

Preliminary Ecological Appraisal, Ivy Mills, Whitehaven

Report compiled by:

Dr Andrew Carr MCIEEM Carr Ecology 🗹 112 Pategill Road | Penrith | CA11 7LY

Report commission by:

Jordan Tyson Land and Planning Assistant Gleeson Rural Enterprise Centre | Redhills | Penrith | Cumbria | CA11 0DT

On behalf of:



Contents

Executive Summary	2	
1. INTRODUCTION	3	
1.1. Terms of instruction	3	
1.2. Documents provided	3	
1.3. Site description	3	
1.4. Proposed development	4	
1.5. Survey aims	4	
2. METHOD	5	
2.1. Desk study	5	
2.2. Habitat survey	5	
2.3. Faunal surveys	5	
3. LEGISLATION	8	
4. RESULTS	9	
4.1. Desk study	9	
4.2. Habitat survey	11	
4.3. Protected and notable species	15	
5. EVALUATION AND RECOMMENDATIONS	17	
5.1. Habitat	17	
5.2. Fauna	18	
6. SUMMARY OF RECOMMENDATIONS	20	
6.1. Additional surveys	20	
6.2. Mitigation and enhancement measures	20	
7. REFERENCES	21	
Appendix 1. Baseline habitat map	22	
Appendix 2. Indicative sketch of the development		

Executive Summary

Carr Ecology was commissioned by Gleeson to provide a preliminary ecological appraisal for land off Cleater Moor Road, Whitehaven (referred to as Ivy Mills). The proposed residential development includes 41 units with associated access, parking and landscaping.

This preliminary ecological appraisal report provides an overview of the ecology of the site, identifies ecological constraints, suggests further survey effort, and proposes recommendations that would ensure no net biodiversity loss post development.

The site was assessed as having low biodiversity value. The main habitat type was previously developed land that is currently used for the storage of road surface material and rubble.

Two ecological constraints were identified including (1) the presence of trees and (2) scrub habitat along the site boundaries. Current development plans are to remove all trees and most of the scrub habitat. The trees are showing stress suggesting future value will be limited and that the planted tree species are not suited to the site. The scrub habitat is overgrown and in poor condition.

To ensure no net biodiversity loss it is suggested that (1) the trees are removed and replaced with a tree lined hedgerow that has both native shrub and tree species that are suitable to site conditions, and (2) the scrub habitat could be retained and managed to increase its ecological condition or removed and replaced with a tree lined hedgerow. This could be incorporated into a landscape design. The current design does not allow space for the above recommendations.

No field signs of protected wildlife species were documented during the site visit. The site provides negligible potential for amphibians, badgers, red squirrels and roosting bats. Although the site provides some foraging and basking habitat for reptiles this potential was assessed as low quality. The surrounding built up area and lack of nearby current reptile records is evidence to suggest likely absence of reptiles. The trees and shrubs likely provide nesting opportunity for birds.

Prior to development the following survey effort is recommended to further assess the site:

- bat activity surveys to assess whether bats forage along the linear boundary features. This will provide further evidence of the ecological value of the trees and scrub habitat. It will also help to inform the landscape plan.

- the removal of vegetation should be achieved outside bird nesting season. If this is not possible then a nesting bird check must be undertaken within 48 hours of vegetation removal.

- a pre-construction badger survey is undertaken to identify any newly created setts that may have been constructed since the time of the last survey.

1. INTRODUCTION

1.1. Terms of instruction

1.1.1. Carr Ecology was commissioned by Gleeson to provide a preliminary ecological appraisal for land off Cleater Moor Road, Whitehaven (hereafter referred to as the 'site').

1.1.2. The purpose of this preliminary ecological appraisal is to:

- identify the likely ecological constraints associated with the development;
- identify any mitigation measures likely to be required;
- identify any additional surveys that may be required; and
- identify the opportunities offered by the development to deliver ecological enhancement.

The following ecological features have been considered:

- statutory and non-statutory designated conservation areas;
- UK and local Biodiversity Action Plan (BAP) habitats;
- areas of ancient woodland;
- legally protected species;
- UK and local BAP species, and
- invasive species.

1.2. Documents provided

1.2.1. As background information the following documents were provided:

- Gleeson Homes - Cleator Moor Road - Whitehaven - Topographical Survey 02.

- Sketch scheme 15-02-21.

