



Ecological Impact Assessment

Pitt Street, Wombwell

Hartwood Estates

CRM.1122.003.EC.R.002



Contact Details:

Enzygo Ltd. (Bristol Office)
The Byre
Woodend Lane
Cromhall
Gloucestershire
GL12 8AA

tel: 01454 269237
email: derek.allan@enzygo.com
www: enzygo.com

Ecological Impact Assessment

Project:	Pitt Street, Wombwell
For:	Hartwood Estates
Status:	Final
Date:	9 th December 2019
Author:	Chris Schofield ACIEEM MSc. BSc. (Hons) – Senior Ecologist
Reviewer:	Derek Allan MCIEEM MSc. BSc. (Hons) – Director of Ecology

Disclaimer:

This report has been produced by Enzygo Limited within the terms of the contract with the client and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

Enzygo Limited Registered in England No. 6525159
Registered Office Stag House Chipping Wotton-Under-Edge Gloucestershire GL12 7AD

Contents

1.0	Introduction	1
1.1	Commission	1
1.2	Proposed Development/Identification of Impacts	1
1.3	Aims and Objectives	1
1.4	Background/Acknowledgments.....	1
1.5	Local Planning Policy	2
1.6	Site Context	3
2.0	Methodology.....	5
2.1	Desk Study	5
2.2	Field Survey	5
2.3	Assessment.....	8
2.4	Limitations.....	10
3.0	Baseline Ecological Conditions	12
4.0	Assessment and Mitigation	21
5.0	Enhancement and Monitoring	24
6.0	Conclusion.....	26
7.0	References	27

Tables and Figures

Figure 1 – Survey Area.....	4
Table 1 – Survey Dates and Conditions	5
Table 2 - Calculation of Foraging/Commuting Habitat Score (shown in brackets)	8
Table 3 - Categorisation of Bats by National Rarity (England only shown)	9

Table 4 - Sites/species Valuation System.....	9
Table 5 – Ecological Features	12
Table 6 – Assessment of effect and mitigation measures	21
Table 7 – Enhancement & Monitoring	24

Drawings and Appendices

Drawing CRM.1122.003.EC.D.001 – Phase I Habitat Map	29
Drawing CRM.1122.003.EC.D.002 – Bat Survey Results	30
Appendix A – Proposed Site Layout.....	31
Appendix B – Bat Activity Survey Results.....	32
Appendix C – Biodiversity Offsetting Calculation Summary	33
Appendix D- Legislation and National Planning Policy.....	34

Non-Technical Summary

- i. In May 2019, Enzygo Ltd was commissioned by Hartwood Estates to undertake an Ecological Impact Assessment (EclA), including protected species surveys, at land at Land at Low Valley Farm, Pitt Street, Barnsley, S73 9PY (central grid reference: SE 40535 04142), located within Barnsley Metropolitan Borough Council planning authority. The study will inform a planning application for residential development.
- ii. The purpose of this report is to provide biodiversity information identifying ecological features, confirmed impacts/effect, and proportionate avoidance/mitigation/compensation strategies, followed by enhancements. This information will support the planning application and assist the Planning Officer in making an informed decision.
- iii. Impacts/effects to the following ecological features have been identified and mitigation as stipulated will be incorporated:
 - **Green Infrastructure and Hedgerows** (Native hedgerow forming part of the eastern boundary) – full length of existing hedgerow to be retained, protected and managed in the long-term for its wildlife value. New east to west corridor and western boundary corridor to be created. Sensitive lighting scheme to be implemented to avoid degradation through artificial lighting;
 - **Bats** (low levels of bat activity present, no high levels of foraging or significant commuting detected. No uncommon or rare species present) – protect boundary hedgerow which provides suitable foraging habitat and implement sensitive lighting scheme;
 - **Birds** (general nesting opportunities on site) – Clearance of suitable nesting habitat outside of nesting season or following check by ECoW, with protection of any active nests until young have fledged. Breeding Bird survey to be conducted at Reserved Matters stage; and,
 - **Common Reptiles & Priority Species** (suitable habitat for common reptiles, and notable invertebrates, flora, amphibians & mammals) – Sensitive clearance by or under supervision of an ECoW.
- iv. Proposals present opportunities for biodiversity enhancements in order to demonstrate an overall biodiversity net gain in accordance with national and local policies. Enhancements are to comprise native landscape planting (including tree, hedgerow and species-rich wildflower grassland) designed in a linear fashion to provide wildlife corridor function, bird and bat boxes and informal deadwood hibernacula.
- v. This report has demonstrated that, if the outlined mitigation measures are implemented in full then no significant residual impact could be expected and the proposed application will result in 'no net loss in biodiversity' whilst providing opportunities for 'biodiversity net gain' in accordance with NPPF and Local Planning Policy.

1.0 Introduction

1.1 Commission

- 1.1.1 In May 2019, Enzygo Ltd was commissioned by Hartwood Estates to undertake an Ecological Impact Assessment (EcIA), including protected species surveys, at land at Land at Low Valley Farm, Pitt Street, Barnsley, S73 9PY (central grid reference: SE 40535 04142), located within Barnsley Metropolitan Borough Council [BMBC] planning authority. The study will inform a planning application for residential development.

1.2 Proposed Development/Identification of Impacts

- 1.2.1 The study will inform an outline planning application for a residential development of up to 107 dwellings, to include site clearance, construction of access roads, landscape planting, an attenuation basin and greenspace. Access is proposed from Pitt Street at the southern site boundary. Refer to Appendix A for proposed site layout.

1.3 Aims and Objectives

- 1.3.1 The purpose of this report is to provide biodiversity information which succinctly identifies ecological features on site and within the corresponding zone of influence, confirmed impacts resulting from the proposed application, associated effect to identified ecological features, confirmed proportionate avoidance/mitigation/compensation strategies, and confirmed enhancements that will be implemented in accordance with the British Standard for Biodiversity BS42020:2013 (BSI, 2013).
- 1.3.2 This information will support the planning application and assist the Planning Officer in making an informed decision on whether the application can demonstrate 'no net loss in biodiversity' and a 'biodiversity net gain' in accordance with National Planning Policy Framework (NPPF) and Local Planning Policy.
- 1.3.3 This report has been produced with reference to current Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018), Guidelines for Ecological Report Writing (CIEEM, 2017), Bat Surveys for Professional Ecologists Good Practice Guidelines (Collins, 2016) and British Standard BS42020:2013 (BSI, 2013).

1.4 Background/Acknowledgments

Previous Planning Application

- 1.4.1 A search of BMBC planning website revealed a single historic application located at the north-eastern corner of the proposed site boundary, extending off-site to the east, for the erection of stable buildings (retrospective) granted in January 2004 (reference: B/03/2019/DA).
- 1.4.2 In the surrounding area there is an approved (with conditions) proposal for an outline development of 5 dwellings and a more recent "*demolition of a former gym and erection of 1 block of 10 apartments*" in the same site area adjacent to the south eastern site boundary (ref. 2005/2093 and 2007/0437, retrospectively).
- 1.4.3 Also, an outline application for a residential development of one pair of semi-detached dwellings and a "*Change of use of land as domestic curtilage (Use Class C3) and erection of outbuilding/ workshop on land for business use (Use Class B1)*" both located immediately south-east. The applications were approved (with conditions) in December 2009 and August 2012 (ref. 2009/1390 and 2012/0649 respectively).

- 1.4.4 None of the above applications are supported by any available ecological survey or assessment information.

Consultations and Correspondence

- 1.4.5 On 29th March 2019 pre-application comments were received from the Biodiversity Officer at Barnsley Council (via email). In summary, these comments comprise: confirmation the planning application should be supported by an ecology report; details of a 2013 Preliminary Ecological Appraisal carried out for the LPA in support of the Local Plan decision making process; data should be gathered from the local Badger group; biodiversity enhancements are required; and, wildlife corridors should be retained or created from east to west through the site.
- 1.4.6 Following the submission of the outline application in September 2019, which was supported by a Preliminary Ecological Appraisal (Enzygo, 2019), a consultation response was received from the Biodiversity Officer at Barnsley Council (email dated 7th November 2019). This response recommends *“the application decision is deferred”* until the requested updated ecology information is provided. In summary, the additional information requested includes: providing details of the ecology pre-application comments; including details of a 2013 Preliminary Ecological Assessment carried out for the LPA in support of Local Plan decision-making; providing data records from South Yorkshire Badger Group; providing details of the Dearne Valley Green Heart Nature Improvement Area; further consideration of ground-nesting birds; providing details of the new/ revised SPDs; and demonstrating a 10% biodiversity net gain (although the a net gain policy/metric has not yet been adopted by BMBC this must be demonstrated). These comments have been addressed in this Ecological Impact Assessment report.
- 1.4.7 Other than these consultation responses there have been no known further correspondence with any third parties (i.e. County Ecologist, Natural England etc.) in relation to this proposed development. Additionally, we have not been made aware of any validation requirements (i.e. completion of a biodiversity checklist or specific protected species survey requirements).

1.5 Local Planning Policy

- 1.5.1 The following policies of the Barnsley Local Plan (Barnsley Council, 2019a) are relevant to this assessment. Policy information is a summary only, and the original Barnsley Local Plan documents should be consulted for definitive information:
- Policy GI1: Green Infrastructure (*to protect, maintain, enhance and create and integrated network of connected and multi-functional GI including enhancements for biodiversity through protection and creation of open space as part of new developments*),
 - Policy GS1: Green Space (*includes open areas which are valuable for amenity, recreation, wildlife or biodiversity, loss of such space will not normally be permitted. To improve green space in the county, new residential developments will contribute in accordance with Green Space Strategy and Infrastructure and Planning Obligations Policy following assessment to determine appropriate provision*), and
 - Policy BIO1: Biodiversity and Geodiversity (*development will be expected to conserve and enhance the biodiversity and geological features by, protecting and improving habitats, species and sites of value, maximising opportunities around new developments, conserving and enhancing local character, following mitigation hierarchy, protecting ancient woodland and trees and provision of biodiversity enhancements*).

- 1.5.2 In accordance with the Local Plan policy map, this application site forms, the majority of, the *HS77 Land at Pitt Street, Wombwell* site allocation. This specific allocation details only archaeological considerations and that the development will be expected to provide appropriate access; no ecology or biodiversity components to this site allocation.
- 1.5.3 There is also a recently adopted Biodiversity and Geodiversity Supplementary Planning Document (Barnsley Council, 2019b) which is of relevance to this assessment and supplements the Barnsley Local Plan in relation to biodiversity-related local policy. Of particular relevance to this application is Paragraph 4.5 of the SPD which states:
- “Local Plan allocations have been assessed for their biodiversity value. Some site-specific policies contain biodiversity requirements. Where the ecological assessments carried out to inform the Local Plan site selection process assessed a site as having medium or high biodiversity value, and that value has been eroded through the actions of a landowner, the site will still be expected to deliver net gains in biodiversity assessed against the Local Plan ecological assessment”*
- 1.5.4 It is confirmed the 2013 Preliminary Ecological Appraisal (Barnsley Council, 2013) undertaken to inform the site allocation decision process does not identify any moderate or high quality habitats, with all species habitats recorded as of a low quality. It is also confirmed the site value does not appear to have been eroded through the actions of the landowner since the 2013 survey.
- 1.5.5 There are also further Supplementary Planning Documents relevant to nature conservation which have been received to inform this assessment:
- SPD ‘Open Space Provision on New Housing Developments’, and
 - SPD ‘Trees and Hedgerows’.
- 1.5.6 Refer to Appendix D for relevant details of European and National Legislation, and National Planning Policy.

1.6 Site Context

- 1.6.1 The approx. 3.3Ha site is located on Land at Low Valley Farm, Pitt Street, Darfield, Barnsley. The majority of the site is comprised of unmanaged neutral grassland, with scattered patches of encroaching semi-mature trees, scrub and tall-ruderal vegetation. The south-west corner of the site and a strip along the western boundary comprises short-grazed pasture grassland. An informal but well used footpath runs from north to south through the centre of the site. The site boundaries are largely fenced and stock proof with a small and isolated stretch of hedgerow along the eastern site edge. The majority of the western boundary is undefined as it routes across short-grazed grassland field units which extend beyond the western boundary.
- 1.6.2 The wider area is comprised of a residential housing estate to the north and south, with an allotment site to the east and grazing pasture to the west, with Low Valley Farm located directly beyond. Pitt Street runs directly adjacent to the southern site boundary. The site is located on the western boundary of Darfield village.
- 1.6.3 The site lies within the Nottinghamshire, Derbyshire and Yorkshire Coalfield National Character Area (Natural England, 2013) which is characterised as *“a generally low-lying area, with hills and escarpments above wide valleys, the landscape embraces major industrial towns and cities as well as villages and countryside.”*

Figure 1 – Survey Area



Image courtesy of Google Image Pro 7.1.8.3036, 53o31'57.50"N 1o23'33.36"W Elev. 34m. Imagery date 25th June 2018. Image accessed 17th July 2019.

2.0 Methodology

2.1 Desk Study

2.1.1 Desk study details were obtained from the following sources on the associated dates to provide background on ecological features in the vicinity of the site. In each case the search included the site and the specified area beyond the site boundary based on the expected zone of influence. Candidate and potential designations are considered too as these are also legally protected. Records obtained included:

- Statutory sites designated or classified under international conventions or European legislation within a 10km radius, statutory sites designated under national legislation (including Marine) and existing EPS Licence applications within a 2km radius, and Priority Habitat & Ancient Woodland Inventory within a 0.5km radius 13th November 2019 (DEFRA, 2019);
- Tree Preservation Orders (TPOs) and Biodiversity Conservation Areas within the immediate zone of influence (Barnsley Council, 28th November 2019);
- Waterbodies within a 0.5km radius (Online mapping sources including: Google Maps; MAGIC; and Ordnance Survey Street View, (28th November 2019);
- Locally designated wildlife sites & any notified Local Biodiversity Action Plan (BAP) Habitats, Legally protected species, any Priority species (which includes: National Biodiversity Species, Local BAP Species, Species of conservation concern and Red Data Book (RDB) species, Birds of Conservation Concern (BOCC), nationally rare and nationally scarce species, and OSPAR Commission list of threatened/declining species) and Invasive species (listed under section 14 of Schedule 9 only) within a 2km radius, and any important hedgerows/veteran trees within the immediate zone of influence (Barnsley Biological Records Centre [BBRC], 29th January 2019);
- Additional records of Badger within a 2km radius from South Yorkshire Badger Group (data received 5th December 2019).

