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WSP

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EXECUTIVE SUMMARY

1.1.1 Keystone Environmental Ltd was instructed by WSP Environmental Limited (WSPE) on behalf of Federal Mogul (the Client) to undertake an ecological constraints assessment of part of the Federal Mogul motor vehicle engineering works off Hayfield Road (A624), Chapel en le Frith (OS Grid Reference SK 057 812). It is understood that the site will be re-configured with the eastern part of the site re-developed. This report focuses on the eastern part of the site (see black line on Figure 1) in relation to potential ecological issues.

1.1.2 Potential ecological issues to development of the eastern part of the site:

- Bats;
- Badger colonisation prior to woks;
- Nesting Birds (general); and
- Reptiles.

1.1.3 Recommendations include:

- Any trees with 'low' to 'moderate' potential to support roosting bats are 'soft felled.
- Any trees containing bat roosts which are to be retained, are to be protected during and post- construction.
- It is recommended that the woodland block within the south-east corner of the survey area be retained, if development plans allow.
- A sensitive lighting plan should be established around any trees which are to be retained and new areas of native planting. Direct lighting and light-spill should be avoided during construction and post-construction.
- A final check for active badger setts should be undertaken approximately 1 month in advance of site clearance operations, to ensure that no new setts have been created, since this initial survey;
- Clear any suitable nesting habitats outside of the nesting bird season which runs from March to August inclusive. Alternatively a suitably qualified ecologist should survey habitats prior to removal;
- It is recommended that suitable reptile habitat is cleared in a sensitive manner. This should be undertaken by an ecological contractor or under the direct guidance of an ecologist. An ecologist should check potential refugia before clearance. Habitats should be strimmed carefully by hand tools in 2 passes (first to a height of no less than 300 millimetres) working towards suitable habitat off-site. Any log piles or other refugia should also be carefully dismantled. This approach can only be undertaken between April and October when reptiles are active. It is not appropriate for use between November and March when reptiles are in hibernation.

2 INTRODUCTION

2.1 BASELINE

2.1.1 WSP Environment and Energy was instructed by Federal Mogul (the client) to undertake an ecological constraints assessment of part of the Federal Mogul motor vehicle engineering works off Hayfield Road (A624), Chapel en le Frith (OS Grid Reference SK 057 812). It is understood that the eastern part of the site will be re-developed with the factory being modernised and re-configured. ,

2.1.2 The area subject to field survey (the site) included the south eastern half of the factory site (see black line boundary), as shown in *111247/1/1wor1 (Figure 1)*.

2.1.3 The aim of this survey is to:

- To carry out a site survey to identify the presence or potential presence of any legally protected species;
- Establish whether any European Protected Species (EPS) licence (or other) is required to ensure legal compliance;
- Produce a report detailing the findings of the site survey including possible ecological constraints to the proposed development arising from the presence or potential presence of legally protected species;
- Provide recommendations for further necessary ecological survey work, and any mitigation measures required; and
- Identify any enhancement and/ or mitigation measures that may be available or employed.

2.1.4 A preliminary bat assessment of 13 buildings on site was undertaken on the same date and the results of this survey are under separate cover (WSPE Preliminary Bat Survey Report).

1.1 SITE OVERVIEW

2.1.5 The site comprises mainly buildings, hard standing and amenity grassland, with areas of scattered trees and scrub, tree lines and a small woodland block. An industrial 'pond' is present in the centre of the site, surrounded by hard standing, with 2 small sections of adjacent scrub. The pond is concrete lined with vertical sides.

2.1.6 The buildings onsite are a complex of factory buildings and office blocks, dating from the 1930' and 1950's. Both single and multi-storey brick buildings are present, many with metal cladding. The roofing materials range from slate and clay tiles to asbestos tiles and sheeting. All the buildings on site were in a good state of repair at the time of survey.

2.1.7 The site is immediately bordered by a commercial property and open space to the North, the A624, fields and housing to the North-east, with a railway line and open countryside to the West and residential buildings to the South-east and South.