1.3. Site description

1.3.1. The site is located at grid reference NX 99168 17095.

1.3.2. The application site comprises a parcel of land, measuring 1.2 ha in area (Figure 1; Appendix2). It is situated to the west of Cleater Moor Road. The site is surrounded by residential and business units. The site is close to the A595 which is a main road through the area. Whitehaven Academy and associated recreational land is located beyond Cleater Moor Road to the east of the site.



Figure 1. Aerial view of the proposed site with red line boundary.

1.3.3. The site is not situated in a conservation area, nor does it form part of any statutory or ecological designation.

1.3.4. The proposed site is best described as brownfield and has been used to stockpile and store materials including rubble, road surface and earth. A row of planted *Populus* spp. trees were present along the north east and south west boundary. The trees were semi mature and all showed signs of stress. Dense scrub was present along the south east boundary (Appendix 1).

1.3.5. Beyond the site boundary to the south east were residential properties with associated gardens. Commercial buildings and a school were present adjacent to Cleater Moor Road with associated recreational grassland. A newly built residential home was present at the north west boundary. Whitehaven town was present to the west with small pockets of open space and recreational areas. An agricultural matrix was present to the north and east (Figure 1).

1.4. Proposed Development

1.4.1. The proposed residential development includes units with associated access, parking, landscaping. An indicative layout of the development is shown on sketch scheme 15-02-21 in Appendix 2.

1.5. Survey aims

1.5.1. The aim of this report is to identify and categorise ecological features present within the site, identify any ecological constraints and propose potential mitigation, and identify opportunities to ensure a net gain in biodiversity post development. Recommendations for further survey effort is included if applicable.

2. METHOD

2.1. Desk study

2.1.1. Existing ecological information on the site and surrounding area was requested from Cumbria Biodiversity Records Centre (CBRC). The purpose of the desk study was to collect baseline information to identify statutory and non-statutory designated sites, legally protected species and species of conservation concern within a 2 km radius of the site in line with CIEEM guidelines for preliminary ecological appraisals (CIEEM, 2017).

2.1.2. A review of online resources, including the Multi Agency Geographic Information for the Countryside (MAGIC) database was undertaken to establish the ecological context for the site (accessed 13th March 2021). The MAGIC website was also reviewed to identify any designated European sites and granted protected species mitigation licences within 5 km of the site.

2.1.3. Ordnance and topographic surveys and aerial mapping was reviewed to identify any ponds with 500 m of the site.

2.2. UK Habitat Classification Survey

2.2.1. A site survey was undertaken by Andrew Carr on 27th February 2021 to ascertain the general ecological value of the site, determine the need for further assessment, and identify opportunities for ecological improvement. Habitats and ecological features were classified and mapped using UK habitat classification system (Butcher et al., 2020) and digitised using QGIS.

2.2.2. The UK habitat classification system replaces phase 1 habitat survey methodology (JNCC, 2010). The site was classified into areas of similar botanical community types, with a representative species list provided for each habitat type identified. Invasive weeds were also searched for, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

2.2.3. The information is presented in accordance with the standard UK habitat classification survey format with habitat descriptions and a habitat map (Appendix 1). Target notes are providing as supplementary information, for example relating to species, composition, structure and management are also presented on the habitat map.

2.3. Faunal surveys

2.3.1. General faunal activity was recorded during the field survey, including mammals and birds observed or heard. Specific attention was also paid to the potential presence of any protected, rare or notable species, as described below.

Badger appraisal

2.3.2. During the walkover survey conducted on 27th February 2021 any incidental signs of badger *Meles meles* activity were recorded within the site and within 30 m of the site where access could be obtained. The survey method followed a standard approach (Creswell, 1990).

2.3.3. The appraisal involved a systematic search of the survey area for all signs of badger activity including badger setts, worn pathways in vegetation and/or across field boundaries, footprints, hairs, dung pits/latrines, bedding and evidence of foraging activity including snuffle holes. Particular attention was paid to habitats of suitable topography or supporting suitable vegetation for sett-building as well as to those features particularly favoured by badgers including hedgerows, areas of dense scrub, woodland, ditches and banks.