2.1.2 Data has been edited where relevant to prevent sensitive or confidential records being made public in accordance with Guidelines for Accessing and Using Biodiversity Data (CIEEM, 2016).

2.2 Field Survey

2.2.1 Field Surveys were undertaken on the following dates by the identified staff, all of whom satisfy necessary field survey competencies as stipulated by the Chartered Institute for Ecology and Environmental Management (CIEEM). Weather conditions on the day of survey have been included and where relevant survey/class licence numbers referred to.

Table 1 – Survey Dates and Conditions

Survey	Date	Staff/Licence	Environmental Conditions
Preliminary Ecological Appraisal	09/08/18	Chris Schofield (CS) MSc BSc (Hons) ACIEEM [Senior Ecologist at Enzygo]	Dry and partly cloudy (75% cloud), a light wind and 18°C
Bat Dusk Activity May	23/05/19	CS plus assistant	Sunset: 21:11 Dry, mostly clear (10% cloud), a light wind and 14°C

Survey	Date	Staff/Licence	Environmental Conditions
Bat Dusk Activity June	26/06/19	CS plus assistant	Sunset: 21:39 Dry and overcast (100% cloud), a light wind and 12°C
Bat Dusk Activity July	25/07/19	CS plus assistant	Sunset: 21:14 Dry and partly cloudy (25% cloud), no wind and 30°C
Bat Dusk Activity August	22/08/19	CS plus assistant	Sunset 20:20 Dry and overcast (100% cloud), a light wind and 18°C
Bat Dusk Activity September	25/09/19	CS plus assistant	Sunset 18:58 Dry and partly cloudy (20% cloud), no wind and 18°C
Bat Dawn Activity September	26/09/19	CS plus assistant	Sunrise: 06:58 Dry and overcast (100% cloud), a light wind and 15°C
Bat Dusk Activity October	24/10/19	CS plus assistant	Sunset 17:50 Dry and partly cloudy (50% cloud), a light wind and 13°C

Preliminary Ecological Appraisal

2.2.2 In accordance with Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM, 2017) the Preliminary Ecological Appraisal (PEA) survey included the following.

Mapping of Habitat Types

2.2.3 Phase I Habitat Survey (JNCC, 2010) is the most recognised published method of habitat classification. It has been used to categorise & map the main vegetation types present within the survey area using a standard set of habitat categories. Each of the main habitats has been described; including details of component plant species abundances (recorded using the DAFOR scale: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare). Additionally, any stands of non-native invasive plant species were recorded. Habitat extents have been visually mapped onto a topographic plan, with approximate location/areas recorded only (a GPS unit has not been utilised to accurately recorded these).

Assessment of possible presence/likely importance for Protected & Priority Species

2.2.4 An assessment of the possible presence of protected or priority species, and the likely importance of habitat features present for such species has also been undertaken, particularly where uncommon or specialised habitats are present in accordance with current PEA guidelines (CIEEM, 2017). However, no specific protected species survey has been undertaken unless listed under additional surveys as below. Any incidental sightings of protected or priority species, or field signs of such species has also been recorded. Species assessed include: Plants & Fungi; Terrestrial/aquatic invertebrates; Fish; Amphibians; Reptiles; Breeding, wintering and migratory birds; Bats (including potential roost sites, foraging and commuting habitats/features), Badger, and Other mammal species.

Bat Activity Survey

2.2.5 Seven bat activity surveys of the site were undertaken in accordance with current guidelines (Collins, 2016) comprising six dusk surveys and a single dawn survey (i.e. as Moderate suitability habitat, one survey per month through the bat activity season with one dusk to dawn or dusk and dawn survey). The dusk transect surveys commenced at sunset and lasted until

approximately 2 hours after sunset, whereas the dawn transect commenced two hours before sunrise until sunrise. On each dusk survey repetition the first 30 minutes after sunset were spent at a single transect point. This method allows identification of any potential bat roost locations in close proximity to the site, and provides information on commuting patterns in relation to the site.

- 2.2.6 A single transect route was deemed sufficient to cover the site. This was determined during the Phase I Habitat Survey taking account of landscape constraints, topography, location of nearest habitats more likely to be utilised by bats, and the distance a surveyor can walk in a single evening (maximum of 3-5km). The transect sampled the full range of habitats present on site.
- 2.2.7 The transect route was supplemented by 10 spot counts (labelled 1-10), each of a 5-minute duration, with the transect route in-between divided into sectors (labelled 1-10). Each survey commenced from a different transect point, and the transect direction varied, in order to gather information on bat usage at different points of the site relative to different times after sunset.
- 2.2.8 During the surveys, the surveyors recorded the time, location, species, and behaviour (i.e. foraging, commuting or swarming) of each bat pass (a single bat pass or a 10sec period of activity recorded as 1). Additional factors, such as, the number of bats, flight height, bat appearance and relative speed, were recorded where observed. The surveyors were equipped with Echo Meter Touch 2 Pro Full spectrum detectors combined with an iPad Pro 9.7. Bat echolocation calls were saved onto the iPad.
- 2.2.9 In accordance with current guidance (Collins, 2016), two static Song Meter SM4BAT FS (Wildlife Acoustics Inc., Concord, MA) automated bat detector units were deployed along the transect during each month. The units were placed at ground level, whilst the microphones were connected approximately 2m from ground height, away from solid objects which may obstruct sound and any source of extraneous noise. The same locations were used each month, in this instance one within the eastern boundary hedgerow and one within the central grassland, to allow spatial and temporal data analysis between months. In each instance, the static detectors recorded for at least 5 consecutive nights, with the detectors automatically switching on 30 minutes prior to sunset and switching off 30 minutes after sunrise (pre-programmed sunset/sunrise times based on location of detector).

General

- 2.2.10 It is important that planning decisions are based on up-to-date ecological data, and the specific timeframe over which survey data is considered valid should follow general advice (CIEEM, 2019). Although it should be noted that the presence/absence and status of protected species can change seasonally/annually. The age of data should also be assessed separately when considering the submission of an EPS Licence (i.e. Natural England may require data to be from the current season).
- 2.2.11 Local Environmental Records Centres (LERC) issue a licence for use of provided biodiversity data for 1 year only, after which time this should be renewed to validate an application (and reports updated accordingly to incorporate any new records). Following completion of surveys all relevant biodiversity data will be submitted to the relevant LERC and other groups as appropriate.

2.3 Assessment

Bat Data Analysis

- 2.3.1 The audio recordings from the Echo Meters and SM4s were later analysed using Kaleidoscope Pro 4.0.4 UK Analysis Software for Ultrasonic Data. This programme uses UK bat classifiers and auto-ID to determine species of bats recorded. However, in every instance this data was fully reviewed by a bat licensed ecologist (Derek Allan MSc, BSc (Hons) MCIEEM, NE Class 2 Licence Number: 2015-14659-CLS-CLS) to confirm its accuracy, specifically where rarer bat species are recorded, where unidentified files are present, where multiple species are present on a single file, or where the auto-ID match ratio is statistically <0.5 confidence (files of Pipistrelle spp. were not assessed further). Any significant sonograms were saved, as an example of each species identified.
- 2.3.2 Bat Activity Index (BAI – bat passes per hour) were calculated for each bat species recorded within each spot count/sector/static location and for the site overall. For each spot count/sector/static location, the BAI was calculated by dividing the number of individual species passes recorded at these locations by the total duration data was collected at each location, to give the mean number of passes per hour. For the site overall, the BAI was calculated by dividing the number of individual species passes recorded during the manual and automated surveys by the total duration of each survey, to give the mean number of passes per hour.
- 2.3.3 The highest BAI (either from the Manual or Static survey) is then combined with values for: national rarity, site/nearby roost potential, and habitat characteristics (calculated as shown below, to give a total score in accordance with current guidance (Wray et al., 2010). The total score is then given a value which is assigned a geographic frame of reference as shown below. Vagrant bats (those species which are not resident and only recorded as occasional visitors) are simply assessed as vagrants.

Table 2 - Calculation of Foraging/Commuting Habitat Score (shown in brackets)

BAI*	National Rarity	Site/Nearby Roost Potential	Habitat Characteristics
Low BAI >0 but <6 (5)	Common (2)	None (1)	Industrial or other site without established vegetation. Absence of linear features (1)
-	-	Small number (3)	Suburban areas or intensive arable land. Un-vegetated fences and large field sizes (2)
Moderate BAI >=6 but <60 (10)	Rarer (5)	Moderate number/not known (4)	Isolated woodland patches, less intensive arable (moderate field sizes) and/or small towns and villages (3)
-	-	Large number of roosts, or close to a SSSI for the species (5)	Large or connected woodland blocks, mixed agriculture (small field sizes with well grown, well connected hedgerows) and small villages/hamlets (4)
High BAI >=60 (20)	Rarest (20)	Close to or within a SAC for the species (20)	Mosaic of pasture (small fields), woodlands and wetland areas with complex network of mature well-established hedgerows (5)

*BAI categories are based on professional judgement in the absence of published guidance.

Table 3 - Categorisation of Bats by National Rarity (England only shown)

Rarity within Range	England
Common (population over 100,000)	Common Pipistrelle Bat (<i>Pipistrellus pipistrellus</i>), Soprano Pipistrelle Bat (<i>Pipistrellus pygmaeus</i>), Brown Long-eared Bat (<i>Plecotus auritus</i>).
Rarer (population 10,000-100,000)	Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>), Whiskered Bat (<i>Myotis mystacinus</i>), Brandt's Bat (<i>Myotis brandtii</i>), Daubenton's Bat (<i>Myotis daubentonii</i>), Natterer's Bat (<i>Myotis nattereri</i>), Leisler's Bat (<i>Nyctalus leisleri</i>), Noctule Bat (<i>Nyctalus noctula</i>), Nathusius' Pipistrelle Bat (<i>Pipistrellus nathusii</i>), Serotine Bat (<i>Eptesicus serotinus</i>).
Rarest (population under 10,000)	Greater Horseshoe Bat (<i>Rhinolophus ferrumequinum</i>), Bechstein's Bat (<i>Myotis bechsteinii</i>), Alcaholic Bat (<i>Myotis alcaholic</i>), Barbastelle Bat (<i>Barbastelle barbastellus</i>), Grey Long-eared Bat (<i>Plecotus austriacus</i>).
*Vagrant species and occasional visitors	Greater Mouse-eared Bat (<i>Myotis myotis</i>), Parti-coloured Bat (<i>Vespertilio murinus</i>), Kuhl's Pipistrelle Bat (<i>Pipistrellus kuhlii</i>), Savi's Pipistrelle Bat (<i>Hypsugo savii</i>), Pond Bat (<i>Myotis dasycneme</i>), Notch-eared Bat (<i>Myotis emarginatus</i>), Northern Bat (<i>Eptesicus nilssonii</i>).

Table 4 - Sites/species Valuation System

Geographic Frame of Reference	BAI Score	Roost Types
Within zone of influence	1-10	N/A
Local	11-20	Feeding Perches (common species), individual bats (common species), small numbers of non-breeding bats (common species), mating sites (common species)
County	21-30	Maternity sites (common species), small numbers of hibernating bats (common and rarer species), feeding perches (rarer/rarest species), individual bats (rarer/rarest species), small numbers of non-breeding bats (rarer/rarest species)
Regional	31-40	Mating sites (rarer/rarest species) including well-used swarming sites, maternity sites (rarer species), hibernation sites (rarest species), significant hibernation sites
National	41-50	Maternity sites (rarest species), Sites of Special Scientific Interest (SSSI)
International	>50	Special Areas of Conservation (SAC)

General

2.3.4 A level of importance has been assigned to each ecological feature, where sufficient baseline data is available to do so, in accordance with current guidance (CIEEM, 2018). This is defined within a geographical context as follows: International and European; National; Regional; Metropolitan, County, vice-county or other local authority-wide area; River Basin District; Estuarine system/Coastal cell; and Local (plus Negligible where no associated value has been identified). For example, importance of designated sites reflects the geographical context of the designation (where designated sites no longer meet designation criteria and those formally 'de-notified' or where an undesignated site meets published selection criteria must also be considered). When considering habitats and species contextual information about distribution and abundance of that habitat/species in the area must be considered (if the habitat/species status is currently in a degraded or unfavourable condition its potential value should be considered).

2.3.5 The assessment then considers potential impacts (both positive and negative) generated during the construction, operational and restoration phase of the proposed application. Only impacts

that are likely to be significant are considered. Impacts that are either unlikely to occur, or if they did occur are unlikely to be significant, are not considered.

- 2.3.6 Cumulative impacts are then considered where the application meets criteria in accordance with national EIA screening guidance (GOV.UK, 2019), and where agreed with the competent authority during scoping. This takes into consideration existing background levels of threat or pressure, looks at critical thresholds, and assess both additive/incremental and associated/connected impacts and effects.
- 2.3.7 Relevant aspects of ecological structure and function are then considered when determining if identified impacts will have a significant effect upon ecological features. Where necessary, this assessment utilises information from other specialists i.e. air quality, hydrology etc, to determine the level of impact. In accordance with current guidance (CIEEM, 2018) these are described using the following characteristics, where relevant: positive or negative; extent; magnitude; duration; frequency and timing; and reversibility.
- 2.3.8 The mitigation hierarchy is then explored in accordance with BS42020:2013 (BSI, 2013). This seeks as a preference to avoid impacts, then to mitigate unavoidable impacts, and as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. Justification has been provided by the client/their planner where the mitigation hierarchy cannot be followed, or for example where compensation is a preferred approach where the competent authority has adopted a County wide strategy i.e. District Level Licensing Schemes (GOV.UK, 2019). In this instance current national Biodiversity Offsetting guidance has also been consulted (GOV.UK, 2019). Additional information has also been provided by the client/their planner where the applicant wishes to demonstrate exceptional circumstances or where they wish to pursue alternative strategies. Any residual impacts following mitigation measures etc are then identified.
- 2.3.9 All mitigation measures follow species specific current best practice guidance and the source has been identified accordingly. Deviation from guidance has been explained by the ecologist and is proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed works.

