



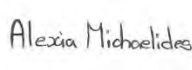





Gwent Police Operational Facility
Turnpike Road, Cwmbran, Torfaen

Ecological Assessment

March 2023

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Executive summary

Gwent Police Operational Facility is located to the west of Croesyceiliog Bypass A4042, Cwmbran, Torfaen, NP44 2XJ, centred on national grid reference ST 30808 95278. Gwent Police is seeking planning permission for the demolition of the three pre-existing buildings on site and the construction of a police station and custody suite, fleet service building, specialist training building and associated parking and landscaping.

First Ecology was commissioned to undertake an ecological assessment of the site to confirm the ecological constraints relating to the works and provide a method statement, as appropriate, to enable statutory compliance.

The desk study confirmed the presence of one non-statutory designated site of importance for nature conservation (County Hall) within the site. In addition, there were a further 21 non-statutory designated sites within a 2km radius of the site. There were records of 146 legally protected species within a 2km radius of the site, with further records of four categories of bats that were not identified to species level.

The preliminary habitat assessment identified six UKHab types of which the lowland mixed deciduous woodland and hedgerow qualify as habitats of principal importance. In addition, scattered trees were located across the site.

The bat survey confirmed that the workshop is used as a day and hibernation (unconfirmed) roost by common pipistrelle and soprano pipistrelle bats. There was evidence of barn swallows in the form of active and inactive nests on the western elevation of the administration building and two inactive nests in the internal area of the workshop. In addition, the site does have the potential to support badgers, great crested newts, hazel dormice and various species of reptile.

Works will be undertaken as follows:

- Consultation with the managing authority.
- Retention and protection of the majority of scattered trees, all of the hedgerow and all of the woodland.
- Arboricultural impact assessment, method statement and tree protection plan.
- Lighting scheme review.
- Precautionary site management - badgers and other mammals.
- Unexpected encounter - badger or a sett protocol implementation.
- Bat mitigation licence sought from, and issued by, Natural Resources Wales.
- Preliminary bat roost assessment of any trees requiring removal.
- Unexpected encounter - bat protocol implementation.
- Breeding bird check, if required.
- Bird nest sites.
- Unexpected encounter - great crested newt protocol implementation.
- Unexpected encounter - reptile protocol implementation.

Further ecological consultation will be sought if the scope of the work changes significantly or if the onset of the work is delayed by more than 12 months from the date of the most recent survey.

1.0 Introduction

1.1 Site location

1.1.1 Gwent Police Operational Facility is located to the west of Croesyceiliog Bypass A4042, Cwmbran, Torfaen, NP44 2XJ, centred on national grid reference ST 30808 95278.

1.2 Background to the activity/development

1.2.1 Gwent Police is seeking planning permission for the demolition of the three pre-existing buildings on site and the construction of a police station and custody suite, fleet service building, specialist training building and associated parking and landscaping (Figure 1).

1.2.2 First Ecology was commissioned to undertake an ecological assessment of the site to confirm the ecological constraints relating to the works and provide a method statement, as appropriate, to enable statutory compliance.

1.3 Objectives

1.3.1 The assessment objectives are listed as follows:

- Identify all relevant statutory and non-statutory designated areas of conservation importance and features of ecological significance relating to the site and area within a 2km radius of the site.
- Identify habitats of principal importance relating to the site and area within a 2km radius of the site.
- Identify protected species and species of principal importance within the site and area within a 2km radius of the site.
- Broadly classify habitats within the site in accordance with UKHab categories.
- Identify incidental and supplementary evidence of protected species activity and assess the potential of the site to support protected species.
- Undertake surveys to confirm the presence or likely absence of protected species and, if present, the extent and type of protected species activity and/or value of habitats.
- Assess the potential impact of the works on protected and notable habitats and species.
- Inform the design of a proportionate strategy to avoid negative impacts on protected and notable habitats and species.
- If avoidance is not possible, propose actions to mitigate the impact of the works on protected and notable habitats and species.
- If mitigation is not possible, specify compensation habitat for the protected and notable habitats and species impacted.
- Identify and propose options for the ecological enhancement of the site, if required.

2.0 Methodology

2.1 Statutory and non-statutory designated sites

2.1.1 Statutory and non-statutory designated site information relating to the site and area within a 2km radius of the site was reviewed. The review was undertaken by Alexia Michaelides (Appendix B). The resources consulted included the following:

- South East Wales Biodiversity Records Centre (SEWBRC) was commissioned to conduct a search for statutory and non-statutory designated sites of conservation importance and protected species consultation zones. Information was received on the 26th July 2022.

2.2 Habitats of principal importance

2.2.1 The SEWBRC data search was consulted to identify habitats of principal importance within the site and area within a 2km radius of the site. The review was undertaken on the 3rd August 2022 by Alexia Michaelides (Appendix B).

2.3 Ancient woodland

2.3.1 The SEWBRC data search was consulted to identify ancient woodland within the site and area within a 2km radius of the site. The review was undertaken on the 27th July 2022 by Alexia Michaelides (Appendix B).

2.4 Protected species records

2.4.1 Protected species records within a 2km radius of the site were reviewed. The review was undertaken by Alexia Michaelides (Appendix B). Information was obtained from the following sources:

- SEWBRC was commissioned to conduct a search for legally protected species and species of principal importance. Information was received on the 26th July 2022.

2.5 Habitats

2.5.1 The survey was completed in accordance with best practice guidance:

- British Standards Institution (2013). BS42020: Biodiversity Code of Practice for Planning and Development. British Standards Institution, London.
- British Standards Institution (2020). BS 8683. Process for designing and implementing Biodiversity Net Gain. Specification. British Standards Institution, London.
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1.
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2017). Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.

2.5.2 The site survey was undertaken on the 29th July 2022 by Alexia Michaelides (Appendix B).

2.5.3 The survey involved systematically inspecting the site and classifying habitats in accordance with UKHab categories. The survey also involved recording incidental observations of notable and invasive, non-native plant species.

2.6 Badgers

2.6.1 The badger (*Meles meles*) survey was completed in accordance with best practice guidance:

- Harris, S., Cresswell, P. and Jefferies, D. (1989). Surveying Badgers. Mammal Society, London.
- Natural England (2009). Guidance on 'Current Use' in the definition of a Badger Sett, WMLG17. Natural England, Peterborough.
- Neal, E. and Cheeseman, C. (2004). Badgers. Poyser Natural History, London.
- Roper, T. J. (2010). Badger. Collins New Naturalist, Glasgow.
- Scottish Natural Heritage (2003). Best Practice Guidance - Badger Surveys. Inverness Badger Survey 2003. Commissioned Report No. 096.

2.6.2 The preliminary badger survey was undertaken on the 29th July 2022 by Alexia Michaelides (Appendix B).

2.6.3 The survey involved inspecting the site and recording incidental evidence of badger activity in the form of live and dead badgers, day nests, faeces, footprints, hair, paths, push-throughs, scratching posts, setts and snuffle holes.

2.6.4 The survey also involved a visual inspection of the habitats within the site to assess their potential suitability for badgers to breed, commute, forage, rest and shelter.

2.7 Bats

2.7.1 The surveys were completed in accordance with best practice guidance:

- Bat Conservation Trust (2022). Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys. Bat Conservation Trust, London.
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.
- Mitchell-Jones A. and McLeish A. (2004). Bat Workers Manual (3rd Edition). Joint Nature Conservation Committee, Peterborough.
- Mitchell-Jones A. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

2.7.2 The preliminary bat survey was undertaken on the 29th July 2022 by Alexia Michaelides. An additional supplementary internal inspection of the workshop only was undertaken on the 20th September 2022 by Alexia Michaelides and Hannah Bates (Appendix B).

2.7.3 The surveys involved inspecting the buildings on site and recording incidental evidence of bat activity in the form of live and dead bats, droppings, feeding remains, perch abrasions, characteristic staining from urine and marks from grease secretions. The survey also focused on identifying roosting features of value to bats such as crevices and perches and access points. Visual assessments were aided by suitable equipment (Table 1).

Table 1. Preliminary bat survey equipment.

Date	Building reference	Equipment		
		Samsung Galaxy A21 digital camera	Opticron Verano 10x42 binoculars	Nebo Davinci 5000 torch
29/07/2022	All buildings	*	*	*
20/09/2022	Workshop	*		*

- 2.7.4 The survey also involved a visual inspection of the habitats within the site to assess their potential suitability for bats to commute and forage.
- 2.7.5 In addition, ordnance survey maps and aerial photographs were reviewed to identify habitats of potential value to bats in the wider landscape.
- 2.7.6 Buildings were subsequently ascribed a bat roost suitability status based on evidence of bat roosting activity, PRFs and habitat features within the landscape (Table 2).

Table 2. Bat roost suitability.

Roost suitability	Description
Confirmed	A structure or tree exhibiting evidence of bat roost activity in the form of live and dead bats, notable quantities of droppings and/or feeding remains, perch abrasions, characteristic staining from urine and marks from grease secretions.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by large numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Moderate	A structure or a tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only and not species conservation status).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats. A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	A structure or tree with negligible habitat features likely to be used by roosting bats.

- 2.7.7 The bat roost surveys of the workshop consisted of three dusk emergence surveys undertaken on the 10th August 2022, 24th August 2022 and the 20th September 2022 by Adam Chambers, Alexander Zee, Alexia Michaelides, Benjamin Hanson, Chloe Turner, Hannah Bates, Stephanie Bentham-Green and Thomas Bell (Appendix B). The surveys involved four surveyors observing all aspects of the workshop with roost suitability continuously throughout each survey.
- 2.7.8 The dusk emergence surveys commenced 15 minutes before sunset and continued for 90 minutes after sunset in suitable weather conditions. The surveyors were equipped with a bat detector and recording equipment and recorded bats and their activity in a defined area. Sound recordings were then processed using Kaleidoscope Pro Version 3.1.8 sound analysis software to confirm, if possible, the identification of any species of bat encountered emerging from or re-entering a roost within the workshop (Table 3).

Table 3. Bat roost manned survey equipment.

Date	Building reference	Elevation	Equipment						Surveyor initials	Surveyor locations (Figure 5)	
			Echometer Touch 2 Pro	Samsung Galaxy							
				S10	A71	A12	A21	A21s			A50
10/08/2022	Workshop	All	*	*	*	*	*			AM, AZ, HB, TB	1-4
24/08/2022			*	*		*	*	*		AC, AM, AZ, SBG	1, 2, 5, 6
20/09/2022			*		*		*	*		AM, BH, CT, HB	1-4

2.7.9 In addition, NVAs comprised of three night vision camcorders with externally mounted infrared lights together with three automated static detectors and/or hand-held bat detectors were deployed focused on the northern and western elevations of the amenities building and the northern, eastern and southern elevations of the workshop. At the darkest point of the survey a screenshot from the camera was taken to illustrate the field of view and visibility. Footage was subsequently reviewed in association with bat call sonogram analysis, processed using Kaleidoscope Pro Version 3.1.8 sound analysis software, to confirm, if possible, the identification of any species of bat emerging from or re-entering a roost within the workshop and/or the amenities buildings (Table 4).

Table 4. Bat roost NVA survey equipment.

Date	Building reference	Elevation(s)	Equipment					Photo	NVA location(s) (Figure 5)
			SM4BAT FS	Sony FDR-AX33 Handycam	Black Sun B20 IR Illuminator	Echometer Touch 2 Pro	Samsung Galaxy A21		
10/08/2022	Workshop	N, S	*	*	*			1, 2	1, 2
	Amenities	N, W						3	3
24/08/2022	Workshop	N, S	*	*	*	*	*	4, 5	1, 2
	Amenities	W							3
20/09/2022	Workshop	N, E, S	*	*	*	*	*	6, 7	1, 4

2.7.10 An automated static detector was deployed within the workshop from the 24th August 2022 to the 4th September 2022. The automated static detector system was programmed to record continuously. On completion of the survey the recordings were manually processed using Kaleidoscope Pro Version 3.1.8 sound analysis software to determine the species present and roost type (Table 5).

Table 5. Automated static detector equipment.

Date	Building reference	Sub-structure	Equipment	Automated static detector location (Figure 5)
			SM4BAT FS	
24/08/2022 - 04/09/2022	Workshop	Internal area of southernmost section	*	1

2.7.11 Bat roost types were attributed based on evidence of bat roosting activity, PRFs and habitat features within the landscape (Table 6).

Table 6. Bat roost types (defined by Natural England).

Roost type	Description
Day	A place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
Feeding	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Hibernation	A place where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort are classed as 'hibernation confirmed'.
Maternity	A place where female bats give birth and raise their young to independence.
Mating	A place where mating takes place from later summer and can continue through winter.
Night	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Satellite	A place in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.
Swarming	A place where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.
Transitional/occasional	A place used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Hibernation (unconfirmed)	A place where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats cannot be confirmed by appropriate survey effort are classed as 'hibernation unconfirmed'.

2.8 Birds

2.8.1 The survey was completed in accordance with best practice guidance:

- British Trust for Ornithology (BTO) (2018). Breeding Bird Survey Instructions. BTO, Norfolk.
- Bird Survey & Assessment Steering Group. (2022). Bird Survey Guidelines for assessing ecological impacts, v.0.1.0. BTO, Norfolk.

2.8.2 The preliminary bird survey was undertaken on the 29th July 2022 by Alexia Michaelides (Appendix B). An additional supplementary internal inspection of the workshop only was undertaken on the 20th September 2022 by Alexia Michaelides and Hannah Bates (Appendix B).

2.8.3 The surveys involved inspecting the site and recording incidental evidence of bird activity in the form of live and dead birds, feeding remains, pellets, active and inactive nests, eggs, eggshells, droppings and feathers. The survey also recorded bird breeding behaviour including adult birds calling, singing, holding territory, returning to nest sites with nest material or food and chicks calling. Visual assessments were aided by suitable equipment (Table 7).

Table 7. Preliminary bird survey equipment.

Date	Building reference	Equipment		
		Samsung A21 digital camera	Opticron Verano 10x42 binoculars	Nebo Davinci 5000 torch
29/07/2022	All buildings	*	*	*
20/09/2022	Workshop	*	*	*

2.8.4 The survey also involved a visual inspection of the habitats within the site to assess their potential suitability for birds to bathe, breed, commute, drink, forage and roost.

2.9 Great crested newts

2.9.1 The survey was completed in accordance with best practice guidance:

- Brady, L. (2010). Great Crested Newt Habitat Suitability Index. ARG UK Advice Note 5. Amphibian and Reptile Groups of the United Kingdom.
- Gent, T. and Gibson, S. (eds) (2003). Herpetofauna Workers' Manual 2003. Joint Nature Conservation Council, Peterborough.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.
- Hayes, C. and Whitehurst, J. (2001, as amended). Great Crested Newt Mitigation Guidelines. English Nature, Northminster House, Peterborough.

2.9.2 The preliminary great crested newt (*Triturus cristatus*) survey was undertaken on the 29th July 2022 by Alexia Michaelides (Appendix B).

2.9.3 The survey involved inspecting the site and recording incidental evidence of great crested newt activity in the form of live and dead great crested newts.

2.9.4 The survey also involved a visual inspection of the habitats within the site to assess their potential suitability for great crested newts to disperse, forage, hibernate, rest and shelter.