2.3.4. Any holes of an identified sett were examined closely and the number of active and inactive entrances and evidence of its usage were recorded. Where possible, setts identified during the survey were categorised using nationally recognised sett classification as described:

- Main sett: these are large setts comprising a number of well-used, active holes with conspicuous spoil heaps. They are well established with worn paths to and from the sett and between entrances. Main setts are breeding setts and are normally in continuous use throughout the year, with only one main sett per social group of badgers;

- Annexe sett: where present they occur in close association with the main sett (normally less than 150 m away) and are linked to them by clear, well-worn paths. Annexe setts arise for the purposes of rearing cubs should a second litter be born, and have several entrances (though not all in use at the same time);

- Subsidiary sett: these setts usually consist of three to five entrances which are not in continuous use. They are usually more than 50 m away and may not have well-used paths connecting them to other setts; and

- Outlier sett: these typically comprise one to three holes with small spoil heaps indicating that they are not very extensive underground. They are used sporadically and are thought to serve multiple functions, including allowing efficient and safe travel to important parts of their home range.

Bat roost assessment

2.3.5. A preliminary ground-based assessment of all suitable trees located on or immediately adjacent to the study area was undertaken to determine their potential to support roosting bats.

2.3.6. All suitable features such as cracks and splits in limbs, hollows and cavities, natural holes, woodpecker holes, loose bark and dense ivy were assessed using binoculars and high-powered torches where appropriate. Evidence of bat roosts themselves, including droppings, feeding remains and urine staining were also searched for during the assessment.

2.3.7. Where no direct or indirect evidence of roosting bats were confirmed, trees were categorised as being of high, medium, low or negligible potential to support roosting bats based on the type and number of suitable bat features present, in accordance with best practice guidance (Bat Conservation Trust, 2016) as follows:

1) High potential – one or more potential roosting features present within a structure, with enough suitable surrounding commuting and foraging habitat and which is large enough to be able to shelter a large number of bats on a regular basis. These include maternity and hibernation roosts.

2) Moderate potential - one or more potential roosting features present within a structure that is likely to shelter a number of bats, but unlikely to support a roost of high conservation status.

3) Low potential – a structure with one or more potential roost features present within a structure yet is not surrounded by suitable commuting and foraging habitat and does not provide enough protection and space to shelter large number of bats. This includes trees with no visible potential roost features but is of adequate age and structure to offer limited roosting potential.

4) Negligible potential – negligible habitat features and unlikely to be used by roosting, commuting or foraging bats.

Eurasian Red squirrel

2.3.8. The survey was extended to include a walk over of woodland habitat for red squirrels *Sciurus vulgaris*. Red squirrels are known in the general area.

2.3.9. Trees were inspected using binoculars to locate any signs of dreys or dens within the tree branches. Ground in the vicinity of the tree groups was inspected for feeding activity such as stripped pine cones or seed remains. The rasping chatter of red squirrel was also listened for.

Reptiles

2.3.10. The surveyor identified and noted potential refugia and foraging opportunity within the site boundary. Potential basking areas were noted.

2.3.11. An assessment of the surrounding habitats was made to better consider the likelihood of reptile presence within the site boundary.

3. LEGISLATION

3.1.1. The Wildlife and Countryside Act 1981 (as amended) is the primary piece of national legislation which pertains to the protection of flora, fauna and the countryside. The Act is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) are implemented in Great Britain.

3.1.2. The Natural Environment and Rural Communities Act 2006 (NERC) made provision for all public authorities, including local planning authorities, to consider biodiversity in their roles. Local planning authorities are to ensure that there is no net loss of biodiversity on a site, no net loss in habitat connectivity and must aim to enhance biodiversity. Section 41 established a list of the species and habitats of principal importance for the purpose of conserving biodiversity.

3.2.3. The Conservation of Habitats and Species Regulations 2017 consolidates all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

4. RESULTS

4.1. Desk study

Statutory designated sites

4.1.1. A search for designated sites within 2 km of the site documented no statutory designated sites.

4.1.2. The site is within St Bees SSSi impact zone although the type of development does not trigger the need for further assessment of likely effects.

Non-statutory designated sites

4.1.3. A search for designated sites within 2 km of the site documented six non-statutory sites including:

- Castle Park Wood, Hope Mission Pond, Midgy Gill and Woodhouse Quarry county wildlife sites (CWS).

- Castle Park Wood and Midgy Gill ancient woodland (ASNW)
- Priestgill Wood and Weddicar Hall sites of invertebrate significance (SIS).
- River Keekle.

4.1.4. Table 2 provides a summary of each non-statutory site, location to the site proposed for development and likely effect.

Table 2. Summary of non-statutory designated sites within 2 km of the site including distance to site and likely effect in the absence of mitigation. CWS = county wildlife site. AW = ancient woodland. SIS = site of invertebrate significant.