2.4 Limitations

- 2.4.1 Data held by consultees may not be exhaustive. The absence of evidence, does not indicate evidence of absence. Enzygo cannot take responsibility for the accuracy of external data sources and as such discrepancies and inaccuracies may occur.
- 2.4.2 Records over 10 years old for transient species (as these are likely to have moved during the interim) and species protected from sale only under the W&C Act 1981 and amendments, are excluded (as these are not relevant to a planning application). Additionally, given the large number of priority species, these have only been included if identified from the desk study and/or habitats recorded on site have been assessed as providing suitable conditions.
- 2.4.3 Geological sites have only been included within this report where there are ecological components of the designation.
- 2.4.4 Although August is a favourable time of year to undertake a Phase I Habitat Survey, some plant species are in a state of senescence at this time and are not readily identifiable. However, the surveyor is experienced in plant identification through vegetative characteristics, and the habitats within the site are common and typical of the conditions present. It is considered that sufficient survey to inform the Preliminary Ecological Appraisal (and identify common Phase I habitats) was feasible and appropriate, and the timing of the survey does not represent a

significant survey limitation. Additionally, during subsequent visits throughout the year, surveyors confirmed habitats & floral species present.

- 2.4.5 This document does not contain a comprehensive list of botanical species on site. Only plant species characteristic of each habitat and incidental observations of notable plant species were recorded.
- 2.4.6 It should be noted that Long-eared Bats echolocate more quietly, and Horseshoe Bat species in particular echolocate more directionally, compared to other bat species and so can sometimes be more difficult to detect and often go unrecorded. Species from the *Myotis* and *Nyctalus* genera are notoriously difficult to distinguish in the field and from recorded sonograms, as there is considerable overlap in their range of echolocation frequencies. Where the species cannot be determined only the genus is stated.
- 2.4.7 Auto ID is intended for use in analysing recordings of single bats in free flight, low clutter environments. On average, more than half of such recordings will result in classifications with 80% accuracy. Recordings of roost emergence, multiple bats, captive bats, bats in high-clutter environments or bat social calls are not suitable for Auto ID and results may not be accurate. Kaleidoscope classification software is not intended to replace expert human analysis, and as such results will contain false positives and false negatives.
- 2.4.8 For the May static detector bat survey repetition, one of the detectors used was an Anabat Express recorder (when on all other occasions Song Meter SM4BAT FS detectors were used). On this May repetition no recordings were made from the Anabat Express. It is considered this is likely due to the design of the detector whereby the microphone is directly attached to the box of the detector and placed on the ground, whereas Song Meter SM4 detectors have a microphone on a wire which is placed 2m high into the tree/shrub and therefore is more likely to detect bat passes. Given the number of records and levels of activity detected at this site, it is not considered this limitation with the survey equipment on one repetition represents a significant survey or assessment limitation.

3.0 Baseline Ecological Conditions

3.1.1 Ecological features identified by the desk study/field survey are presented below, along with their details and associated ecological value. Refer to Drawing CRM.1122.003.EC.D.001-002 for the location/extent of ecological features where relevant.

Table 5 – Ecological Features

Ecological Feature	Details	Ecological Importance
Statutory sites designated or classified under international conventions or European legislation		
None	-	-
Statutory sites designated under national legislation (& Impact Risk Zones)		
SSSI Impact Risk Zone	The Impact Risk Zone in which the site lies states the Local Planning Authority (LPA) should consult Natural England on the likely impacts of “airports, helipads and other aviation proposals.”	N/A (confirmed the proposals do not meet the criteria for which further consultation is required)
Locally designated wildlife sites		
Parkhill Nature Reserve Local Wildlife Site (LWS) 675m South.	Site is comprised of lowland mixed deciduous woodland and ponds (no detailed designation information available).	County
Broomhill Flash & Wombwell Ings LWS 908m South-east.	Site is comprised of floodplain and grazing marsh with ponds (no detailed designation information available).	County
Gipsy Marsh LWS 1.05km South-east	Site is comprised of ponds, lowland meadows, fen and heath habitats (no detailed designation information available).	County
England HPI, Local BAP Habitats, Ancient Woodland, Important Hedgerows, Veteran Trees, TPOs and Conservation Areas		
Lowland Mixed Deciduous Woodland Priority Habitat 27m South	Several parcels of deciduous woodland within the search radius, the closest is immediately south of Pitt Street to the south of the site.	Local
Green/Blue & Aquatic Infrastructure, Dark Zones, and Local Policy		
Green Infrastructure	The site forms a parcel of unmanaged land in an area of managed and farmed habitats, located on the edge of Darfield settlement. The site provides connectivity from allotments and similar habitats to the east, to open greenspace to the west. Loss of this feature would result in minor fragmentation effect of the GI resource.	Local
Blue Infrastructure	No aquatic infrastructure resource on site or immediately off-site.	N/A

Ecological Feature	Details	Ecological Importance
Dearne Valley Green Heart Nature Improvement Area (NIA)	The site lies within the Dearne Valley Green Heart NIA which extends across a large area to the east and south of Barnsley. The NIA has four main objectives: 1) Create and restore floodplain habitat at Houghton Washlands, Wombwell Ings and Carlton Marsh through direct management. 2) Restore woodland and farmland habitats in low ecologically functioning areas through targeted advisory work and uptake of environmental stewardship, management advice, and training. 3) Embed NIA principles in Local Planning Policy and create opportunities for biodiversity offsetting by working with local planning authorities. 4) Build popular support and understanding in the community through community wardens and a programme of events, cycle tours, education visits and community engagement.	Local
Habitat Types		
Poor semi-improved grassland (B6) 	The dominant habitat type on site is poor semi-improved grassland, which accounts for approximately 80% of the site area. Predominantly, this habitat has had no recent management and at the time of survey resembled a dense tussocky sward, standing to approximately 80cm in height. Scrub and tall ruderal vegetation (see below) was beginning to colonise, encroaching from the site boundaries. A localised area at the south-west corner of the site and a strip along the western boundary lies beyond post-and-wire fencing and comprised short-grazed neutral grassland at the time of survey. The species recorded within these grassland areas include abundantly occurring False Oat-grass (<i>Arrhenatherum elatius</i>) and Cock's-foot (<i>Dactylis glomerata</i>). Frequently occurring Creeping Thistle (<i>Cirsium arvense</i>), Rosebay Willowherb (<i>Chamerion angustifolium</i>) and Common Nettle (<i>Urtica dioica</i>). Occasionally occurring Common Hogweed (<i>Heracleum sphondylium</i>), Bramble (<i>Rubus fruticosus</i> agg.), Hedge Bindweed (<i>Calystegia sepium</i>), Great Willowherb (<i>Epilobium hirsutum</i>), Mugwort (<i>Artemisia vulgaris</i>), Broad-leaved Dock (<i>Rumex obtusifolius</i>), Field Horsetail (<i>Equisetum arvense</i>), Teasel (<i>Dipsacus fullonum</i>), Perennial Ryegrass (<i>Lolium perenne</i>), Yorkshire Fog (<i>Holcus lanatus</i>), Rough Meadow-grass (<i>Poa trivialis</i>), Meadow Foxtail (<i>Alopecurus pratensis</i>) and Common Ragwort (<i>Jacobaea vulgaris</i>). These findings correspond with the findings of the previous 2013 survey (Barnsley Council, 2013) which described this grassland as "Poor semi-improved." Poor semi-improved grassland is not UK BAP Priority Habitat or Local BAP Habitat.	Negligible

Ecological Feature	Details	Ecological Importance
Scrub - dense/continuous (A2.1) & scattered (A2.2) 	Dense scrub patches are located across the northern site boundary, at the south-west corner of the site and within central areas, with scattered stands situated throughout the site. This habitat is largely found encroaching from site boundaries and has established on site through lack of overall site management. Species found here include dominantly occurring Bramble, frequently occurring Hedge Bindweed and False-oat grass. Occasionally occurring Dog Rose (<i>Rosa canina</i>), Creeping Thistle, Common Hogweed (<i>Heracleum sphondylium</i>) and Hawthorn (<i>Crataegus monogyna</i>). Rarely occurring Crab Apple (<i>Malus sylvestris</i>), Ash (<i>Fraxinus excelsior</i>), Rowan/Mountain Ash (<i>Sorbus aucuparia</i>), Lombardy Poplar (<i>Populus nigra 'italica'</i>) and Pedunculated Oak (<i>Quercus robur</i>). Dense and scattered scrub is not UK BAP Priority Habitat or Local BAP Habitat.	Negligible
Other tall herb and fern – ruderal (C3.1) 	As above, tall ruderal vegetation is found in dense patches throughout central and southern parts of the site, encroaching from site boundaries and has established on site through lack of overall management. Species recorded here include poor semi-improved grassland species with dominantly occurring Rosebay Willow-herb and occasionally occurring Common Nettle and Creeping Thistle. Tall Ruderal vegetation is not UK BAP Priority Habitat or Local BAP Habitat.	Negligible

Ecological Feature	Details	Ecological Importance
Scattered trees (A3.3) 	Young to semi-mature trees are located along site boundaries and scattered towards the centre of the site. Species recorded here include occasionally occurring Goat Willow (<i>Salix caprea</i>) and Apple (<i>Malus</i> sp.), and rarely occurring Turkey Oak (<i>Quercus cerris</i>), Field Maple (<i>Acer campestre</i>), Bird Cherry (<i>Prunus padus</i>) and Pedunculated Oak. Scattered trees are not UK BAP Priority Habitat or Local BAP Habitat.	Negligible
Intact hedge (J2.1) 	Unmanaged species-poor native hedgerow 88m long and forming approximately half of the eastern site boundary. It measures on average 5m high, 3m wide and is 100% continuous, with no additional notable features (i.e. no hedge bank, ditch or wall). Species recorded here include dominantly occurring Hawthorn and abundantly occurring Bramble. Frequently occurring Creeping Thistle and Ivy (<i>Hedera helix</i>) and occasionally occurring Elder (<i>Sambucus nigra</i>), Garden Privet (<i>Ligustrum ovalifolium</i>) and Dog Rose (<i>Rosa canina</i>). The understory is predominantly comprised of semi-improved grassland and tall ruderal vegetation species, with abundantly occurring Common Nettle and occasionally occurring False-oat Grass and Common Hogweed. This hedgerow was reported as “species poor or defunct” in the previous 2013 survey (Barnsley Council, 2013). For the purposes of England HPI (and local BAP), a hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat, therefore the hedgerow present at the eastern site boundary would qualify.	Local
Fence (J2.4) & Wall (J2.5)	The site is bordered by wooden and concrete posts and wire fences, and a small section of wall along the south east boundary. There are no significant vegetation assemblages associated with these features. Fencing and walls are not UK BAP Priority Habitat or Local BAP Habitat.	Negligible
Legally Protected & Priority Species (& Consultation Zones where applicable)		
Bats	There are no buildings or structures on site. Trees on site are young to semi-mature and are not of an age to have developed potential roosting features (such as woodpecker holes,	Local

Ecological Feature	Details	Ecological Importance
	knotholes, hollows, splits etc.) which are typical of more mature trees. No obvious signs of damage which could offer potential roosting features was noted. Habitats on site provide moderate suitability as commuting (i.e. hedgerows and scrub) and foraging resources (i.e. unmanaged grassland and scrub). Off-site features available to bats include surrounding housing (offering roosting opportunities) and woodland and farmland to the south and west (commuting and foraging resource). The local records search has identified 22 records comprising Common Pipistrelle (<i>Pipistrelle pipistrelle</i>), Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>), Daubenton's Bat (<i>Myotis daubentonii</i>), Noctule Bat (<i>Nyctalus noctula</i>) and unidentified <i>Myotis</i> species (<i>Myotis</i> sp.). within the search radius. Records are grouped to the South West associated with open parkland and wetland habitats with the closest record 500m from the site boundary. The Bat Activity surveys recorded generally only very low bat activity across the site with a typical assemblage of bat species for this habitat type/extent recorded over the 2019 survey season. Recordings predominantly of Common Pipistrelle and Soprano Pipistrelle, and more rare passes of Nathusius' Pipistrelle (<i>Pipistrellus nathusii</i>), Noctule, Leisler's Bat (<i>Nyctalus leisleri</i>), Daubenton's Bat (<i>Myotis daubentonii</i>) and Brown Long-eared Bat (<i>Plecotus auritus</i>). A generally higher level of activity was detected associated with the eastern boundary hedgerow compared to central areas of grassland which is typical of bat behaviour (i.e. use boundary/linear features). The surveys found the following in accordance with Tables 2 and 3 (3 Habitat characteristic as small town with smaller fields), assessed Local value overall as all local scores and typical species assemblage given habitat types present (i.e. majority Common and Soprano Pipistrelle passes). • Common Pipistrelle Score 18 Local (BAI 9.36 – small number of roosts nearby), Soprano Pipistrelle Score 13 Local (BAI 0.88 – small number of roosts nearby) and Nathusius' Pipistrelle Score 16 Local (BAI 0.18 – small number of roosts nearby) intermittent passing across site [bats of all three species recorded early after sunset indicating likely nearby roost off-site possibly in nearby town buildings, direction from site unknown. Highest activity level recorded in August indicating potential maternity roost nearby with bats foraging at the site] • Noctule Score 16 Local (BAI 1.34 – small number of roosts nearby) and Leisler's Bat Score 14 Local (BAI 0.05- no nearby roosts) [Noctule recorded early indicating likely nearby roost off-site roost, direction from site unknown]	