2.9.5 In addition, ordnance survey maps and aerial photographs were reviewed to identify waterbodies of potential value to great crested newts within a 250m radius of the site.

2.10 Hazel dormice

2.10.1 The survey was completed in accordance with best practice guidance:

- Bright, P. Morris, P. and Mitchell-Jones, T. (2006). The dormouse conservation handbook (2nd Edition). English Nature, Peterborough.

- 2.10.2 The preliminary hazel dormouse (*Muscardinus avellanarius*) survey was undertaken on the 29th July 2022 by Alexia Michaelides (Appendix B).
- 2.10.3 The survey involved inspecting the site and recording incidental evidence of hazel dormouse activity in the form of live and dead hazel dormice, feeding remains and active and inactive nests.
- 2.10.4 The survey also involved a visual inspection of the habitats within the site to assess their potential suitability for hazel dormice to breed, commute, forage, hibernate, rest and shelter.

2.11 Reptiles

- 2.11.1 The reptile survey was completed in accordance with best practice guidance:
- Froglife (1999) Reptile survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, London.
 - Gent, A. H. and Gibson, S. D. (2003). Herpetofauna Workers' Manual, 2nd Edition. Joint Nature Conservation Committee, Peterborough.
 - Herpetofauna Groups of Britain and Ireland (1998). Evaluating local mitigation/translocation programmes: Maintaining best practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth.
- 2.11.2 The preliminary reptile survey was undertaken on the 29th July 2022 by Alexia Michaelides (Appendix B).
- 2.11.3 The survey involved inspecting the site and recording incidental evidence of reptile activity in the form of live and dead reptiles, eggs, eggshells and moults.
- 2.11.4 The survey also involved a visual inspection of the habitats within the site to assess their potential suitability for reptiles to breed, disperse, forage, hibernate, rest and shelter.

2.12 Limitations

- 2.12.1 Ecological assessments are not intended to produce comprehensive lists of species present but, nevertheless, it is considered that the survey undertaken is sufficient to evaluate the ecological resources within the site and thus to identify potential issues of relevance to the works.
- 2.12.2 The presence or likely absence of ancient woodland within the site or a 2km radius of the site is based on the SEWBRC data search results and does not account for unmapped ancient woodlands whose low tree density or small area does not register as woodland on historic maps.
- 2.12.3 The temporary buildings and storage containers were inaccessible and thus no internal visual inspections were conducted.
- 2.12.4 The roost surveys were intended to provide a representative sample of bat roosting activity associated with the amenities building and the workshop and are not an exhaustive investigation of the use of the buildings by bats.
- 2.12.5 The weather conditions recorded during the automated static detector survey of the workshop were obtained from the timeanddate website and have not been independently verified.
- 2.12.6 The use of an automated static detector does not provide the directionality of any recorded bat calls and the precise location of the echolocating bat recorded or the activity exhibited by the bat cannot be

identified. As such this can only indicate or confirm the likely presence of species of bats within the vicinity of the automated static detector.

- 2.12.7 Bat roosts were attributed to the roost type which most closely related to Natural England's definitions whilst also applying professional judgement as to the function of the roost.
- 2.12.8 The presence or likely absence of waterbodies within a 250m radius and with habitat connectivity to the site is based on OS mapping and does not account for unmapped waterbodies or waterbodies which no longer exist.
- 2.12.9 These limitations have been taken into consideration within the method statement of this report.

3.0 Results

3.1 Statutory and non-statutory designated sites

3.1.1 There were no statutory designated sites located within a 2km radius of the site.

3.1.2 One non-statutory designated site intersects the site (County Hall SINC). In addition, a further 21 non-statutory designated sites were located within a 2km radius of the site (Table 8, Figure 2).

Table 8. Non-statutory designated sites of conservation importance within a 2km radius of the site (table continues).

Name	Status	Location	Description
Ancient semi-natural woodland	SINC	Information not provided.	Ancient woodland.
South Wales B-Line	B-Line	ST 307 947	B-Lines are a series of ‘insect pathways’ running through the countryside and towns, along which restoration and creation of a series of wildflower-rich habitat steppingstones is occurring. They link existing wildlife areas together, creating a network. This will provide large areas of brand-new habitat benefiting bees and butterflies - but also a host of other wildlife.
Cefn Tilla Meadow	SINC	Information not provided.	Information not provided.
Coed Llwyd Wood		ST 315 964	Ancient woodland.
		ST 313 962	
Coed Tre-Herbert		ST 308 968	Ancient woodland.
County Hall		ST 308 954	Semi-improved neutral grassland, ancient woodland, species-rich hedgerow, scrub, and deadwood.
Craig Y Felin Wood		ST 300 983	Planted ancient woodland site with ground flora in terms of ancient woodland indicators. Partially replanted in 1977.
Craig Y Felin/ Chapel Lane Road Verge		ST 3036 9698	Semi-improved neutral grassland.
Cwm Heron Wood		ST 315 960	Mostly unmodified ancient woodland.
Greenmeadow Community Farm		ST 287 953	Neutral grassland which is currently being intensively grazed by inappropriate animals.
Land at Edgehill, Llanfrechfa, Cwmbran		ST 310 940	High quality grassland.
Llanfrechfa Grange	ST 310 945	Ancient mown grassland, parkland, trees, scrub, and species-rich hedgerows.	

Name	Status	Location	Description
Llantarnam Abbey Bat Roost	SINC	ST 315 928	Lesser horseshoe bat roost within a bell tower, known otter breeding sites, ancient woodland and species-rich hedgerow.
Llantarnam Grasslands		ST 306 937	Neutral grassland surrounded by species-rich hedge occasionally grazed with patches of scrub progressing into broadleaved woodland.
Llantarnam Grasslands – the Alders		ST 307 939	Relatively species-rich grassland with patches of scrub surrounded by broadleaved woodland.
Llantarnam Road/ Court Road, Cwmbran		ST 297 946	Semi-improved grassland, stream, and mature trees.
Llantarnam Wetland		ST 308 933	Species-rich wetland/floodplain.
Llanyravon Farm, Cwmbran		ST 303 945	Ancient hedgerows, orchard, open standing water, Afon Llwyd river and listed buildings. Lesser horseshoe bat roosts on site.
St Dials Meadows/Police Training College		ST 287 949	Seven hay meadows separated by thick, overgrown hedges. Meadows vary from species-rich to neutral grassland.
Ty Llwyd Wood		ST 314 946	Ancient woodland.
White House Meadows		Information not provided.	Information not provided.

3.1.3 The site is not located within any protected species consultation zones.

3.2 Habitats of principal importance

3.2.1 One habitat of principal importance (lowland mixed deciduous woodland) intersects the site. In addition, there were four further habitats of principal importance located within a 2km radius of the site (Figure 3):

- Semi-natural broadleaved woodland
- Semi-improved neutral grassland
- Running water
- Standing water

3.3 Ancient woodland

3.3.1 No ancient woodlands intersect or adjoin the site. However, there were 44 ancient semi-natural, plantation ancient woodlands located within a 2km radius of the site (Figure 2).

3.4 Protected species records

3.4.1 There were records of 146 legally protected species and/or species of principal importance within a 2km radius of the site. In addition, there were records of four categories of bats that were not identified to species level (Table 9).

Table 9. Summary of legally protected species and/or species of principal importance records within a 2km radius of the site (table continues).

Common name	Scientific name	EU protected	EU priority	WACA 1981	NERC Act 2006	Species of principal importance
Amphibians						
Common toad	<i>Bufo bufo</i>				*	*
Bats						
Bat species	<i>Chiroptera sp.</i>	*		*	*	*
Brown long-eared bat	<i>Plecotus auritus</i>	*		*	*	*
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	*		*		
Daubenton's bat	<i>Myotis daubentonii</i>	*		*		
Greater horseshoe bat	<i>Rhinolophus ferrumequinum</i>	*		*	*	*
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	*		*	*	*
Mouse-eared species	<i>Myotis sp.</i>	*		*	*	
Natterer's bat	<i>Myotis nattereri</i>	*		*		
Noctule	<i>Nyctalus noctula</i>	*		*	*	*
Pipistrelle species	<i>Pipistrellus sp.</i>	*		*	*	
Serotine	<i>Eptesicus serotinus</i>	*		*		
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	*		*	*	*
Whiskered bat	<i>Myotis mystacinus</i>	*		*		
Whiskered/Brandt's bat	<i>Myotis mystacinus/brandtii</i>	*		*		
Birds						
Avocet	<i>Recurvirostra avosetta</i>	*	*	*		
Barn owl	<i>Tyto alba</i>	*		*		
Barnacle goose	<i>Branta leucopsis</i>	*	*			
Black-headed gull	<i>Chroicocephalus ridibundus</i>	*	*			
Brambling	<i>Fringilla montifringilla</i>			*		
Canada goose	<i>Branta canadensis</i>	*	*			
Common gull	<i>Larus canus</i>	*	*			
Common sandpiper	<i>Actitis hypoleucos</i>	*				
Common tern	<i>Sterna hirundo</i>	*	*			
Coot	<i>Fulica atra</i>	*	*			
Cormorant	<i>Phalacrocorax carbo</i>	*				
Cuckoo	<i>Cuculus canorus</i>				*	*
Dipper	<i>Cinclus cinclus</i>	*				
Dunlin	<i>Calidris alpina</i>	*				
Dunnock	<i>Prunella modularis</i>	*				
Fieldfare	<i>Turdus pilaris</i>		*	*		
Gadwall	<i>Anas strepera</i>	*	*			
Goldcrest	<i>Regulus regulus</i>	*				

Common name	Scientific name	EU protected	EU priority	WACA 1981	NERC Act 2006	Species of principal importance
Goshawk	<i>Accipiter gentilis</i>	*		*		
Great black-backed gull	<i>Larus marinus</i>	*	*			
Green woodpecker	<i>Picus viridis</i>	*				
Greenfinch	<i>Chloris chloris</i>	*				
Grey heron	<i>Ardea cinerea</i>	*				
Grey wagtail	<i>Motacilla cinerea</i>	*				
Hawfinch	<i>Coccothraustes coccothraustes</i>	*			*	*
Herring gull	<i>Larus argentatus</i>	*	*			
Hobby	<i>Falco subbuteo</i>	*		*		
House sparrow	<i>Passer domesticus</i>				*	*
Kestrel	<i>Falco tinnunculus</i>	*				
Kingfisher	<i>Alcedo atthis</i>	*	*	*		
Lapwing	<i>Vanellus vanellus</i>	*	*		*	*
Lesser black-backed gull	<i>Larus fuscus</i>	*	*			
Lesser redpoll	<i>Acanthis cabaret</i>				*	*
Lesser spotted woodpecker	<i>Dendrocopos minor</i>	*				
Linnet	<i>Linaria cannabina</i>	*				
Little ringed plover	<i>Charadrius dubius</i>	*		*		
Mallard	<i>Anas platyrhynchos</i>	*	*			
Mandarin duck	<i>Aix galericulata</i>	*				
Marsh harrier	<i>Circus aeruginosus</i>	*	*	*		
Marsh tit	<i>Poecile palustris</i>	*				
Meadow pipit	<i>Anthus pratensis</i>	*				
Mediterranean gull	<i>Larus melanocephalus</i>	*	*	*		
Merlin	<i>Falco columbarius</i>	*	*	*		
Mistle thrush	<i>Turdus viscivorus</i>		*			
Osprey	<i>Pandion haliaetus</i>	*	*	*		
Peregrine	<i>Falco peregrinus</i>	*	*	*		
Pink-footed goose	<i>Anser brachyrhynchus</i>	*	*			
Pintail	<i>Anas acuta</i>	*	*	*		
Pochard	<i>Aythya ferina</i>	*	*			
Red kite	<i>Milvus milvus</i>	*	*	*		
Red-breasted merganser	<i>Mergus serrator</i>	*	*			
Red-crested pochard	<i>Netta rufina</i>	*	*			
Redshank	<i>Tringa totanus</i>	*	*			
Redwing	<i>Turdus iliacus</i>		*	*		
Reed bunting	<i>Emberiza schoeniclus</i>	*			*	*
Ringed plover	<i>Charadrius hiaticula</i>	*				

Common name	Scientific name	EU protected	EU priority	WACA 1981	NERC Act 2006	Species of principal importance
Ruff	<i>Calidris pugnax</i>	*	*	*		
Sand martin	<i>Riparia riparia</i>	*				
Shoveler	<i>Anas clypeata</i>	*	*			
Skylark	<i>Alauda arvensis</i>		*		*	
Snipe	<i>Gallinago gallinago</i>	*	*			
Song thrush	<i>Turdus philomelos</i>		*			
Spotted flycatcher	<i>Muscicapa striata</i>	*			*	*
Starling	<i>Sturnus vulgaris</i>		*			
Swallow	<i>Hirundo rustica</i>	*				
Teal	<i>Anas crecca</i>	*	*			
Tree pipit	<i>Anthus trivialis</i>	*			*	*
Tufted duck	<i>Aythya fuligula</i>	*	*			
Wheatear	<i>Oenanthe oenanthe</i>	*				
Wigeon	<i>Anas penelope</i>	*	*			
Willow tit	<i>Poecile montanus</i>			*		
Crustaceans						
White-clawed crayfish	<i>Austropotamobius pallipes</i>			*	*	*
Insects						
August thorn	<i>Ennomos quercinaria</i>				*	*
Autumnal rustic	<i>Eugnorisma glareosa</i>				*	*
Beaded chestnut	<i>Agrochola lychnidis</i>				*	*
Blood-vein	<i>Timandra comae</i>				*	*
Brindled beauty	<i>Lycia hirtaria</i>				*	*
Buff ermine	<i>Spilosoma lutea</i>				*	*
Cinnabar	<i>Tyria jacobaeae</i>				*	*
Crescent	<i>Helotropha leucostigma</i>				*	*
Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>				*	*
Deep-brown dart	<i>Aporophyla lutulenta</i>				*	*
Dingy skipper	<i>Erynnis tages</i>				*	*
Dot moth	<i>Melanchra persicariae</i>				*	*
Dusky thorn	<i>Ennomos fuscantaria</i>				*	*
Feathered gothic	<i>Tholera decimalis</i>				*	*
Ghost moth	<i>Hepialus humuli</i>				*	*
Grayling	<i>Hipparchia semele</i>				*	*
Green-brindled crescent	<i>Allophytes oxyacanthae</i>				*	*
Hedge rustic	<i>Tholera cespitis</i>				*	*
High brown fritillary	<i>Argynnis adippe</i>				*	*
Knot grass	<i>Acronicta rumicis</i>				*	*