Site name and designation	Reason for designation	Distance and direction from site	Likely effect without designation
Castle Park Wood	CWS - The traditional park is full of large trees and wild bushes with a twirling path right through. The park is used by both dog walkers and tourists. ASNW - designated at the south east of the site.	1 km north east	Neutral – no direct pathway and no likely impact
Midgy Gill	ASNW - Ancient Semi natural Woodland, Planted Ancient Woodland Site colonised by Scots pine and sycamore with some larch. The wood is dominated by sycamore (Acer pseudoplatanus) with sessile	1 km north east	Neutral – no direct pathway and no likely impact

	oak (Quercus petraea), English elm (Ulmus procera), ash (Fraxinus excelsior), beech (Fagus sylvatica), Scots (Pinus sylvestris) and Corsican pine (Pinus nigra). The under storey includes holly (Ilex aquifolium), elder (Sambucus nigra), rowan (Sorbus aucuparia) and hawthorn (Crataegus monogyna).		
Hope Mission Pond	CWS – no citation available	1.7 km north	Neutral – no direct pathway and no likely impact
Priestgill Wood	SIS – no citation available	1.2 km north east	Neutral – no direct pathway and no likely impact
Weddicar Hall	SIS – previous opencast mine. No citation available	1.5 km east	Neutral – no direct pathway and no likely impact
Woodhouse Quarry	CWS – no citation available	2 km west	Neutral – no direct pathway and no likely impact
River Keekle	River restoration project to remove plastic lining and revert health post mining works in the area.	1.6 km east	Neutral – no direct pathway and no likely impact

Protected species

4.1.5. There were no granted European protected species licences within 500 m of the site. The nearest mitigation licence was 2.1 km south west and included the destruction of a resting place for common *Myotis* species (Licence number EPSM2013-6035).

4.1.6. Table 3 summarises protected and notable species records within 2 km of the site. Data was collected from Cumbria Biodiversity Records Centre (CBRC) obtained in March 2021.

Table 3. Summary of protected / notable species with 2 km of the site.

Species/Group	Number of	Date of most	Distance of	Data source
	records	recent record	closest record	
Chiroptera	7	2003	1 km	CBRC
Brandts' or whiskered. Likely not accurate as identification was made from visual look at the droppings. <i>Pipistrellus pipistrellus</i>				
Western Hedgehog	60	2016	100 m	CBRC
Erinaceus europaeus			(Muncaster	
			Road)	
Brown hare	5	2004	1.2 km	CBRC
Lepus europaeus				
Otter	16	2018	1.6 km	CBRC

Lutra lutra				
Badger	3	2018	2 km	CBRC
Meles meles				
Red squirrel	65	2015	100 m	CBRC
Scurius vulgaris				
Palmate newt	1	2010	2 km	CBRC
Lissotriton helveticus				
Common lizard	17	2014	1.5 km (land	CBRC
Zootoca vivipara			adjacent to	
			Cockickle	
			Station)	
Slow worm	5	2014	1.5 km (land	CBRC
Anguis fragilis			adjacent to	
			Cockickle	
			Station)	

4.2. Habitat survey

4.2.1. The field survey was conducted on 27th February 2021 in good weather conditions (50% cloud cover, Beaufort scale 1, no precipitation, 16°C).

4.2.2. Time of year for botanical surveys was sub optimal and floral species may have been missed. The site consisted mostly of stored rubble and road material with two rows of planted *Populus* species trees, overgrown scrub and modified grassland. The survey is considered a robust assessment.

4.2.3. The habitat survey map detailing the location of the below habitats and other features of ecological interest is presented in Appendix 1. The habitat descriptions below should be read in conjunction with this plan and any associated target notes.

4.2.4. Habitats identified during the field survey included:

Open mosaic habitat on previously developed land u1a

4.2.5. The majority of land consisted of a mosaic habitat with some recolonising flora on previously developed. This habitat was heavily disturbed land covering approximately 0.85 ha.

4.2.6. Approximately 60% of this habitat was bare ground (Figure 2) with 40% consisting of recolonising species (Figure 3).

4.2.7. Evidence of heavy machinery was present, and it appears the site was used to store rubble and excavated road surface material possibly when an adjacent nursing home was in construction. This had resulted in large and well compacted piles of rubble, earth and road surface material at the east of the site (Figure 4).