Ecological Feature	Details	Ecological Importance
	- Daubenton's Bat Score 14 Local (BAI 0.01 – no nearby roosts). Individual passes only. [no evidence of nearby roost] - Brown Long-eared Score 11 Local (BAI 0.12 – no nearby roosts). Individual passes only. [no evidence of nearby roost] No significant commuting routes were identified for any species. Refer to Appendix B for full results, including charts showing the temporal variation in activity across the survey season. The appended Drawing CRM.1122.003.EC.D.002 illustrates the location and amount of the bat activity detected.	
Badger	No evidence of setts on site or within the immediate surrounding area and no other field evidence (e.g. prints, latrines etc.) was recorded. No significant extent of suitable shelter or refuge habitat present, and the site is regularly disturbed and used by dog walkers, reducing the potential for Badger sett creation. The grassland provides a limited extent of suitable foraging habitat. The local records search identified three records within a 2km radius, located to the south-west associated with open parkland and wetland habitats with the closest record 1.1km from the site boundary. The South Yorkshire Badger Group do not hold any further records of Badger within a 2km radius.	Negligible
Dormouse	No records within a 2km radius (including no records of previous Natural England EPS licences). No significant extent of favourable Dormouse habitat and the site lies in an area of the country where this species is considered extinct.	Negligible
Otter & Water Vole	No watercourses, waterbodies or other suitable habitats within or adjacent to the site likely to support Otter or Water Vole. Data search has revealed one record of Otter (1.75km south-west) and 46 records of Water Vole (concentrated at River Dove and River Dearne, and at closest 550m south).	Negligible
Other Protected Mammals	No records within search radius, no specific suitable opportunities for any other species of protected mammal identified.	Negligible
Specially Protected Birds	Data search has revealed records of 22 species listed on Schedule 1 of the Wildlife and Countryside Act 1981. Species include Kingfisher (<i>Alcedo atthis</i>), Little-ringed Plover (<i>Charadrius dubius</i>), Hobby (<i>Falco subbuteo</i>), Barn Owl (<i>Tyto alba</i>) and Redwing (<i>Turdus iliacus</i>), with the closest record located 750m from the site boundary. Site provides a limited extent of suitable foraging habitat for Barn Owl, with the presence of unmanaged tussocky grassland with a suitable litter layer likely to support small mammal prey. However, the site is relatively small, enclosed to the north, east and south, and is regularly disturbed by the public, therefore reducing the suitable for foraging Barn Owl.	Negligible

Ecological Feature	Details	Ecological Importance
	No other specific opportunities for any of these species or other specially protected species at the site. No habitats present which are well-connected or complementary to the habitats within the nearby statutory sites which are designated for Schedule 1 birds.	
Breeding, Wintering and Migratory Birds	The hedgerow, young trees and scrub provide a limited extent of suitable nesting habitat for a limited range of common nesting passerine species likely to be present at the site considering the site location and conditions. There is also limited potential for ground-nesting species such as Skylark (<i>Alauda arvensis</i>) within the unmanaged grassland and a significant limited extent of suitable nesting habitat for Lapwing (<i>Vanellus vanellus</i>) within the grazed grassland area at the south-west of the site, however, the suitability of these areas is somewhat reduced by the relatively enclosed nature of the site providing a wide field of view and by the regular disturbance by dog-walkers. No significant extent of high-value favourable nesting habitat present. Incidental observations during the Phase Survey comprise House Sparrow (<i>Passer domesticus</i>), Swallow (<i>Hirundo rustica</i>), Magpie (<i>Pica pica</i>), Wood Pigeon (<i>Columba palumbus</i>), Goldfinch (<i>Carduelis carduelis</i>), Blackbird (<i>Turdus merula</i>), Robin (<i>Erithacus rubecula</i>), Blue Tit (<i>Cyanistes caeruleus</i>), Jackdaw (<i>Corvus monedula</i>) and Carrion Crow (<i>Corvus corone</i>). The data search has revealed records of eight Priority Species of birds within a 2km radius in the last 10 years comprising Curlew (<i>Numenius arquata</i>), Grasshopper Warbler (<i>Locustella naevia</i>), Grey Partridge (<i>Perdix perdix</i>), House Sparrow, Lapwing, Reed Bunting (<i>Emberiza schoeniclus</i>), Tree Sparrow (<i>Passer montanus</i>) and Yellowhammer (<i>Emberiza citrinella</i>).	Local
Common Reptiles	No incidental observations made on site during any survey. Unmanaged grassland habitat provides a limited extent of suitable basking and foraging habitat, with hedgerows and scattered scrub providing limited extent of sheltering opportunities. No notable artificial refugia or hibernacula present. Limited connectivity to the surrounding landscape as the site is surrounded to the north and south by development and roads, and to the west by unsuitable short-grazed pasture. Data search has identified five records of Grass Snake (<i>Natrix natrix</i>) within a 2km radius, located at Wombwell Ings and Broomhill Flash more than 1km to the south-east beyond extensive areas of built development. No connectivity between the site and the location of these records. There is also a single 2008 record of Adder (<i>Vipera berus</i>) located 1.75km north-east of the site. Again, there is no connectivity of suitable habitat between the site and the location of this record.	Local

Ecological Feature	Details	Ecological Importance
	Due to site conditions, its size and its location surrounded by development and unsuitable habitat on three sides, it is considered the site likely supports a maximum of small numbers/individuals of common species only.	
Great Crested Newt	No records within a 2km radius (including no previous Natural England EPS licence applications). No waterbodies are present within the site to provide any potential breeding opportunities for GCN, however the grassland and scrub provide a limited extent of suitable terrestrial habitat, providing foraging and refuge potential. OS maps and aerial imagery do not indicate any waterbodies within a 250m radius of the site which may provide suitable breeding habitat for GCN. <i>Note: it is confirmed that a pond shown on OS maps at Low Valley Farm 230m west has been filled in and no longer present.</i> Maps and imagery indicate one further pond between 250m and 500m from the site boundary, located 350m to the west of the site, to the south of Pitt Street/Netherwood Road (which presents a partial barrier to the dispersal of GCN considering the 90° kerbs and traffic). Woodland, scrub and grassland in close proximity to the pond appear to provide an abundance of favourable GCN terrestrial habitat. Given the absence of any ponds to the north/east of the site to which GCN may attempt to disperse to, the relatively large distance between the site and the pond (350m), the favourable terrestrial habitats in close proximity to the pond and the presence of Pitt St/Netherwood Road representing a partial dispersal barrier, it is considered significantly unlikely any GCN would be present within the site boundary.	Negligible
Other Protected Herpetofauna	No records within a 2km radius and no specific opportunities for any other protected species of herpetofauna.	Negligible
Protected Fish/Marine	No aquatic habitat on site or within the immediate surrounding area. No connectivity to suitable off-site habitats. Data search identified two records of Three-Spined Stickleback (<i>Gasterosteus aculeatus</i>) and Ten-Spined Stickleback (<i>Pungitius pungitius</i>) associated with wetland habitats located 1.1km from the site boundary.	Negligible
White-clawed Crayfish	No records within search radius and no suitable habitats identified within or adjacent to the application footprint.	Negligible
Protected Invertebrates	No records of any protected invertebrate species within the 2km search radius. Site supports common and widespread habitats, and considering the location and size of the site, it is assessed as significantly unlikely any protected invertebrate species are present. No significant standing/fallen deadwood or any other specialised habitats likely to support a any specific protected species.	Negligible

Ecological Feature	Details	Ecological Importance
Protected Flora	No records within search radius and no protected flora identified during surveys. Common and widespread habitats present which are unlikely to support protected plant species.	Negligible
Invasive Flora	No invasive flora detected within the site boundary during any of the surveys undertaken (a stand of Japanese Knotweed (<i>Fallopia japonica</i>) is present 150m north-east of the site on the boundary of the adjacent field unit). Records within a 2km radius of Canadian Waterweed (<i>Elodea canadensis</i>), <i>Cotoneaster</i> sp., Giant Hogweed (<i>Heracleum mantegazzianum</i>), Indian Balsam (<i>Impatiens glandulifera</i>), Japanese Rose (<i>Rosa rugosa</i>), Japanese Knotweed, New Zealand Pigmyweed (<i>Crassula helmsii</i>), Nuttall's Waterweed (<i>Elodea nuttallii</i>), Parrot's-feather (<i>Myriophyllum aquaticum</i>), Rhododendron (<i>Rhododendron ponticum</i>), Virginia Creeper (<i>Parthenocissus quinquefolia</i>) and Variegated yellow archangel (<i>Lamium galeobdolon argentatum</i>).	Negligible
Invasive Fauna	No invasive fauna detected during surveys and not anticipated works are likely to lead to the spread of any invasive fauna species in the wild. Data search has identified two records of Grey Squirrel (<i>Sciurus carolinensis</i>) within a 2km radius.	Negligible
Priority Species	Data search has identified six records of Brown Hare (<i>Lepus europaeus</i>), 10 records of Hedgehog (<i>Erinaceus europaeus</i>), eight records of Harvest Mouse (<i>Micromys minutus</i>), three records of Cinnabar (<i>Tyria jacobaeae</i>), one record of Shaded Broad-Bar (<i>Scotopteryx chenopodiata</i>) and two records of Cornflower (<i>Centaurea cyanus</i>) within the 2km search radius. The unmanaged grassland, scattered scrub and hedgerow provide a limited extent of foraging and sheltering habitat for range of Priority Species such as Hedgehog. No uncommon or specialised habitats present providing any significant opportunities for any specific Priority Species.	Local

4.0 Assessment and Mitigation

4.1.1 Assessment of impacts and the associated ecological effect to identified ecological features are presented below. To clarify, ecological features have been screened out where no likely significant impacts have been identified or where impact is unlikely to occur (this includes: Local Wildlife Sites due to separation from application footprint). Cumulative effects are also considered where applicable. *Note: This assessment and mitigation section has not addressed the Safeguarded Land status within the Local Plan of land to the west of the site (as raised as a concern in consultation with the Council Biodiversity Officer).*

Table 6 – Assessment of effect and mitigation measures

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
Hedgerow HPI and Green Infrastructure	Loss, damage and/or fragmentation of habitats. Significant adverse, permanent, reversible impact	The full length of the existing eastern boundary hedgerow will be retained and protected and is incorporated into the final site layout. The hedgerow and other retained boundary trees and shrubs will be protected throughout the construction phase in accordance with BS5837:2012 (i.e. establishing root protection zones, installing protection fencing etc.). To avoid fragmentation impacts, the site layout has been designed to incorporate an east to west green corridor which will remain outside of garden areas. To avoid degradation of the wildlife corridor function of this hedgerow, a sensitive lighting scheme will be implemented (as described below), and the hedgerow will be brought into active management to promote a feature of high biodiversity value. <i>Note: the hedgerow will remain outside of gardens</i>	None proposed	None
Bats	Damage and/or degradation of Local value bat foraging habitat Minor adverse, permanent irreversible impact	The construction phase and operational development will incorporate a sensitive lighting scheme in accordance with <i>Bats and artificial lighting in the UK</i> (BCT & ILP, 2018) to minimise the risk of degradation of suitable bat foraging and commuting habitats from artificial lighting. As agreed with the Council	None proposed	None

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
		Biodiversity Officer details of the lighting scheme will be provided at the Reserved Matters stage. The above described hedgerow and tree protection measures will minimise the risk of direct damage to primary bat habitats during the works.		
Birds	Risk of killing/injury and disturbance of nesting birds during site clearance, including ground-nesting species (no significant habitat loss). Minor adverse, permanent, irreversible impact	Clearance of suitable nesting habitat will be undertaken outside of the bird nesting season (March to August inclusive). If clearance is necessary during this season, due to project timing constraints, habitats will be sensitively cleared by or under the supervision of an ECoW. Where active nests are identified an appropriate buffer will be retained until any young have fledged. As requested by the Council Biodiversity Officer, a breeding bird survey will be provided at the Reserved Matters stage to inform any further mitigation required in respect of ground-nesting birds. This survey should be undertaken in accordance with current guidance (Gilbert et al. 1998), with two survey repetitions conducted between April and June. The proposed landscape scheme will include areas of grassland (outside of gardens) which will be brought into active management and will provide some suitable nesting habitat for ground-nesting species.	None required (ground-nesting bird surveys provided at the Reserved Matters stage and any subsequent mitigation measures will demonstrate no residual effect)	None
Common Reptiles	Risk killing/injury of individual numbers during site clearance (no significant habitat loss). Minor adverse, permanent, irreversible impact	Grassland, scattered scrub and tall-herb habitats will be sensitively cleared under the direct supervision of an ECoW. This will progress from the middle of the site out towards to flush any reptiles into off-site habitats. Habitats will initially be cut to a height of 0.15m to encourage wildlife to move out of the construction area, prior to stripping of the remaining vegetation and top-soil.	None required	None

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
		Any reptiles which cannot be actively encouraged to move will be carefully picked up by the ECoW and relocated by hand to a safe refuge location off-site (this method is proportionate given the small extent of suitable habitat and likely small numbers which will be encountered, a full reptile survey is not justified). Confirmation of this sensitive clearance could be the subject of a suitably worded planning condition.		
Priority Species	Risk killing/injury of individual numbers during site clearance (no significant habitat loss). Minor adverse, permanent, irreversible impact	As above, habitats to be cleared in a sensitive manner either by or under the direct supervision of a suitably qualified ECoW. Any Priority Species found to be allowed to disperse into off-site habitats or will be relocated by hand to a safe location off site. As described above, this could be the subject of a suitably worded planning condition.	None required	None

5.0 Enhancement and Monitoring

- 5.1.1 Opportunities for biodiversity enhancement (above and beyond those required to mitigate for any identified impacts) have been determined through consideration of: Ecological Features identified on site and within the zone of influence; Historical records of protected species/habitats present within the locality; National and Local planning policy including National and Local Biodiversity habitats/species; Local Development Plans including consideration of Green/Blue Infrastructure Resource; Consultation with third parties/stakeholders where applicable; and Other influencing factors such as underlying Geology/Hydrology, intended operational activities, and existing disturbance activities within the locality. This makes specific reference to Biodiversity Net Gain, Good practice principles for development (CIEEM, IEMA, CIRA, 2019). A biodiversity offsetting metric i.e. DEFRA calculation, can be used to further demonstrate 'biodiversity net gain' where necessary.
- 5.1.2 The scope of the proposed enhancements have been informed by Appendix C of the Biodiversity and Geodiversity SPD (Barnsley Council, 2019b) which describes what biodiversity features are expected to be included in new developments, and considers the location of the site within the Dearne Valley Green Heart NIA, in addition to the requirements of local policy BIO1 of the Local Plan (Barnsley Council, 2019a).
- 5.1.3 A biodiversity offsetting calculation has been undertaken which confirms a biodiversity net gain is to be achieved with a 15.3% net gain calculated (which exceeds the 10% gain requested within consultation). Refer to Appendix C for a summary of the calculation.
- 5.1.4 A number of the enhancement features below (e.g. bird, bat and insect boxes) are not accounted for in the biodiversity offsetting calculation (i.e. as this accounts for area and length of habitats only and not individual features), and are considered to provide further biodiversity net gain proportionate to the location and size of the site.