Common name	Scientific name	EU protected	EU priority	WACA 1981	NERC Act 2006	Species of principal importance
Large wainscot	<i>Rhizedra lutosa</i>				*	*
Latticed heath	<i>Chiasmia clathrata</i>				*	*
Lesser silver water beetle	<i>Hydrochara caraboides</i>			*		
Marsh fritillary	<i>Euphydryas aurinia</i>			*	*	*
Mottled rustic	<i>Caradrina morpheus</i>				*	*
Mouse moth	<i>Amphipyra tragopoginis</i>				*	*
Narrow-bordered bee hawk-moth	<i>Hemaris tityus</i>				*	*
Pearl-bordered fritillary	<i>Boloria euphrosyne</i>				*	*
Powdered quaker	<i>Orthosia gracilis</i>				*	*
Rosy minor	<i>Litologia literosa</i>				*	*
Rosy rustic	<i>Hydraecia micacea</i>				*	*
Rustic	<i>Hoplodrina blanda</i>				*	*
Sallow	<i>Cirrhia icteritia</i>				*	*
September thorn	<i>Ennomos erosaria</i>				*	*
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>				*	*
Shoulder striped wainscot	<i>Leucania comma</i>				*	*
Shrill carder bee	<i>Bombus sylvarum</i>				*	*
Small emerald	<i>Hemistola chrysoprasaria</i>				*	*
Small heath	<i>Coenonympha pamphilus</i>				*	*
Small pearl bordered fritillary	<i>Boloria selene</i>				*	*
Small phoenix	<i>Ecliptopera silaceata</i>				*	*
Small square-spot	<i>Diarsia rubi</i>				*	*
Sprawler	<i>Asteroscopus sphinx</i>				*	*
Wall	<i>Lasiommata megera</i>				*	*
White ermine	<i>Spilosoma lubricipeda</i>				*	*
White letter hairstreak	<i>Satyrium w-album</i>				*	*
Mammals						
Hazel dormouse	<i>Muscardinus avellanarius</i>	*		*	*	*
Hedgehog	<i>Erinaceus europaeus</i>				*	*
Otter	<i>Lutra lutra</i>	*		*	*	*
Polecat	<i>Mustela putorius</i>				*	*
Water vole	<i>Arvicola amphibius</i>			*	*	*
Reptiles						
Grass snake	<i>Natrix helvetica</i>			*	*	*
Slow worm	<i>Anguis fragilis</i>			*	*	*
Fish						
Brown trout	<i>Salmo trutta</i>				*	*
Brown trout, river subsp.	<i>Salmo trutta subsp. fario</i>				*	*

Common name	Scientific name	EU protected	EU priority	WACA 1981	NERC Act 2006	Species of principal importance
Eel	<i>Anguilla anguilla</i>				*	*
Flora						
Bluebell	<i>Hyacinthoides non-scripta</i>			*		
Grape-hyacinth	<i>Muscari neglectum</i>				*	*
Marsh stitchwort	<i>Stellaria palustris</i>				*	*
Sea barley	<i>Hordeum marinum</i>				*	*
Tubular water-dropwort	<i>Oenanthe fistulosa</i>				*	*
Fungus						
Date coloured waxcap	<i>Hygrocybe spadicea</i>				*	*
Olive earthtongue	<i>Microglossum olivaceum</i>				*	*

3.5 Habitats

3.5.1 There were six UKHab types and scattered trees within the site (Tables 10-21, Photos 8-35, Figure 4). The lowland mixed deciduous woodland and the hedgerow qualify as habitats of principal importance.

Table 10. Grassland - modified grassland.

Habitat reference	g4
Habitat type	Grassland - modified grassland
Location details	In the northern, eastern, southern, western and central sections of the site.
Dominant species	Perennial rye-grass (<i>Lolium perenne</i>), Yorkshire fog (<i>Holcus lanatus</i>), ribwort plantain (<i>Plantago lanceolata</i>), yarrow (<i>Achillea millefolium</i>), common daisy (<i>Bellis perennis</i>), black medic (<i>Medicago lupulina</i>), cat's ear (<i>Hypochaeris radicata</i>), black knapweed (<i>Centaurea nigra</i>), common bird's-foot trefoil (<i>Lotus corniculatus</i>).
Management	Mown. Sward height 5mm.
Photo	8

Table 11. Native species-rich hedgerow with trees.

Habitat type	Native species-rich hedgerow with trees
Location details	Along the eastern boundary of the site.
Dominant species	Hawthorn (<i>Crataegus monogyna</i>), sycamore (<i>Acer pseudoplatanus</i>), common dogwood (<i>Cornus sanguinea</i>), holly (<i>Ilex aquifolium</i>), willow species (<i>Salix</i> sp.) and ash (<i>Fraxinus excelsior</i>) with an understorey of bramble (<i>Rubus fruticosus</i>), common ivy (<i>Hedera helix</i>), lords-and-ladies (<i>Arum maculatum</i>) and Yorkshire fog.
Management	Flailed.
Photo	9

Table 12. Heathland and shrub - mixed scrub.

Habitat reference	h3 (mixed scrub)
Habitat type	Heathland and shrub - mixed scrub
Location details	In the western section of the site.
Dominant species	Bramble, holly, pendulous sedge (<i>Carex pendula</i>), common dogwood.
Management	Strimmed.
Photo	10

Table 13. Heathland and shrub - ornamental planting

Habitat reference	h3 (ornamental planting)
Habitat type	Heathland and shrub - ornamental planting
Location details	In the central section of the site.
Dominant species	Cotoneaster species (<i>Cotoneaster</i> sp.), leylandii cypress (<i>C. × leylandii</i>) and buddleia (<i>Buddleja</i> sp.)
Management/use	Maintained via regular cutting
Photo	11

Table 14. Urban: developed land - sealed surface.

Habitat reference	u1b
Habitat type	Developed land - sealed surface.
Location details	In all sections of the site.
Management/use	Hardstanding used as car park and footpaths
Photo	12

Table 15. Scattered trees.

Habitat type	Scattered trees
Location details	In the eastern, southern, western and central sections of the site.
Dominant species	Sycamore, horse chestnut (<i>Aesculus hippocastanum</i>), pedunculate oak (<i>Quercus robur</i>), ash, yew (<i>Taxus baccata</i>), hazel (<i>Corylus avellana</i>), holly, small-leaved lime (<i>Tilia cordata</i>), beech (<i>Fagus sylvatica</i>) and willow species.
Photo	13

Table 16. Woodland - lowland mixed deciduous woodland.

Habitat reference	w1f
Habitat type	Woodland and forest - lowland mixed deciduous woodland
Location details	In the northeastern section of the site.
Dominant species	Silver birch (<i>Betula pendula</i>), beech, Norway maple (<i>Acer platanoides</i>), ash, common oak, horse chestnut, sycamore and holly.
Photo	14

Table 17. Urban - administration building description (table continues).

Building reference	Administration building (Photos 15-19)
Maximum number of floors	Multi-storey with a basement
Roof structure and finish	Flat roof. Skylight windows present.
Wall construction and finishing	Blockwork with a complete concrete render. The presence of a cavity wall is unknown.

Windows and doorways	Multiple windows within all elevations, all glazed, some partially open (anecdotal evidence that they are closed overnight). Four doorways within the eastern and western elevations all of which were closed.
Internal area	The building lacked roof voids.
Basement	A cluttered area with exposed pipework and red brick supporting columns. The internal area was recorded as dark, dry and warm (Photo 20).

Table 18. Urban - amenities building description.

Building reference	Amenities building (Photos 21-24)
Maximum number of floors	Multi-storey
Roof structure and finish	Flat roof. Skylight windows present.
Wall construction and finishing	Blockwork with a complete render. The presence of a cavity wall is unknown.
Windows and doorways	Multiple windows within all elevations, all glazed, some partially open (anecdotal evidence that they are closed overnight). One doorway was within the eastern elevation and three doorways within the western elevation, all of which were closed.
Internal area	The building lacked roof voids (Photo 25).

Table 19. Urban - workshop building description.

Building reference	Workshop (Photos 26-29)
Maximum number of floors	1
Roof structure and finish	Flat roof with timber panelling along the fascia.
Wall construction and finishing	Blockwork. The walls were not cavity walls. The western elevation was open fronted.
Windows and doorways	Six windows were within the western elevation, all glazed and two were open.
Internal area	The building lacked roof voids (Photo 30).

Table 20. Urban - temporary buildings descriptions.

Building reference	Temporary buildings
Description	Wooden buildings, tightly sealed
Location	Four in the eastern section of the site.
Photo	31-34

Table 21. Urban - storage containers description.

Building reference	Storage containers
Description	Metal containers, tightly sealed
Location	Four in the southern section of the site.
Photo	35

3.6 Badgers

3.6.1 No conclusive evidence of badger activity was observed within the site.

3.6.2 The habitat features within the site of potential value for badgers were recorded as follows:

- The modified grassland, hedgerow understory and woodland constitute suitable foraging habitat for this species.
- The modified grassland, hedgerow and woodland allow unobstructed dispersal across the site.

3.7 Bats

3.7.1 The preliminary bat survey confirmed the potential presence of bats.

3.7.2 No live or dead bats, droppings, feeding remains, perch abrasions, characteristic staining from urine or marks from grease secretions were observed within any of the buildings on site. However, the amenities building and workshop exhibited PRFs (Table 22, Figure 4).

Table 22. PRFs identified within the buildings.

Building reference	Structure	Location(s) (elevation)	Potential roost feature	Roost suitability
Amenities	Wall	W	Gap above window	Moderate
Workshop	Soffit box	All	Gaps within the base and timber cladding	High
	Internal	All	Exposed timber rafters and fixtures and fittings	

3.7.3 The administration building, temporary buildings and storage containers were not observed to contain any PRFs and as such the buildings have been assessed as offering a negligible roost suitability.

3.7.4 The workshop offers suitable hibernating conditions for common pipistrelle and soprano pipistrelle in the form of a stable temperature and high humidity.

3.7.5 It is considered likely that a selection of the trees located on site may have the potential to offer suitable PRFs for bats.

3.7.6 The habitat features within the site of potential value for bats are as follows:

- The grassland, hedgerows, scattered trees and woodland support a diversity and abundance of invertebrates and opportunities for foraging.
- The hedgerow provides a protected route for commuting and foraging.
- The woodland offered covered enclosed areas for foraging, commuting and light sampling.

3.7.7 These suitable but isolated habitats could be used by low numbers of bats and, therefore, are assessed as providing low suitability commuting and foraging habitat.

3.7.8 The dusk emergence and automated static detector surveys confirmed the presence of bats roosting within the workshop and the likely absence of bats roosting within the amenities building (Tables 23-28, Figure 5).

Table 23. Dusk emergence survey conditions.

Date	Time			Weather				
	Sunset	Start of survey	End of survey	Temperature (°C) (start - end)	Precipitation	Wind direction (start - end)	Wind speed (mph) (start - end)	Cloud cover (%) (start - end)
10/08/2022	20:44	20:29	22:14	27-22	None	NW-SW	8-7	0-0
24/08/2022	20:16	20:01	21:46	20-19	None	NW-NNW	7-3	100-90
20/09/2022	19:15	19:00	20:45	17-16	None	W-WNW	6-6	30-10

Table 24. Dusk emergence survey results for the 10th August 2022.

Species	Maximum count	Time(s) (emergence)	Roost type	Building reference	Roost feature	Access points	Photo	Location(s) (Figure 5)
Common pipistrelle	4	21:09, 21:10, 21:11, 21:19	Day	Workshop	Precise roost location unknown but considered likely to be roosting between the wall plate and soffit box timber cladding.	Accessed via gaps in the soffit box.	36	1, 2
Soprano pipistrelle	1	21:08						3

Result: No bats were observed emerging from or re-entering a roost within the amenities building.

Table 25. Dusk emergence survey results for the 24th August 2022.

Species	Maximum count	Time (emergence)	Roost type	Building reference	Roost location	Access point	Photo	Location (Figure 5)
Common pipistrelle	1	20:35	Day	Workshop	Precise roost location unknown but considered likely to be roosting between the wall plate and soffit box timber cladding.	Accessed via a gap in the soffit box.	36	4

Result: No bats were observed emerging from or re-entering a roost within the amenities building.

Table 26. Dusk emergence survey results for the 20th September 2022.

Species	Maximum count	Time (emergence)	Roost type	Building reference	Roost location	Access point	Photo	Location (Figure 5)
Common pipistrelle	1	19:35	Day	Workshop	Precise roost location unknown but considered likely to be roosting between the wall plate and soffit box timber cladding.	Accessed via a gap in the soffit box.	36	1

Table 27. Automated static detector survey conditions for the 24th August 2022 to the 4th September 2022.

Date	Time		Weather				
	Sunrise	Sunset	Temperature (°C) (Minimum - maximum)	Precipitation	Wind direction	Wind speed (mph) (Minimum - maximum)	Cloud cover (%) (Minimum - maximum)
24/08/2022	N/A	20:16	15-18	None	E	8-12	100
25/08/2022	06:13	20:14	14-17	None	E	2-15	30
26/08/2022	06:14	20:12	12-17	None	E	3-16	50
27/08/2022	06:16	20:09	16-20	None	E	5-10	50
28/08/2022	06:17	20:07	14-21	None	SW	5-9	20
29/08/2022	06:19	20:05	13-20	None	SW	12-16	20
30/08/2022	06:21	20:03	15-21	None	SW	11-15	20
31/08/2022	06:22	20:01	15-22	None	SW	13-16	0
01/09/2022	06:24	19:58	16-20	None	SW	8-15	20
02/09/2022	06:25	19:56	17-21	None	NW	2-8	70
03/09/2022	06:27	19:54	18-19	None	N	13-16	70
04/09/2022	06:29	N/A	N/A	N/A	N/A	N/A	N/A

Table 28. Automated static detector survey results for the 24th August 2022 to the 4th September 2022 (table continues).

Date	Species	Maximum count		Time(s)	Roost type	Building reference	Location (Figure 5)
		Bat	Pass				
24/08/2022	Common pipistrelle	1	11	20:11-23:11	N/A	Workshop	1
	Noctule	1	1	23:25			
25/08/2022	Common pipistrelle	2	7	05:44 20:15-20:55	N/A	Workshop	1
	Soprano pipistrelle	1	1	21:01			
26/08/2022	Common pipistrelle	1	5	20:42-23:06	N/A	Workshop	1

Date	Species	Maximum count		Time(s)	Roost type	Building reference	Location (Figure 5)
		Bat	Pass				
27/08/2022	Common pipistrelle	1	26	21:04-23:25	N/A	Workshop	1
	Noctule	1	1	00:12			
28/08/2022	Common pipistrelle	1	6	03:21 20:16-22:02			
	Soprano pipistrelle	1	1	21:05			
29/08/2022	Common pipistrelle	1	8	20:42-23:16			
30/08/2022	Common pipistrelle	1	9	03:54 20:47-22:52			
31/08/2022	Common pipistrelle	1	7	20:09-23:39			
01/09/2022	Common pipistrelle	1	14	20:35-21:56			
02/09/2022	Common pipistrelle	1	7	20:34-22:19			
	Noctule	1	1	20:40			
03/09/2022	Common pipistrelle	1	1	20:10-21:50			

Comment (common pipistrelle): Passes were recorded on all survey dates between 20:09 and 05:44. The known emergence period for common pipistrelle is 20-30 minutes after sunset and occasionally before sunset with re-entry 20-30 minutes before sunrise and occasionally after sunrise. However, no evidence of roosting bats in the form of stationary calls made by a perching bat or dropping evidence supports the presence of a roost within the internal area of the workshop. Furthermore, when reviewed the sound analysis indicated the presence of commuting and foraging bats only during the night.

