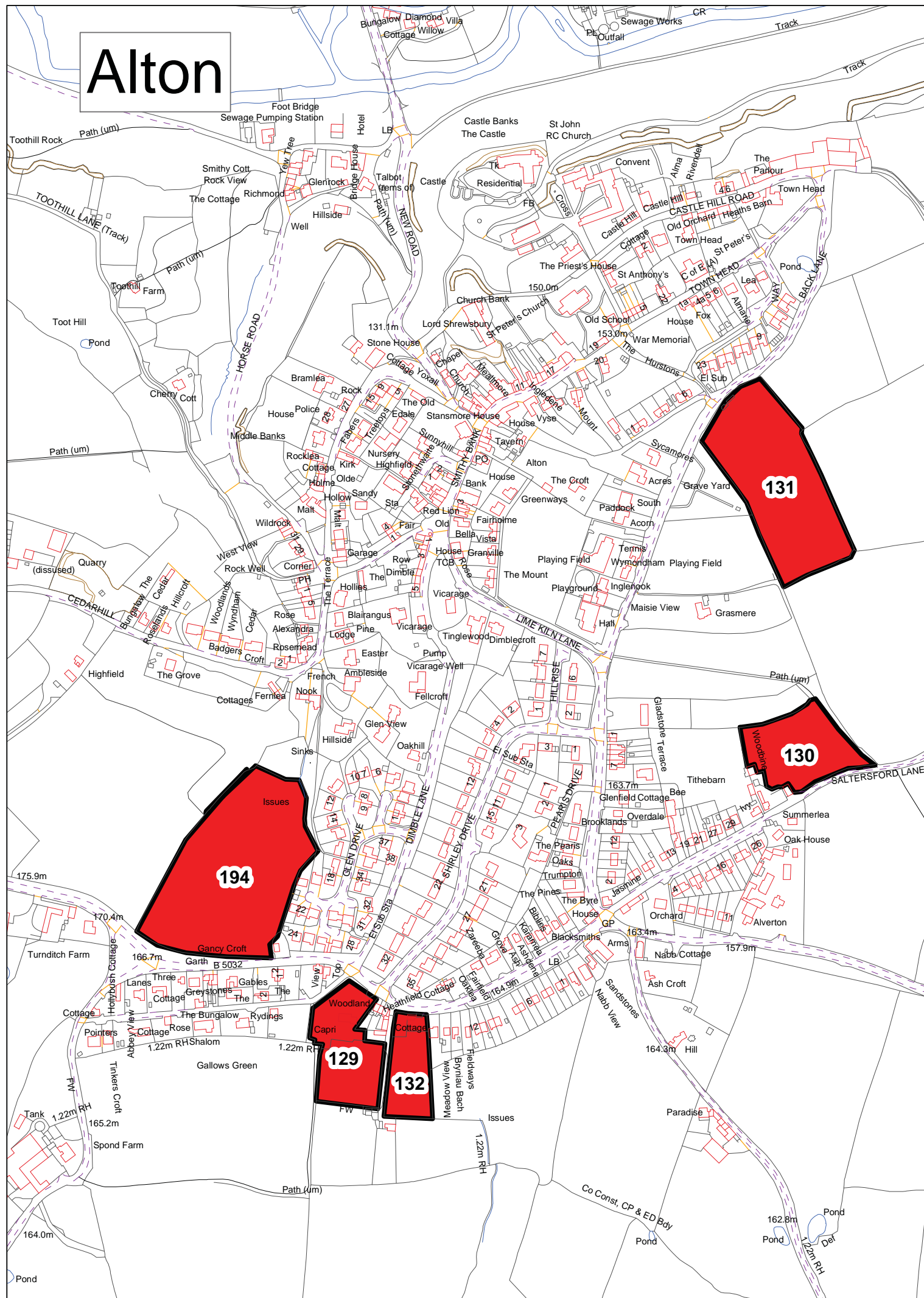


Alton



Scale 1: 3200

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Site label numbers denote Site FID reference numbers used in Study.



FID 129



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FID 129

1. Introduction

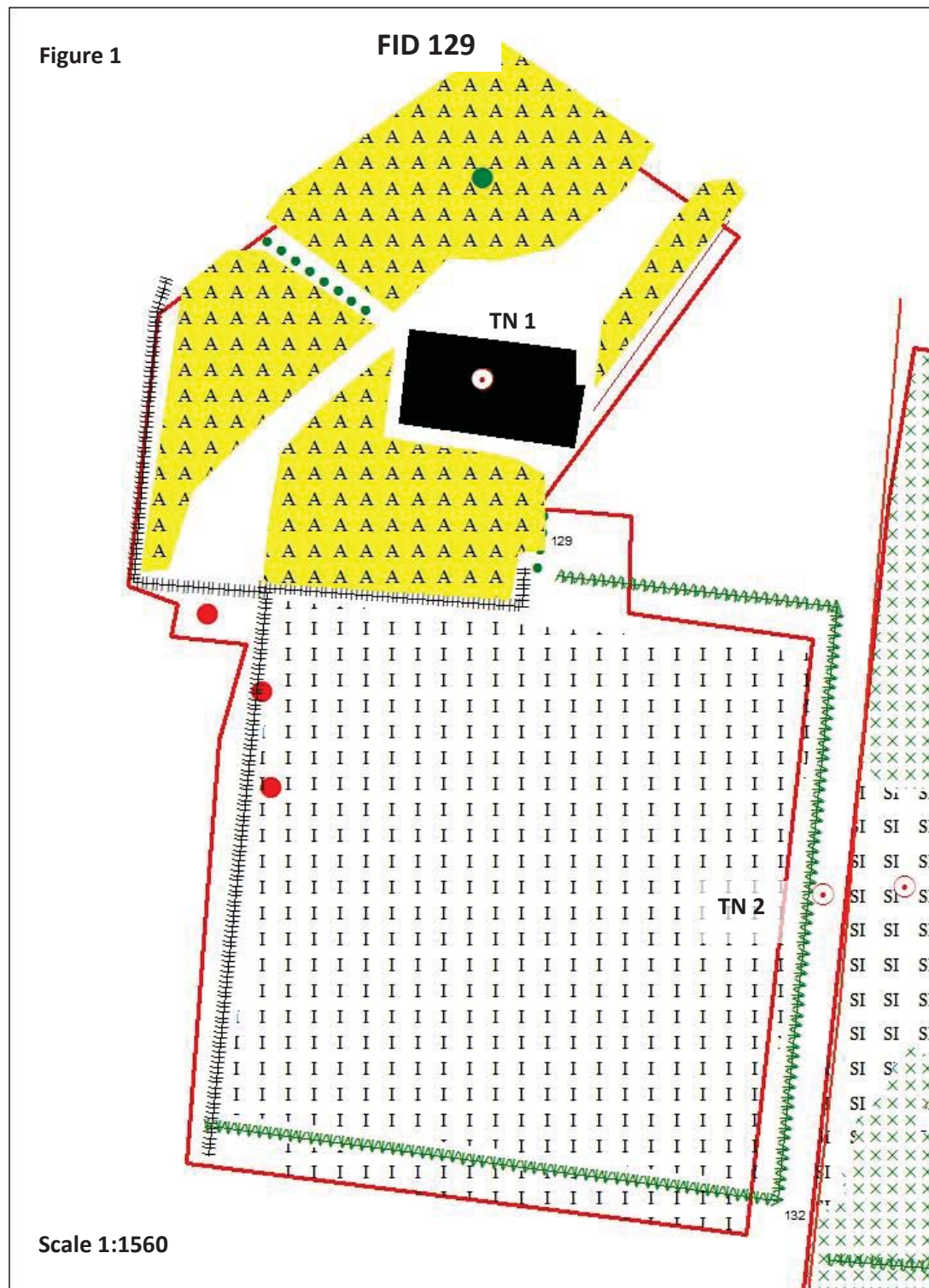
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 129 O.S grid reference SK0713741610.

FID 129 is located south of Alton village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 129 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Saltersford Lane Meadows
SSSI	Dimmings Dale & The Ranger
AWI/ SBI	Abbey Wood
AWI	Red Road (west of)
AWI	Greatgate Wood
AWI/ SBI	Crump Wood
AWI/ SBI	Barbary Gutter
AWI	Threap Wood
BAS	Toothill Wood
SBI	Jeffreymeadow (south of)
SBI	Rakes Dale
SBI	Rainroach Rock
SBI	Lord's Bridge (north of)
SBI	Churnet Valley Railway
SSI	Crumpwood Fields, Caldon Canal and Park Banks Meadow
SBI	Smalley Farm
SBI	Nabb Farm (south west of)
SBI	Saltersford Lane
SBI	Castle Wood

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Owl
	Box
	Brown hare
	Brown Long-eared Bat
	Common Bullfinch
	Common pipistrelle

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	Common snipe
	Common toad
	Common wasp
	Common yellow face bee
	Dunnoek
	Dusky Thorn
	Dyer's greenweed
	Early mining bee
	Eurasian Curlew
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Grey Wagtail
	Insect – beetle
	Insect - Hymenopteran
	Knot grass
	Lichen
	Mallard
	Marsh Tit
	Mistle Thrush
	Mournful wasp
	Mouse Moth
	Noctule bat
	Oak Hook-tip
	Pipistrelle
	Polecat
	September Thorn
	Small Heath
	Small Phoenix
	Small Square-spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	Tufted duck
	Wall
	Wesmael's digger wasp
	West European Hedgehog
	Wild Pansy
	Wood Warbler
	Yellowhammer

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INV	American Mink
	Chinese muntjac
	Indian Balsam
	Japanese knotweed
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Lesser Noctule
	Myotis bat species
	Natterers bat
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building
- Scattered trees
- Species rich hedgerows
- Species poor grassland
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.32	50	
AM	0.14	22	
OTHER	0.18	28	
BPT			3
TOTALS	0.64	100	3

AM – Amenity Grassland, I – Improved grassland, BPT – Bat Potential Trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , creeping thistle <i>Cirsium arvense</i> , dandelion <i>Taraxacum officinale</i> agg
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> ,

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey. Weeds listed under the Weeds Act 1959 including broadleaved dock *Rumex obtusifolius*, were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0717541584	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerows				x	
Species poor grassland					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by domestic dwellings to the north, species poor grassland and FID132 to the east, and is well connected to the wider countryside with hedgerows to the south.

The site mainly consists of species poor improved grassland (72%) domestic dwellings and hard standing. The species rich hedgerows mainly consist of hawthorn and holly with sycamore, elder *Sambucus nigra*, wild cherry *Prunus avium*, cherry laurel *Prunus laurocerasus* and wych elm *Ulmus glabra*.

The building and 3 scattered trees consisting of oak and ash present on site could potentially support roosting bats; therefore the site is given district ecological importance due to the tree assemblage and species rich hedgerow.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats (roost recorded within 150m) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 2 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees and the hedgerow be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use)

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or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has 3 trees and 1 building with bat potential, species rich hedgerows, and species poor grasslands which are connected to a series of other hedgerows and other habitats. Therefore the site is attributed at least district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees and buildings
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 130