Table 7 – Enhancement & Monitoring

Ecological Feature	Enhancement & Monitoring	Significance of Residual Effect
Hedgerow Priority Habitat and Green Infrastructure	The eastern boundary hedgerow will be extended and enhanced, through additional native planting and through being brought into active management to provide high-value habitat in the long-term. This new section of hedgerow will remain outside of garden boundaries. Although at the time of writing, no detailed landscape scheme has been produced, it is confirmed it is to include extensive further lengths of native tree and shrub planting. Planting is to be focussed on providing linear habitat connectivity across and around the site boundaries. Notably a green corridor is to be provided from east to west across the northern end of the site, and along the full length of the western boundary (it is confirmed these corridors will not comprise gardens). Areas of grassland will be created with seeding and management to provide species-rich grassland (it is accepted some areas will serve as close-mown amenity grass). The planting scheme will include a range of native species, species which are known to be of value to wildlife, and are	Moderate gain

Ecological Feature	Enhancement & Monitoring	Significance of Residual Effect
	appropriate to the site and conditions. These measures, alongside the mitigation measures described earlier in the report, will significantly enhance the green infrastructure and wildlife corridor function of habitats at the site including east to west connectivity and connectivity with the woodland habitats to the south.	
Aquatic/Wetland Feature	An attenuation basin is proposed at the south-west corner of the site. This area will be designed with a biodiversity consideration in ensuring it holds some water in the Spring and therefore provides potential breeding habitat for amphibians, and also will be planted with a wetland tolerant species-rich seed mix to encourage a wide range of wildlife including invertebrates and foraging bats.	Moderate gain
Birds	30 bird boxes will be provided at suitable locations within the developed site, to comprise a mixture of boxes to suit a variety of species likely to be present in the local area (i.e. a combination of 1SP Schwegler Terrace, Vivara Pro Woodstone Starling Nest Box, Woodstone Swift Nest Box and Vivara Pro Seville 32mm Woodstone Box, or similar products if not available). Boxes to be sited at least 3m high, and ideally high up under the eaves of the new properties, in a location away from significant sources of human disturbance and should avoiding south-facing aspects as these can receive excessive sunlight which can cause chicks to overheat in the nest.	Minor gain
Bats	10 bat boxes , such as the Beaumaris Woodstone Bat Box (or similar product if not available) will be installed at suitable locations at the new properties to provide significantly enhanced roosting opportunities at the site. At a height of at least 5m on a south/west facing aspect with clear flight line and away from sources of human disturbance (including artificial lighting sources) and ideally facing on to areas of suitable foraging/commuting habitat (such as the eastern boundary hedgerow and new western boundary corridor).	Minor gain
Common Reptiles & Priority Species	5 informal hibernacula (i.e. brash & log piles) will be installed at the site boundaries (i.e. the base of hedgerows around the new attenuation basin) to provide enhanced shelter, refuge and hibernation potential for a wide species including reptiles, amphibians, small mammals and invertebrates.	Minor gain
Invertebrates	5 insect boxes (such as the Elba Insect Tower or a similar product if not available) will be provided at suitable locations around the developed site to provide enhanced conditions for a range of invertebrates such as solitary bees. Boxes will be placed on fencing in areas of landscape planting which provide favourable habitats for feeding invertebrates.	Minor gain

5.1.5 No post-determination/operational site monitoring is considered necessary. To comply with guidance set out in BS42020:2013, a Construction Environment Management Plan (CEMP) which includes consideration of biodiversity will be produced prior to the commencement of construction activities, including site clearance works or archaeological investigations etc. A Landscape and Ecological Management Plan (LEMP) will then be produced prior to operation of the site to ensure the continued appropriate management and monitoring of ecological features. The production of both a CEMP and a LEMP can be requested within a planning condition or alternatively a combined Environmental Management Plan (EMP) can be produced.

6.0 Conclusion

- 6.1.1 No further pre-determination surveys are required to inform this assessment
- 6.1.2 Suitable mitigation measures can be incorporated into the proposed application to avoid, mitigate or compensate any potential impacts to ecological features and to demonstrate 'no biodiversity net loss' in accordance with NPPF and local planning policy. As such, no significant residual impact can be expected which would prevent determination of a planning application or development of this site.
- 6.1.3 Additionally, the proposals and site extent provide the opportunity to incorporate wide-ranging enhancements to demonstrate a 'biodiversity net gain' as confirmed by the DEFRA Biodiversity Offsetting Calculation.

7.0 References

- Barnsley Council. (2013). *Preliminary Ecological Appraisal - Land North of Pitt Street GAT21*. Barnsley: Barnsley Council.
- Barnsley Council. (2019a). *Barnsley Local Plan*. Barnsley: Barnsley Metropolitan Borough Council.
- Barnsley Council. (2019b). *Biodiversity and Geodiversity Supplementary Planning Document*. Barnsley: Barnsley Council.
- BCT & ILP. (2018). *Guidance Note 8/18 - Bats and artificial lighting in the UK*. London/Rugby: Bat Conservation Trust & Institute of Lighting Professionals.
- BSI. (2013). *Biodiversity - Code of practice for planning and development BS 42020:2013*. London: BSI Standards Limited.
- BSI. (2015). *BS 8596:2015 - Surveying for bats in trees and woodland - Guide*. London: BSI Standards Limited.
- CIEEM. (2016). *Guidelines for Assessing and Using Biodiversity Data*. Winchester: Chartered Institute of Ecology and Environmental Management.
- CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal*. Winchester: Chartered Institute of Ecology and Environmental Management.
- CIEEM. (2017). *Guidelines on Ecological Report Writing*. Winchester: Chartered Institute of Ecology and Environmental Management.
- CIEEM. (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, coastal and Marine*. Winchester: Chartered Institute of Ecology and Environmental Management.
- CIEEM, IEMA, CIRA. (2019). *Biodiversity Net Gain: Good practice principles for development*. CIEEM, CIRA & IEMA.
- CITB. (2016). *Construction (Design and Management) Regulations 2015*. Norfolk: Construction Industry Training Board. Retrieved from <https://www.citb.co.uk/Documents/CDM%20Regs/2015/cdm-2015-designers-printer-friendly.pdf>
- Collins, J. (2016). *Bat surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. London: The Bat Conservation Trust.
- DEFRA. (2019). *MAGIC*. Retrieved from <https://magic.defra.gov.uk/MagicMap.aspx>
- Enzygo. (2019). *Preliminary Ecological Appraisal - Land at Low Valley Farm, Pitt Street, Barnsley*. Cromhall: Enzygo Ltd.
- GOV.UK. (2019). *Collection on Biodiversity Offsetting*. Retrieved from <https://www.gov.uk/government/collections/biodiversity-offsetting>

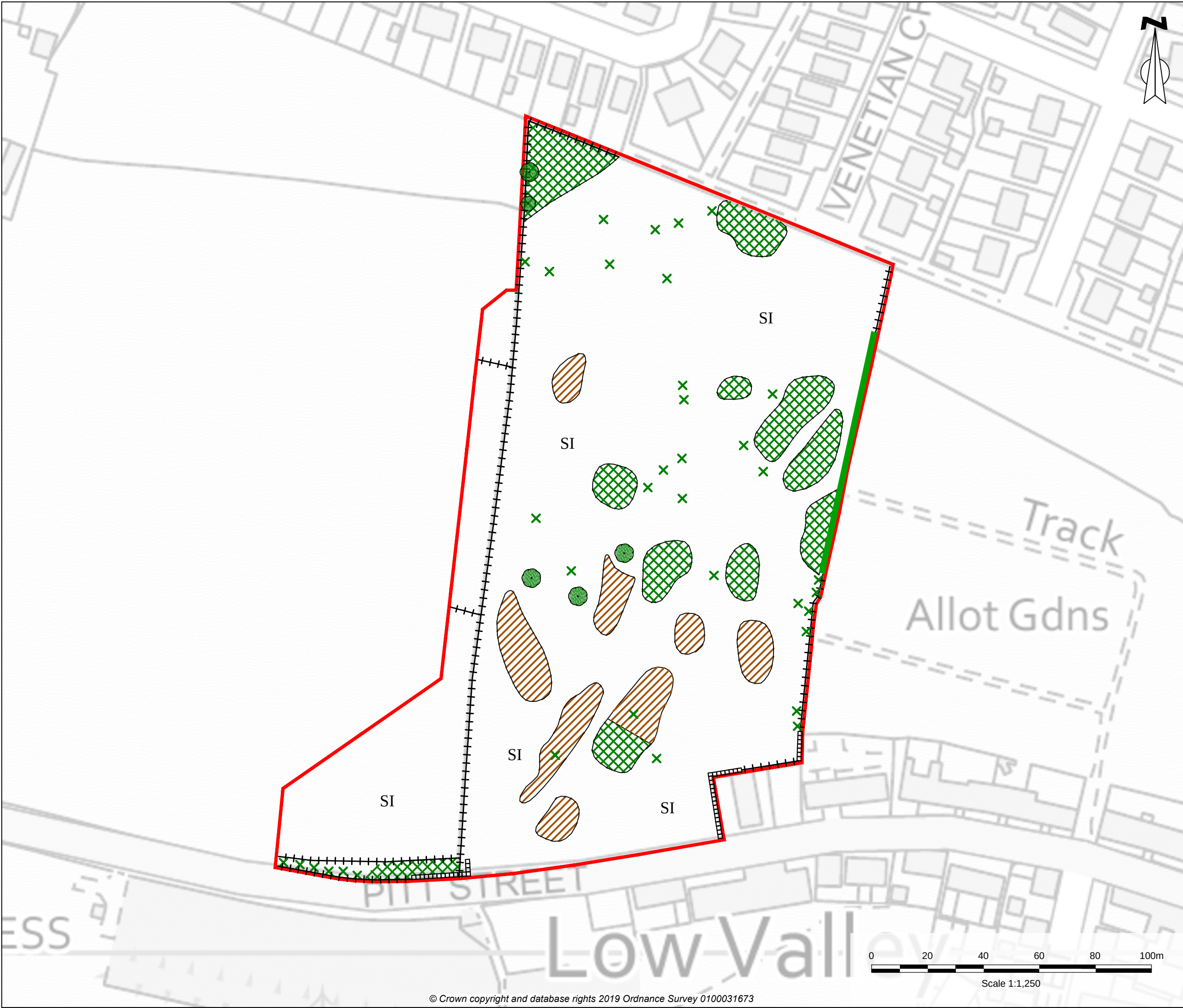
GOV.UK. (2019). *Guidance on Environmental Impact Assessment*. Retrieved from
<https://www.gov.uk/guidance/environmental-impact-assessment#Screening-Schedule-2-projects>

GOV.UK. (2019). *Guidance on GCN District Level Licensing Schemes*. Retrieved from
https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes?utm_source=987533b2-4ba3-44e7-9707-93f5189921d8&utm_medium=email&utm_campaign=govuk-notifications&utm_content=immediate

JNCC. (2010). *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*.
Peterborough: Joint Nature Conservation Committee.