Comment (noctule): Passes were recorded on three of the 11 survey dates. Sonogram analysis of the calls identified them as being low frequency quasi-constant calls with a slow repetition rate which is indicative of a noctule commuting within an open environment and not of bat activity within a roost. No evidence of roosting bats in the form of stationary calls made by a perching bat or dropping evidence supports the presence of a roost within the internal area of the workshop and when reviewed the sound analysis indicated the presence of commuting and foraging bats only.

Comment (soprano pipistrelle): Passes were recorded on two of the 11 survey dates. The passes throughout the night are those of foraging and commuting bats and are not confirmation of a night roost.

3.7.9 The survey results indicate that the workshop contains roosts used by two species of bats (Table 29).

Table 29. Confirmed bat roosts and their conservation significance.

Building reference	Species	Roost type	Maximum count	Conservation significance
Workshop	Common pipistrelle	Day	4	Moderate
	Soprano pipistrelle	Hibernation (unconfirmed)	1	

3.8 Birds

3.8.1 Anecdotal stories from site staff confirmed the presence of breeding barn swallows (*Hirundo rustica*) located in overhanging eaves of the administration building, amenities building and workshop.

- 3.8.2 Two barn swallows were observed displaying breeding behaviour in the form of returning to nest sites with food (Figure 4). A wood pigeon (*Columba palumbus*) was observed displaying breeding behaviour in the form of carrying nesting material (Figure 4).
- 3.8.3 Bird species observed on site during the survey, but not displaying breeding behaviour, included blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), great tit (*Parus major*), house sparrow (*Passer domesticus*), robin (*Erithacus rubecula*), song thrush (*Turdus philomelos*), wren (*Troglodytes troglodytes*) and magpie (*Pica pica*).
- 3.8.4 An active barn swallow nest was located on the western elevation of the administration building underneath the covered walkway at a height of 2m (Photo 37, Figure 4). The nest was cup-shaped and consisted of mud. There were at least three chicks within the nest begging for food.
- 3.8.5 An inactive barn swallow nest was located on the western elevation of the administration building underneath the covered walkway at a height of 2m (Photo 38, Figure 4). The nest was cup-shaped and consisted of mud. Two further inactive barn swallow nests were located within the workshop at a height of 2m (Figure 4).
- 3.8.6 The habitat features within the site of potential value for birds were recorded as follows:
- The modified grassland, hedgerow understory, scrub and woodland constitute suitable foraging habitat for these species.
 - The hedgerow, scrub, woodland and buildings provide suitable locations for nest creation and roosting.
 - The hedgerow, woodland and buildings provide a suitable perch for holding territory and/or searching for prey.

3.9 Great crested newts

- 3.9.1 The preliminary great crested newt survey did not find any live or dead great crested newts within the site.
- 3.9.2 There were no waterbodies within the site.
- 3.9.3 The terrestrial habitat features within the site of potential value for great crested newts were recorded as follows:
- The roots of the scattered trees and lowland broadleaved mixed woodland provide damp, protected features suitable for rest and shelter, opportunities for foraging and provides crevices which protect against frost, flooding and predators suitable for hibernation.
 - The intact, species-rich hedgerow and lowland broadleaved mixed woodland located along the eastern boundary and within the northern section of the site, respectively, allows protected dispersal routes and opportunities for foraging.
- 3.9.4 There were no waterbodies within a 250m radius of the site which were not separated from the site by significant barriers to amphibian dispersal.

3.10 Hazel dormice

- 3.10.1 No live or dead hazel dormice, feeding remains, active or inactive nests were observed within the site.

3.10.2 The habitat features within the site of potential value for hazel dormice were recorded as follows:

- The native species-rich hedgerow with trees and woodland constitute suitable foraging habitat for this species, and suitable locations for nest creation.
- The root balls of the hedgerow and woodland provide suitable conditions for hibernation.

3.11 Reptiles

3.11.1 The preliminary reptile assessment did not find any live or dead reptiles, eggs, eggshells, or moults within the site.

3.11.2 The site provides potentially suitable habitat for grass snake (*Natrix helvetica*), slow-worm (*Anguis fragilis*) and viviparous lizard (*Zootoca vivipara*). Habitat features within the site of potential value to reptiles were recorded as follows:

- The roots of the scattered trees and lowland broadleaved mixed woodland provide damp, protected features suitable for rest and shelter, and opportunities for foraging.
- The intact, species-rich hedgerow and lowland broadleaved mixed woodland located along the eastern boundary and within the northern section of the site, respectively, allows protected dispersal routes and opportunities for foraging.
- The hard standing and modified grassland adjacent to more densely vegetated areas located across the site provide protected basking areas.

3.12 Other notable species

3.12.1 One live adult hedgehog (*Erinaceus europaeus*) was observed along the eastern boundary of the site on the 10th August 2022 and two live adult hedgehogs were observed along the eastern boundary of the site on the 20th September 2022 (Photo 39, Figure 4).

3.12.2 No protected or invasive, non-native species of plant were identified and the habitats within the site which will be impacted by the works were not deemed to provide critical resources for any other protected or notable species of animal.

4.0 Method statement

4.1 Statutory and non-statutory designated sites

4.1.1 Torfaen County Borough Council will be consulted to establish the potential risks which the works pose to the County Hall SINC that the site sits within.

4.2 Habitats of principal importance

4.2.1 The works will be undertaken in accordance with the habitat method statement which takes into account the presence of the lowland mixed deciduous woodland and the hedgerow (Section 4.4. Habitats).

4.3 Ancient woodland

4.3.1 No further actions are required in relation to the ancient woodlands identified off-site as the works pose no potential risks to this habitat.

4.4 Habitats

4.4.1 An arboricultural survey compliant with BS5837 (2012) including a TPO search has been undertaken to assess the arboricultural features within the site (ArbTS. 2022). The results of this work have been documented in a tree schedule and tree constraints plan and will enable the preparation of an arboricultural impact assessment, method statement and tree protection plan to ensure adequate protection of the retained trees, woodland and hedgerow on site.

4.4.2 There will be no direct illumination of the onsite lowland mixed deciduous woodland or the hedgerow. Where lighting is necessary elsewhere on site, low impact lighting solutions will be adopted as follows:

- All luminaires will lack UV elements when manufactured. Metal halide, fluorescent sources will not be used.
- LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- All luminaires will emit a warm white spectrum (<2700Kelvin) to reduce the blue light component.
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to light sensitive species.
- All internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill.
- All luminaires will have an upward light ratio of 0% and good optical control.
- All luminaires will be mounted on the horizontal to avoid upward tilt.
- All external security lighting will be set on motion-sensors and short timers.

4.4.3 The lighting scheme will be used to create a horizontal, and if necessary, vertical, illuminance contour plan using an appropriate software package to model the extent of light emitted. The buffer zone widths and illuminance limits which have been agreed can then be overlaid to determine if any further mitigation is necessary. The lighting strategy will be signed-off by a suitably qualified ecologist.

4.5 Badgers

- 4.5.1 As a precautionary measure during the construction phase the site will be secured at night such that any potentially harmful equipment or materials are removed or stored safely and any excavations are covered or fitted with ramps to ensure badgers or other mammals do not become trapped.
- 4.5.2 Excavations which are more than 1m in depth and less than 1m wide will be covered with a timber sheet material. The timber sheet material will be of a thickness which remains rigid when installed across the excavation and could support the weight of an adult badger (i.e. 20kg). The timber sheet material will also retain structural integrity in wet conditions. The timber sheet material will be secured to the ground using robust fixings (i.e. metal stakes at least 50cm in length). Covered excavations will be visually inspected every day to confirm that the timber sheet material has not become damaged and that no animals have become trapped within the excavation. If an animal is observed within the excavation, a suitably qualified ecologist will be contacted immediately for advice. The site manager will be responsible for the installation of the timber sheet material, checking of covered excavations and, if required, contacting a suitably qualified ecologist for advice.
- 4.5.3 Excavations which are more than 1m in depth and more than 1m wide will be fitted with ramps. The ramp will be of a timber plank material. The timber plank material will be of a thickness which remains rigid when installed from the bottom corner to the top edge of the excavation and could support the weight of an adult badger (i.e. 20kg). The timber plank will be of a width which will allow an adult badger to walk up the plank without risk of falling off (i.e. 50cm). The slope of the timber plank material will not exceed 45°. The timber plank material will be ridged across its width so that badgers are able to ascend the ramp. The timber plank material will be secured to the ground using robust fixings (i.e. metal stakes at least 50cm in length). Excavations containing ramps will be visually inspected every day to confirm that the timber plank material has not become damaged and that no animals have become trapped within the excavation. If an animal is observed within the excavation, a suitably qualified ecologist will be contacted immediately for advice. The contractor will be responsible for the installation of the timber plank material, checking of excavations containing ramps and, if required, contacting a suitably qualified ecologist for advice.
- 4.5.4 In the unlikely event that a badger is encountered, and the badger is not at immediate risk of harm, works will cease, until further advice is provided by the suitably qualified ecologist. If the badger is injured, it will be taken to the nearest suitably qualified wildlife rehabilitator.
- 4.5.5 If a badger excavation is discovered during the works and can be fully inspected to confirm badgers are absent, the hole will be refilled and then monitored daily to check that re-excavation does not occur. If the furthest extent of the hole cannot be inspected advice will be sought from a suitably qualified ecologist.

4.6 Bats

- 4.6.1 The proposed works will result in the permanent destruction of the common pipistrelle and soprano pipistrelle roosts within the workshop (Figure 5).
- 4.6.2 As such, a bat mitigation licence will be sought from, and issued by, Natural Resources Wales prior to the commencement of works on the workshop.
- 4.6.3 The licence application can only be submitted to Natural Resources Wales once the following conditions are satisfied:

- All consents necessary for the works must have been granted and all conditions or reserved matters relating to wildlife species and habitat issues, which are intended to be and are capable of being discharged before development begins, must have been discharged and in place.
- A walk over survey must have been undertaken within two years prior to the submission of the licence application to determine whether conditions have changed since the most recent survey was undertaken.
- Works may only take place in agreement with the landowner, who must also have agreed to comply with the terms and conditions of the licence.

4.6.4 The use of the licence is subject to:

- A survey to inform whether a licence is required to permit the works and whether the species and circumstances fall within the remit of this licence.
- Meeting the three licensing tests: the activity must be for a certain purpose (e.g. for scientific research or in the public interest); there must be no satisfactory alternative that will cause less harm to the species; and the activity must not harm the long-term conservation status of the species.
- The submission of an application form, method statement and work schedule.
- Submission of an EPS mitigation report of action taken under licence following completion of licensable works, and submission of records to the relevant local records centre.

4.6.5 Natural Resources Wales does not charge for the consideration of licence applications and issue of licences.

4.6.6 The determination period of a bat mitigation licence application is 30-60 working days.

4.6.7 Once the licence is received, the works will be undertaken during daylight hours when weather conditions are conducive with bat activity with air temperatures above 8°C for a minimum of three nights prior to works commencing and for the night following the day works are undertaken with no rain or strong wind. During these conditions, it is considered that common pipistrelle and soprano pipistrelle are likely to be least vulnerable to disturbance.

4.6.8 Three alternative temporary roosts in the form of three 2F Schwegler bat boxes (or similar) will be located on the retained trees in the southern section of the site at a height of 3-6m with a clear line of flight below (Photo 40, Figure 6). The alternative temporary roosts will remain in this location throughout the duration of the works.

4.6.9 A pre-works inspection will be undertaken by the nominated ecologist or accredited agent. The pre-works inspection will involve systematically inspecting the workshop for evidence of bat activity in the form of live and dead bats, droppings and feeding remains. Visual assessments will be aided by suitable equipment. During the pre-works inspection, if a common pipistrelle or soprano pipistrelle is encountered, the nominated ecologist or accredited agent will, if possible, capture the bat by gloved hand or using a hand-held static net and, if it is confirmed as healthy, release it into one of the alternative temporary roosts. If a common pipistrelle or soprano pipistrelle is encountered but is not accessible, it will initially be left to emerge of its own volition. If it does not emerge, the nominated ecologist or accredited agent will use illumination, noise or vibration to disturb the bat to encourage it to emerge and disperse. Disturbance will only take place after sunset and on a night when weather conditions are suitable with air temperatures exceeding 8°C and no rain or strong wind. If the bat is underweight or injured it will be taken to the nearest suitably qualified wildlife rehabilitator. If the bat recovers, it will subsequently be released in the northern section of the site near the woodland when weather conditions are suitable. Where necessary, the client will cover any costs related to bat care.

- 4.6.10 If the pre-works inspection identifies evidence significantly different to that previously recorded, the works will be postponed and the impacts on bats reassessed. If necessary, the mitigation, compensation and enhancement strategy will be updated, which may require a modification to the bat mitigation licence, to be reapproved by the local planning authority and Natural Resources Wales prior to the recommencement of the works.
- 4.6.11 A toolbox talk will be provided before works commence by the nominated ecologist or accredited agent to the site manager and all contractors involved with the works. The toolbox talk will state that bats are present, the evidence that confirms bats are present, the legislation relating to bats, measures that will be used to protect bats, good working practices, licensable activities and what to do should a bat be found. A written record that this has been undertaken, and when, will be kept by the nominated ecologist or accredited agent.
- 4.6.12 Following the pre-works inspection and toolbox talk a destructive search by soft demolition of the roof and PRFs of the workshop will be supervised by the nominated ecologist or accredited agent. Where applicable, materials will be removed carefully away and not rolled or sprung to avoid potential harm to bats. If possible, the undersides of materials will be checked by the nominated ecologist or accredited agent for bats that may be clung to them before removal. Once the confirmed and potential roost features have been removed, the contractors will proceed with the works unsupervised.
- 4.6.13 During the destructive search, if a licensed species is found then the methodology outlined in paragraph 4.6.9 will be followed. Should an unlicensed species, number of bats or roost type be encountered then the procedure outlined in 4.6.10 will be implemented.
- 4.6.14 Any potentially harmful equipment or materials (e.g., equipment and materials with fine mesh elements, which are toxic, have an adhesive outer surface or comprise an open basin which requires or collects fluid) will be removed or stored safely when not in use. Any equipment or materials potentially harmful to bats will be identified by the nominated ecologist or accredited agent prior to the commencement of works. The nominated ecologist or accredited agent will specify the control measures which will be implemented to minimise the risk of disturbing, injuring or killing bats. The site manager will be responsible for the implementation of the control measures.
- 4.6.15 In the event that a bat is encountered when the nominated ecologist or accredited agent is not present works will cease until further advice is provided by the nominated ecologist. If the bat does not disperse when exposed or remains within the work area, and the bat is at immediate risk of harm, the following actions will be undertaken:
- A small cardboard box with a lid will be prepared by placing a soft cloth over the side of the box.
 - Wearing a pair of clean and dry powder-free gloves the bat will be covered by a clean and dry cloth and carefully captured lifting its whole body.
 - The bat will then be gently placed into the box.
 - The box will be placed in a safe, undisturbed, cool and dark location. A shallow container (i.e. plastic bottle top) containing a few drops of water will be placed on the base of the box and regularly replenished.
 - Once the bat is safe, further advice will be provided by the nominated ecologist.
- 4.6.16 To compensate for the loss of the common pipistrelle and soprano pipistrelle roosts a dedicated bat house (ST 30794 95135) will be constructed within the southern section of the site (Figures 6-7). The roost will be a minimum of 2.0m wide, 3.0m long and have an apex to floor height of a minimum of 3.0m. The roost will be constructed of a single skin of breezeblock with a pitched roof covered in either

clay or slate tiles with a wet ridge system and lined throughout with bitumen roofing felt. Raised bargeboards will be present on the eastern and western gable ends with sealed fascia board on the northern and southern elevations. The northern elevation will be open to allow entry for barn swallows (see Section 4.7 Birds).