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FID 130

1. Introduction

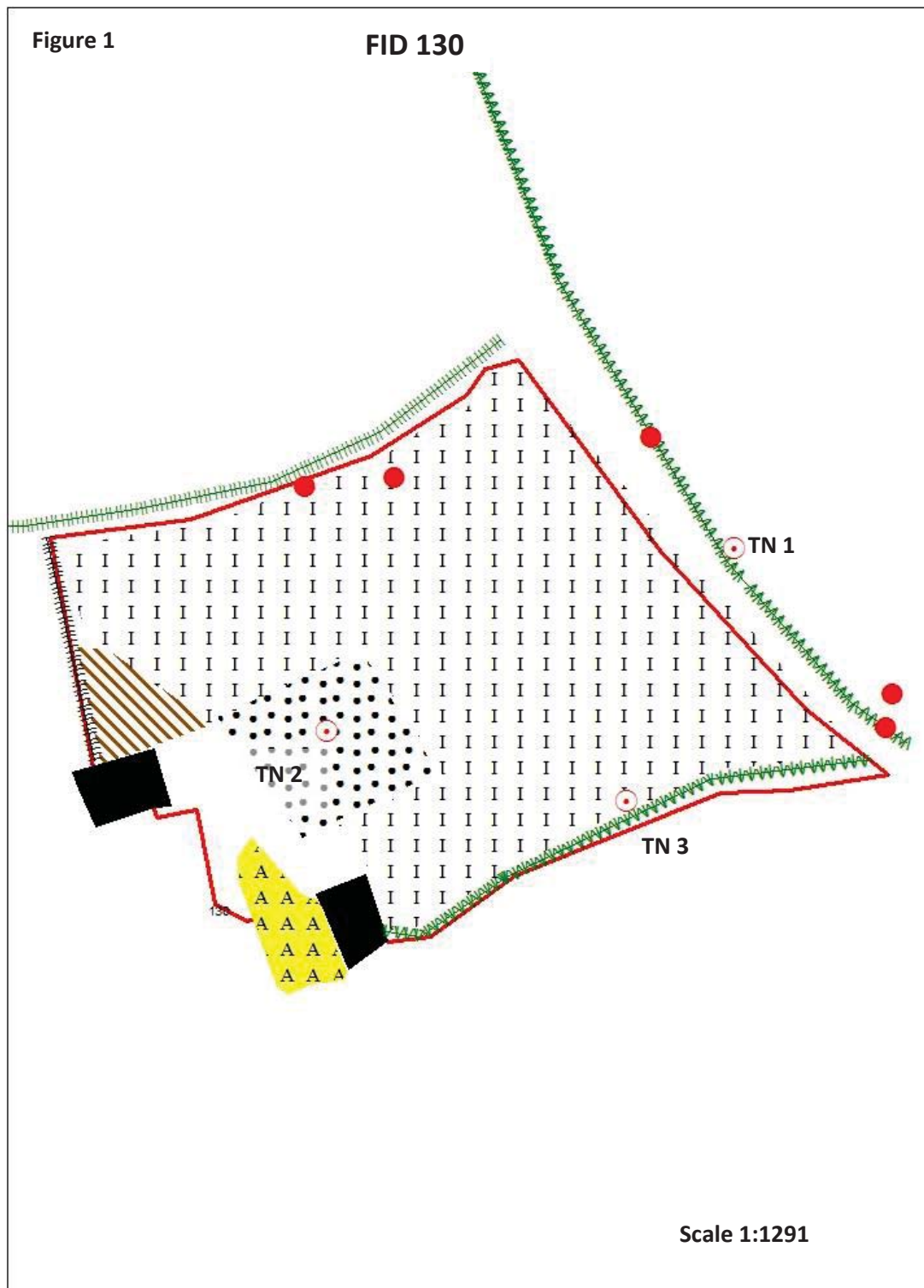
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 130 O.S grid reference SK 0758741903.

FID 130 is located east of Alton village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 130 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

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2.3 Mapping

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All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

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The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

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The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Saltersford Lane Meadows
SSSI	Dimmings Dale & The Ranger
AWI/ SBI	Abbey Wood
AWI	Red Road (west of)
AWI/ SBI	Crump Wood
AWI/ SBI	Barbary Gutter
AWI	Threap Wood
BAS	Toothill Wood
SBI	Jeffery meadow (south of)
SBI	Rakes Dale
SBI	Rainroach Rock
SBI	Lord's Bridge (north of)
SBI	Churnet Valley Railway
SBI	Crumpwood Fields, Caldon Canal and Park Banks Meadow
SBI	Smalley Farm
SBI	Nabb Farm (south west of)
SBI	Saltersford Lane
SBI	The Sprink
SBI	Alverton Hall Farm (east of)
SBI	Alton Park
SBI	Castle Wood

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Owl
	Box
	Brown hare
	Brown Long-eared Bat

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	Common Bullfinch
	Common pipistrelle
	Common toad
	Common wasp
	Common yellow face bee
	Dunnock
	Dusky Thorn
	Dyer's greenweed
	Early mining bee
	Eurasian Curlew
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Grey Wagtail
	Insect – beetle
	Insect - Hymenopteran
	Knot grass
	Lichen
	Mallard
	Marsh stitchwort
	Marsh Tit
	Mistle Thrush
	Mournful wasp
	Mouse Moth
	Noctule bat
	Oak Hook-tip
	Pipistrelle
	Polecat
	September Thorn
	Slow worm
	Small Heath
	Small Phoenix
	Small Square-spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	Tufted duck
	Wall
	Wesmael's digger wasp
	West European Hedgehog

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	Wild Pansy
	Wood Warbler
	Yellowhammer
INV	American Mink
	Chinese muntjac
	Indian Balsam
	Japanese knotweed
	Rhododendron
E/ UK PS	Barn Owl
	Bluebell
	Brown Long-eared Bat
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	Daubenton's bat
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	European otter
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	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Lesser Noctule
	Myotis bat species
	Natterers bat
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Slow worm
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerows
- Species poor grassland
- Tall ruderal vegetation
- Amenity grassland
- Bare ground

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.48	73	
BG	0.06	9	
TR	0.02	3	
AM	0.01	1	
OTHER	0.09	14	
BPT			5
TOTALS	0.63	100	5

AM – Amenity Grassland, TR- Tall ruderal vegetation, I – Improved grassland, BPT – Bat Potential Trees, BG – Bare ground

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , white clover <i>Trifolium repens</i> , common nettle <i>Urtica dioica</i> , broadleaved dock <i>Rumex obtusifolius</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , ash <i>Fraxinus excelsior</i> , pedunculate oak <i>Quercus robur</i> , bramble <i>Rubus fruticosus</i> agg, hazel <i>Corylus avellana</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including broadleaved dock were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0763041923	Requires hedgerow survey
2	SK0756141886	Equine display area
3	SK0761441879	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerows				x	
Species poor grassland					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by domestic dwellings to the south west, species poor grassland and arable land, and well connected to the wider countryside with a number of hedgerows.

The site is a livery yard/ field mainly consisting of species poor improved grassland (73%). The species rich hedgerows mainly consist of hawthorn and holly *Ilex aquifolium* with sycamore, elder *Sambucus nigra*, oak, ash and hazel. 5 mature pedunculate oak and ash trees present on site could also potentially support roosting bats. Therefore the site is attributed district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would possibly include roosting/ foraging bats (roost recorded within 180m) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 5 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees and the hedgerow be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has 5 trees with bat potential, species rich hedgerows, and species poor grasslands which are connected to a series of other hedgerows and other habitats. Therefore the site is attributed district ecological importance

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees and buildings
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 131



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FID 131

1. Introduction

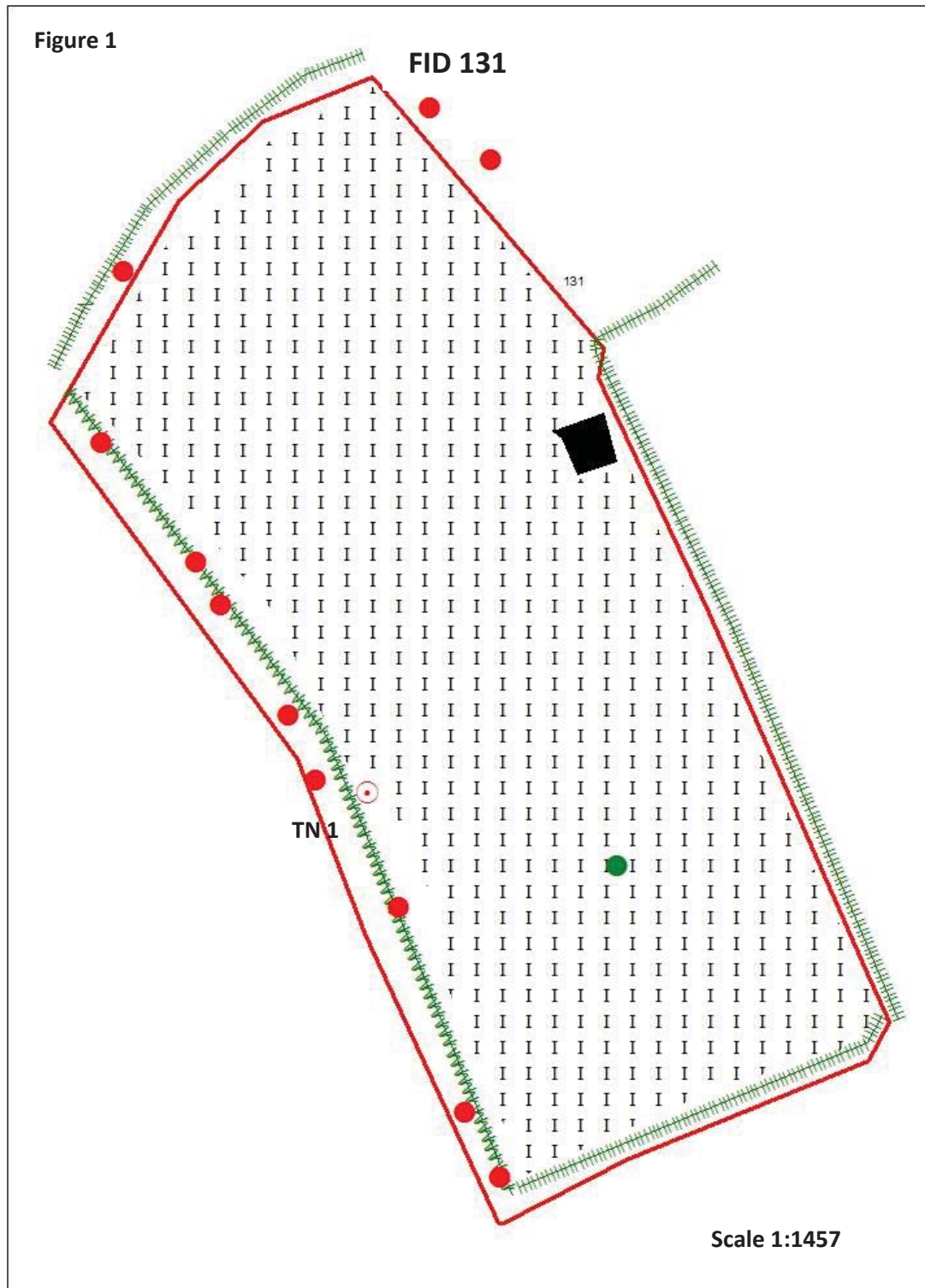
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 131 O.S grid reference SK 0755842176.

FID 131 is located east of Alton village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 131 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Saltersford Lane Meadows
SSSI	Dimmings Dale & The Ranger
AWI/ SBI	Abbey Wood
AWI	Tongue Wood
AWI	Pumpton banks Plantation
AWI	Red Road (west of)
AWI/ SBI	Crump Wood
AWI/ SBI	Barbary Gutter
AWI	Threap Wood
BAS	Hazlehurst Brook
BAS	Toothill Wood
SBI	Jeffery meadow (south of)
SBI	Rakes Dale
SBI	Rainroach Rock
SBI	Lord's Bridge (north of)
SBI	Churnet Valley Railway
SBI	Crumpwood Fields, Caldon Canal and Park Banks Meadow
SBI	Smalley Farm
SBI	Nabb Farm (south west of)
SBI	Saltersford Lane
SBI	The Sprink
SBI	Alverton Hall Farm (east of)
SBI	Alton Park
SBI	Castle Wood

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Owl

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	Box
	Brown hare
	Brown Long-eared Bat
	Common Bullfinch
	Common pipistrelle
	Common toad
	Common wasp
	Common yellow face bee
	Dunnock
	Dusky Thorn
	Dyer's greenweed
	Early mining bee
	Eurasian Curlew
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Grey Wagtail
	Insect – beetle
	Insect - Hymenopteran
	Jacob's ladder
	Knot grass
	Lichen
	Mallard
	Marsh stitchwort
	Marsh Tit
	Mistle Thrush
	Mournful wasp
	Mouse Moth
	Noctule bat
	Oak Hook-tip
	Pipistrelle
	Polecat
	September Thorn
	Slow worm
	Small Heath
	Small Phoenix
	Small Square-spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee

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	Tufted duck
	Wall
	Wesmael's digger wasp
	West European Hedgehog
	Wild Pansy
	Wood Warbler
	Yellowhammer
INV	American Mink
	Chinese muntjac
	Indian Balsam
	Japanese knotweed
	Rhododendron
E/ UK PS	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Lesser Noctule
	Myotis bat species
	Natterers bat
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Slow worm
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerows
- Species poor hedgerows
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)	NUMBER
I	1.25	82	
OTHER	0.27	18	
BPT			11
TOTALS	1.52	100	11

I – Improved grassland, BPT – Bat potential trees

4.3.3 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , red clover <i>Trifolium pratense</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , elder <i>Sambucus nigra</i> , holly <i>Ilex aquifolium</i>

4.3.4 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0754642136	Hedgerow survey required

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerows				x	
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by domestic dwellings, a cemetery, amenity grassland, species poor grasslands and arable land, which are well connected to the wider countryside with a number of hedgerows.