2.1.8 In a wider context there are woodland strips/blocks, pastures, scrub and areas of coarse grassland but the site is partially isolated from these habitats by the A6 (Dual Carriageway) to the North and bordering residential development. A large pond 600 metres to the North-east is isolated from the site by the A6.

2.2 STUDY LIMITATIONS

2.3 Refer to Appendix A.

3 METHODOLOGY

3.1 FIELD SURVEY

3.1.1 The Protected Species survey was undertaken on 4th July 2011 by Tim Palmer, Principal Ecologist and Sarah Proctor, Senior Ecologist of Keystone Ecology, both members of the Institute of Ecology and Environmental Management (IEEM). A preliminary bat assessment of 13 buildings on site was undertaken on the same date and the results of this survey are under separate cover (WSPE Preliminary Bat Survey Report).

3.1.2 The area of site within the black site boundary (refer to Drawing 111256/1/1/wor1) was surveyed to identify incidental evidence of protected fauna species, or habitat with the potential to support such species. In recognition of the site's location and the habitats identified on site the potential for the following species/species was considered

- Bats (trees and foraging habitat covered in this report, refer to WSPE Preliminary Bat Survey Report for an assessment of buildings) – trees were surveyed in accordance with current Bat Conservation Trust (BCT) survey guidelines (BCT, 2007);
- Badger (*Meles meles*) – in addition to incidental observations a thorough search of the site was undertaken for field signs such as setts, latrines, dung pits, prints, tracks and hair;
- Nesting Birds
- Reptiles;
- Great Crested Newts (*Triturus cristatus*) – in addition to incidental observations the pond on site was subject to a Habitat Suitability Index assessment (HSI) in accordance with Oldham *et al.* (2000); and
- Invertebrates;

3.2 NOMENCLATURE

3.2.1 The English and Scientific names of fauna species are given in the main text of this report. Nomenclature follows the National Biodiversity Network (NBN) Gateway (NBN, 2011).

4 RESULTS AND EVALUATION

4.1.1 The possibility that protected species will pose a constraint to the proposed development is evaluated for each of the main protected species/groups in Table 1, based on assessment of habitat suitability and other relevant factors, such as:

- National distribution of each species/group;
- Previous records of species occurrence obtained through the desk study;
- Connectivity to suitable habitats in the surrounding landscape;
- Field signs (e.g. tracks, droppings, direct sightings) suggesting presence of species within or near to the site;
- Probability of the proposed development having an adverse impact on the species/group if present.

Table 1: Protected species constraints evaluation

Species/ Group	Potential Habitat	Other Relevant Factors	Potential Constraint?
Bats	Foraging habitat present throughout the site as woodland edge and coarse grassland Three individual trees and a group of trees within the woodland plantation which have a moderate/low potential to support roosting bats (see Appendix B for full details) Refer to WSPE Preliminary Bat Survey Report for assessment of buildings.		Yes
Badger	No badger setts or signs were recorded during the survey visit; however there are suitable areas for sett locations on Site. The woodland block, within the Site is considered potentially suitable for occupation by badgers, with adjacent grassland areas also potentially suitable for foraging		Yes Badgers are not considered a potential constraint on site at the time of survey. However, if badgers colonise the site prior to works being undertaken; badgers will be a potential constraint.
Nesting Birds	No nesting birds were located during the protected species walkover survey. However, suitable habitat is located in the form of broad-leaved woodland, scrub and buildings		Yes