4.6.17 Bat access into the dedicated bat house will be created as follows:

- Raised bargeboard on the eastern and western gable ends allowing access over the top of the gable plates into the cavity between the tiles and bitumen roofing felt (Figure 7). The bargeboards will be raised along their length by 30mm.
- Four bat access gaps, two each within the northern and southern seals of the ridgeline, will be created and be 20x30mm in size (Photo 41, Figure 7). The gap will enable access into a cavity beneath the ridge tiles.
- Two bat access tiles, one each within the northern and southern pitches of the roof, will be created a minimum in size of 20x30mm (Photo 42, Figure 8). The gap will enable access into the cavity between the tiles and bitumen roofing felt.
- The northern elevation will be open and will allow access to the open void and rafters.

4.6.18 There will be no direct illumination of the roost and access features, or the woodland, hedgerow or retained trees used as a commuting route. Where lighting is necessary in relation to the dedicated bat house, low impact lighting solutions will be adopted as outlined in paragraph 4.4.2. The proposed lighting strategy will be designed for the site this will be reviewed by the nominated ecologist.

4.6.19 On completion of the works, an inspection of the dedicated bat house will be undertaken by the nominated ecologist or accredited agent to determine whether the compensation measures have been implemented correctly. If the roost is satisfactory the works will be signed-off or, if the roost is not suitable, remediation will be completed, and this will subsequently be signed-off by the nominated ecologist or accredited agent.

4.6.20 Bat roost monitoring consisting of one external and internal inspection and one dusk emergence survey will be undertaken to determine the presence or likely absence of bats roosting within the dedicated bat house. The surveys will take place in the period from the 1st August to the 30th September two years after the completion of the works.

4.6.21 The external and internal inspection will be undertaken by the nominated ecologist or accredited agent and will involve systematically inspecting the dedicated bat house for evidence of bat activity in the form of live and dead bats, droppings and feeding remains. Visual assessments will be aided by suitable equipment.

4.6.22 The dusk emergence survey will commence 15 minutes before sunset and continue for 90 minutes after sunset. The survey will be scheduled to take place in suitable weather conditions with air temperatures exceeding 10°C and no rain or strong wind. The survey will involve two surveyors observing all aspects of the dedicated bat house with roost suitability continuously throughout the survey. The surveyors will be equipped with bat detectors and recording equipment and will record bats and their activity in a defined area. Sound recordings will then be processed using sound analysis software to confirm, if possible, the identification of any species of bat encountered emerging from or re-entering a roost within the dedicated bat house.

4.6.23 The monitoring survey data will allow an assessment of the use of the dedicated bat house. If it is considered that the roost provision is unsuitable and failing, the nominated ecologist or accredited agent will recommend remediation actions which will be implemented as soon as practically possible.

- 4.6.24 A report of actions taken in accordance with the bat mitigation licence will be submitted to Natural Resources Wales on completion of the works and/or no later than two weeks after the bat mitigation licence expires by the nominated ecologist or accredited agent.
- 4.6.25 The dedicated bat house will be maintained in a functional condition for a minimum of 10 years and once occupied by bats, maintenance activities will be supervised by a licensed bat ecologist. Management actions will be specified by the nominated ecologist or accredited agent and detailed within the landscape and ecological management plan for the site.
- 4.6.26 As a precaution, the administration building and all elevations excluding the western elevation of the amenities building will continue to be managed to maintain their current unfavourable condition for species of bat. This will be achieved by maintaining the buildings in their current condition and not allowing any deterioration which may result in the formation of crevice features and ensuring doors and windows remain closed when not in use.
- 4.6.27 Any trees which require removal will be subjected to a preliminary roost assessment by a suitably qualified ecologist prior to removal. If they exhibit features with a low potential to support bats then the trees should undergo soft felling, taking reasonable measures to avoid impacts on bats. In the event that a bat is encountered, works must cease immediately, and advice be sought from a suitably qualified ecologist on how to proceed with the works in compliance with relevant UK wildlife legislation, with the potential need for a licence to be obtained from Natural Resources Wales. If any tree is assessed to have moderate or high potential to support bats then the tree may need to be subjected to further dusk emergence and/or pre-dawn re-entry surveys.
- 4.6.28 There will be no direct illumination of the onsite lowland mixed deciduous woodland and hedgerow. Where lighting is necessary elsewhere on site, low impact lighting solutions will be adopted as outlined in paragraph 4.4.2, and the lighting strategy will be signed-off by the nominated ecologist.

4.7 Birds

- 4.7.1 The works will be undertaken in the period from the 1st September to the 28th February to avoid any potential risk of impacting breeding birds and in accordance with other protected species method statements.
- 4.7.2 If it is necessary to remove the buildings and trees in the period from the 1st March to the 31st August, a pre-works inspection will be undertaken by a suitably qualified ecologist in the 24 hour period prior to the works. The inspection will take place between sunrise and 10:00 or between 16:00 and sunset, and in suitable weather conditions with air temperatures between 8°C and 20°C and with no rain or strong wind.
- 4.7.3 The inspection will involve observation of nesting habitats for 30 minutes for evidence of breeding bird activity from multiple discrete vantage points. If no evidence of breeding bird activity is observed the nesting habitats will be closely inspected to confirm that there are no active nests present. If full access is not possible, the initial observation period will be extended to 60 minutes.
- 4.7.4 If an active nest is discovered, the nest will remain undisturbed until the young have fledged. The suitably qualified ecologist will then undertake a further inspection of the nest once it is likely that the young have fledged and confirm that the nest is inactive.
- 4.7.5 If the initial observation and inspection is inconclusive, a phased demolition and clearance approach will be adopted under the direct supervision of the suitably qualified ecologist.

4.7.6 If there are no signs of breeding activity, demolition and clearance works will commence within the 24 hour period following the breeding bird check. However, if more than 24 hours elapses prior to the commencement of the works to remove the suitable nesting habitat, or during the works to remove the habitat, a further breeding bird check will be undertaken.

4.7.7 The dedicated bat house will incorporate compensation for the loss of the four barn swallow nest sites. The dedicated bat house will contain at least four WoodStone swallow nest cups (or similar) (Photo 43, Figure 6). The cups will be installed along the top of the interior wall of the southern elevation of the bat house, which will have an open front along the northern elevation to provide access (Figure 7). The cups will be installed at a minimum height of 2m with 1m between each nest cup, ensuring that there is 6cm clearance above the nest cup.

4.8 Great crested newts

4.8.1 During the works, measures will be implemented to avoid impacting the retained woodland, hedgerow and scrub.

4.8.2 As a precaution, the modified grassland will continue to be managed to maintain its current unfavourable condition for great crested newts. This will be achieved by regular mowing using the lowest blade setting available.

4.8.3 During works, equipment and/or materials which provide crevice features and could be used by great crested newts for rest and shelter, will not be stored on site.

4.8.4 In the unlikely event that a great crested newt is encountered, and the amphibian is not at immediate risk of harm, works will cease, until further advice is provided by the suitably qualified ecologist.

4.8.5 If the great crested newt is at immediate risk of harm, the following actions will be undertaken:

- A clean bucket or box will be prepared by placing grass and leaves inside to a depth of at least 1cm.
- Wearing a pair of clean and dry gloves the great crested newt will be carefully captured from the middle of its body.
- The great crested newt will then be gently placed into the bucket or box.
- The bucket or box will be placed in a safe, undisturbed, cool and dark location.
- Once the great crested newt is safe, further advice will be provided by the suitably qualified ecologist.

4.8.6 If the great crested newt is confirmed as healthy by the suitably qualified ecologist, it will be released on the edge of the woodland. If the amphibian is not fit for release, it will be taken to the nearest suitably qualified wildlife rehabilitator. If the great crested newt recovers, it will subsequently be released on the edge of the woodland when weather conditions are suitable. Where necessary, the client will cover any costs related to amphibian care. Once the great crested newt is safe, works will not recommence until further advice is provided by the suitably qualified ecologist.

4.9 Hazel dormice

4.9.1 During the works, measures will be implemented to avoid impacting the retained potential hazel dormouse habitat.

4.9.2 Barrier fencing will be installed around the woodland and hedgerow prior to the commencement of, and remain in place until the completion of, the works (in accordance with any arboricultural protection documentation as detailed in Section 4.4). The barrier fencing will comprise exclusion fencing and/or Heras fencing, with signage detailing the purpose of the area, during the works. The barrier fencing will be signed off by a suitably qualified ecologist.

4.9.3 There will be no direct illumination of the onsite lowland mixed deciduous woodland and hedgerow. Where lighting is necessary elsewhere on site, low impact lighting solutions will be adopted, and the lighting strategy will be signed-off by a suitably qualified ecologist (see Section 4.4 Habitats).

4.10 Reptiles

4.10.1 During the works, measures will be implemented to avoid impacting the retained woodland, hedgerow and scrub.

4.10.2 As a precaution, the modified grassland will continue to be managed to maintain its current unfavourable condition for reptiles. This will be achieved by regular mowing using the lowest blade setting available. In this way the sward will be maintained at a height of less than 10cm until the onset of, and during, the works.

4.10.3 Materials and equipment where reptiles could rest or shelter will not be stored adjacent to the retained woodland, hedgerow and scrub, or will be stored so that they do not create crevices where reptiles may rest or shelter.

4.10.4 In the unlikely event that a reptile is encountered, and the reptile is not at immediate risk of harm, works will cease until the species has dispersed or, if it does not disperse, until further advice is provided by the suitably qualified ecologist. In any event the suitably qualified ecologist will be notified prior to the continuation of works.

4.11 Other notable species

4.11.1 As a precautionary measure during the construction phase the site will be secured at night to avoid accidental harm to hedgehogs (see Section 4.5 Badgers).

4.12 Survey updates

4.12.1 Further ecological consultation will be sought if the scope of the work changes significantly or if the onset of the work is delayed by more than 12 months from the date of the most recent survey.

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5.2 Websites

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6.0 Photographs

6.1 Methodology







	
<p>Photo 1. The northern elevation of the workshop at the darkest point of the survey on the 10th August 2022.</p>	<p>Photo 2. The southern elevation of the workshop at the darkest point of the survey on the 10th August 2022.</p>
	
<p>Photo 3. The northern and western elevations of the amenities building at the darkest point of the survey on the 10th August 2022.</p>	<p>Photo 4. The northern elevation of the workshop at the darkest point of the survey on the 24th August 2022.</p>
	
<p>Photo 5. The southern elevation of the workshop at the darkest point of the survey on the 24th August 2022.</p>	<p>Photo 6. The northern elevation of the workshop at the darkest point of the survey on the 20th September 2022.</p>



Photo 7. The eastern and southern elevations of the workshop at the darkest point of the survey on the 20th September 2022.

No photograph

6.2 Results



Photo 8. The modified grassland located in the centre of the site.

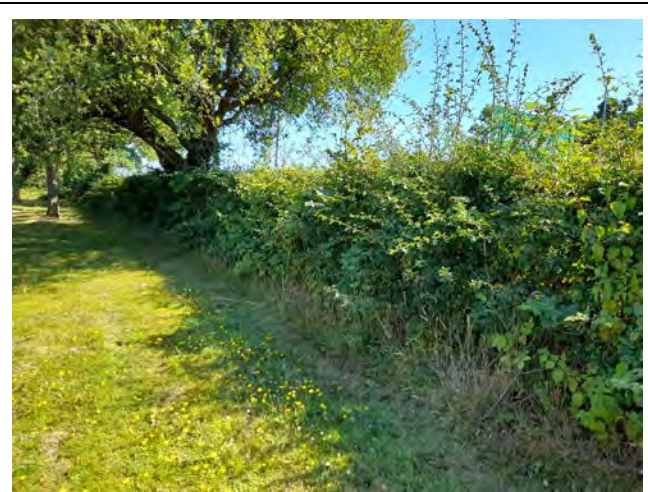


Photo 9. The hedgerow with trees located along the eastern boundary of the site.



Photo 10. The mixed scrub in the western section of the site.



Photo 11. The ornamental planting in the central section of the site.



Photo 12. The hard standing in the central section of the site.

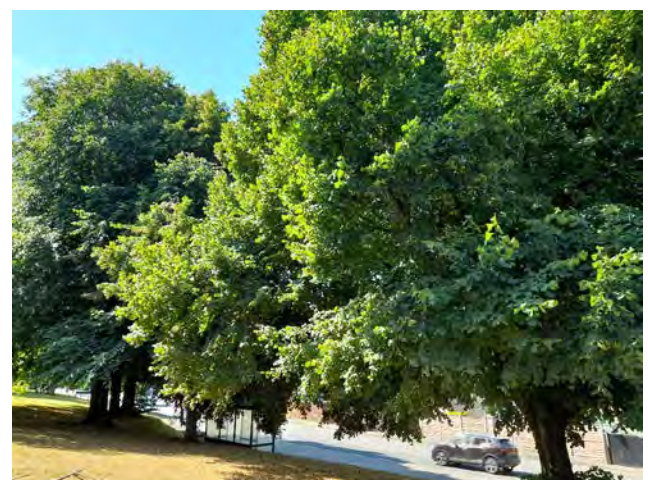


Photo 13. The scattered trees in the southern section of the site.



Photo 14. The lowland mixed deciduous woodland in the northeastern section of the site.



Photo 15. The northern elevation of the administration building.



Photo 16. The eastern elevation of the administration building.



Photo 17. The southern elevation of the administration building.



Photo 18. The western elevation of the administration building.



Photo 19. The roof of the administration building.



Photo 20. The basement of the administration building.



Photo 21. The northern elevation of the amenities building.



Photo 22. The eastern elevation of the amenities building.



Photo 23. The southern elevation of the amenities building.

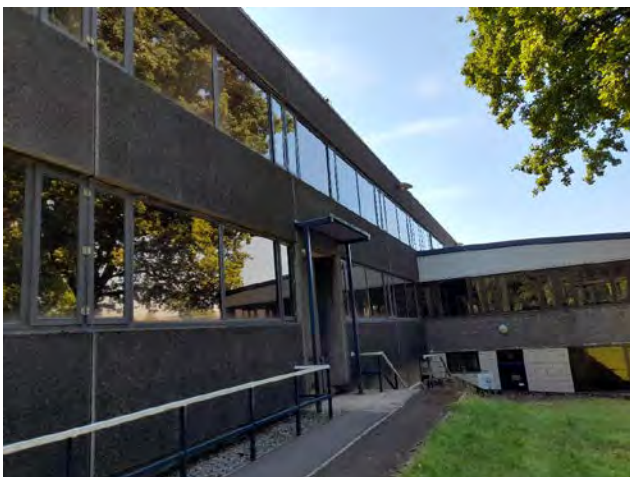


Photo 24. The western elevation of the amenities building.



Photo 25. The internal area of the amenities building.



Photo 26. The northern elevation of the workshop.



Photo 27. The eastern elevation of the workshop.