Natural England. (2019). *National Character Area*. Retrieved from
<http://publications.naturalengland.org.uk/category/587130>

Drawing CRM.1122.003.EC.D.001 – Phase I Habitat Map



- Key**
- Site Boundary
 - Scrub - dense/continuous (A2.1)
 - Scrub - scattered (A2.2)
 - Mixed Parkland/scattered trees (A3.3)
 - SI Poor semi-improved grassland (B6)
 - Other tall herb and fern (C3.1)
 - Intact hedge (J2.1)
 - Fence (J2.4)
 - Wall (J2.5)



Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT:
Hartwood Estates

SCALE: 1:1,250@A3 PROJECT REF: CRM.1122.003

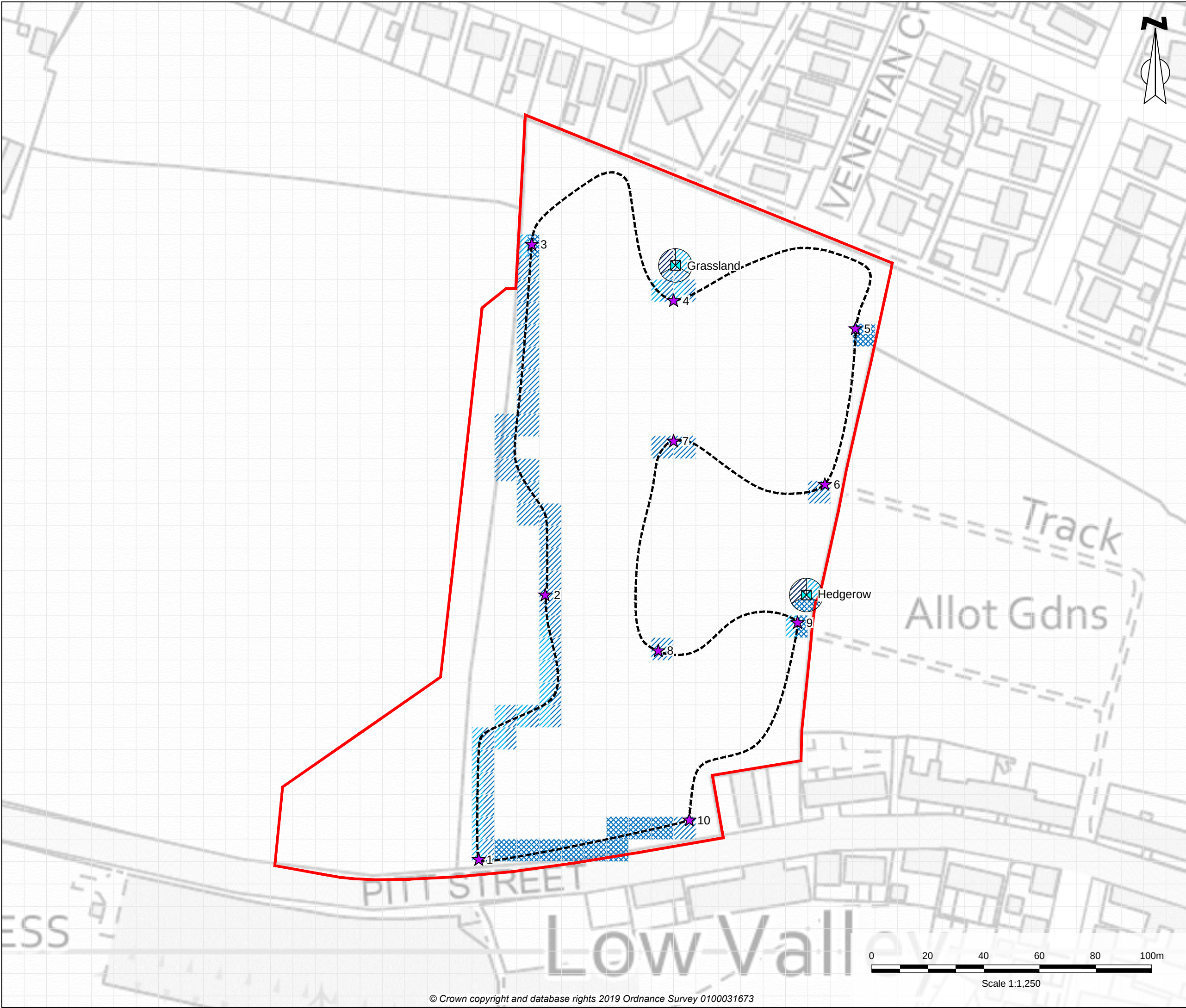
DRAWN: MG CHECKED: CS DATE: July 2019

PROJECT:
Land at Low Valley Farm,
Pitt Street

TITLE:
Phase I Habitat Map

DRAWING NO:
CRM.1122.003.EC.D.001

Drawing CRM.1122.003.EC.D.002 – Bat Survey Results



Key

Survey Boundary

PIPPYG
High BAI >=60

PIPPYG
Moderate BAI >=6 but <60

PIPPYG
Low BAI >0 but <6

PIPPIP
High BAI >=60

PIPPIP
Moderate BAI >=6 but <60

PIPPIP
Low BAI >0 but <6

PIP NAT
High BAI >=60

PIP NAT
Moderate BAI >=6 but <60

PIP NAT
Low BAI >0 but <6

Nothing Present
0

Sector

Spot Counts

SM4



Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT:

Hartwood Estates

SCALE:

1:1,250@A3

PROJECT REF:

CRM.1122.003

DRAWN:

MG

CHECKED:

CS

DATE:

Dec 2019

PROJECT:

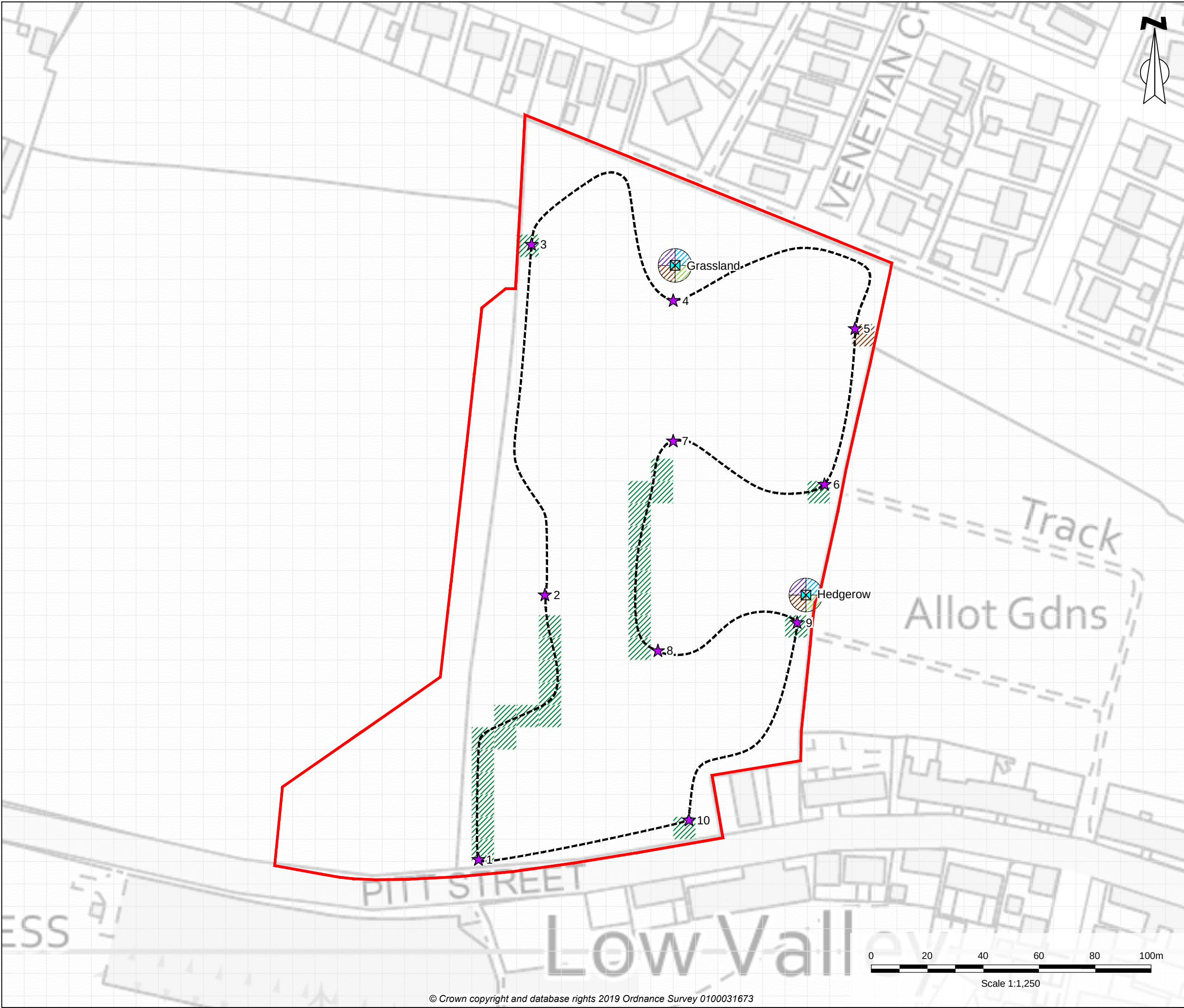
Pitt Street, Wombwell

TITLE:

Bat Activity Results
(Pipistrelle spp.)

DRAWING NO:

CRM.1122.003.EC.D.002.A



Key

- Survey Boundary
- NYCNO
High BAI ≥ 60
- NYCNO
Moderate BAI ≥ 6 but < 60
- NYCNO
Low BAI > 0 but < 6
- NYCLEI
High BAI ≥ 60
- NYCLEI
Moderate BAI ≥ 6 but < 60
- NTCLEI
Low BAI > 0 but < 6
- PLEAU
High BAI ≥ 60
- PLEAU
Moderate BAI ≥ 6 but < 60
- PLEAU
Low BAI > 0 but < 6
- MYODAU
High BAI ≥ 60
- MYODAU
Moderate BAI ≥ 6 but < 60
- MYODAU
Low BAI > 0 but < 6
- Nothing Present
0
- Spot Counts
- Sector
- SM4

enzygo
environmental consultants

Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT:
Hartwood Estates

SCALE:
1:1,250@A3

PROJECT REF:
CRM.1122.003

DRAWN:
MG

CHECKED:
CS

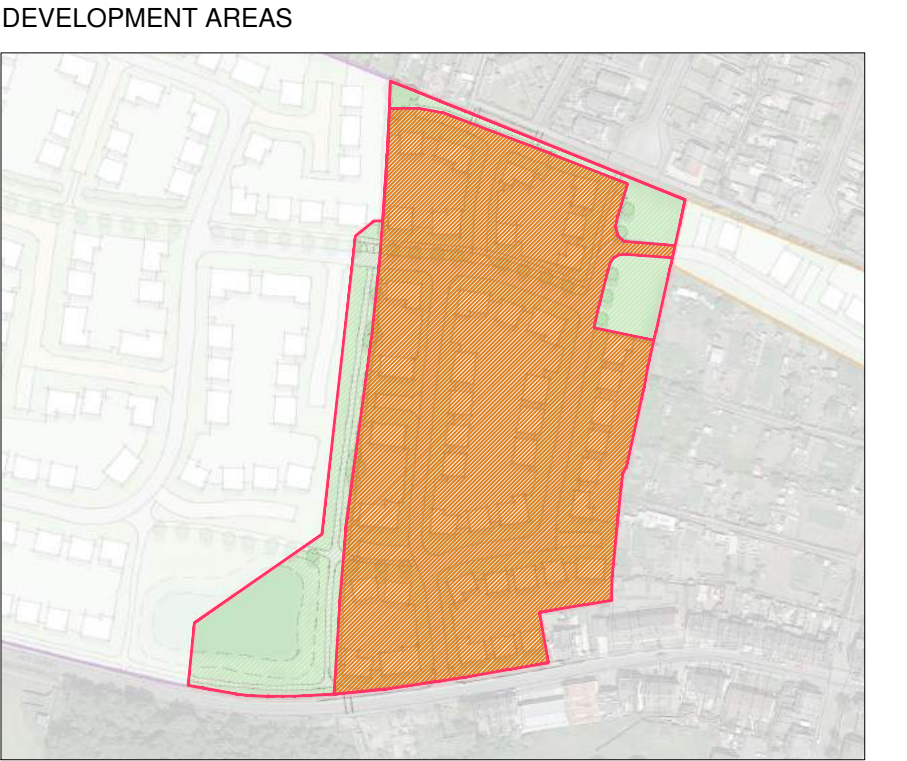
DATE:
Dec 2019

PROJECT:
Pitt Street, Wombwell

TITLE:
**Bat Activity Results
(Nyctalus spp. and Other)**

DRAWING NO:
CRM.1122.003.EC.D.002.B

Appendix A – Proposed Site Layout



DEVELOPMENT AREA = 2.67 HECTARES (107 UNITS @40 DPH)

PUBLIC OPEN SPACE & DRAINAGE = 0.71 HECTARES (26%)

GROSS AREA = 3.38 HECTARES

KEY TO MASTERPLAN:

APPLICATION BOUNDARY

PUBLIC RIGHT OF WAY

C	14.08.19	ACCESS POSITION MOVED FURTHER WEST, AWAY FROM EXISTING PROPERTIES. DWELLINGS RE-ORIENTATED TO OVERLOOK ACCESS & FOOTPATH.	LB	LM
B	27.06.19	EAST-WEST GREEN ROUTE ADDED HEDGE SHOWN RETAINED ON EASTERN BOUNDARY ACCESS POSITION MOVED FURTHER WEST PUBLIC OPEN SPACE ENLARGED & LAP RELOCATED	LB	
A	17.05.19	DRAWING LOCATED ACCORDING TO NEW TOPO SURVEY CONTOURS SHOWN	LB	

REV	DATE	DESCRIPTION	BY	CHECK
-----	------	-------------	----	-------



CLIENT:
HARTWOOD

PROJECT:
LAND AT PITT STREET
WOMBWELL

DRAWING:
ILLUSTRATIVE MASTERPLAN

DRAWING NUMBER:
P09 4270 101

SCALE @ A2:
1:1000

DRAWN:
LB

DATE:
13.05.19

CHECKED:

DATE:

14 MARINER COURT / CALDER PARK / WAKEFIELD / WF4 3FL
01924 383322 / www.jrpassoc.co.uk / info@jrpassoc.co.uk
jrpassoc is a trading style of John R Pailey Associates Limited