Reptiles	No incidental sightings. Coarse grassland suitable for common lizard (*Zootoca vivipara*) and grass snake (*Natrix natrix*),		Yes
Great Crested Newt	Pond onsite and 1 pond within 500m Broad-leaved woodland and scrub suitable terrestrial habitat	Pond onsite has 'Poor' potential to support breeding great crested newt, see Appendix C. The pond onsite is entirely surrounded by hard standing reducing connectivity to suitable foraging habitat on site. No ponds occur off-site within 500m. The closest is some 600m distant. Although great crested newt have been found to move up to 1.3 kilometres between breeding ponds, a normal maximum migratory range has been estimated as 250 metres from a pond (Franklin, 1993; Oldham and Nicholson, 1986; Jehle, 2000a and b).	No
Invertebrates	The application site contains no habitats suitable for protected invertebrate species.	Even if present, the proposed development is highly unlikely to have any adverse impact on invertebrate species.	No

5 RELEVANT LEGISLATION

5.1 This section sets out the wildlife legislation relevant (or potentially relevant pending further survey) to the proposed development based on the findings of the field survey. Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information. Web addresses providing access to the full text of these documents are given in the References section.

5.2 The legislation protection afforded to species that could be affected by the proposed development is detailed in Table 2.

Table 2: Legislation protection afforded to species that could potentially be affected by the proposed development

Species	Legal Status
European Protected	
Bats	These animal species and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2010, which makes it illegal to: Deliberately capture, injure or kill any such animal; Deliberately disturb1 such an animal; Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed: The development is for reasons of overriding public interest; There is no satisfactory alternative; and The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed.
Nationally Protected	
Bats	These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: Intentionally kill, injure or take any such animal; Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Common Lizard, Grass Snake	These animals receive limited protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal to intentionally or recklessly kill or injure any such animal.
Nesting Birds (general)	All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: Intentionally kill, injure or take any wild bird; Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Badgers	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a

[1] Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

	Badger, or attempt to do so and also makes it illegal to intentionally or recklessly interfere with a Badger sett. This includes damaging or destroying a sett, obstructing access to a sett and disturbing a Badger while it is occupying a sett. Licences can be granted to permit sett closure and/or disturbance between July and November inclusive.
Wild Mammals	The Wild Mammals (Protection) Act 1996 makes it illegal to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

6 DISCUSSION AND RECOMMENDATIONS

6.1 OVERVIEW OF POTENTIAL ECOLOGICAL CONSTRAINTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT

6.1.1 The following species/species groups have been identified as potential constraints to the proposed development:

- Badger;
- Bats;
- Nesting Birds; and
- Reptiles.

6.2 RECOMMENDATIONS

Badger

6.2.1 No badger setts or signs were recorded during the survey visit; however there are suitable areas for sett locations off site, which were not surveyed. The woodland block, within the site is considered potentially suitable for occupation by Badgers, with adjacent grassland areas also potentially suitable for foraging.

6.2.2 Badgers are not considered a potential constraint on site at the time of survey. However, if badgers colonise the site prior to works being undertaken; badgers will be a potential constraint. Therefore, a final check for active setts should be undertaken approximately 1 month in advance of site clearance operations, to ensure that no new setts have been created since this initial survey.

Bats

6.2.3 Three individual trees and one group of trees on site were identified as having the potential to support roosting bats. All individual trees and the tree group was assessed as having 'Low' to 'Moderate' potential to support roosting bats (Category 2b trees (BCT, 2007)).

6.2.4 Where Category 2b trees are to be removed it is recommended that they be 'soft felled'. This is a generic term used to describe more cautious felling approaches, using lowering and cushioning techniques to reduce the impact of felling limbs, which may still have bats within the cavities. Limbs with cavities should be left at the base of the tree for at least 24 hours before removal from the site.

6.2.5 When removing trees or undertaking tree surgery works, the following procedures should be employed in the event any bats are discovered:

- If the roost is still on the tree and bats are not injured, seek advice from Natural England or a suitably experienced ecologist. If help is not available, allow bats to fly out of harms way.
- If the timber is felled, the roost is not exposed and the bats are not injured, temporarily seal and isolate the roost and seek advice from Natural England or a suitably experienced ecologist. If advice is not readily available, position the roost off the ground, re-open it and allow bats to relocate of their own accord.
- If the roost has been exposed, and especially if bats have been injured, collect bats in a secure box or bag (using a glove) and contact Natural England or a suitably experienced ecologist.
- Note the date, locality, type of tree, situation in tree and bat species if known.