The site consists mainly of species poor improved grassland (82%). The species rich hedgerows mainly consist of hawthorn and holly with sycamore, ash, elder, oak *Quercus robur* with rowan *Sorbus aucuparia*, dog rose *Rosa canina* and hazel *Corylus avellana*.

11 pedunculate oak, ash and sycamore present on site could potentially support roosting bats which is significant as this large mature tree assemblage and good connectivity provides good foraging lines which are likely to increase the chances of roosting bats being present as this tends to suit their normal behavioural patterns. Therefore the site is attributed district ecological importance.

A number of European and UK protected species have been recorded within 2km and it is deemed that the site could support some of the species including roosting/ foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 11 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees and especially the species rich hedgerow be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has 11 trees with bat potential, species rich hedgerows, and species poor grasslands which are well connected to a series of other hedgerows and other habitats. Therefore the site is attributed at least district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 132



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FID 132

1. Introduction

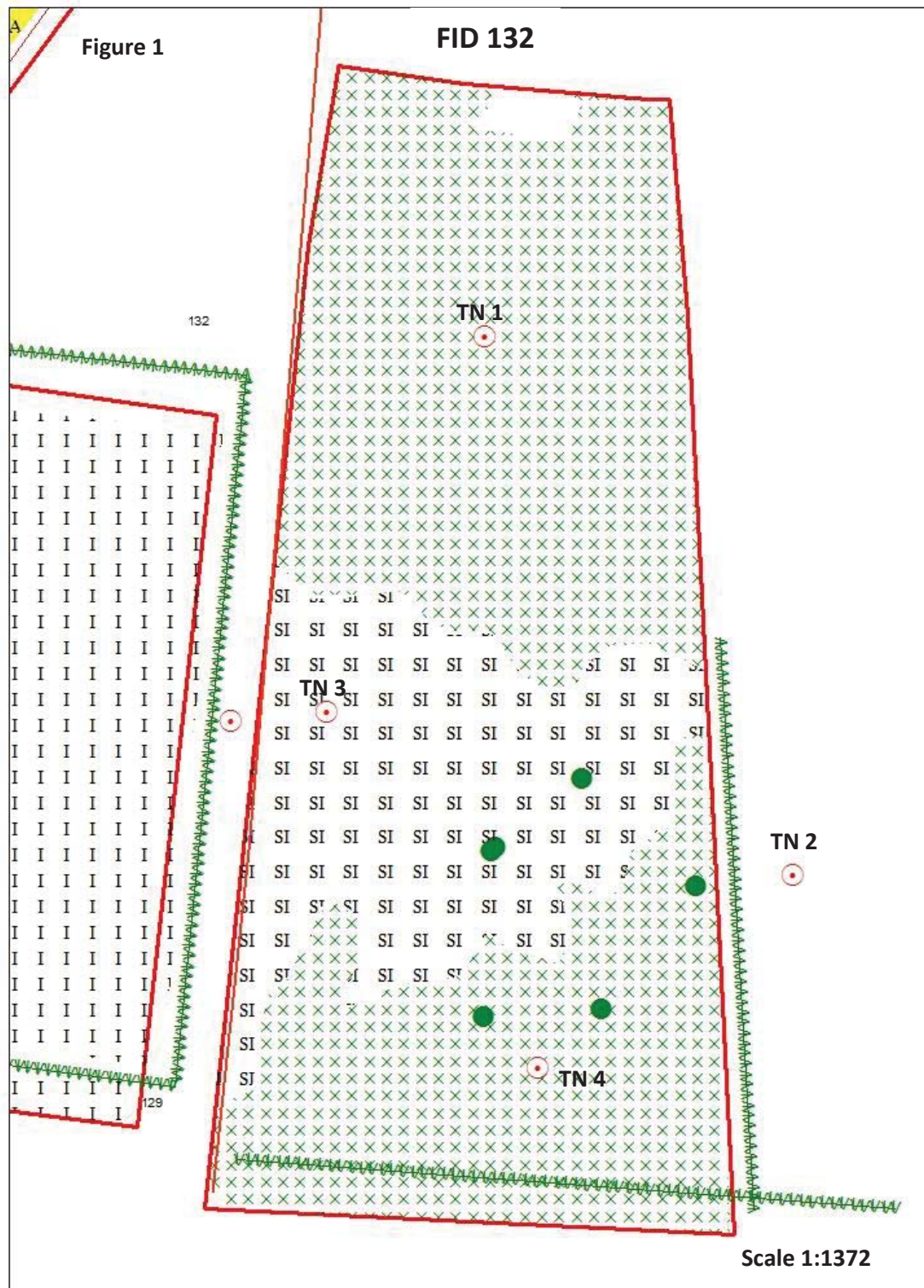
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 132 O.S grid reference SK0720541585.

FID 132 is located south of Alton village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 132 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.



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2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Saltersford Lane Meadows
SSSI	Dimmings Dale & The Ranger
AWI/ SBI	Abbey Wood
AWI	Red Road (west of)
AWI	Greatgate Wood
AWI/ SBI	Crump Wood
AWI/ SBI	Barbary Gutter
AWI	Threap Wood
BAS	Toothill Wood
SBI	Jeffery meadow (south of)
SBI	Rakes Dale
SBI	Rainroach Rock
SBI	Lord's Bridge (north of)
SBI	Churnet Valley Railway
SSI	Crumpwood Fields, Caldon Canal and Park Banks Meadow
SBI	Smalley Farm
SBI	Nabb Farm (south west of)
SBI	Saltersford Lane
SBI	Castle Wood

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Owl
	Box
	Brown hare
	Brown Long-eared Bat
	Common Bullfinch
	Common pipistrelle

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	Common snipe
	Common toad
	Common wasp
	Common yellow face bee
	Dunnoek
	Dusky Thorn
	Dyer's greenweed
	Early mining bee
	Eurasian Curlew
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Grey Wagtail
	Insect – beetle
	Insect - Hymenopteran
	Knot grass
	Lichen
	Mallard
	Marsh Tit
	Mistle Thrush
	Mournful wasp
	Mouse Moth
	Noctule bat
	Oak Hook-tip
	Pipistrelle
	Polecat
	September Thorn
	Small Heath
	Small Phoenix
	Small Square-spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	Tufted duck
	Wall
	Wesmael's digger wasp
	West European Hedgehog
	Wild Pansy
	Wood Warbler
	Yellowhammer

INV	American Mink
	Chinese muntjac
	Indian Balsam
	Japanese knotweed
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Lesser Noctule
	Myotis bat species
	Natterers bat
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerows
- Scattered scrub
- Species poor semi-improved grassland
- Scattered trees

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	0.11	28
SS	0.29	72
OTHER	0.00	0
TOTALS	0.40	100

SI – Semi-improved grassland, SS – Scattered scrub

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	False oat grass <i>Arrhenatherum elatius</i> , red fescue <i>Festuca rubra</i> , Yorkshire fog <i>Holcus lanatus</i> , rosebay willowherb <i>Chamerion angustifolium</i> , cock's foot <i>Dactylis glomerata</i> , creeping thistle <i>Cirsium arvense</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, elder <i>Sambucus nigra</i> , crab apple <i>Malus sylvestris</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, scrub and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0720241616	Encroaching scattered scrub
2	SK0717741585	Requires hedgerow survey
3	SK0719041588	Grassland with scrub encroachment
4	SK0721241557	Encroaching scattered scrub

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerows				x	
Scattered scrub					x
Species poor grassland					x
Scattered trees					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is a former domestic garden/ small orchard bordered by domestic dwellings and species poor grasslands which are well connected to the wider countryside with a number of hedgerows.

The site consists mainly of scattered ash and hawthorn scrub, semi improved species poor grassland with false oat grass, perennial rye grass *Lolium perenne* and rosebay willowherb. The species rich hedgerows mainly consist of hawthorn and holly *Ilex aquifolium* with ash, elder and damson *Prunus domestica institia*. Scattered trees include walnut *Juglans regia* and apple *Malus domestica species*. Therefore the site is considered to have district ecological importance.

A number of European and UK protected species have been recorded within 2km and it is deemed that the site is unlikely to support most of the species apart potentially from foraging bats (roost recorded 160m away).

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees and especially the species rich hedgerow be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has species rich hedgerows, and scattered scrub/ tall ruderal vegetation which are well connected to a series of other hedgerows and other habitats; therefore the site is attributed district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 194



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FID 194

1. Introduction

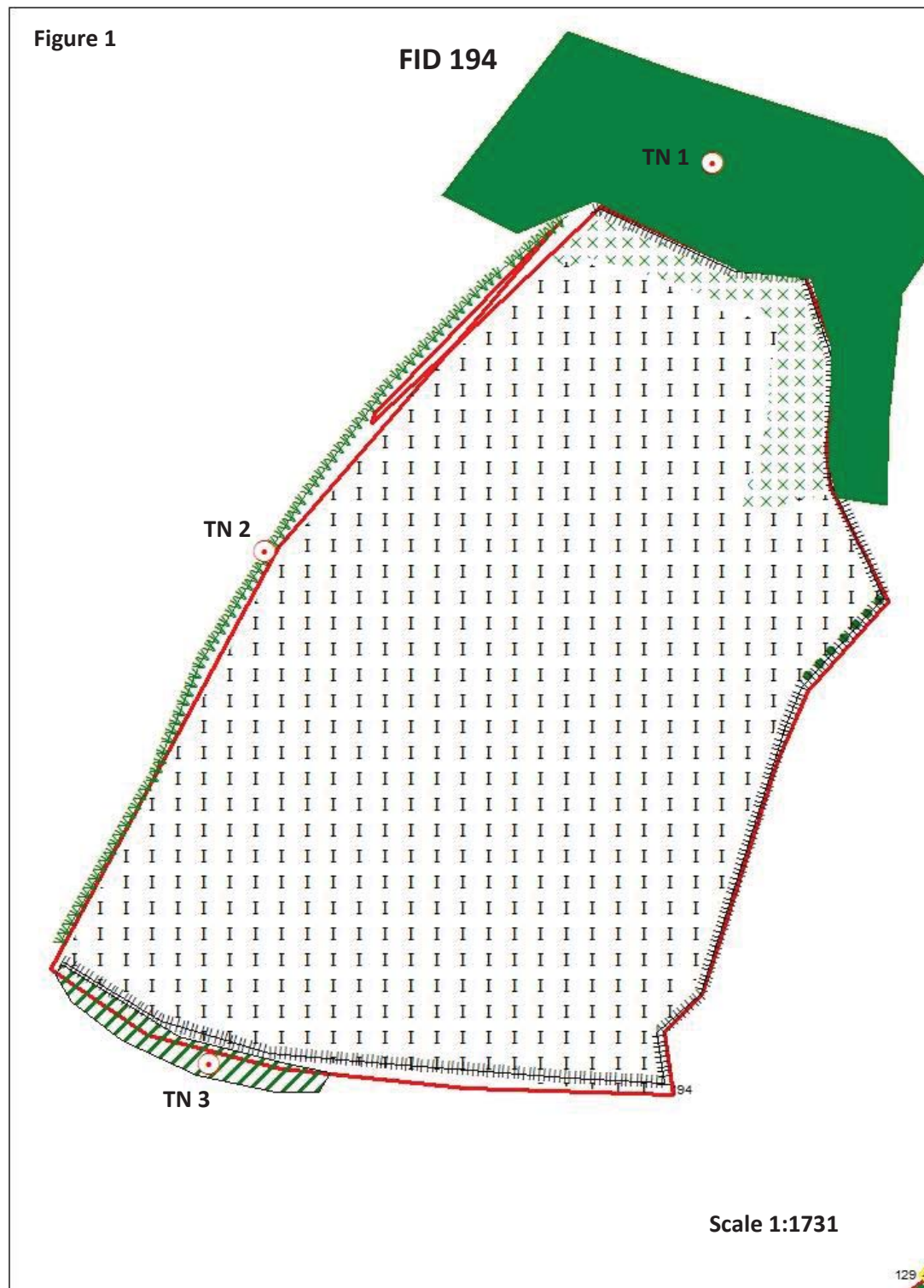
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 194 O.S grid reference SK0702641782.