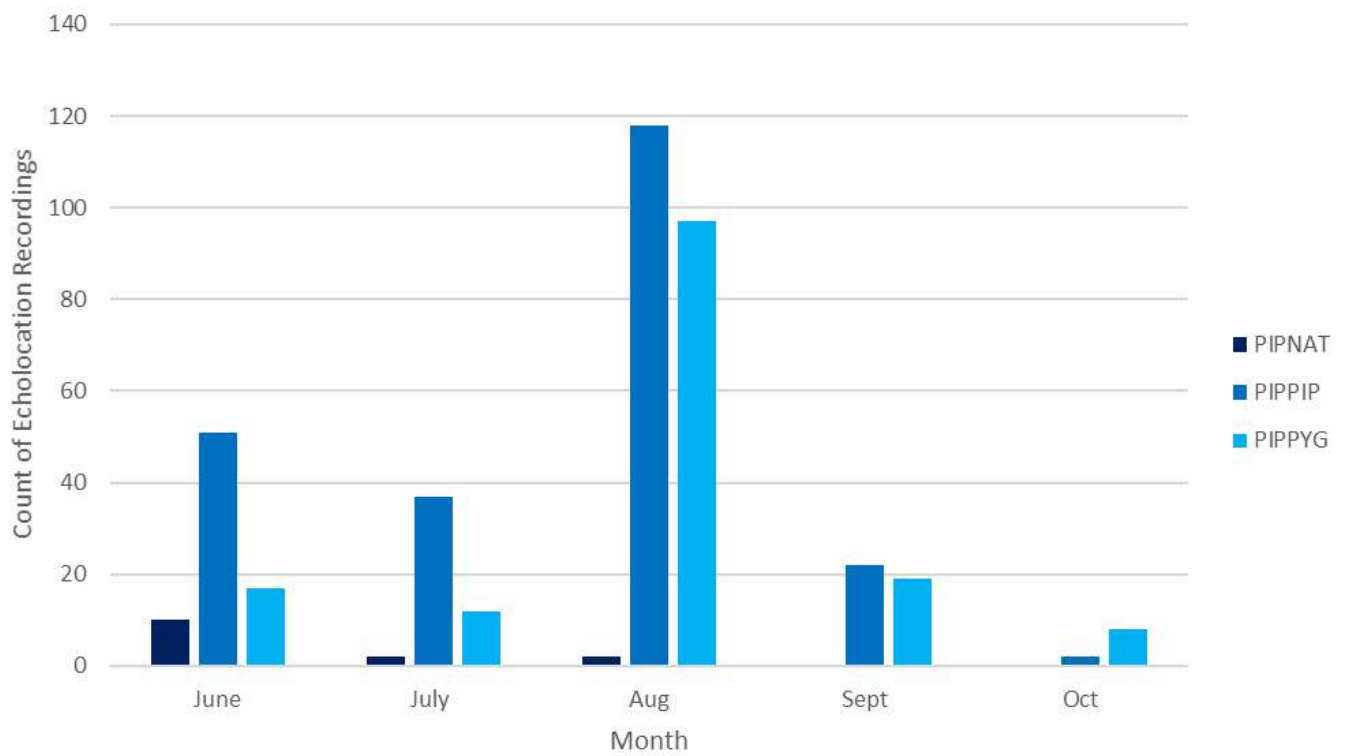
Appendix B – Bat Activity Survey Results

Number of passes																				
SM4																				
Date	location	hrs	RHIFER	RHIHIP	NYONOC	NYCLEI	EPTSER	BARBAR	PIPPIP	PIPPYG	PIP NAT	PLEAUR	PLEAUS	MYODAU	MYONAT	MYOMYS	MYOALC	MYOBRA	MYOBEC	VAGRAN
23/05/19 - 28/05/19	Grassland	42.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23/05/19 - 28/05/19	Hedgerow	42.50	-	-	21	2	-	-	166	13	-	-	-	2	-	-	-	-	-	-
26/06/19 - 01/07/19	Grassland	40.00	-	-	91	7	-	-	51	17	10	1	-	-	-	-	-	-	-	-
26/06/19 - 01/07/19	Hedgerow	40.00	-	-	28	4	-	-	962	18	101	1	-	-	-	-	-	-	-	-
25/07/19 - 30/07/19	Grassland	45.00	-	-	17	3	-	-	37	12	2	-	-	1	-	-	-	-	-	-
25/07/19 - 30/07/19	Hedgerow	45.00	-	-	23	1	-	-	355	28	4	-	-	-	-	-	-	-	-	-
05/09/19 - 11/09/19	Grassland	55.00	-	-	11	13	-	-	118	97	2	-	-	2	-	-	-	-	-	-
05/09/19 - 11/09/19	Hedgerow	55.00	-	-	-	2	-	-	1151	56	1	1	-	2	-	-	-	-	-	-
25/09/19 - 30/09/19	Grassland	65.00	-	-	3	-	-	-	22	19	-	-	-	-	-	-	-	-	-	-
25/09/19 - 30/09/19	Hedgerow	65.00	-	-	4	-	-	-	681	28	-	1	-	-	-	-	-	-	-	-
24/10/19 - 30/10/19	Grassland	88.50	-	-	-	-	-	-	2	8	-	-	-	-	-	-	-	-	-	-
24/10/19 - 30/10/19	Hedgerow	88.50	-	-	-	-	-	-	213	2	-	-	-	-	-	-	-	-	-	-
Total		672.00	0	0	198	32	0	0	3758	298	120	4	0	7	0	0	0	0	0	0
Bat Activity Index (BAI)			0.00	0.00	0.29	0.05	0.00	0.00	5.59	0.44	0.18	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00

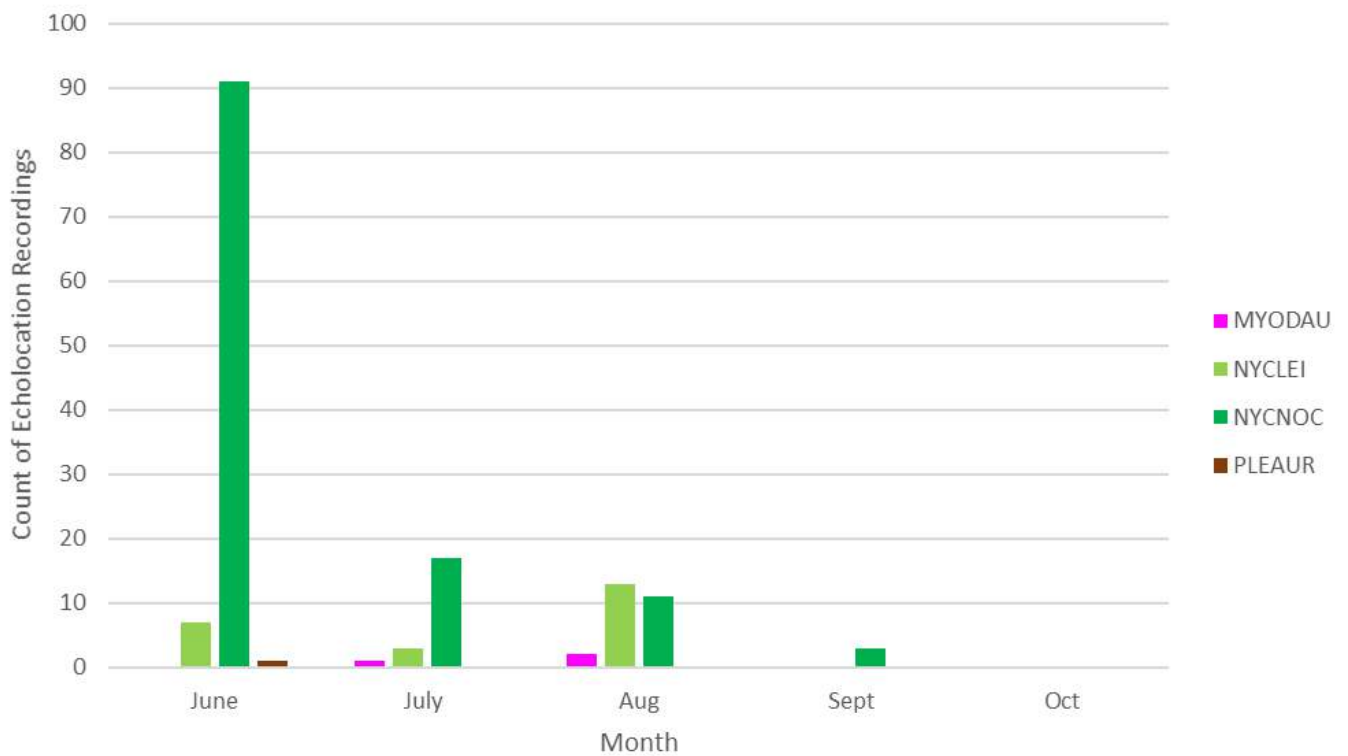
Date	Transect	Spot Count/		hrs	Number of passes																	
		Sector			RHIFER	RHIHIP	NYCNO	NYCLEI	EPTSER	BARBAI	PIPPIP	PIPPYG	PIPNAT	PLEAUR	PLEAUS	MYODA	MYONA	MYOMI	MYOAL	MYOBR	MYOBE	VAGRAI
25/05/2019	1	10		0.5833	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	10-1.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	1		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	1-2.		0.0667	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	2		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	2-3.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	3		0.1667	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	3-4.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	4		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	4-5.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	5		0.1667	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	5-6.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	6		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	6-7.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	7		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	7-8.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	8		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	8-9.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	9		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/05/2019	1	9-10.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	5		0.5833	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	5-6.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	6		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	6-7.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	7		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	7-8.		0.0833	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	8		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	8-9.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	9		0.1667	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	9-10.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	10		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	10-1.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	1		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	1-2.		0.0500	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	2		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	2-3.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	3		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	3-4.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	4		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26/06/2019	1	4-5.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	1		0.5833	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	1-10.		0.0333	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	10		0.1667	-	-	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	10-9.		0.0833	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	9		0.1667	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	9-8.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	8		0.1667	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	8-7.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	7		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	7-6.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	6		0.1667	-	-	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	6-5.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	5		0.1667	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	5-4.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	4		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	4-3.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	3		0.1667	-	-	3	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	3-2.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	2		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/07/2019	1	2-1.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	1		0.5833	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	1-2.		0.0667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	2		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	2-3.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	3		0.1667	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	3-4.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	4		0.1667	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	4-5.		0.0667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	5		0.1667	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	5-6.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	6		0.1667	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	6-7.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	7		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	7-8.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	8		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	8-9.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	9		0.1667	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	9-10.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	10		0.1667	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22/08/2019	1	10-1.		0.0333	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	3		0.5833	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	3-2.		0.0333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	2		0.1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	2-1.		0.0667	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	1		0.1667	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	1-10.		0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25/09/2019	1	10		0.16																		

[illegible]

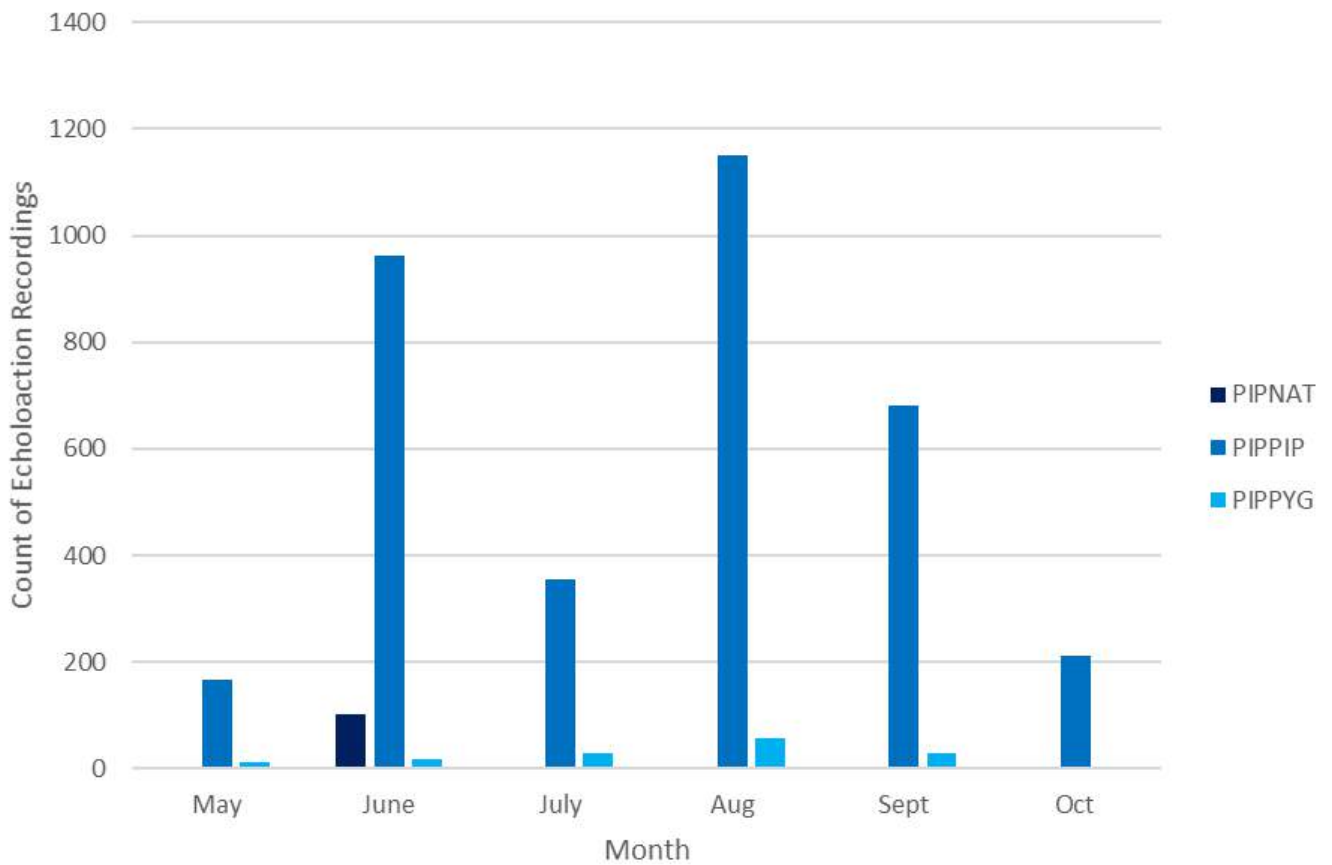
Grassland Temporal Variation of Pipistrelle Species Activity