Photo 28. The southern elevation of the workshop.



Photo 29. The western elevation of the workshop.



Photo 30. The internal area of the workshop.



Photo 31. The northern elevation of one of the temporary buildings located in the eastern section of the site.



Photo 32. The eastern elevation of one of the temporary buildings located in the eastern section of the site.



Photo 33. The southern elevation of one of the temporary buildings located in the eastern section of the site.



Photo 34. The western elevation of one of the temporary buildings located in the eastern section of the site.



Photo 35. The storage containers in the southern section of the site.



Photo 36. The eastern elevation of the workshop with the common pipistrelle (orange) and soprano pipistrelle (yellow) access features highlighted.

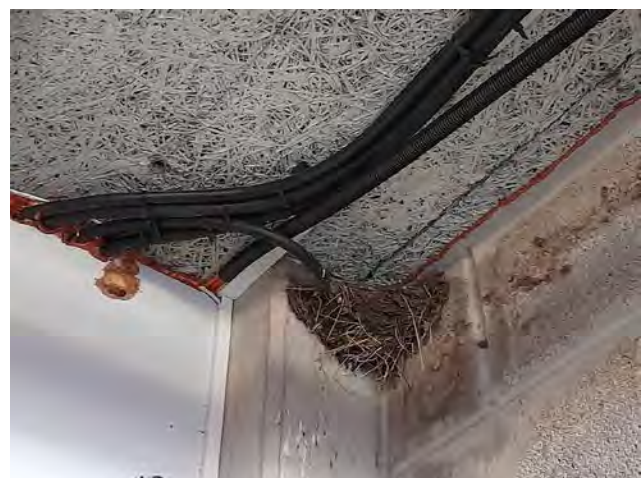


Photo 37. The active barn swallow nest on the western elevation of the administration building.



Photo 38. The inactive barn swallow nest on the western elevation of the administration building.



Photo 39. An adult hedgehog observed along the eastern boundary of the site on the 20th September 2022.

6.3 Method statement



Photo 40. A 2F Schwegler bat box.



Photo 41. An example of a created access feature suitable for various species of bat within a wet ridgeline.



Photo 42. An example of a bat access tile.



Photo 43. A WoodStone barn swallow nest cup.

7.0 Figures

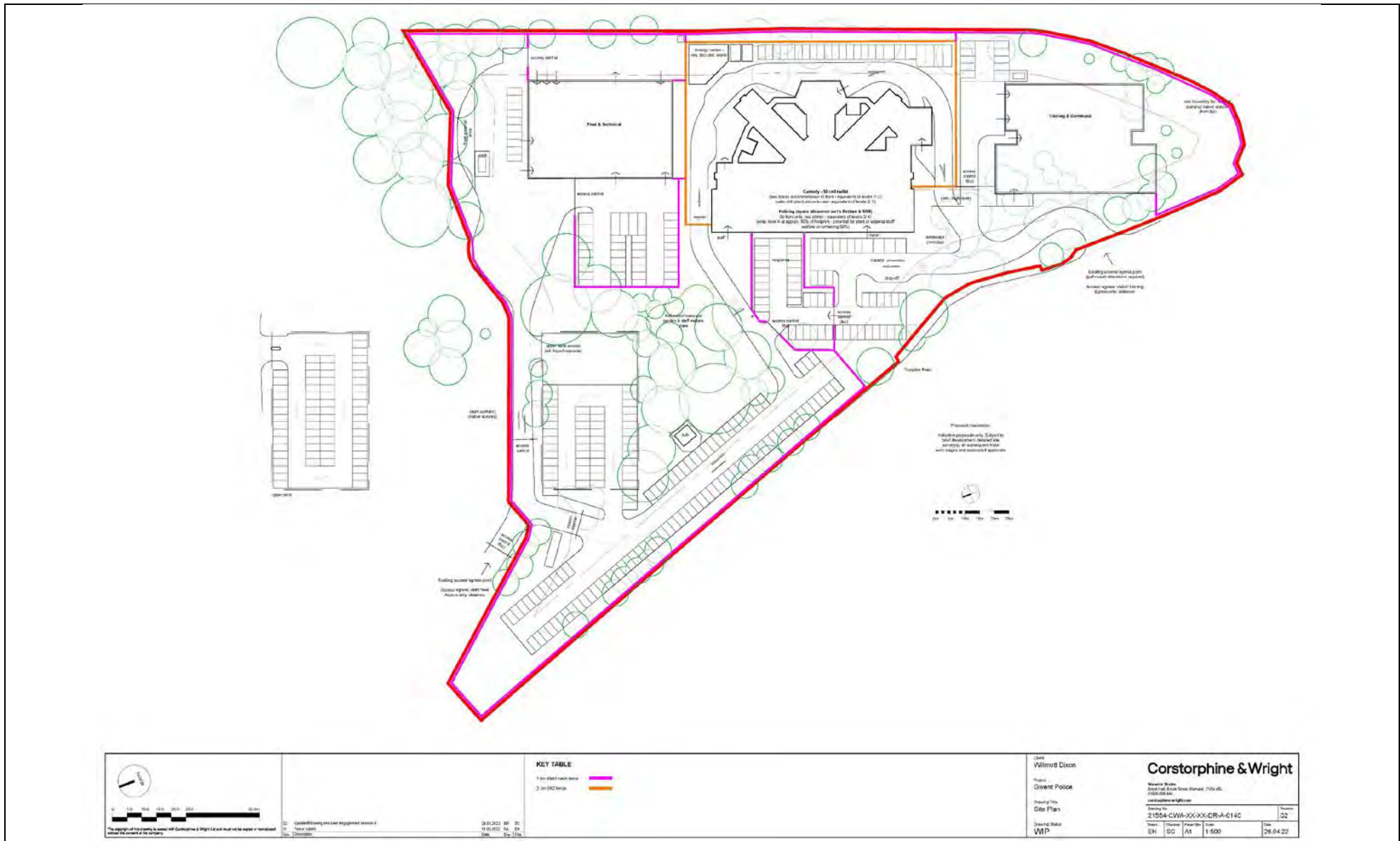


Figure 1 Proposed site plan

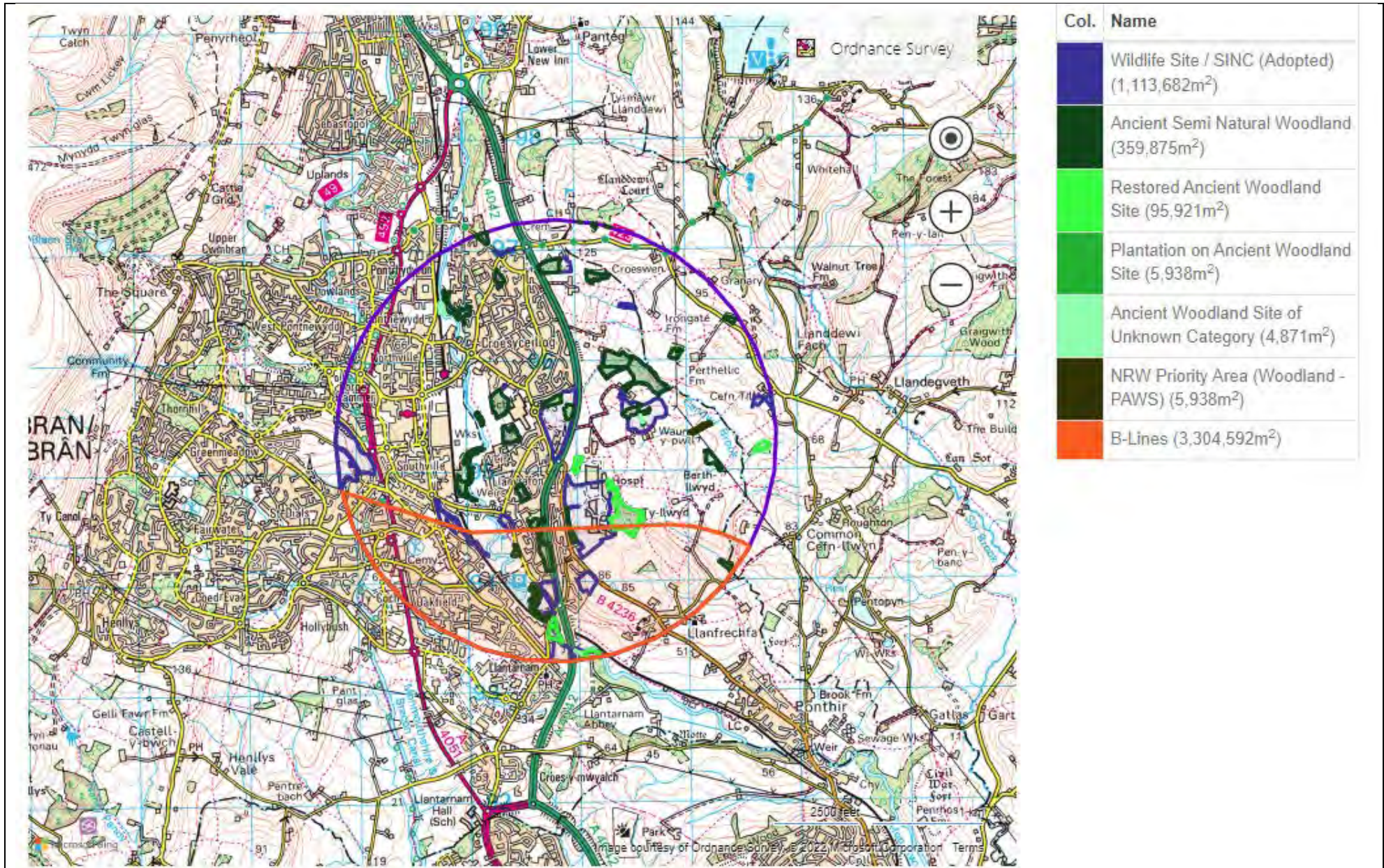


Figure 2 Non-statutory designated sites plan (including ancient woodland sites) (courtesy of SEWBRC)