FID 194 is located west of Alton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 194 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Saltersford Lane Meadows
SSSI	Dimmings Dale & The Ranger
AWI/ SBI	Abbey Wood
AWI	Red Road (west of)
AWI	Dimmingsdale Wood
AWI	Greatgate Wood
AWI/ SBI	Crump Wood
AWI/ SBI	Barbary Gutter
AWI	Threap Wood
BAS	Toothill Wood
SBI	Alton Park
SBI	Jeffrey meadow (south of)
SBI	Rakes Dale
SBI	Rainroach Rock
SBI	Lord's Bridge (north of)
SBI	Churnet Valley Railway
SSI	Crumpwood Fields, Caldon Canal and Park Banks Meadow
SBI	Smalley Farm
SBI	Nabb Farm (south west of)
SBI	Saltersford Lane
SBI	Castle Wood
RIGS	Peakstone Rock, Alton Common

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Owl
	Box

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	Brown hare
	Brown Long-eared Bat
	Common Bullfinch
	Common pipistrelle
	Common snipe
	Common toad
	Common wasp
	Common yellow face bee
	Dunnock
	Dusky Thorn
	Dyer's greenweed
	Early mining bee
	Eurasian Curlew
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Grey Wagtail
	Insect – beetle
	Insect - Hymenopteran
	Knot grass
	Lichen
	Mallard
	Marsh Tit
	Mistle Thrush
	Mournful wasp
	Mouse Moth
	Noctule bat
	Oak Hook-tip
	Pipistrelle
	Polecat
	September Thorn
	Small Heath
	Small Phoenix
	Small Square-spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	Tufted duck
	Wall
	Wesmael's digger wasp

	West European Hedgehog
	Wild Pansy
	Wood Warbler
	Yellowhammer
INV	American Mink
	Chinese muntjac
	Indian Balsam
	Japanese knotweed
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Lesser Noctule
	Myotis bat species
	Natterers bat
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Scattered trees
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)
I	1.85	91
SS	0.09	5
PBW	0.01	0
OTHER	0.08	4
TOTALS	2.03	100

I – Improved grassland, SS – Scattered scrub, PBW – Planted broadleaved woodland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , red clover <i>Trifolium pratense</i> , hogweed <i>Heracleum sphondylium</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* have both been recorded within the site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0707741890	Broadleaved woodland
2	SK0697241802	Requires hedgerow survey
3	SK0696341706	Landscaped tree planting

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Scattered trees					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by mainly by domestic dwellings and species poor grassland though there is an area of semi-natural broadleaved woodland, scrub and tall ruderal to the north.

The site itself consists of species poor grassland (91%), scattered bramble scrub and species rich hedgerow consisting of hawthorn, crab apple *Malus sylvestris*, holly, hazel *Corylus avellana*, ash, sycamore and damson *Prunus domestica* *institia*.

There have been a number of European and UK protected species recorded within 2km according to the desk study. The site is connected to a scrub/ broadleaved woodland mosaic and connected to other hedgerows. Therefore the site could potentially support foraging bats (roosts recorded within 50m) and badger, and possibly reptiles (grass snakes recorded within 100m), especially along the south facing woodland edge habitat to the north.

The species poor grassland habitats are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix. Nevertheless the site is deemed to have district ecological importance due to the presence of a species rich hedgerow and potential to support protected species.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the habitat mosaic to the north of the site a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998), especially concentrated on the habitats directly adjacent to the wet woodland, tall ruderal vegetation and stream area.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerow is retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

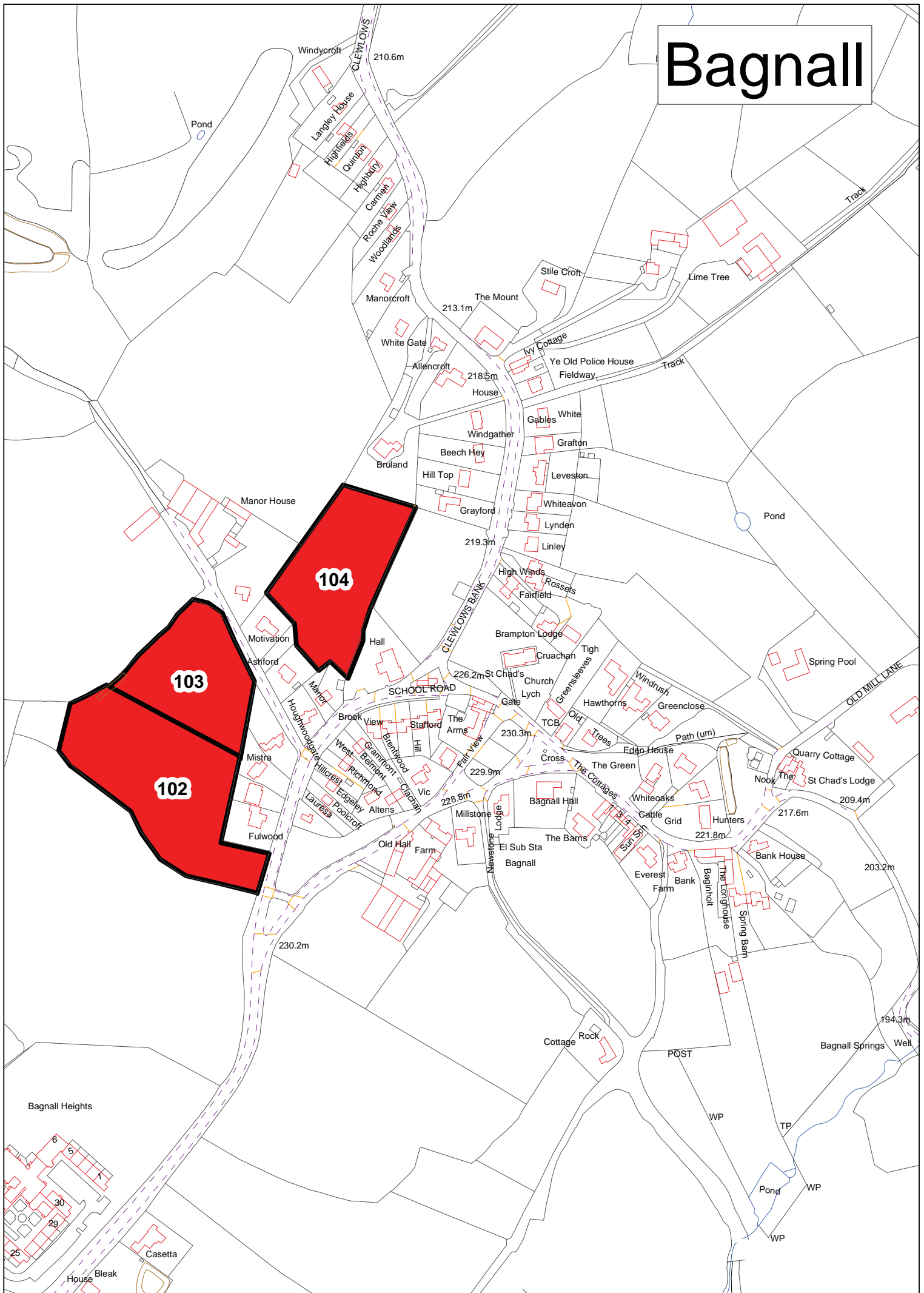


7. Conclusion

The site has mostly low biodiversity value overall in terms of area but does have a species rich hedgerow and good connectivity to other habitats, which warrants the site being given district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Reptile survey
- Hedgerow survey
- Vegetation removal at the appropriate time of year





FID 102



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FID 102

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 102 O.S grid reference SJ9256550877.

FID 102 is located west of Bagnall village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 102 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Wetley Moor
LNR	Bagnall Road Wood
AWI	Houghwood
AWI	Greenway Wood
AWI	UNK
AWI/ SBI	Tinster Wood
BAS	Spring Bank
BAS	Stanley Pool
BAS	Moor Hall (west of)
SBI	Lawn Farm Nursery (north-east of)
SBI	Bagnall Springs
SBI	Windy Croft
SBI	Postbridge Farm (west of)
SBI	Cliff Wood
SBI	Houghwood
SBI	Heakley Marshes
SBI	Carmountside Wood
SBI	The Green, Baddeley
SBI	Carmountside Grassland
SBI	Bagnall Road Wood
SBI	Upper Holehouse Wood
SBI	Greenway Hall Golf Course
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

SSSI – Site of Special Scientific Interest, LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

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4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	A true fly
	Adder
	Autumnal Rustic
	Barn Owl
	Barn Swallow
	Black-headed Gull
	Broom Moth
	Brown Spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common Snipe
	Common Starling
	Common swift
	Common Toad
	Corn spurrey
	Cornflower
	Crescent
	Dark barred twin spot
	Dot Moth
	Dunnock
	Dusky brocade
	Dusky Thorn
	Dyer's greenweed
	Ear Moth
	Eurasian teal
	Eurasian tree sparrow

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	European Water Vole
	Ferret
	Fieldfare
	Freshwater White-clawed Crayfish
	Ghost Moth
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Grey Wagtail
	Hedge rustic
	Hornet
	House Sparrow
	Insect - Beetle
	Insect - hymenoptera
	Knot Grass
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh Tit
	Meadow Pipit
	Mistle thrush
	Native black poplar
	Northern Lapwing
	Oak Hook-tip
	Pipistrelle
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Tufted duck
	West European Hedgehog
	White Ermine

	Willow Tit
	Yellowhammer
INV	American mink
	False-Acacia
	Giant Hogweed
	Greater Canada goose
	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Marsh Frog
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Ferret
	Fieldfare
	Freshwater White-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Pipistrelle
	Pipistrelle Bat Species
	Redwing
	Whiskered/Brandt's Bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Marshy grassland
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.08	91	
MG	0.06	5	
OTHER	0.05	4	
BPT			3
TOTALS	1.19	100	3

I – Improved grassland, BPT – Bat Potential Trees, MG – Marshy grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , soft rush <i>Juncus effusus</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Pedunculate oak <i>Quercus robur</i> , hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg,

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense*, curled dock *Rumex crispus* and ragwort *Senecio jacobea* were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees, hedgerows and dense scrub from March to August when birds in the UK normally breed.

Incidental records

- Birds including woodpigeon *Columba palumbus*



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9256850847	Marshy grassland within wet depression

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Marshy grassland					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site mainly consists of grazed species poor improved grassland (91%), which is also poorly connected to the wider countryside and a common habitat within the local area and the UK as a whole. The 3 scattered trees present on site consist of mature oak and sycamore *Acer pseudoplatanus* which have potential to support roosting bats and is designated as having district ecological importance as a result. A small depression to the south of the site contains species poor marshy grassland consisting of mainly of soft rush.

Despite a number of European protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would possibly include roosting/foraging bats (roost recorded within 150m to the north east) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 3 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

If at all possible it is recommended that as many trees be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has 3 trees with bat potential which forms the main biodiversity interest, and is fairly poorly connected to other biodiverse habitats within the locality, and due to the BPT's is designated as having at least district importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Vegetation removal at the appropriate time of year