6.2.6 Any trees containing bat roosts which are to be retained, are to be protected during and post- construction. During the demolition and construction phase of works a suitable stand-off distance should be maintained to protect the tree and roost from damage, disturbance and impacts from noise. The exact dimensions of the 'buffer' zone would be dependent on the seasonality of use, species concerned, type of adjacent habitat etc. It is anticipated that these factors would be given detailed consideration by the ecologist present during the tree felling works.

6.2.7 A sensitive lighting plan should be established around any trees which are to be retained. Direct lighting and light-spill should be avoided during construction and post-construction.

6.2.8 The on Site woodland edge habitat provides good foraging for bats, with sheltered foraging opportunities and an commensurately high levels of insect prey; therefore, it is recommended that the woodland block within the south-east corner of the survey area be retained, if development plans allow.

6.2.9 Due to the potential bat foraging habitat which may be lost, it is recommended that native wildlife planting be incorporated into any landscape plan for the Site, to encourage foraging bats within the local area. Direct lighting and light-spill on these areas of planting should avoided post-construction to encourage the long-term use of these areas by bats.

Birds

6.2.10 As a general recommendation, no vegetation or buildings should be removed during the bird breeding season, which is generally considered to be March to August inclusive. If this is not possible then buildings and vegetation should be checked immediately prior to removal by a suitably qualified ecologist. Any active nests identified must be retained until such time as the nest is deemed, by a suitably qualified ecologist to be no longer supporting young.

Reptiles

6.2.11 It is recommended that suitable reptile habitat is cleared in a sensitive manner. This should be undertaken by an ecological contractor or under the direct guidance of an ecologist. An ecologist should check potential refugia before clearance. Habitats should be strimmed carefully by hand tools in 2 passes (first to a height of no less than 300 millimetres) working towards suitable habitat off-site. Any log piles or other refugia should also be carefully dismantled. This approach can only be undertaken between April and October when reptiles are active. It is not appropriate for use between November and March when reptiles are in hibernation.

WSP Environmental Ltd

7 REFERENCES

Bat Conservation Trust (2007) *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust: London.

NBN Gateway (2010) *National Biodiversity Network Species Dictionary* [Online] Available at: http://data.nbn.org.uk [Accessed on 20th September 2010]

Oldham, R. S., Keeble, J., Swan, M. J. S. & Jeffcote, M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus).* Herpetological Journal, 10, p143-155.

Web addresses for access to full legislation text:

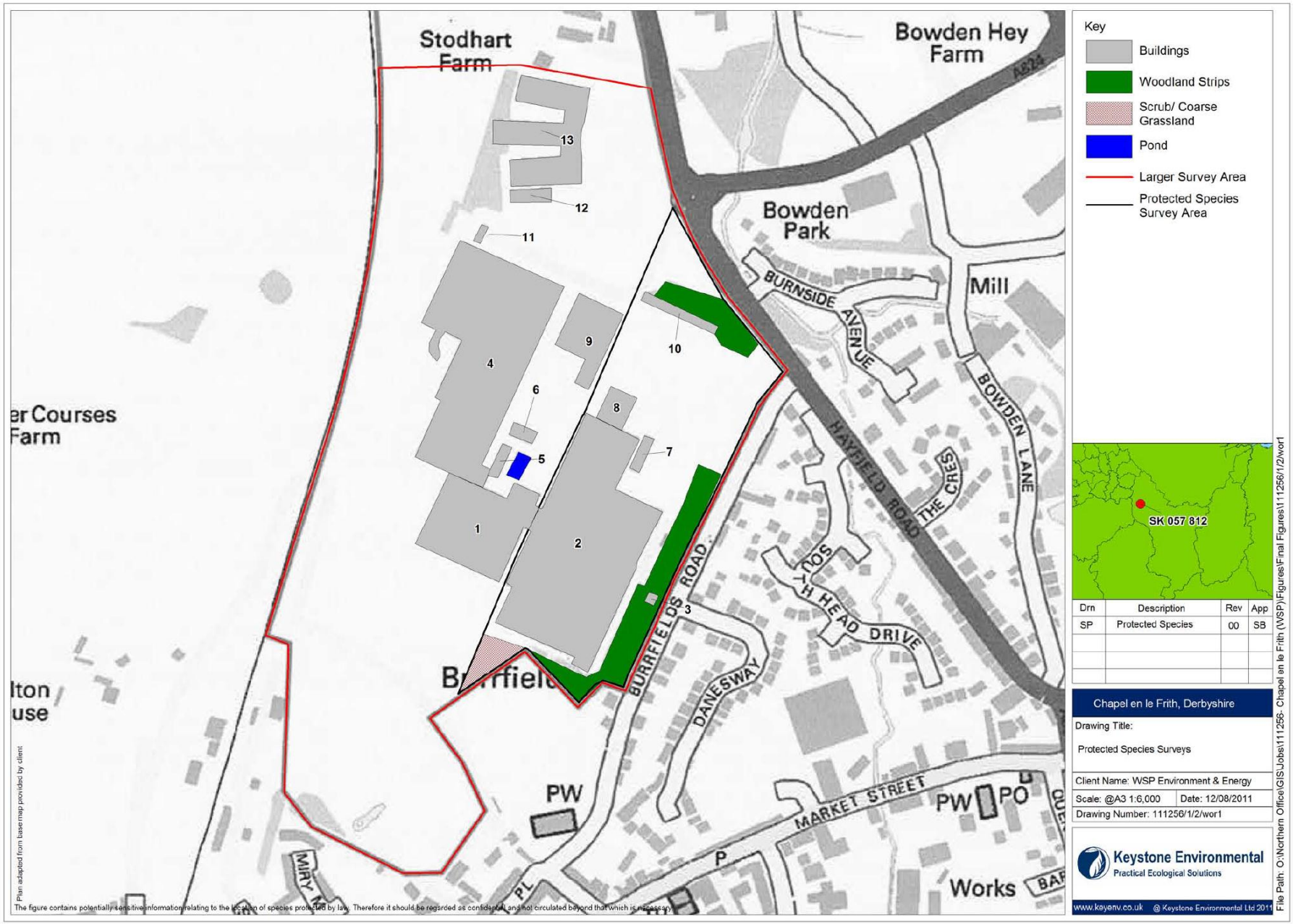
Conservation of Habitats and Species Regulations 2010:
www.opsi.gov.uk/si/si2010/uksi_20100490_en_1

Countryside and Rights of Way Act 2000:
www.legislation.hmso.gov.uk/acts/acts2000/20000037

Protection of Badgers Act 1992:
www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1

Wildlife and Countryside Act 1981:
www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1

Plan – Protected Species Survey


Stodhart Farm
Bowden Hey Farm
A624
Bowden Park
Mill
BURNSIDE AVENUE
BOWDEN LANE
HAYFIELD ROAD
THE CRES
BURRFIELDS ROAD
DANESWAY
SOUTH HEAD DRIVE
MARKET STREET
PW
PO
Works
er Courses Farm
lton use
1
2
3
4
5
6
7
8
9
10
11
12
13
Key
Buildings
Woodland Strips
Scrub/ Coarse Grassland
Pond
Larger Survey Area
Protected Species Survey Area
SK 057 812
Drn
Description
Rev
App
SP
Protected Species
00
SB
Chapel en le Frith, Derbyshire
Drawing Title:
Protected Species Surveys
Client Name: WSP Environment & Energy
Scale: @A3 1:6,000
Date: 12/08/2011
Drawing Number: 111256/1/2/wor1
Keystone Environmental
Practical Ecological Solutions
www.keyenv.co.uk
@ Keystone Environmental Ltd 2011
File Path: O:\Northern Office\GIS\Jobs\111256- Chapel en le Frith (WSP)\Figures\Final Figures\111256/1/2/wor1
Plan adapted from base map provided by client
The figure contains potentially sensitive information relating to the location of species protected by law. Therefore it should be regarded as confidential and not circulated beyond that which is necessary.