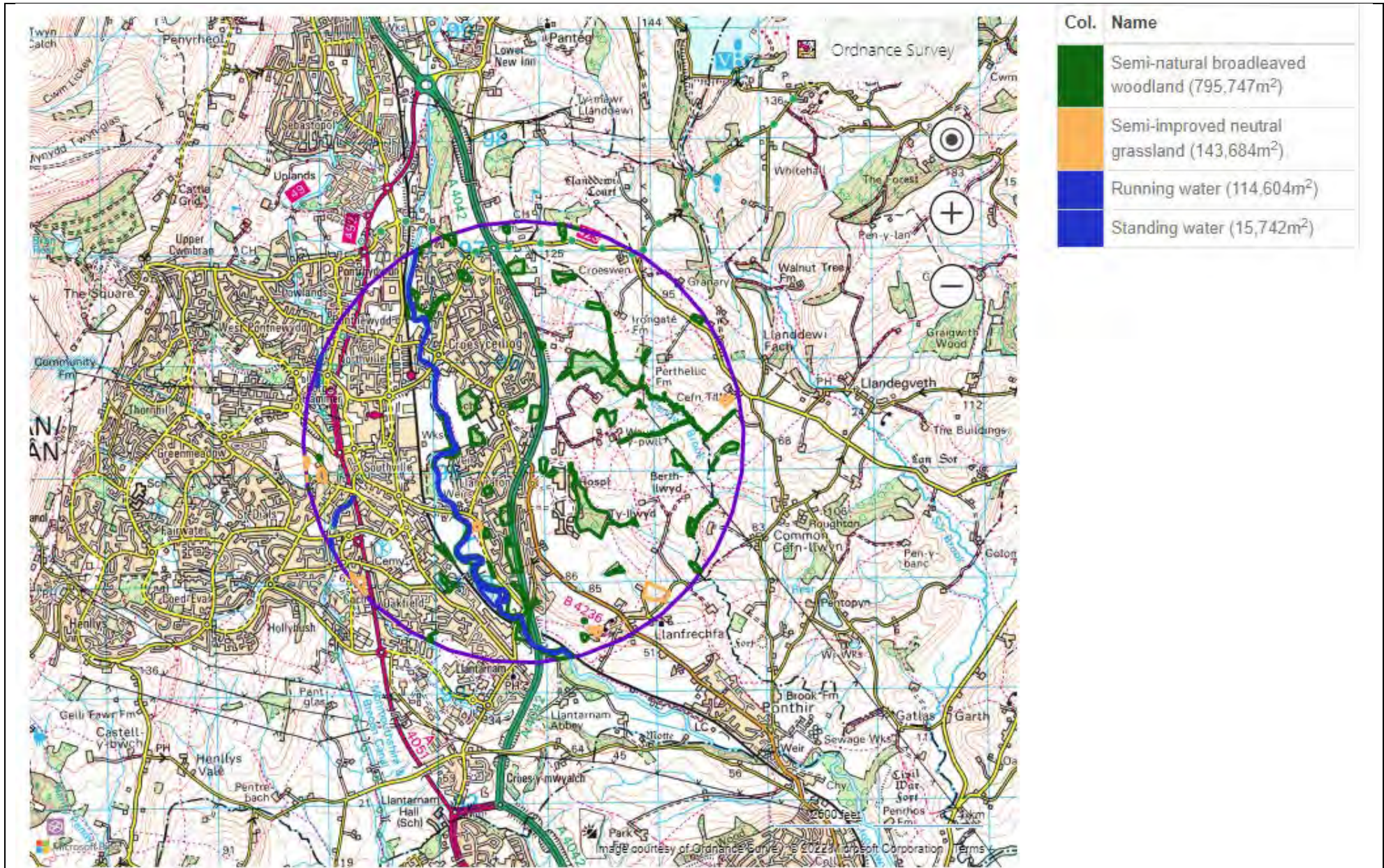


Figure 3 Habitats of principal importance plan



Figure 4 Preliminary ecological appraisal plan

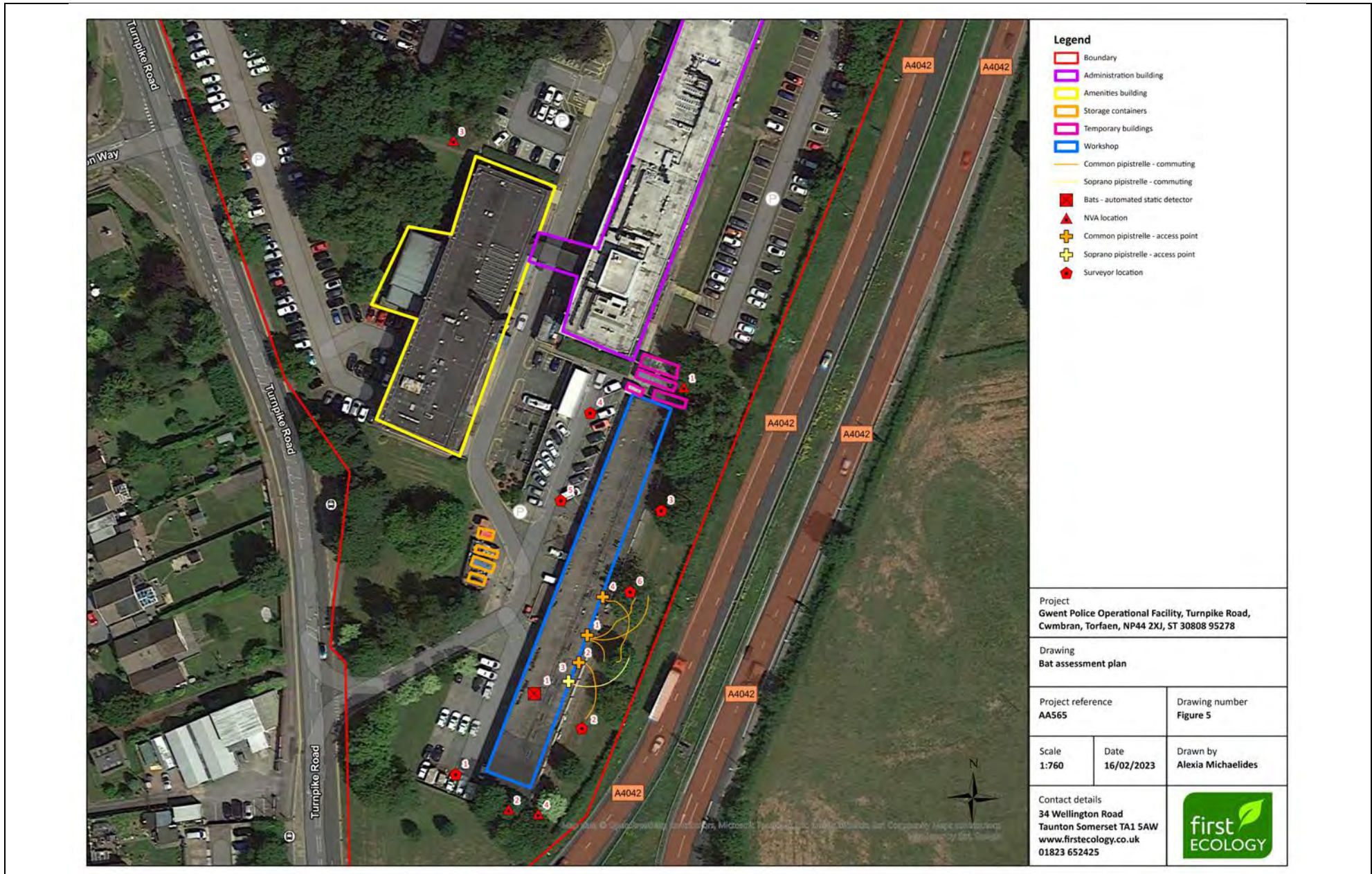


Figure 5 Bat assessment plan

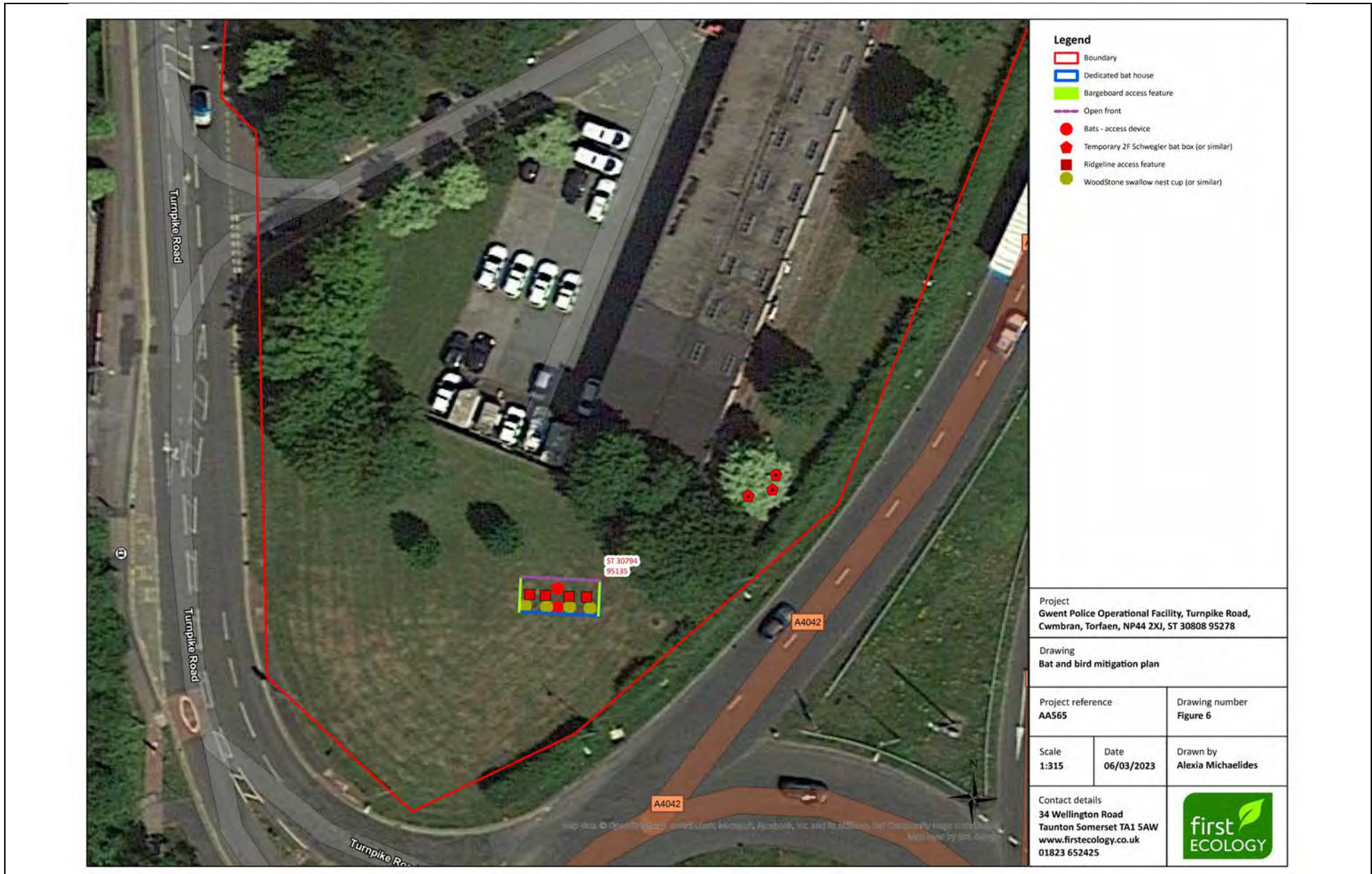


Figure 6 Bat and bird mitigation plan




**Figure 7: Specification for mitigation/compensation: dedicated bat roost:
external view including bird mitigation**

Drawn by: Alexia Michaelides
Date: 01/03/2023
Scale: no scale

General specifications

- Roof to be covered in clay or slate tiles
- Eaves to be sealed tight on the northern and southern elevations
- Wet ridge system to be installed
- Open northern elevation (for bird mitigation)

Key

-  Bat access tiles: one within each of the pitches of the roof on the second course below the ridgeline with an access feature a minimum of 20x30mm
-  Bat ridge access: two on each side of the roof within the seal of the ridge with an access feature a minimum of 20x30mm
-  Bat bargeboard access: raised bargeboard to be present on each gable end to enable access over the top of the gable plate and into the cavity between the tiles and bitumen roofing felt. The bargeboard will be raised throughout by 30mm.

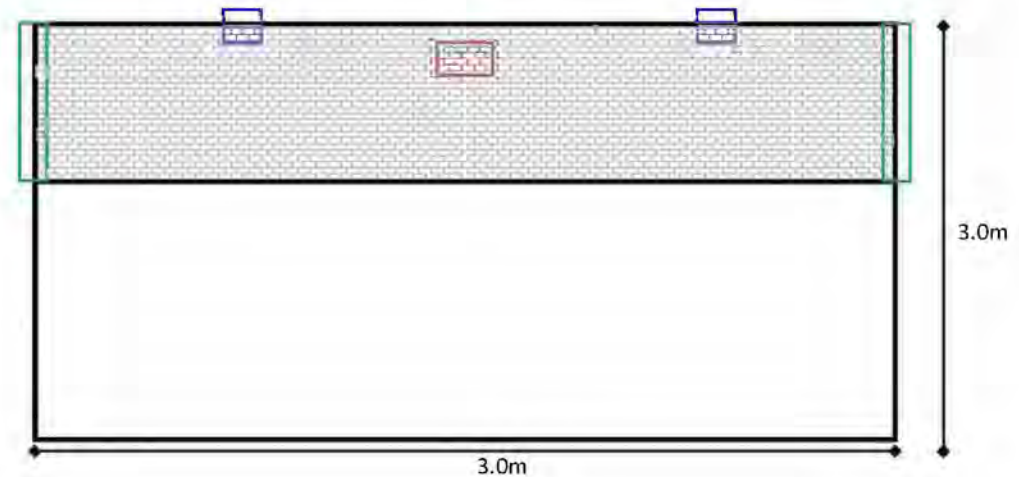
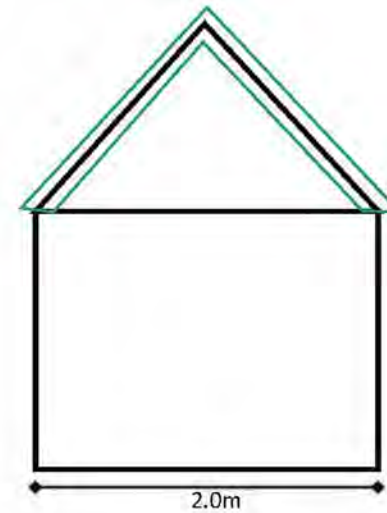


Figure 7 Specification for mitigation/compensation: dedicated bat roost: external view

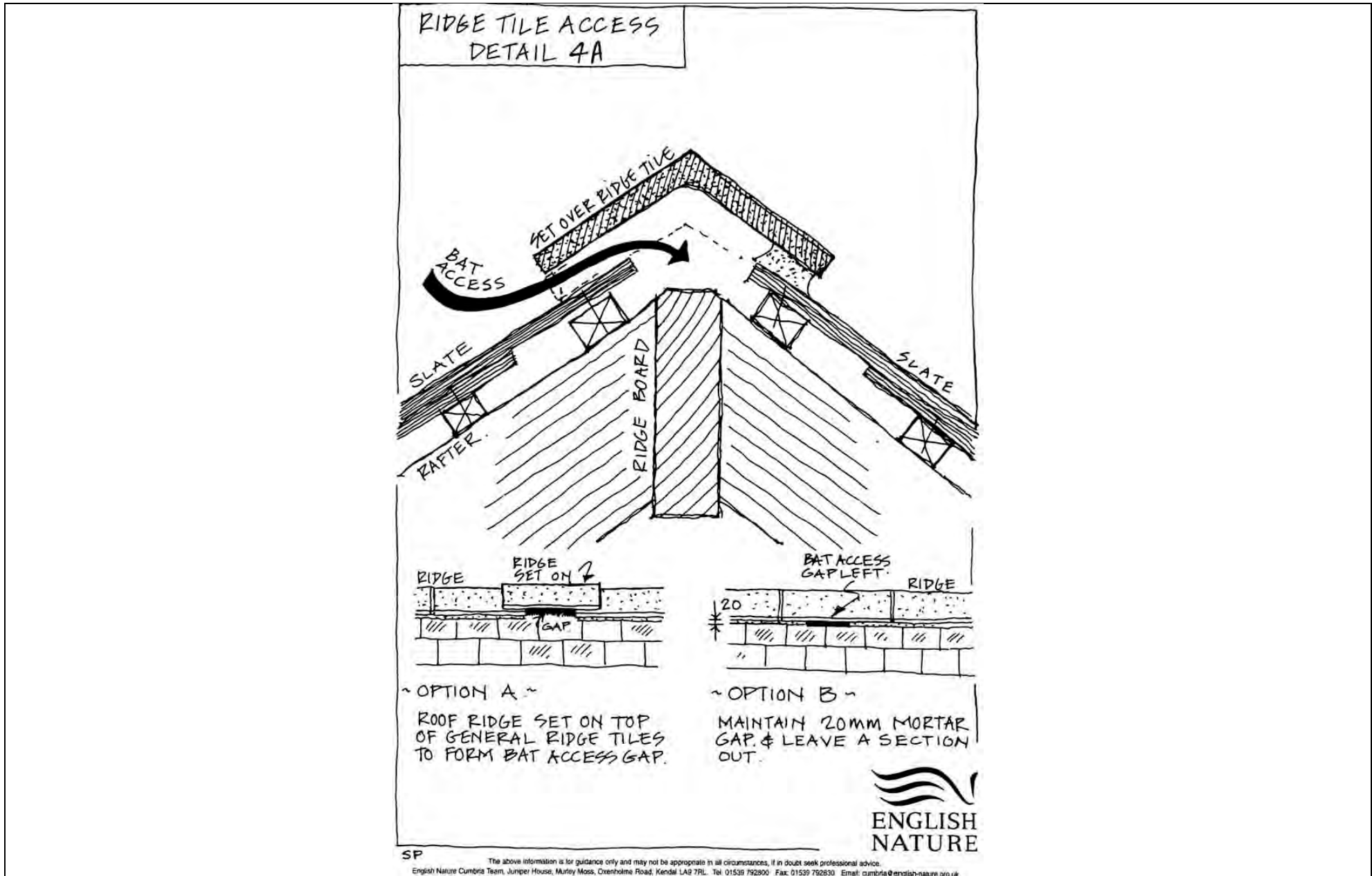


Figure 8 Specification for mitigation/compensation: ridge tile access - Detail 4A

8.0 Appendices

Appendix A Wildlife legislation and planning policy

The following information provides a summary of wildlife legislation and planning policy which affords protection to plants and animals and seeks to conserve, enhance and restore biodiversity.

Table 30. Summary of wildlife legislation afforded to terrestrial and freshwater animals.

Species	Legislation
Birds	All species of bird whilst actively nesting are afforded legal protection under the Wildlife and Countryside Act 1981 (as amended) and additional penalties are incurred for offences relating to birds listed on Schedule 1.
Amphibians	The great crested newt is afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and is therefore a European Protected Species (EPS). Common amphibian species (common frog (<i>Rana temporaria</i>), common toad (<i>Bufo bufo</i>), smooth newt (<i>Lissotriton vulgaris</i>) and palmate newt (<i>Lissotriton helveticus</i>)) are afforded limited legal protection under the act (as amended). Common toad and great crested newt are also listed as species of principal importance under Section 41 of the NERC Act 2006 (as amended).
Badger	Badgers are afforded legal protection under the Badgers Act 1992 and are afforded limited protection under the Wildlife and Countryside Act 1981, Section 11, Schedule 6 (as amended).
Bats	All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended) (Section 9 (4)(b), (1) and (5)), the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 listed in Schedule 2 as European protected species, the Countryside and Rights of Way (CROW) Act 2000 and the Wild Mammals Protection Act 1996.
Hazel dormouse	The hazel dormouse is afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and is therefore a European protected species.
Otter	The otter is afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and is therefore a European protected species.
Reptiles	Common reptiles are afforded limited legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are also listed as species of principal importance under section 41 of the NERC Act 2006 (as amended).
Water vole	Water voles are afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are also listed as species of principal importance under section 41 of the NERC Act 2006.
White-clawed crayfish	White-clawed crayfish are afforded limited legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are also listed as species of principal importance under section 41 of the NERC Act 2006 (as amended).

Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Habitats Directive and Birds Directive provide protection for a wide range of habitats and species within the European Community in order to meet their obligations as a signatory to the Berne Convention. The Conservation of Habitats and Species Regulations 2017 transposes these directives into European law. On the

departure of the UK from the EU in 2020, this legislation was transposed into domestic law via the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The Conservation of Habitats and Species Regulations 2017 (SI No. 2017/1012) update and supersede the Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490) and the Conservation Regulations 1994 (as amended). The 2017 Regulations are the principal means by which the European Habitats Directive is transposed in England and Wales.

The Regulations provide for the designation and protection of a network of 'European Sites' termed Natura 2000, the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

The Conservation of Habitats and Species Regulations 2017 apply in the terrestrial environment and in territorial waters out to 12 nautical miles. The EU Habitats and Wild Birds Directives are transposed in UK offshore waters by separate regulations - The Conservation of Offshore Marine Habitats and Species Regulations 2017 (the "2017 Regulations") which consolidate and update the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (the "2007 Regulations").

Regulation 43 relates to the protection of European protected species listed under Schedule 2 of the Regulations. Taken together it is an offence to undertake the following acts with regard to European protected species:

- deliberately capture, injure or kill any wild animal of a European protected species;
- deliberately disturb animals of any such species in such a way as to be likely to:
 - impair their ability to survive, breed, rear or nurture their young, hibernate or migrate, or
 - affect significantly the local distribution or abundance of the species to which they belong;
- deliberately take or destroy the eggs of such an animal; or
- damage or destroy a breeding site or resting place of such an animal.

The disturbance offence is generally taken to refer to a discernible effect at population level and biogeographic level, rather than simply to an individual animal. However, in certain circumstances the disturbance of one individual animal may have population level effects.

The Regulations also make it an offence (subject to exceptions) to deliberately pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5.

However, the actions listed above can be made lawful through the granting of licences (European protected species licence) by the appropriate authorities (Natural England in England). Licences may be granted for several purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority has determined that the following regulations are satisfied:

- the works under the licence are being carried out for the purposes of 'preserving public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment';
- there is 'no satisfactory alternative'; and
- the action 'will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in their natural range'.

To apply for a licence, the following information is required:

- the species concerned;

- the size of the population at the site (note this may require a survey to be carried out at a particular time of the year);
- the impact(s) (if any) that the development is likely to have upon the populations; and
- what measures can be conducted to mitigate for the impact(s).

The Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 (as amended) is the principal piece of UK legislation relating to the protection of wildlife. It consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain.

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Special Protection Areas (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals listed in Schedule 6.

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

The Countryside and Rights of Way Act 2000

The Countryside and Rights of Way Act 2000 (CRoW) was passed to provide additional levels of protection for wildlife whilst also strengthening the protection afforded to Sites of Special Scientific Interest.

Schedule 12 of the Act amends the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', create a new offence of 'reckless' disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 (NERC) is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy.

It was created to make provision in connection with wildlife, Sites of Special Scientific Interest, National Parks and the Broads; to amend the law relating to rights of way; to make provision as to the Inland Waterways Amenity Advisory Council; to provide for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.

Section 40 of NERC carries an extension of the earlier CRoW Act biodiversity duty to public bodies and statutory undertakers to have due regard to the conservation of biodiversity. Section 41 requires the Secretary of State, as respects England, to publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. The updated S41 list, published in August 2010, identified 56 habitats and 943 species of principal importance.

The Environment Act 2021

The Environment Act 2021 sets out amendments to the Town and Country Planning Act 1990, which include Schedule 14, paragraph 2 (3), which specifies that development must exceed the pre-development biodiversity value of onsite habitat by at least 10%. This will apply to every planning permission granted for the development of land in the UK.

The Environment Act 2021 achieved Royal Assent in November 2021 and it is expected that there will be a two year transition period, which will make the provisions above a mandatory part of the planning process by November 2023.

The Protection of Badgers Act 1992

In the UK badgers are primarily afforded protection under the Protection of Badgers Act 1992. This makes it illegal to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so and to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

Badgers also receive limited protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). This outlaws certain methods of taking or killing animals.

Under Section 10 (1)(d) of the Protection of Badgers Act 1992, a licence may be granted by Natural England to interfere with a badger sett for the purpose of development, as defined by Section 55(1) of the Town and Country Planning Act 1990.

Section 3 of the Protection of Badgers Act 1992 defines interference as:

- damaging a badger sett;
- destroying a badger sett;
- obstructing access to, or any entrance of, a badger sett;
- causing a dog to enter a sett; or
- disturbing a badger when it is occupying a badger sett.

Natural England guidance has suggested that the following operations may disturb badgers in their setts, and therefore unless these can be avoided a licence may be required for:

- excavation within 20m of any entrance to an active sett;
- excavation or other ground disturbance using heavy machinery within 30m of a sett;
- fire or chemicals within 20m of a sett;
- tree felling in the area of a sett - trees should be felled away from setts and cleared away from badger paths; and
- other disturbances such as loud noises or vibrations; some activities such as pile driving and the use of explosives that may result in a disturbance over a much greater distance will require individual consideration.

The Wild Mammals (Protection) Act 1996

The Wild Mammals (Protection) Act 1996 makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

The Animal Welfare Act 2006

Prior to the Animal Welfare Act 2006, people only had a duty to ensure that an animal didn't suffer unnecessarily. The new Act keeps this duty but also imposes a broader duty of care on anyone responsible for an animal to take reasonable steps to ensure that the animal's needs are met. This means that a person has to look after the animal's welfare as well as ensure that it does not suffer. The Act says that an animal's welfare needs include:

- a suitable environment (how it is housed);
- a suitable diet (what it eats and drinks);
- the ability to exhibit normal behaviour patterns;
- any need it has to be housed with, or apart from, other animals; and
- protection from pain, suffering, injury and disease.

With regards to development, this may have implications when translocations of animals are proposed. As such, care must be taken to ensure that any receptor sites are suitable for the species in terms of habitat and carrying capacity.

The National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out national planning policy and provides guidance to local planning authorities to apply within local plans. Of particular relevance to ecology is paragraph 180, which specifies that planning permission should be refused in cases where the development would cause significant harm to biodiversity, have adverse impacts on designated sites or result in deterioration of irreplaceable habitats.

Appendix B Surveyor qualifications, accreditations and memberships

- Adam Chambers, First Ecology, Ecologist, BSc (Hons), qualifying member of the CIEEM.
- Alexander Zee, First Ecology, Assistant Ecologist, BSc (Hons).
- Alexia Michaelides, First Ecology, Ecologist, MBiol (Hons), qualifying member of the CIEEM, Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number 2019-41269-CLS-CLS, Natural Resources Wales Licence Number: S091465/1, Natural England Dormouse Level 1 Survey Class Licence CL10a Registration Number: 2022-10028-CL10a-DOR, Natural Resources Wales Licence Number: S091240/1. Accredited agent of Hannah Bates, First Ecology, Senior Ecologist, BSc (Hons), MSc, ACIEEM, Natural England Class Licence CL18 (Bat Survey Level 2) Registration Number: 2019-41077-CLS-CLS, Natural Resources Wales Bat Survey Licence Number S087866/1.
- Benjamin Hanson, First Ecology, Assistant Ecologist, BSc (Hons).
- Charlie Fayers, First Ecology, Senior Ecologist, BSc (Hons), ACIEEM, Natural England Class Licence CL18 (Bat Survey Level 2) Registration Number: 2016-21963-CLS-CLS, Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number: 2016-23475-CLS-CLS.
- Chloe Turner, First Ecology, Ecologist, BSc (Hons), qualifying member of the CIEEM.
- Hannah Bates, First Ecology, Senior Ecologist, BSc (Hons), MSc, ACIEEM, Natural England Class Licence CL18 (Bat Survey Level 2) Registration Number: 2019-41077-CLS-CLS, Natural Resources Wales Bat Survey Licence Number S087866/1, Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number 2022-10308-CL08-GCN, Natural England Dormouse Class Licence CL10A (Dormouse Survey) Registration Number: 2016-22096-CLS-CLS, Natural Resources Wales Licence Number: S085400/1.
- Helen Ward, First Ecology, Consultancy Manager, BSc (Hons), MCIEEM, Natural England Class Licence CL18 (Bat Survey Level 2) Registration Number: 2016-19350-CLS-CLS, Registered Consultant Reference Number RC127, Natural Resources Wales Licence Number S088357/1, Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number 2016-20068-CLS-CLS, Natural England Dormouse Class Licence CL10A (Dormouse Survey) Registration Number: 2016-22343-CLS-CLS.
- Jacob Hill, First Ecology, Assistant Ecologist, BSc (Hons), qualifying member of the CIEEM.
- Robyn Ablitt, First Ecology, Senior Arboriculturist / Ecologist, BSc (Hons), ACIEEM, Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number 2015-16924-CLS-CLS, Natural Resources Wales Licence Number: S087567-1, professional member of the Arboricultural Association (MArborA), accredited agent of Hayley Hockridge, Waterman Group, Principal Ecologist, BSc (Hons), MCIEEM, Natural England Class Licence CL18 (Bat Survey Level 2) Registration Number: 2015-14812-CLS-CLS.
- Stephanie Bentham-Green, First Ecology, Principal Ecologist, BSc (Hons), ACIEEM, Natural England Class Licence CL17 (Bat Survey Level 1) Registration Number: 2021-51332-CLS-CLS, Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number 2018-37987-CLS-CLS, Natural Resources Wales Licence Number: S089243/1, Natural England Dormouse Class Licence CL10A (Dormouse Survey) Registration Number: 2019-39610-CLS-CLS, Natural Resources Wales Licence Number: S089258/1. Accredited agent of Hannah Bates, Senior Ecologist, BSc (Hons), MSc, ACIEEM, Natural England Class Licence CL18 (Bat Survey Level 2) Registration Number: 2019-41077-CLS-CLS, Natural Resources Wales Bat Survey Licence Number S087866/1.
- Thomas Bell, First Ecology, Assistant Ecologist, BSc (Hons), Natural England Class Licence CL08 (Great Crested Newt Survey Level 1) Registration Number: 2020-44365-CLS-CLS.
- Victoria Anthony, First Ecology, Assistant Ecologist, BSc (Hons), MSc.

Appendix C Acronyms

Acronym	Description
ACIEEM	Associate member of the Chartered Institute of Ecology and Environmental Management
AONB	Area of Outstanding Natural Beauty
AWI	Ancient Woodland Inventory
AWIS	Ancient Woodland Indicator Species
BSc (Hons)	Bachelor of Science with Honours
CEMP	Construction Ecological Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CWS	County Wildlife Site
E	East (-ern / -erly)
eDNA	Environmental Deoxyribonucleic Acid
ENE	Eastnortheasterly
EPS	European Protected Species
ESE	Eastsoutheasterly
G	Good
Hons	Honours
HSI	Habitat Suitability Index
IAW	Inventory of Ancient Woodland
IHS	Integrated Habitat System
LNR	Local Nature Reserve
LWS	Local Wildlife Site
M	Moderate
MAGIC	Multi-Agency Geographic Information for the Countryside
MBiol (Hons)	Master of Biology (MBiol) with Honours (Hons)
MCIEEM	Full member of the Chartered Institute of Ecology and Environmental Management
MEWP	Mobile Elevated Working Platform
MSc	Master of Science
mtDNA	Mitochondrial Deoxyribonucleic Acid
N	North (-ern / -erly)
N/A	Not Applicable
NE	Northeasterly
NNE	Northnortheasterly
NNR	National Nature Reserve
NW	Northwesterly
OSWI	Other Sites of Wildlife Interest
P	Poor
PCR	Polymerase Chain Reaction
PRF	Potential Roost Feature
Ramsar	Wetland Site of International Importance
RSPB	Royal Society for the Protection of Birds
S	South (-ern / -erly)
SAC	Special Area of Conservation
SE	Southeasterly
SNCI	Site of Nature Conservation Importance
SPA	Special Protection Area
SSE	Southsoutheasterly
SSSI	Site of Special Scientific Interest
SSW	Southsouthwesterly

Acronym	Description
SW	Southwesterly
TPO	Tree Preservation Order
UK Hab	United Kingdom Habitat Classification
UWS	Unconfirmed Wildlife Site
W	West (-ern / -erly)
WSW	Westsouthwesterly

Appendix D Field signs

Badger	Definitions
Day nests	Bundles of grass and other vegetation where badgers may sleep above ground.
Faeces	Usually deposited in characteristic excavated pits, concentrations of which, known as latrine sites, are typically found at home range boundaries.
Footprints	Typically observed in damp mud, prints comprise the impression of a large, wide pad with five toes aligned in front.
Hair traces	Black and white, appearing shiny when fresh.
Paths	Between setts or leading to foraging areas
Push-throughs	Where a badger passes beneath a boundary feature creating a depression in the ground or pushes up fencing.
Scratching posts	At the base of tree trunks
Setts	Comprising either single isolated entrances or a series of entrances, likely to be interconnected underground.
Snuffle holes	Small scrapes where badgers have searched for insects, earthworms and plant tubers
Hazel dormice	
Feeding remains	Nuts with tooth marks around the rim of the hole, smoothing it out, with a few tooth marks on the nut surface. Nuts opened by hazel dormice will have no transverse tooth marks across the rim of the nut shell.
Active nests	Typically, these are grapefruit-size and often found in brambles or other low-growing shrubs and are most likely to be found in the autumn. Dormouse nests are woven from strips of honeysuckle bark, or similar material, and frequently have whole leaves incorporated into the outer layers. These are often collected fresh and are either green or faded to grey. The nests are spherical and lack an obvious entrance hole.
Inactive nests	As above but showing clear signs of degradation
Otter	
Breeding sites	An area of land or open water, large enough to provide security from disturbance, with one or more potential natal dens, play areas for cubs, access to a food supply and an area where there is no risk of flooding.
Couches	Above ground daytime resting places for otters typically comprising a nest like structure or an area of flattened vegetation.
Feeding remains/stations	Remains such as fish skeletons
Footprints	Usually 5-7cm wide, with five toes and webbed feet
Holts	Underground sites used by otters for sleeping and resting usually situated on riverbanks.
Latrines or spraint sites	Typically located at prominent points along riverbanks, on rocks or under bridges to mark territories
Natal dens	Used by female otters to give birth to cubs and are usually similar in structure to holts with an opening leading into a cavity
Spraints	Otter faeces which are typically 2-7cm long, black when fresh, often contain fish bone fragments and have a characteristic fishy odour
Slides	A worn area down a bank that otters use for play and for access to a watercourse
Water voles	
Burrows	Water vole burrows are typically wider than they are high with a diameter of 4-8cm.
Droppings	Cylindrical with blunt ends, usually 12mm long and 4-5mm wide. The colour is variable but they are often green and sometimes have a faint musty smell.
Latrines	Used to mark range boundaries or are located at favoured spots close to burrows. They typically consist of a flattened mass of old droppings topped with fresh ones.

Feeding remains/stations	Pieces of cut vegetation to favoured feeding stations close to the water's edge and leave remains
Footprints	Star-shaped print and are typically 3-4cm long in neat piles. Well-grazed 'lawns' are also often found surrounding burrow entrances.