FID 103



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FID 103

1. Introduction

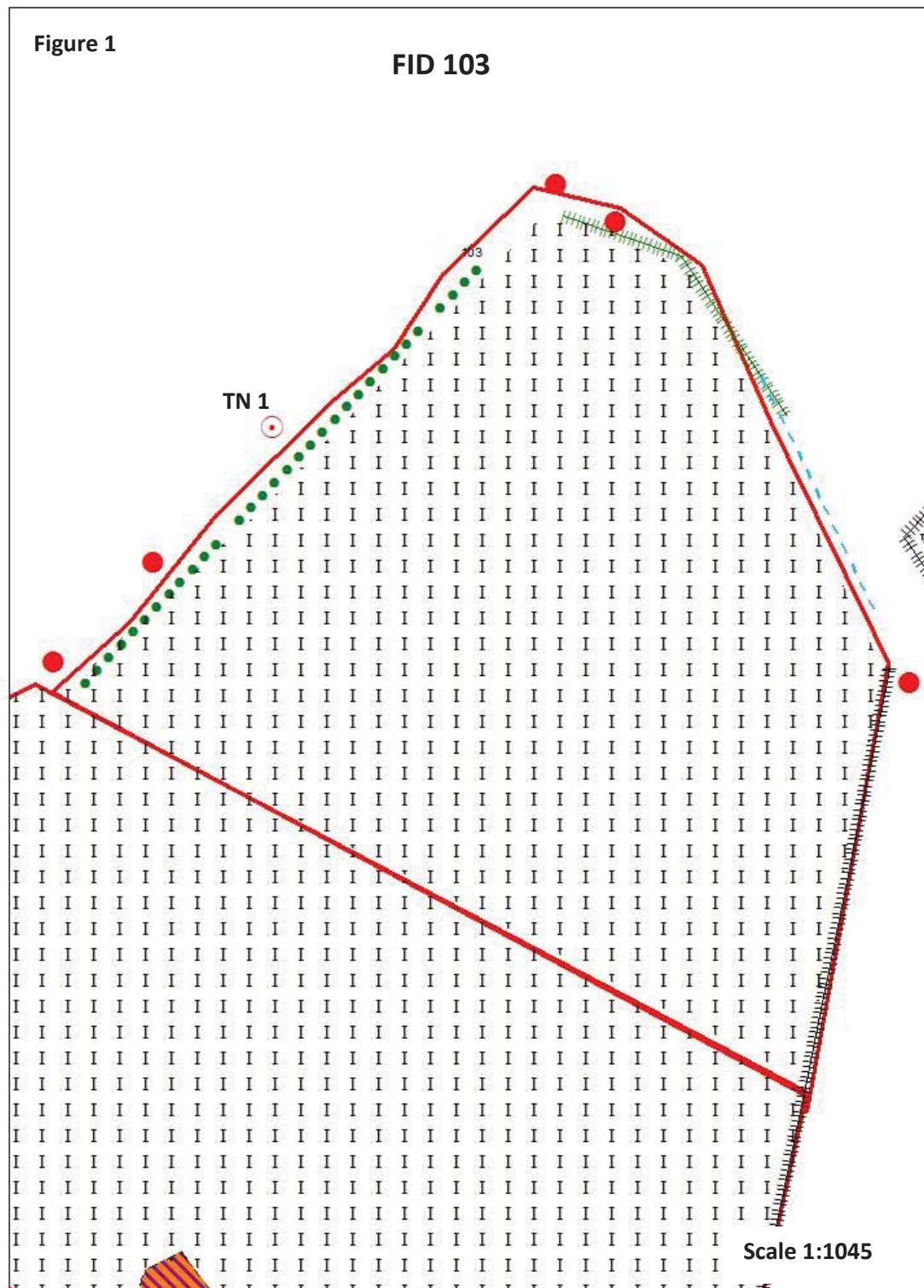
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 103 O.S grid reference SJ9259550941.

FID 103 is located west of Bagnall village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 103 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Wetley Moor
LNR	Bagnall Road Wood
AWI	Houghwood
AWI	Greenway Wood
AWI	UNK
AWI/ SBI	Tinster Wood
BAS	Spring Bank
BAS	Stanley Pool
BAS	Moor Hall (west of)
SBI	Lawn Farm Nursery (north-east of)
SBI	Bagnall Springs
SBI	Windy Croft
SBI	Postbridge Farm (west of)
SBI	Cliff Wood
SBI	Houghwood
SBI	Heakley Marshes
SBI	Carmountside Wood
SBI	The Green, Baddeley
SBI	Carmountside Grassland
SBI	Bagnall Road Wood
SBI	Upper Holehouse Wood
SBI	Greenway Hall Golf Course
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

SSSI – Site of Special Scientific Interest, LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

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4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	A true fly
	Adder
	Autumnal Rustic
	Barn Owl
	Barn Swallow
	Black-headed Gull
	Broom Moth
	Brown Spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common Snipe
	Common Starling
	Common swift
	Common Toad
	Corn spurrey
	Cornflower
	Crescent
	Dark barred twin spot
	Dot Moth
	Dunnock
	Dusky brocade
	Dusky Thorn
	Dyer's greenweed
	Ear Moth
	Eurasian teal
	Eurasian tree sparrow

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	European Water Vole
	Ferret
	Fieldfare
	Freshwater White-clawed Crayfish
	Ghost Moth
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Grey Wagtail
	Hedge rustic
	Hornet
	House Sparrow
	Insect - Beetle
	Insect - hymenoptera
	Knot Grass
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh Tit
	Meadow Pipit
	Mistle thrush
	Native black poplar
	Northern Lapwing
	Oak Hook-tip
	Pipistrelle
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Tufted duck
	West European Hedgehog
	White Ermine

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	Willow Tit
	Yellowhammer
INV	American mink
	False-Acacia
	Giant Hogweed
	Greater Canada goose
	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Marsh Frog
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Ferret
	Fieldfare
	Freshwater White-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Pipistrelle
	Pipistrelle Bat Species
	Redwing
	Whiskered/Brandt's Bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Dry ditch
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.63	93	
OTHER	0.05	7	
BPT			5
TOTALS	0.68	100	5

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Holly <i>Ilex aquifolium</i> , sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, blackthorn <i>Prunus spinosa</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9255950967	Small stream approximately 3ft wide

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Dry ditch					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by domestic dwellings and farm buildings to the north and east and species poor grasslands and mainly consists of grazed species poor improved grassland (93%). The 5 scattered sycamore trees present on site all have potential to support roosting bats and have been designated a district ecological importance. The habitats present on site are species poor apart from the scattered mature trees, poorly connected to the wider countryside and common within the local area and the UK as a whole.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats (roost recorded 50m to the north) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 5 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

If at all possible it is recommended that as many trees be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site is fairly poorly connected to other biodiverse habitats within the locality but has 5 trees with bat potential which forms the main biodiversity interest and therefore the site is deemed to have district importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the 5 trees
- Vegetation removal at the appropriate time of year



FID 104



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FID 104

1. Introduction

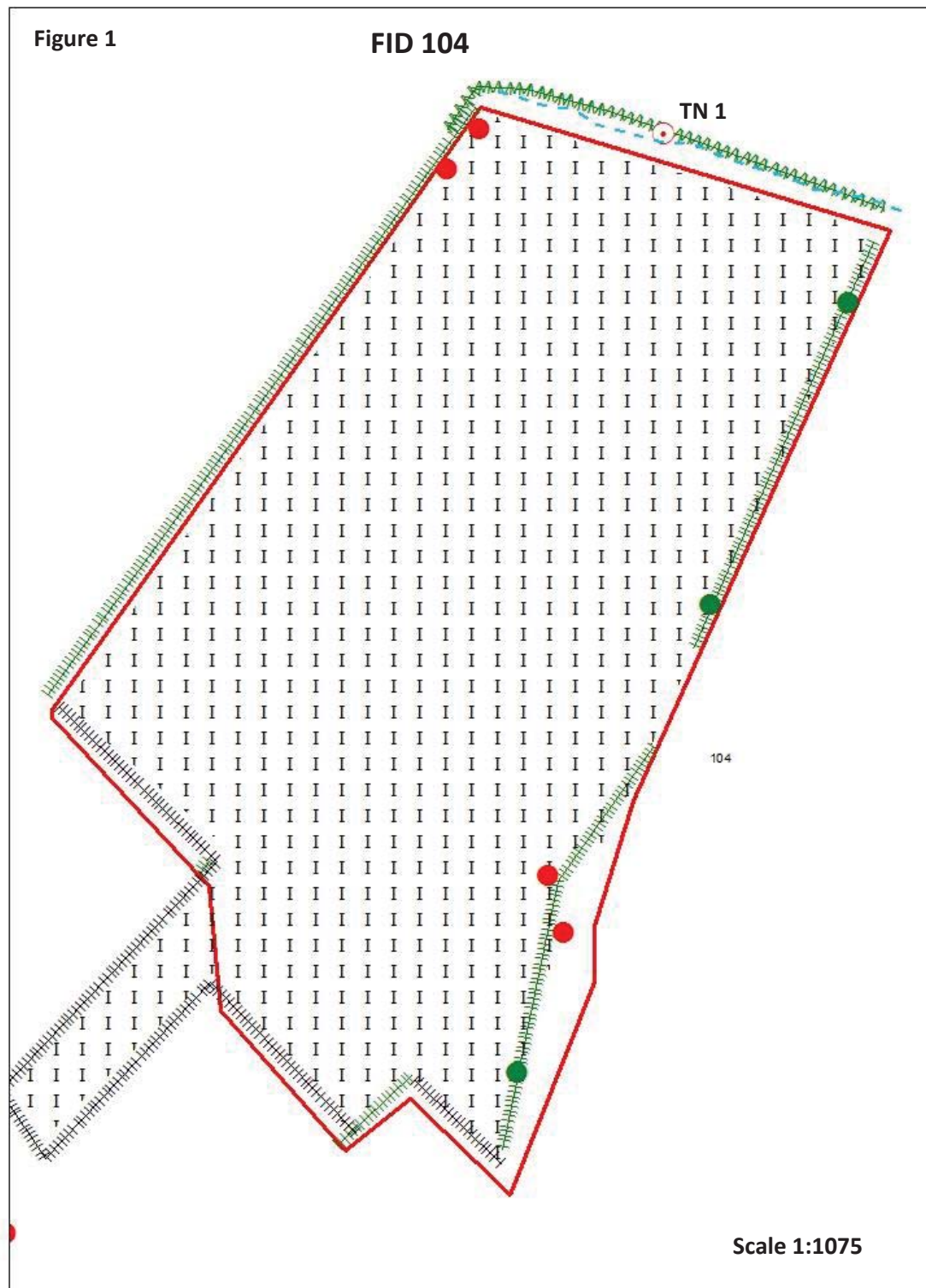
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 104 O.S grid reference SJ9270051024.

FID 104 is located west of Bagnall village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 104 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Wetley Moor
LNR	Bagnall Road Wood
AWI	Houghwood
AWI	Greenway Wood
AWI	UNK
AWI/ SBI	Tinster Wood
BAS	Spring Bank
BAS	Stanley Pool
BAS	Moor Hall (west of)
SBI	Lawn Farm Nursery (north-east of)
SBI	Bagnall Springs
SBI	Windy Croft
SBI	Postbridge Farm (west of)
SBI	Knowsley Common
SBI	Holehouse (north east of)
SBI	Cliff Wood
SBI	Houghwood
SBI	Heakley Marshes
SBI	Carmountside Wood
SBI	The Green, Baddeley
SBI	Carmountside Grassland
SBI	Bagnall Road Wood
SBI	Greenway Hall Golf Course
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

SSSI – Site of Special Scientific Interest, LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

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4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	A true fly
	Adder
	Autumnal Rustic
	Barn Owl
	Barn Swallow
	Black-headed Gull
	Broom Moth
	Brown Spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common Snipe
	Common Starling
	Common swift
	Common Toad
	Corn spurrey
	Cornflower
	Crescent
	Dark barred twin spot
	Dot Moth
	Dunnock
	Dusky brocade
	Dusky Thorn
	Dyer's greenweed
	Ear Moth
	Eurasian teal
	Eurasian tree sparrow

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	European Water Vole
	Ferret
	Fieldfare
	Freshwater White-clawed Crayfish
	Ghost Moth
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Grey Wagtail
	Hedge rustic
	Hornet
	House Sparrow
	Insect - Beetle
	Insect - hymenoptera
	Knot Grass
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh Tit
	Meadow Pipit
	Mistle thrush
	Native black poplar
	Northern Lapwing
	Oak Hook-tip
	Pipistrelle
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Tufted duck
	West European Hedgehog
	White Ermine

	Willow Tit
	Yellowhammer
INV	American mink
	False-Acacia
	Giant Hogweed
	Greater Canada goose
	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Marsh Frog
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Ferret
	Fieldfare
	Freshwater White-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Pipistrelle
	Pipistrelle Bat Species
	Redwing
	Whiskered/Brandt's Bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerow
- Species poor hedgerows
- Dry ditch
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)	NUMBER
I	0.78	95	
OTHER	0.04	5	
BPT			4
TOTALS	0.82	100	4

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9273651086	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Species poor hedgerow					x
Scattered trees				x	
Dry ditch					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by domestic dwellings and farm buildings and species poor grasslands.

The site itself mainly consists of grazed species poor improved grassland (95%). The 4 scattered trees present on site consist of ash which all have potential to support roosting bats combined with a potentially species rich hedgerow warrant the site being given a district ecological importance. The habitats present on site are species poor apart from the scattered mature trees, fairly well connected to the wider countryside with scattered scrub and hedgerows, as well as being common within the local area and the UK as a whole.

