monitoring quadrats recorded between 3 and 7 species. It failed criterion B in that the sward height is not variable, it passed all the other criteria.

It resulted in 5 criteria being achieved and therefore was **categorised as of "moderate condition"**.

7.3 Net gain calculation

This calculation tool identifies the following:

- The installation of the artificial pitch on the area of football stadium (modified grassland) results in a loss of **1.65 habitat units from the site**.

The headline results from the biodiversity net gain metric is included overleaf.

As it is not possible to achieve the net gain target on site, the owner and agent will be sourcing 1.65 Habitat units from one of the habitat banks.

Overleaf is the extracted headline results from the associated statutory metric entitled:

Burgess Hill Town Football Club – Statutory BNG Metric 08.01.24 v2

On-site baseline	<i>Habitat units</i>	1.77	
	<i>Hedgerow units</i>	0.00	
	<i>Watercourse units</i>	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.30	
	<i>Hedgerow units</i>	0.00	
	<i>Watercourse units</i>	0.00	
On-site net change (units & percentage)	<i>Habitat units</i>	-1.47	-82.89%
	<i>Hedgerow units</i>	0.00	0.00%
	<i>Watercourse units</i>	0.00	0.00%

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	-1.47
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Spatial risk multiplier (SRM) deductions	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-1.47		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-82.89%		
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	1.77	1.95	1.65
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00

Figure 8: showing the headline results worksheet from the attached statutory biodiversity net gain metric.

8. REFERENCES

Anon (2024) *Ecological data search for land at Burgess Hill Town FC, on behalf of Barry Collins (B J Collins Protected Species Surveyors Ltd)* Report reference SxBRC/24/378, Sussex Biodiversity Record Centre. Prepared on 20/08/2024.

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Chartered Institute of Ecology and Environmental Management, 2013. *Guidelines for Preliminary Ecological Appraisal*. CIEEM.

Institution of Lighting Professionals & Bat Conservation Trust (2023) **Guidance Note GN08/23 Bats and Artificial Lighting at Night**, Institution of Lighting Professionals, Rugby.

Stone, E.L., Harris, S., Jones, G. (2015a). *Impacts of artificial lighting on bats: A review of challenges and solutions*. Mammal. Biol. 80, 213-219.

APPENDIX 1: PROTECTED SPECIES LEGISLATION

Plants

All wild plants are protected against unauthorised removal or uprooting under Section 13 of the Wildlife and Countryside Act 1981 (as amended). Plants listed on Schedule 8 of the Act (e.g. triangular club rush and Deptford Pink) are afforded additional protection against picking, uprooting, destruction and sale. Bluebell is protected against sale only.

Common Amphibians

Common amphibian species (i.e. common frog, common toad, smooth newt and palmate newt) are afforded partial legal protection under UK legislation, i.e. Schedule 5, Section 9 (5) of the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. This legislation prohibits sale, transportation and advertising for sale.

European Hedgehog

Hedgehogs are protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) which prohibits killing or taking of individuals.

The hedgehog is also listed as a Priority Species for conservation action under the UK Biodiversity Action Plan. Under the NERC Act 2006, the hedgehog is categorised as a 'Species of Principal Importance' for biodiversity. Listing as a Biodiversity Action Plan priority and 'Principal Importance' species reflects concerns that hedgehog numbers are in decline and that some protection should be afforded to hedgehog habitat through the planning system.

Bats

All species of British bat and their roosts are protected under British law by the Wildlife and Countryside Act 1981 (as amended), and bats are classified as European Protected Species under the Conservation of Habitats and Species Regulations 2017 ('the 2017 Regulations'). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations (2019) which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

The legislation makes it an offence to kill, injure or disturb a bat and/or to damage or destroy a breeding site or resting place for a bat.

With regard to artificial illumination of foraging and commuting habitats, it is also an offence to disturb the animals such that it impairs their ability to survive, or such that it impairs their ability to hibernate or migrate.

Birds

The bird breeding season generally lasts from early March to September for most species. All birds are protected under the Wildlife and Countryside Act (1981) (as amended) and the Countryside & Rights of Way Act 2000. This legislation makes it illegal, both intentionally and recklessly to:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is being built or in use;
- Take or destroy the eggs of any wild bird; and
- Possess or control any wild bird or egg unless obtained legally.

Birds listed under Schedule 1 of the Wildlife and Countryside Act (1981) (as amended) (e.g. barn owl) are afforded additional protection, which additionally makes it an offence to disturb a bird while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.