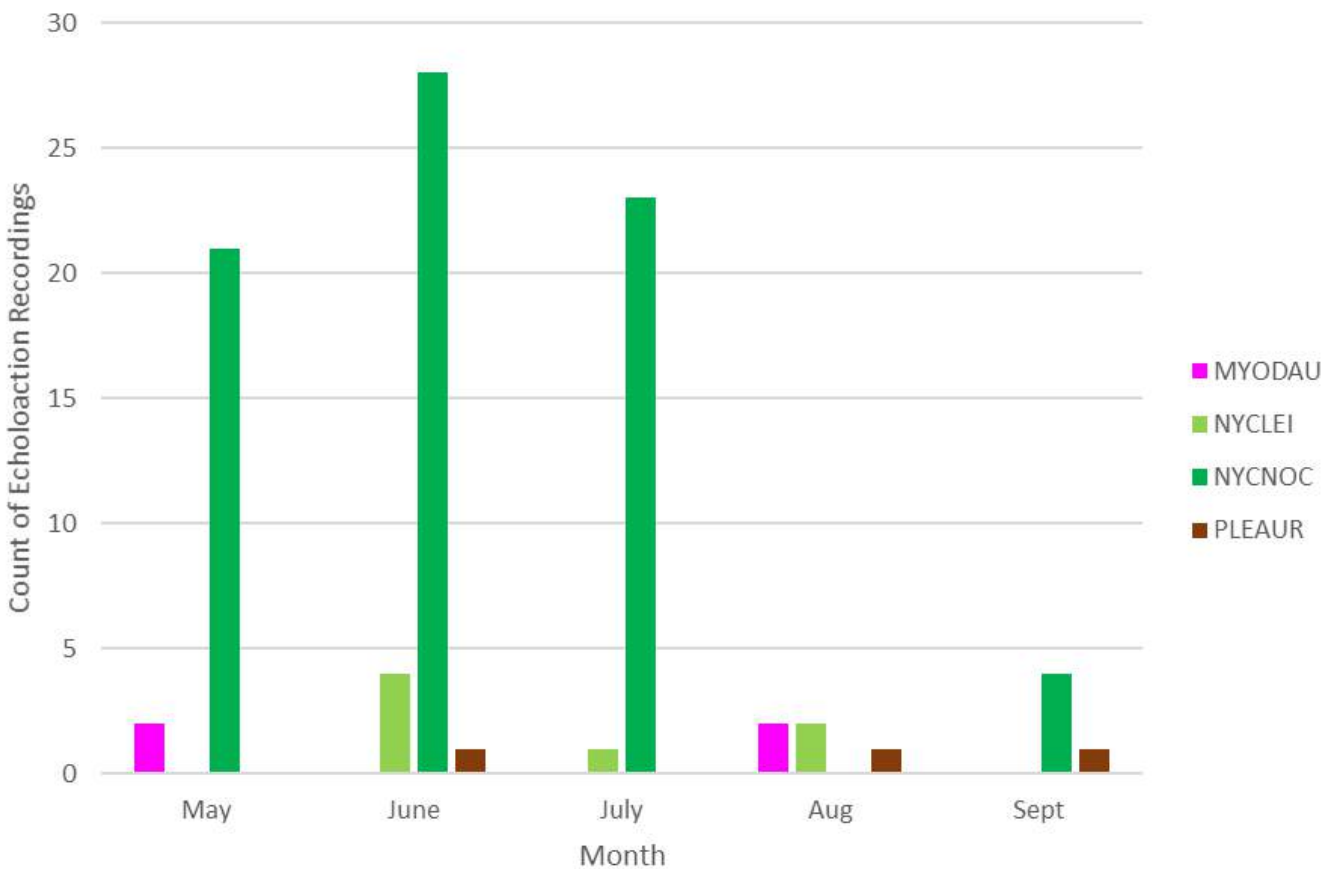
Grassland Temporal Variation of Other Species Activity



Hedgerow Temporal Variation of Pipistrelle Species Activity



Hedgerow Temporal Variation of Other Species Activity



Appendix C – Biodiversity Offsetting Calculation Summary

Project details	
Local Planning Authority:	Barnsley Metropolitan Borough Council
Site name:	Pitt Street, Wombwell
Planning application ref.:	2019/1117
Site grid reference:	SE 40535 04142
Assessor:	Chris Schofield - Senior Ecologist at Enzygo
Date:	6th December 2019

Net biodiversity balance			
Habitat type	Net effect	Units	% Gross
Habitats	Biodiversity gain	1.13	15.3
Linear	Linear gain	3.69	0.0

Biodiversity accounting summary			
Habitats	Area (ha)	Units	
Existing site	3.38	7.38	
Gross habitat loss	3.38	-7.38	
Onsite habitat compensation		8.51	
Net habitats balance		1.13	
Linear features	Length (km)	Units	
Total existing length onsite	0.09	0.36	
Gross linear loss	0.00	0.00	
Onsite linear compensation		3.69	
Net linear balance		3.69	

BIODIVERSITY OFFSET SUMMARY

Biodiversity offset credit requirement		
Habitat type	No Net Loss	Additional requirement for Net Gain (10%)
Total habitats	none	none
Total linear features	none	none

Offset strategy for No Net Loss			
Habitat type	Distinctiveness	Strategy	Credits
Habitats	High (Priority habitats)	Like-for-like	0
	Medium	Same or better	0
	Low	Trade up	0
Linear	Hedgerows	Like-for-like or	0
	Lines of trees	trade up within	0
	Ditches and streams	type	0
	Other linear		0

www.environmentbank.com

tel: 01765 278995

The proposed development will result in a net gain to biodiversity, no further offsite compensation is required.

BIODIVERSITY OFFSET REQUIREMENT: Habitats and linear features

Minimum credit compensation for no net loss to biodiversity, by habitat type

Distinctiveness	Habitat type	Conservation credits	Offset strategy
High	TOTAL	0	Like-for-like
	Arable: Arable field margins	0	
	Arable: Other high distinctiveness arable	0	
	Other Features: Other high distinctiveness feature	0	
	Grassland: Calaminarian grasslands	0	
	Grassland: Lowland dry acid grassland	0	
	Grassland: Other acid grassland	0	
	Grassland: Lowland calcareous grassland	0	
	Grassland: Upland calcareous grassland	0	
	Grassland: Other calcareous grassland	0	
	Grassland: Lowland meadows	0	
	Grassland: Upland hay meadows	0	
	Grassland: Marsh/marshy grassland	0	
	Grassland: Purple moor grass and rush pastures	0	
	Grassland: Other high distinctiveness grassland	0	
	Woodland: Native broadleaved woodland	0	
	Woodland: Lowland Beech and Yew woodland	0	
	Woodland: Lowland mixed deciduous woodland	0	
	Woodland: Upland mixed Ashwoods	0	
	Woodland: Upland Oakwood	0	
	Woodland: Wet woodland	0	
	Woodland: Native Pine woodlands	0	
	Woodland: Wood-pasture and parkland	0	
	Woodland: Scattered trees some veterans	0	
	Woodland: Traditional orchard	0	
	Woodland: Bracken with diverse flora	0	
	Woodland: Other high distinctiveness woodland	0	
	Heathland: Lowland heathland	0	
	Heathland: Mountain heaths and Willow scrub	0	
	Heathland: Upland heathland	0	
	Heathland: Wet heath	0	
	Heathland: Other high distinctiveness heathland	0	
	Freshwater: Aquifer fed naturally fluctuating water bodies	0	
	Freshwater: Standing water	0	
	Freshwater: Priority ponds	0	
	Freshwater: Rivers and streams	0	
	Freshwater: Other high distinctiveness freshwater	0	
	Wetland: Blanket bog	0	
	Wetland: Lowland raised bog	0	
	Wetland: Lowland fens	0	
	Wetland: Upland flushes, fens and swamps	0	
	Wetland: Coastal and floodplain grazing marsh	0	
	Wetland: Reedbeds	0	
	Wetland: Other high distinctiveness wetland	0	
	Coastal & Estuary: Coastal saltmarsh	0	
	Coastal & Estuary: Coastal sand dunes	0	
	Coastal & Estuary: Coastal vegetated shingle	0	
	Coastal & Estuary: Maritime cliff and slopes	0	
	Coastal & Estuary: Saline lagoons	0	
	Coastal & Estuary: Other high distinctiveness coastal	0	
	Inland Rock: Open mosaic habitats on prev. dev. land	0	
	Inland Rock: Inland rock outcrop and scree habitats	0	
	Inland Rock: Other high distinctiveness rock	0	
Medium	TOTAL	0	Same or better
Low	TOTAL	0	Trade up
Linear Features	Hedgerows	0	Like-for-like or trade
	Line of trees	0	up within type
	Ditches	0	
	Other	0	



Biodiversity Impact Calculator - Habitats
v2 - May 2019

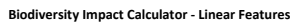
Local Planning Authority:	Barnsley Metropolitan Borough Council
Site name:	Pitt Street, Wombwell
Planning application reference number:	2019/1117
Site grid reference:	SE 40535 04142
Assessor:	Chris Schofield - Senior Ecologist at Enzygo
Date:	6th December 2019
Edit comments:	

KEY	
	No action required
	Action required
	Drop-down menu
	Calculation
	Automatic lookup
Result	

Minimum target for biodiversity Net Gain (%)		10		Existing biodiversity units												Comment							
Existing site habitats				Existing habitat distinctiveness		Existing habitat condition		Areas to be retained and protected during development		Habitats to be lost and subsequent recreation		Comment											
Please enter <u>all</u> existing habitats within the development site:				Habitat area (ha)	Distinctive	Score	Condition	Score	Habitats to be maintained	Habitats to be restored	New habitat creation		Habitats to be lost and subsequent recreation										
Parcel ID	Existing habitat baseline																						
	Direct impacts and retained habitats	A		B		C		D	DivBxC = E	F	FidBxC = G	H	Units to be enhanced	HidBxC = I	J	Units lost	JidBxC = K						
	Grassland: Improved grassland	2.86	Low	2	Poor	1									2.86	5.72		Area of the species-poor neutral grassland. No uncommon or rare species, or species indicative of more species-rich grassland					
	Other features: Tall ruderal	0.21	Low	2	Poor	1									0.21	0.42		Limited areas of scattered trees and shrubs, distinct from the broadleaf plantation areas					
	Woodland: Scrub	0.31	Medium	4	Poor	1									0.31	1.24		Areas of colonising bramble scrub within the grassland. Young self-seeded and bramble dominated therefore considered poor condition					
					</																		

Parcel ID	Proposed habitats on site		Target habitats distinctiveness		Target habitat condition		Temporal factor		Difficulty factor		Biodiversity units generated	Comment	
	Development, mitigation and onsite compensation		Area (ha)	Distinctive	Score	Condition	Score	Time (years)	Score	Difficulty	Score		
	1: Habitat recreation Enter target habitat to be recreated on area of development										(Q1 x R1 x S1) / T1 / U1		
	Habitat impact		Q1			R1					U1		
	Built Environment: Buildings and hardstanding		1.02	None	0	Poor	1	5 years	1.2	n/a	1	0.00	Includes all areas of building, access roads and footpaths
	Built Environment: Gardens and amenity areas		1.61	Low	2	Moderate	2	5 years	1.2	Low	1	5.37	Area of gardens
	Grassland: Lowland meadows		0.20	High	6	Moderate	2	10 years	1.4	Medium	1.5	1.14	Total area of grassland is 0.47ha, conservatively assume 0.2ha will be seeded and managed to species-rich grassland
	Grassland: Amenity grassland		0.27	Low	2	Poor	1	5 years	1.2	Low	1	0.45	0.27ha of 0.47ha area of proposed grassland assumed to be amenity grassland (likely an over-estimate)
	Woodland: Scattered trees		0.11	Medium	4	Moderate	2	10 years	1.4	Medium	1.5	0.42	Measured as area of trees shown on masterplan
	Freshwater: Sustainable Urban Drainage Systems		0.17	Medium	4	Moderate	2	5 years	1.2	Low	1	1.13	Area of attenuation basin at south-west corner

KEY	
	No action required
	Action required
	Drop-down menu
	Calculation
	Automatic lookup
Overall	Net loss to biodiversity
Result	Net gain to biodiversity



KEY	
	No action required
	Enter value
	Drop-down menu
	Calculation
	Automatic lookup
	Result

Existing biodiversity units		
Lengths to be retained and <u>protected</u> during development		Habitats to be lost
Habitats to be <u>maintained</u>	Habitats to be <u>restored</u>	

[illegible]

Appendix D- Legislation and National Planning Policy

Legislation Protection Afforded to Sites/Habitats that could Potentially be Affected by the Proposed Works

Designated Site/Habitat	Legal Status
Hedgerows	Hedgerows that meet certain criteria are protected by The Hedgerows Regulations 1997, under which it is an offence to remove or destroy such hedgerows without permission from the Local Planning Authority.

Legislation Protection Afforded to Species that could Potentially be Affected by the Proposed Works

Species	Legal Status
European Protected	
Bats	These animal species and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) Regulations 2012, which makes it illegal to: - Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; - Deliberately disturb such an animal; - Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licences can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed: - The development is for reasons of overriding public interest; - There is no satisfactory alternative; and - The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed.
Nationally Protected	
Bats	These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: - Intentionally kill, injure or take any such animal; - Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and - Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Viviparous/Common Lizard, Grass Snake, Slow-worm	These animals receive limited protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal to intentionally kill or injure any such animal.
Nesting Birds (general)	All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: Intentionally kill, injure or take any wild bird;

Species	Legal Status
	Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Wild Mammals	The Wild Mammals (Protection) Act 1996 makes it illegal to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
Invasive Species	
None	-

Section 40 of the Natural Environment and Rural Communities Act 2006 (the NERC Act) places a legal duty on public bodies, including planning authorities, to 'have regard' to the conservation of biodiversity when carrying out their normal functions, which includes consideration of planning applications.

In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is known as the list of Habitats and Species of Principal Importance (HPI/SPI), of which there are 56 habitats and 943 species. The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act.

National Planning Policy

The NPPF set out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined.

The NPPF states that:

'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'

Under the NPPF, the Planning Authority has a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan.

Also under the NPPF the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.



Enzygo specialise in a wide range of technical services:

Property and Sites

Waste and Mineral Planning

Flooding, Drainage and Hydrology

Landscape Architecture

Arboriculture

Permitting and Regulation

Waste Technologies and Renewables

Waste Contract Procurement

Noise and Vibration

Ecology Services

Contaminated Land and Geotechnical

Traffic and Transportation

Planning Services

BRISTOL OFFICE

The Byre
Woodend Lane
Cromhall
Gloucestershire GL12 8AA
Tel: 01454 269 237

SHEFFIELD OFFICE

Samuel House
5 Fox Valley Way
Stocksbridge
Sheffield S36 2AA
Tel: 0114 321 5151

MANCHESTER OFFICE

Ducie House
Ducie Street
Manchester
M1 2JW
Tel: 0161 413 6444

Please visit our website for more information.

enzygo.com