Despite a number of European protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/foraging bats (maternity roost and other roost recorded within 100m) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 4 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees and hedgerows be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

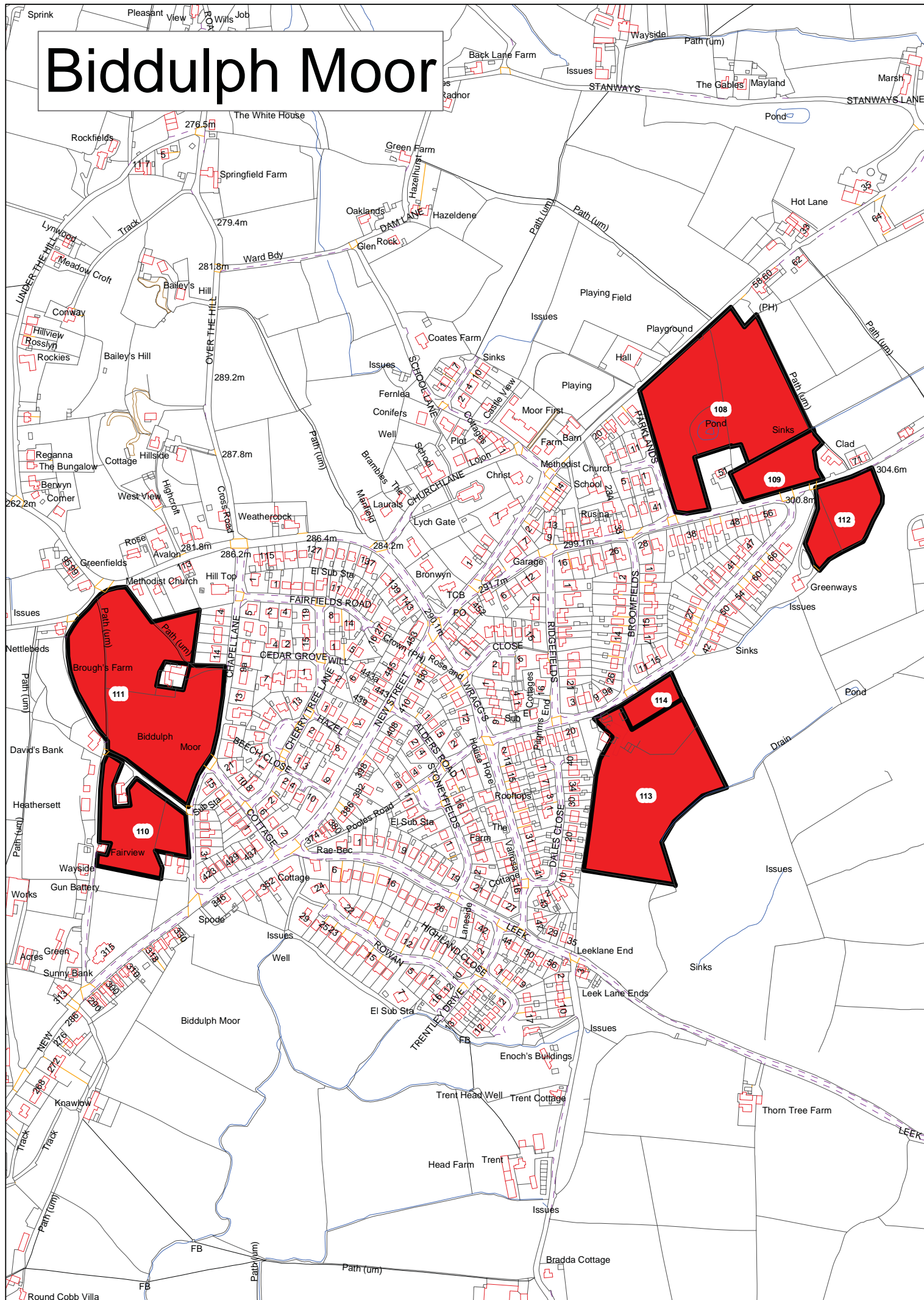
7. Conclusion

The site itself has 4 trees with bat potential and a species rich hedgerow and is designated having district ecological importance, although it is fairly poorly connected to other biodiverse habitats within the locality.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year

Biddulph Moor





FID 108



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FID 108

1. Introduction

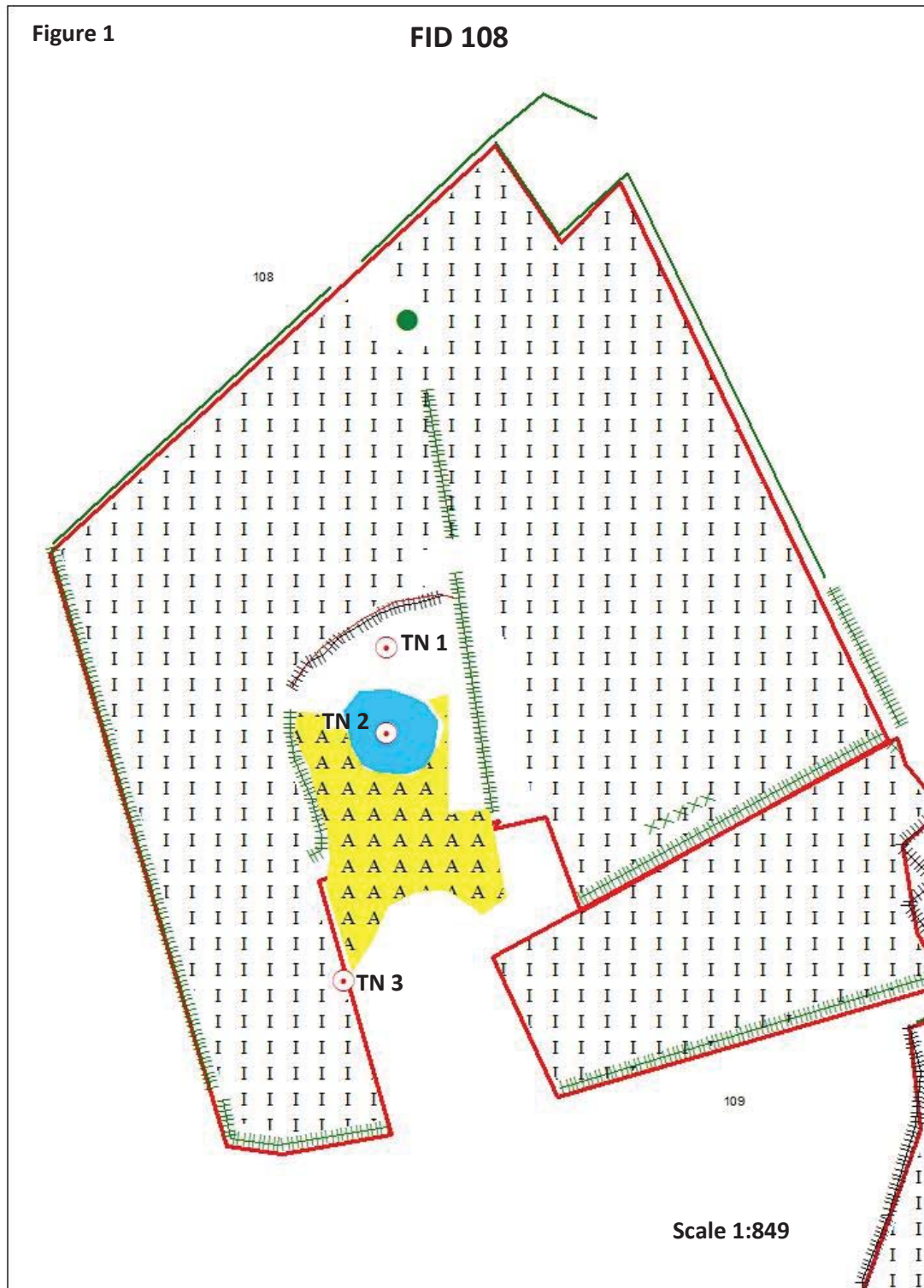
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 108 O.S grid reference SJ9099958442.

FID 108 is located north east of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 108 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
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Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
BAS	The Ashes (north east of)
SBI	Cliff Wood (east of)
SBI	Cliff Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Common bullfinch
	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp
	Common toad
	Early Bumble Bee
	Grey wagtail
	House sparrow

	Ivy leaved bellflower
	Lesser redpoll
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle
	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Open water
- Species poor hedgerows
- Species poor grassland
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	1.80	80
AM	0.08	4
OW	0.03	1
OTHER	0.34	15
TOTALS	2.25	100

AM – Amenity Grassland, I – Improved grassland, OW – Open water

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, beech <i>Fagus sylvatica</i> , leylandii <i>Cuprocypressus x leylandii</i> , silver birch <i>Betula pendula</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded in the site at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could nest in areas of broadleaved woodland and riparian habitat from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9097158416	Domestic garden
2	SJ9097758402	Ornamental pond
3	SJ9096558340	Leylandii

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Open water				x	
Species poor hedgerows					x
Scattered trees					x
Species poor grassland					x
Amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor improved grassland, farm buildings and domestic dwellings and fairly well connected through species poor hedgerows to the wider countryside.

The site itself consists mainly of species poor improved grassland (80%), and amenity mown grassland, pond and garden belonging to the domestic dwelling to the south of the site. The species poor hedgerows consist mainly of hawthorn *Crataegus monogyna* and elder *Sambucus nigra*.

The main areas of interest focus on the pond and garden, which appear to be fairly newly created within the last few years. The pond itself is ornamental, containing fish with poor marginal vegetation and water lilies *Nymphaea species* present, and the garden has ornamental shrubs and trees such as cherry *Prunus species* and sycamore planted. However the pond is afforded district ecological importance as there is a fairly low chance of supporting great crested newt populations

The site is fairly poorly connected to the wider countryside and it is unlikely that the site would support many protected species. However, it could support reptiles, amphibians and foraging badger and is therefore given district importance overall.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

Although it is fairly unlikely that great crested newts breed within the pond, it is still worth carrying out a survey according to the 'Great crested newt conservation handbook' (Froglife, 2001) to confirm that populations are not present.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Reptiles could potentially be present on site due to the presence of the pond, therefore a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998), especially concentrated on the habitats directly adjacent to the pond and the immediate vicinity.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and scrub understorey are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site has fairly low potential to support protected species as the habitats are fairly newly created and fairly poorly connected to other more biodiverse habitats. However, as a pond and potential supporting habitat for amphibians and reptiles is present the site has been deemed to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 109



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FID 109

1. Introduction

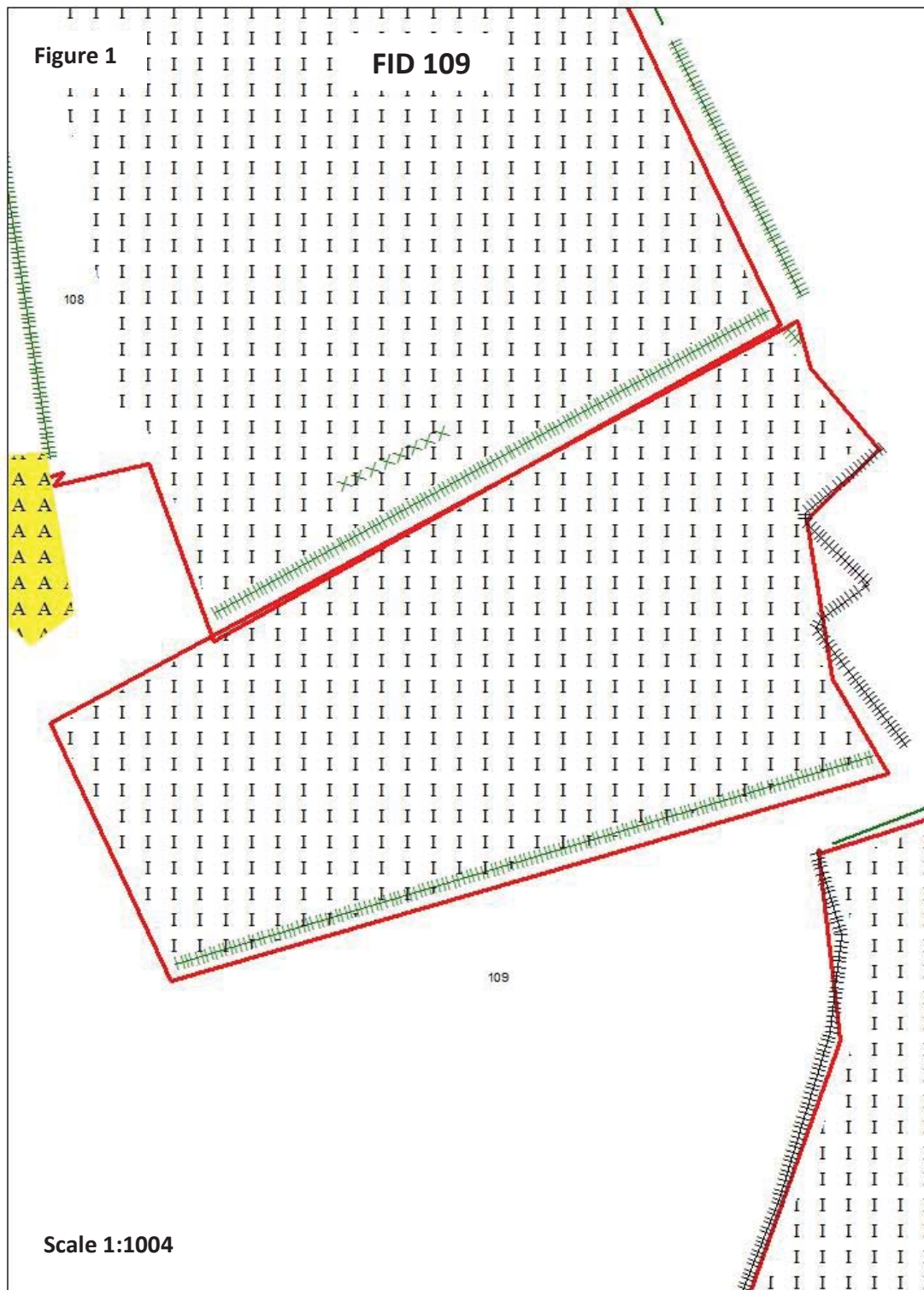
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 109 O.S grid reference SJ9105658359.