Appendix A Notes and Limitations

WSP Environmental staff and their sub-consultants have endeavoured to identify the presence of protected species wherever possible on site, where this falls within the agreed scope of works.

Up to date standard methodologies have been used, which are accepted by Natural England (previously English Nature) and other statutory conservation bodies. No responsibility will be accepted where these methodologies fail to identify all species on site. WSP cannot take responsibility where Government, national bodies or industry subsequently modify standards.

The results of the survey and assessment work undertaken by WSP Environmental were representative at the time of surveying.

WSP Environmental has advised on the optimum survey season for a particular habitat/species prior to undertaking the survey work. However, WSP Environmental cannot accept responsibility for the accuracy of surveys undertaken outside this period.

WSP Environmental cannot accept responsibility for data collected from third parties.

Appendix B Preliminary Tree Bat Survey Results

The majority of the trees within the woodland plantation were multi-stemmed young specimens with negligible potential to support roosting bats (BCT, 2007).

Tree Number	Tree Species	Tree Location (OS co-ordinates)	Bat Roost Features	Roost Potential
1	Horse chestnut (*Aesculus hippocastanum*)	SK 05901, 81330 South of entrance gate	Holes in trunk	2b – Moderate/Low Potential
2	Beech (*Fagus sylvatica*)	SK 05905, 81285	Rot holes in trunk	2b – Moderate/Low Potential
3	Beech	SK 05942, 812890	Rot holes in trunk	2b – Moderate/Low Potential
Group	Mature grey poplars (*Populus alba x tremula = P. x canescens*) and beech	Throughout plantation	Splits and rot holes	2b – Moderate/Low Potential

Appendix C Results of HSI Survey of On-site Pond

HABITAT SUITABILITY INDEX (HSI) ASSESSEMENT FORM		Pond No: 1	
GENERAL DETAILS			
HSI SCORES (refer to details of suitability indices and definitions of categories)			
Suitability Indices	Details	Delete as appropriate/enter figures	Score
SI1 Location	See map of UK geographic location zones (A=1.0,B=0.5,C=0.1)	*A (optimal) / B (marginal) / C (unsuitable)*	1
SI2 Surface area	Approximate area (read score from graph)	____200_____m^2	0.4
SI3 Pond drying	(never=0.9, rarely=1.0, sometimes=0.5, annually=0.1)	*Never / Rarely / Sometimes / Annually*	0.9
SI4 Water quality	(good=1.0, moderate=0.67, poor=0.33, bad=0.01)	*Good / Moderate / Poor / Bad*	0.33
SI5 Shade	Estimate % perimeter shaded to at least 1m from shore (read score from graph)	_____25_____%	1
SI6 Fowl	(Absent=1.0, Minor=0.67, Major=0.01)	*Absent / Minor / Major*	0.67
	Species & number:		
SI7 Fish	(Absent=1.0, Possible=0.67, Minor=0.33, Major=0.01)	*Absent / Possible / Minor / Major*	1
	Species & number:		
SI8 Other Ponds*	Number of waterbodies within 1km not separated by major barriers / 3.14*	____1___Pond/s ÷ 3.14 =_____	0.69
SI9 Terrestrial Habitat	(Good=1.0, Moderate=0.67, Poor=0.33, None=0.01)	Good / Moderate / Poor / None	0.01
SI10 Macrophytes	% of surface area covered (Read score from graph)	_____50_____%	0.81
		Habitat Suitability Index (HSI) (<0.5 = poor, 0.5-0.59 = below average, 0.6-0.69 = average, 0.7-0.79 = good, >0.8 = excellent)	0.46