Figure 2. Bare ground following disturbance from heavy machinery



Figure 3. Bare ground following disturbance from heavy machinery with recolonising vegetation



Figure 4. Stored and piled rubble and road surface material

Line of trees w1g6

4.2.8. Two lines of planted trees were present along the west and east boundaries. The trees were *Populus* spp. likely an aspen species taken from nursery stock (Figure 5).

4.2.9. The trees were semi mature and all were showing signs of stress.



Figure 5. Line of trees at the west (right) and east (left) site boundaries.

Dense scrub h3

4.2.10. A linear strip of dense scrub was present along the south east boundary (Figure 6). The area was approximately 0.09 ha. This habitat was unmanaged and overgrown. Evidence of fly tipping from adjacent gardens was located along this boundary.

4.2.11. The dominant species was bramble *Rubus* spp. Occasional species included fern spp., greater plantain *Plantago major*, willow spp. and *Ligustrum* spp.



Figure 6. Dense bramble dominated scrub along the south east boundary of the site.

Built linear feature u1e

- 4.2.12. A tarmac access road was present running from the Cleater Moor Road into the site.
- 4.2.13. The road area was approximately 0.05 ha.



Figure 7. Access road running from Cleater Moor Road into the site.

Modified grassland G4

4.2.14. Approximately 0.05 ha of modified grassland was present along the north east boundary adjacent to Cleater Moor Road. The grassland was likely occasionally managed.

4.2.15. Rye grass *Lolium* spp. was the dominant species with occasional whiteclover *Trifolium repens* and creeping buttercup *Ranunculus repens*.



Figure 8. Modified grassland adjacent to Cleater Moor Road.

Built up area u1

4.2.16. A small area adjacent to Cleater Moor Road was best described as built up. This area consisted of a cage and hard standing.



Figure 9. Hard standing adjacent to Cleater Moor Road.

4.3. Protected and notable species

Badgers

4.3.1. No evidence of badger setts were documented within the site. No mammal tracks were observed.

4.3.2. No evidence of badger setts or presence of foraging badgers was documented in the areas surrounding the site.

Bats

4.3.3. A preliminary roost assessment of all trees on site was completed during 'leaf off'.

4.3.4. A systematic search from the ground assessed all trees on site as providing negligible potential for roosting bats. These trees had not developed to the point that crevices would form.

4.3.5. Foraging opportunity was present for edge foraging common species such as pipistrelles *Pipistrellus* spp. along the tree lines. This was not considered high quality foraging potential due to the condition of the trees and surrounding built up area.

4.3.6. Commuting potential of the site was considered negligible.

4.3.7. No buildings were present on site.

Eurasian Red squirrel

4.3.8. A walk over for red squirrels *Sciurus vulgaris* was undertaken.

4.3.9. Trees were inspected using binoculars to locate any signs of dreys or dens within the tree branches. No field signs associated with red squirrels were documented.

4.3.10. The site provides negligible potential for red squirrels.

Reptiles

4.3.11. The surveyor identified potential foraging opportunity at the site.

4.3.12. An assessment of the surrounding habitats was made to better consider the likelihood of reptile presence within the site boundary. On balance the site is not suitable for reptiles. This is due to the heavily built up surroundings and high levels of disturbance on the site.

5. EVALUATION AND RECOMMENDATIONS

5.1. Habitat

Statutory designated sites

5.1.1. The proposed development will not impact on statutory designated sites.

Non-statutory designated sites

5.1.2. The proposed development will not impact on nearby non-statutory sites as they are considered outside the developments zone of influence.

Open mosaic habitat on previously developed land u1a

5.1.3. Approximately 0.85 ha of open mosaic habitat on previously developed land will be removed and replaced with 41 residential units with associated access, parking and landscaping.

5.1.4. Although recolonising vegetation was recorded these species were not of notable ecological value and when combined with the heavily disturbed ground and large piles of tarmac and rubble this habitat is assessed as having poor ecological value.

5.1.5. The removal of this habitat and replacement with dwellings and associated gardens will not reduce the ecological value of the site. Built structures and landscaping will likely increase the value of the site for some wildlife.

Line of trees w1g6

5.1.6. Two lines of trees will be removed on the north east and south west boundaries including 12 semi mature *Populus* spp.

5.1.7. These trees were planted, and all showed signs of stress which suggests their future value is limited. These trees will likely provide nesting and foraging opportunity for birds and potential roosting and foraging opportunity for bats.

5.1.8. The removal of these trees will reduce the ecological value of the site. Given the obvious stress it would be suitable to remove all trees and consider replacing with more suitable boundary feature trees or shrubs.