FID 109 is located north east of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 109 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
BAS	The Ashes (north east of)
SBI	Cliff Wood (east of)
SBI	Cliff Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Common bullfinch
	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp
	Common toad
	Early Bumble Bee
	Grey wagtail
	House sparrow

	Ivy leaved bellflower
	Lesser redpoll
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle
	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerow
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.40	92
OTHER	0.04	8
TOTALS	0.44	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, beech <i>Fagus sylvatica</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded in the site at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerow from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Scattered trees					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by grazed species poor improved grassland, farm buildings and domestic dwellings and fairly well connected through species poor hedgerows to the pond within the garden to the north and the wider countryside.

The site itself consists mainly of species poor improved grassland (92%) and a species poor hedgerow which consists mainly of hawthorn and beech. The site has species poor habitats present on site and is deemed to have a low score within the biodiversity matrix. The site is unlikely to support many protected species with the possible exception of foraging bats and badger. Terrestrial populations of amphibians could also be present as there is a pond located 76m away and therefore the site has been attributed district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

Great crested newts could potentially use terrestrial habitat within the site. As great crested newts could potentially breed within the pond (located 76m away in FID 108), it is still worth carrying out a survey according to the 'Great crested newt conservation handbook' (Froglife, 2001) to confirm presence or absence.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that the hedgerows are retained if the site is to be developed.

If the hedgerow is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has fairly low potential to support protected species as the habitats are species poor and fairly poorly connected to other more biodiverse habitats. However, there is potential for terrestrial amphibians to be present therefore the site is considered to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey of the adjacent pond
- Vegetation removal at the appropriate time of year



FID 110



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FID 110

1. Introduction

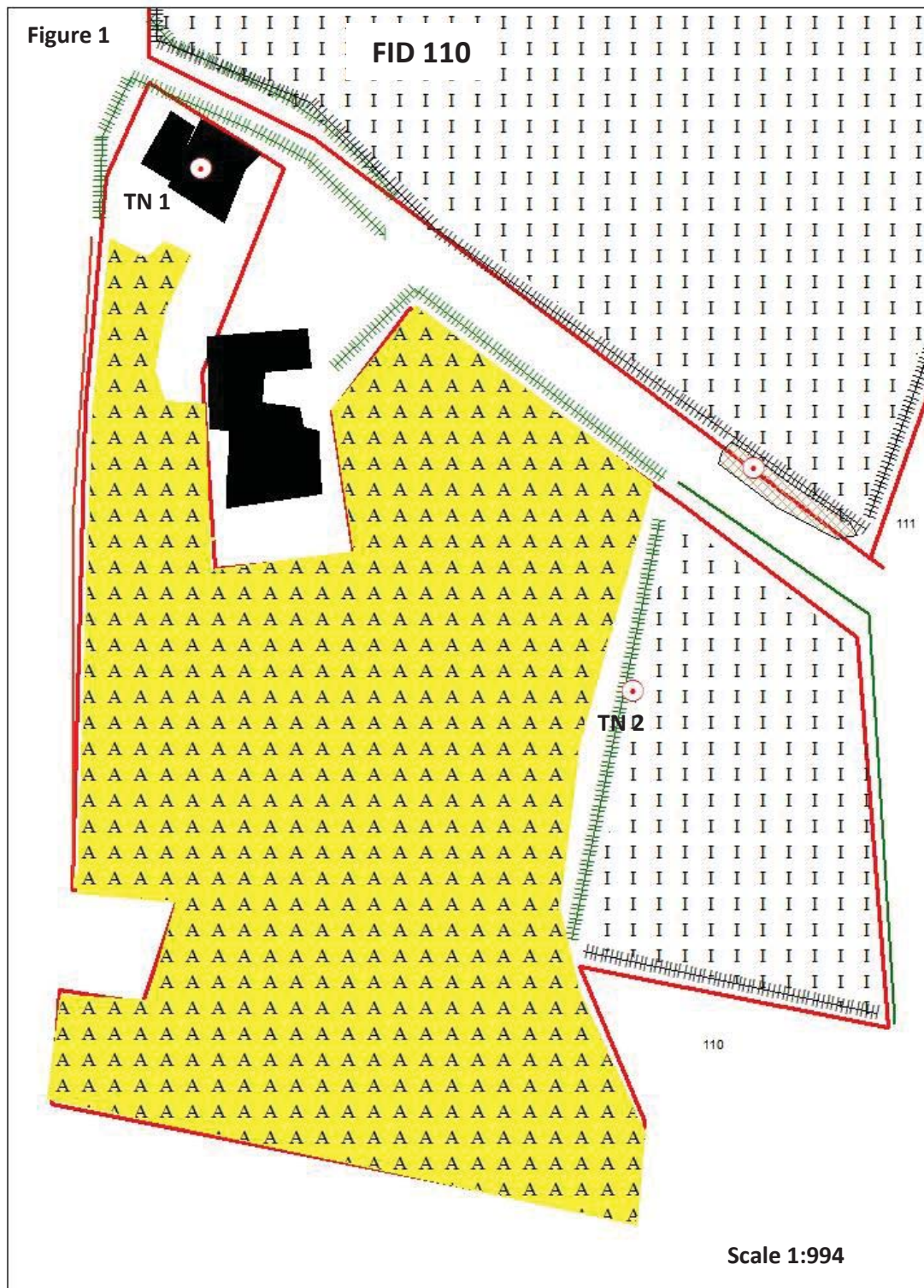
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 110 O.S grid reference SJ9032957956.

FID 110 is located west of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 110 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI	Bailey's Wood
AWI	Crowborough Road
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
SBI	Greenway Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Brown Hare
	Brown long eared bat
	Buff tailed bumble bee
	Buff ermine
	Common bullfinch
	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp

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	Common toad
	Dot moth
	Duncock
	Early Bumble Bee
	European water vole
	Ghost moth
	Grey wagtail
	House sparrow
	Ivy leaved bellflower
	Latticed heath
	Lesser redpoll
	Mallard
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
	White ermine
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European water vole
	Myotis bat species
	Natterer's bat
	Noctule bat
	Pipistrelle
	Polecat

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	Soprano pipistrelle
	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerow
- Scattered trees
- Species poor improved grassland
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.56	66
I	0.15	18
OTHER	0.14	16
TOTALS	0.84	100

AM – Amenity grassland, I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , silver birch <i>Betula pendula</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , garden privet <i>Ligustrum sp</i> , holly <i>Ilex aquifolium</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded in the site at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerows and scattered trees from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9031558031	Building requires bat survey
2	SJ9036757965	Hedgerow with 5 species including 1 non-native species

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Scattered trees					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of each site and habitat in terms of their potential loss to the wider countryside.

The site is bordered by grazed species poor improved grassland, and domestic dwellings and fairly poorly connected to the wider countryside.

The site itself consists mainly of species poor improved grassland (84%), species poor hedgerows consisting mainly of hawthorn and occasional goat willow *Salix caprea*. The lines of scattered trees consist of silver birch and ash. Therefore the site is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species with the possible exception of foraging badger and bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that the hedgerows are retained if the site is to be developed.

If the hedgerow is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has fairly low potential to support protected species as the habitats are species poor and fairly poorly connected to the wider countryside, therefore the site is considered to have low ecological value.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 111



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FID 111

1. Introduction

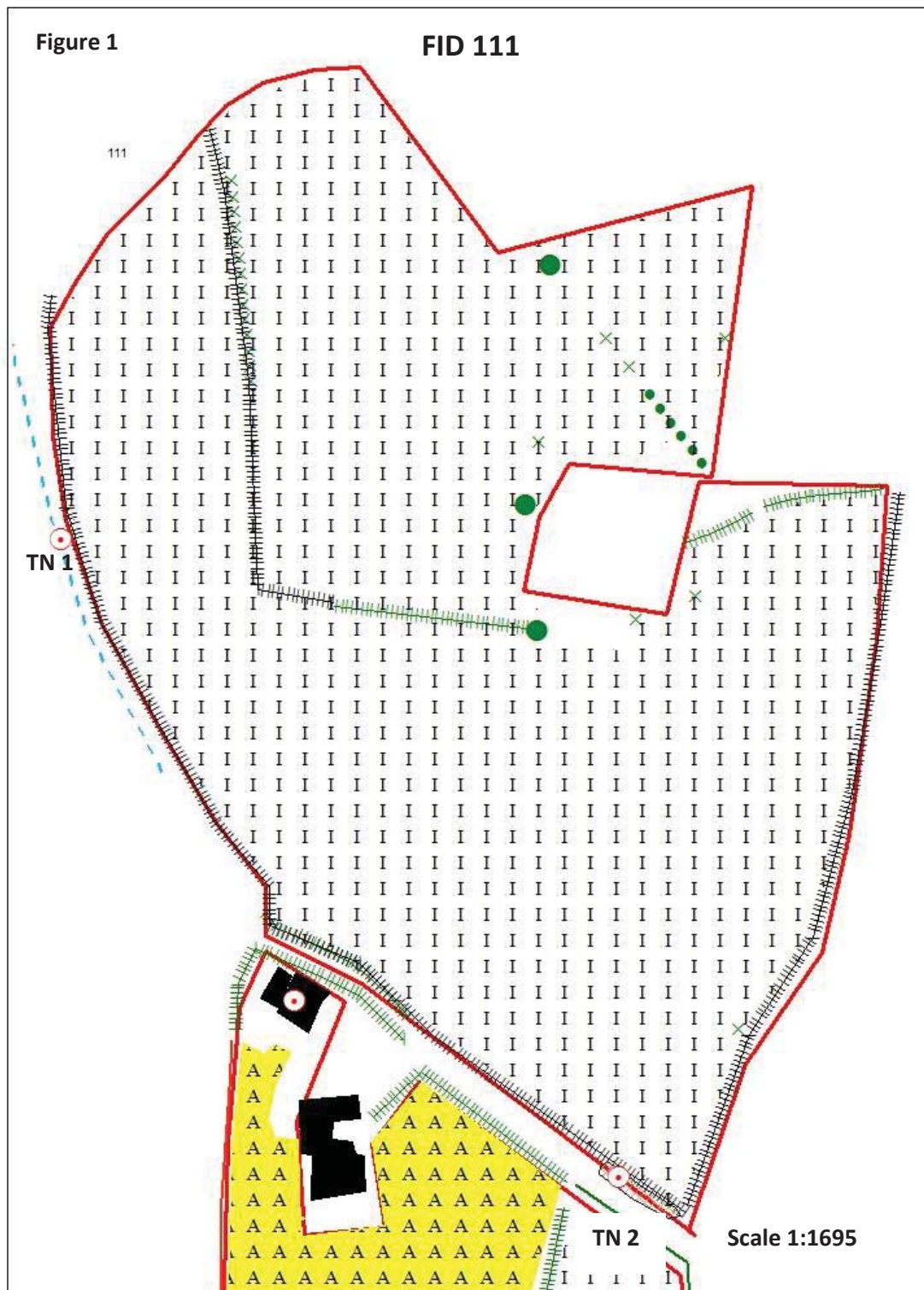
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 111 O.S grid reference SJ9036658094.