Dense scrub h3

5.1.9. A 0.9 ha linear strip of dense scrub will be removed along the south east boundary. The current habitat condition is poor. Current plans indicate that the majority of this habitat will be removed.

5.1.10. The removal of this habitat will reduce the sites overall biodiversity value although given the poor condition of this scrub habitat this is not consider significant.

5.1.11. Retention (with management) of this scrub habitat or replacement with a new hedgerow would be suitable enhancement.

Built linear feature u1e

5.1.12. 0.05 ha of existing tarmac access road will be removed. This will not reduce the biodiversity value of the site.

Modified grassland G4

5.1.13. The proposed plans indicate that 0.05 ha will be removed.

5.1.14. Although this will reduce the biodiversity value of the site the grassland was not assessed as high distinctiveness and was in poor condition. The proposed gardens and landscaping would be adequate as mitigation for the loss of this grassland habitat.

Built up area u1

5.1.15. A small area of hardstanding will be removed. This will not reduce the biodiversity value of the site and no mitigation is advised.

5.2. Fauna

Badgers

5.2.1. A walkover was completed for the site and the surrounding habitat. Three records of badgers were provided with the nearest record being 2 km from the site.

5.2.2. No evidence of badger setts were documented within the site. No mammal tracks were observed.

5.2.3. The site provides negligible potential for badgers.

Bat roost assessment

5.2.4. The record search identified that common bat species are known in the area.

5.2.5. The preliminary roost assessment of trees was suitable to provide evidence that trees on the site provide negligible potential for roosting bats. No other suitable roosting potential was present (i.e. no buildings).

5.2.6. The trees on the site may provide foraging opportunity for small numbers of common edge foraging bat species such as *Pipistrellus pipistrellus*. This opportunity is not considered of high value to local bats.

5.2.7. The situation of the site within a built up area means it is not of value for commuting bats.

Eurasian Red squirrel

5.2.8. The record search identified that red squirrels are known in the area although the most up to date record was in 2015 which may indicate squirrel numbers have reduced.

5.2.9. Trees were inspected using binoculars to locate any signs of dreys or dens within the tree branches. No field signs associated with red squirrels were documented.

5.2.10. The site provides negligible potential for red squirrels.

Reptiles

5.2.11. Records search identified slow worms and common lizards have been recorded in the area. These records are from 2014 and located at least 1.5 km from the site.

5.2.12. Low quality foraging and basking opportunity was documented at the site.

5.2.13. An assessment of the surrounding habitats was made to better consider the likelihood of reptile presence within the site boundary. On balance the site is not suitable for reptiles and the record search provides some evidence that reptiles are likely absent from the immediate site boundary.

6. SUMMARY OF RECOMMENDATIONS

6.1. Additional surveys

6.1.1. Badgers. It is recommended that a pre-construction badger survey is undertaken to identify any newly created setts that may have been constructed since the time of the last survey.

6.1.2. Bats. The site provides opportunity for foraging bats. Although this potential is not considered high quality it is necessary to survey for foraging bats to ensure tree removal will not remove foraging opportunity.

6.1.3. Nesting birds. Removal of vegetation should be completed outside of the nesting bird season. If vegetation removal must be undertaken within nesting season, then nesting bird surveys should be undertaken within 48 hours of clearance.

6.2. Mitigation and enhancement measures

6.2.1. The current proposed plan shows that all vegetation (including trees) will be removed except for a small section of scrub at the southern corner of the site. This does not allow any mitigation for the removal of boundary scrub and lines of trees which are the two ecological constraints of the proposed development.

6.2.2. To ensure a neutral impact on biodiversity value it is recommended that a landscaping plan should be completed that (1) retains the trees on the north east and south west boundaries or replaces them with a tree lined hedgerow, and (2) retains and enhances the scrub habitat along the south east boundary or replaces it with a tree lined hedgerow.

7. References

Butcher, B., Carey, P., Edmonds, R., Treweek, J. 2020. The UK Habitat Classification System.

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

Collins, J., 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust, London.

Creswell, P., 1990. The History, Distribution, Status and Habitat Requirements of the Badger in Britain. Nature Conservancy Council.

JNCC. 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

Forestry Commission (2009) Practical Techniques for Surveying and Monitoring Squirrels.

The Forestry Authority (1994) Red Squirrel Conservation: Field Study Methods; Research Information Note 255



Appendix 1. Ivy Mills baseline habitat map (UK Habitat classification symbology)