FID 111 is located west of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 111 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI	Bailey's Wood
AWI	Crowborough Road
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
SBI	Greenway Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Brown Hare
	Brown long eared bat
	Buff tailed bumble bee
	Buff ermine
	Common bullfinch
	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp

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	Common toad
	Dot moth
	Duncock
	Early Bumble Bee
	European water vole
	Ghost moth
	Grey wagtail
	House sparrow
	Ivy leaved bellflower
	Latticed heath
	Lesser redpoll
	Mallard
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
	White ermine
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European water vole
	Myotis bat species
	Natterer's bat
	Noctule bat
	Pipistrelle
	Polecat

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	Soprano pipistrelle
	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Scattered trees
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)
I	2.38	95
OTHER	0.13	5
TOTALS	2.51	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , white clover <i>Trifolium repens</i> , soft rush <i>Juncus effusus</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus agg</i> , ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

A small patch of Japanese knotweed *Fallopia japonica* (0.16ha's) which is listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded on the border to the south east of the site.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, and creeping thistle *Cirsium arvense* have been recorded around the site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerows and scattered trees from March to August when birds in the UK normally breed.

Incidental records

- Birds including domestic geese and carrion crow *Corvus corone*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9026858121	Dry ditch with tall ruderal vegetation
2	SJ9038757991	Japanese knotweed

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Scattered trees					x
Introduced shrub					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by grazed species poor improved grassland, domestic dwellings and fairly poorly connected to the wider countryside.

The site itself consists mainly of species poor improved grassland (95%), species poor hedgerows consisting mainly of hawthorn and occasional elder *Sambucus nigra*. The site has species poor habitats present on site and is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species with the possible exception of foraging badger and bats (roost recorded within 140m to the north east).

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that the hedgerows are retained if the site is to be developed.

If the hedgerows and scattered trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has low potential to support protected species and is fairly poorly connected to other more biodiverse habitats, therefore is attributed a low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 112



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FID 112

1. Introduction

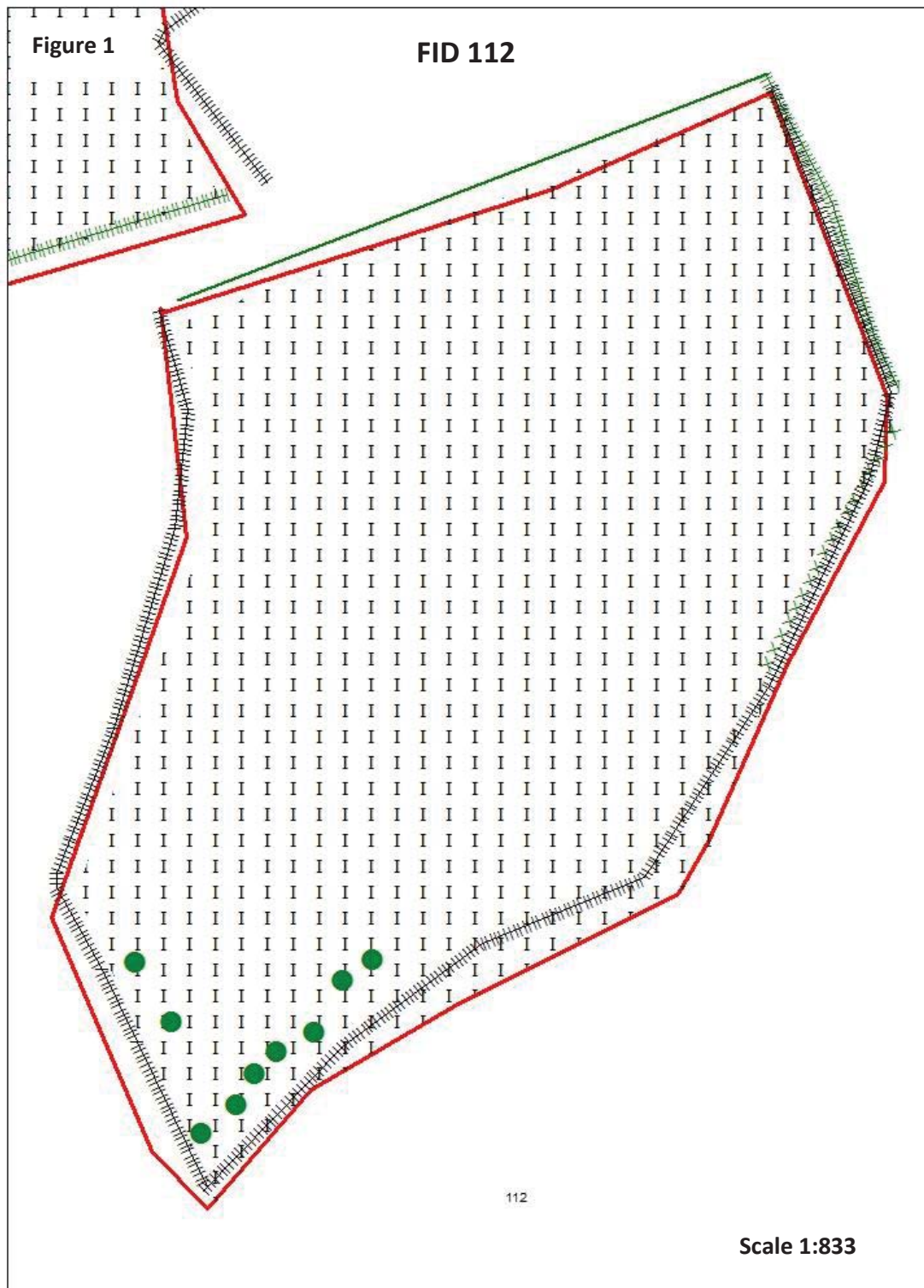
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 112 O.S grid reference SJ9111958303.

FID 112 is located north east of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 112 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
BAS	The Ashes (north east of)
SBI	Cliff Wood (east of)
SBI	Cliff Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Common bullfinch
	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp
	Common toad
	Early Bumble Bee
	Grey wagtail
	House sparrow

	Ivy leaved bellflower
	Lesser redpoll
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle
	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered planted trees
- Species poor hedgerows
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.54	94
OTHER	0.03	6
TOTALS	0.58	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , red clover <i>Trifolium pratense</i> , soft rush <i>Juncus effusus</i> , common nettle <i>Urtica dioica</i> , ribwort plantain <i>Plantago lanceolata</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, whitebeam <i>Sorbus aria</i> sp

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerows but less likely in scattered trees on site from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Scattered trees					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of each habitat in terms of their potential loss to the wider countryside.

The site is bordered by grazed species poor improved grassland, and domestic dwellings and fairly poorly connected to the wider countryside.

The site itself consists mainly of species poor improved grassland (95%), species poor hedgerows consisting mainly of hawthorn and occasional elder *Sambucus nigra*. The site has species poor habitats present on site and is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species with the possible exception of foraging badger and bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that the hedgerow is retained if the site is to be developed.

If the hedgerows and scattered trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has low potential to support protected species as the habitats have been deemed to have low biodiversity which are fairly poorly connected to other more biodiverse habitats, and overall is considered to have low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



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FID 113

1. Introduction

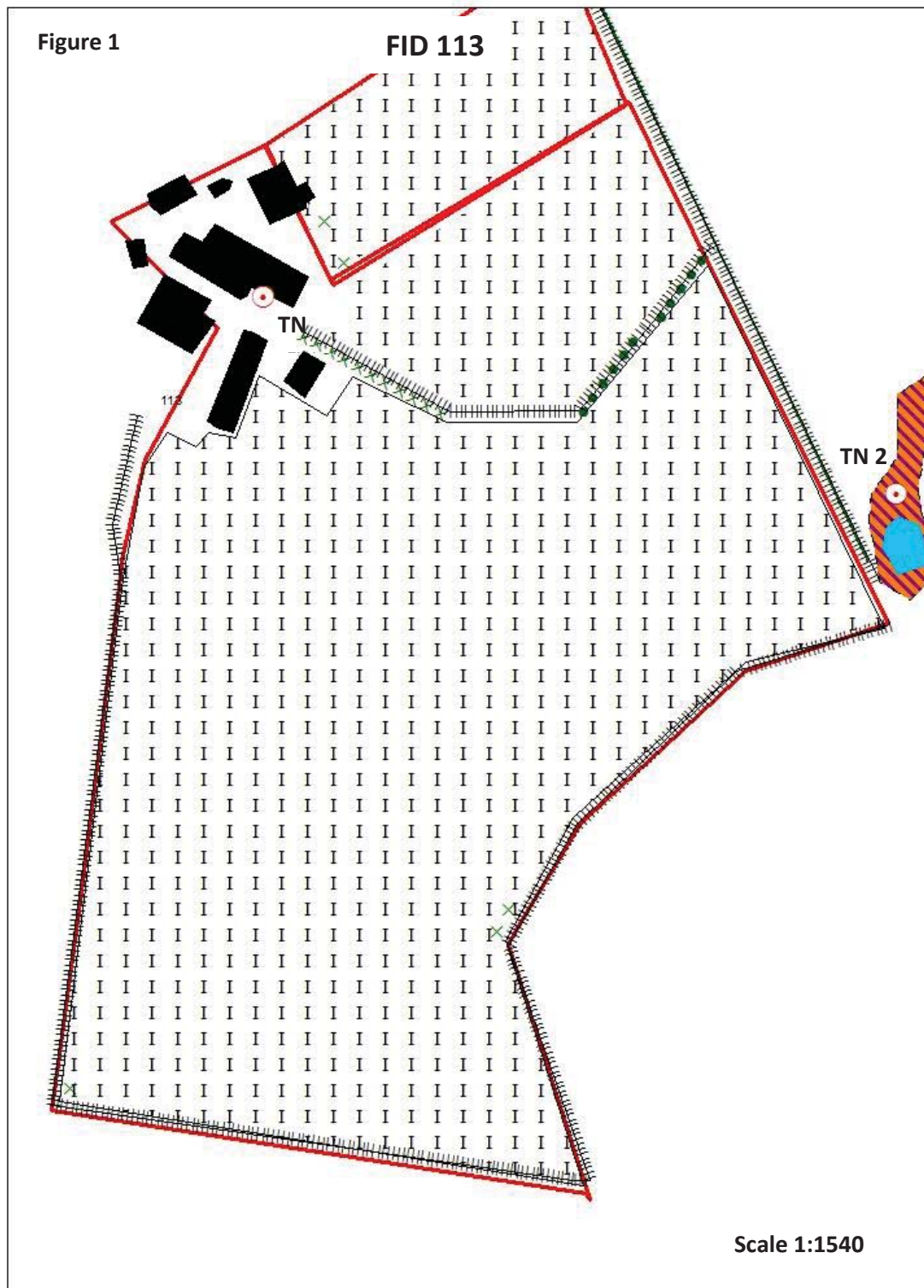
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 113 O.S grid reference SJ9090758008.

FID 113 is located east of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 113 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI/ SBI	Dalehouse Wood
AWI	Crowborough Road
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
BAS	The Ashes (north of)
SBI	Cliff Wood (east of)
SBI	Cliff Wood
SBI	Greenway Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Buff ermine
	Brown Hare
	Brown long eared bat
	Buff tailed bumble bee
	Buff ermine
	Common bullfinch

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	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp
	Common toad
	Dot moth
	Dunnock
	Early Bumble Bee
	Ghost moth
	Grey wagtail
	House sparrow
	Ivy leaved bellflower
	Latticed heath
	Lesser redpoll
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
	White ermine
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

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	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Buildings
- Scattered trees
- Species poor hedgerows
- Scattered scrub
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	1.52	78
OTHER	0.43	22
TOTALS	1.94	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , hogweed <i>Heracleum sphondylium</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded on site at the time of survey.

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4.3.4 Fauna

Bats

The site has a number of farm buildings and outbuildings of which are deemed potentially suitable to support roosting bats as there are occasional roof tiles loose and holes in the brick work.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9087258070	Buildings with bat roosting potential
2	SJ9099658032	Small pond/ depression surrounded by marshy grassland outside of the site boundary

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Scattered trees					x
Scattered scrub					x
Species poor improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by grazed species poor improved grassland, domestic dwellings and is fairly poorly connected to the wider countryside. A small pond is present outside of the site to the east (Target note 1) that could potentially support breeding great crested newts *Triturus cristatus*.

The site itself consists mainly of species poor improved grassland (78%), species poor hedgerows consisting mainly of hawthorn and occasional elder.

However, the site has a number of buildings that could support roosting bats therefore is deemed to have district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that the hedgerow is retained if the site is to be developed.

If the hedgerows and scattered trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has fairly low potential to support protected species as the habitats are species poor and poorly connected to other more biodiverse habitats; however the presence of buildings with bat roosting potential elevates the value of the site to district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat surveys of the buildings with bat roosting potential
- Great crested newt survey of the adjacent small pond
- Vegetation removal at the appropriate time of year



FID 114



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FID 114

1. Introduction

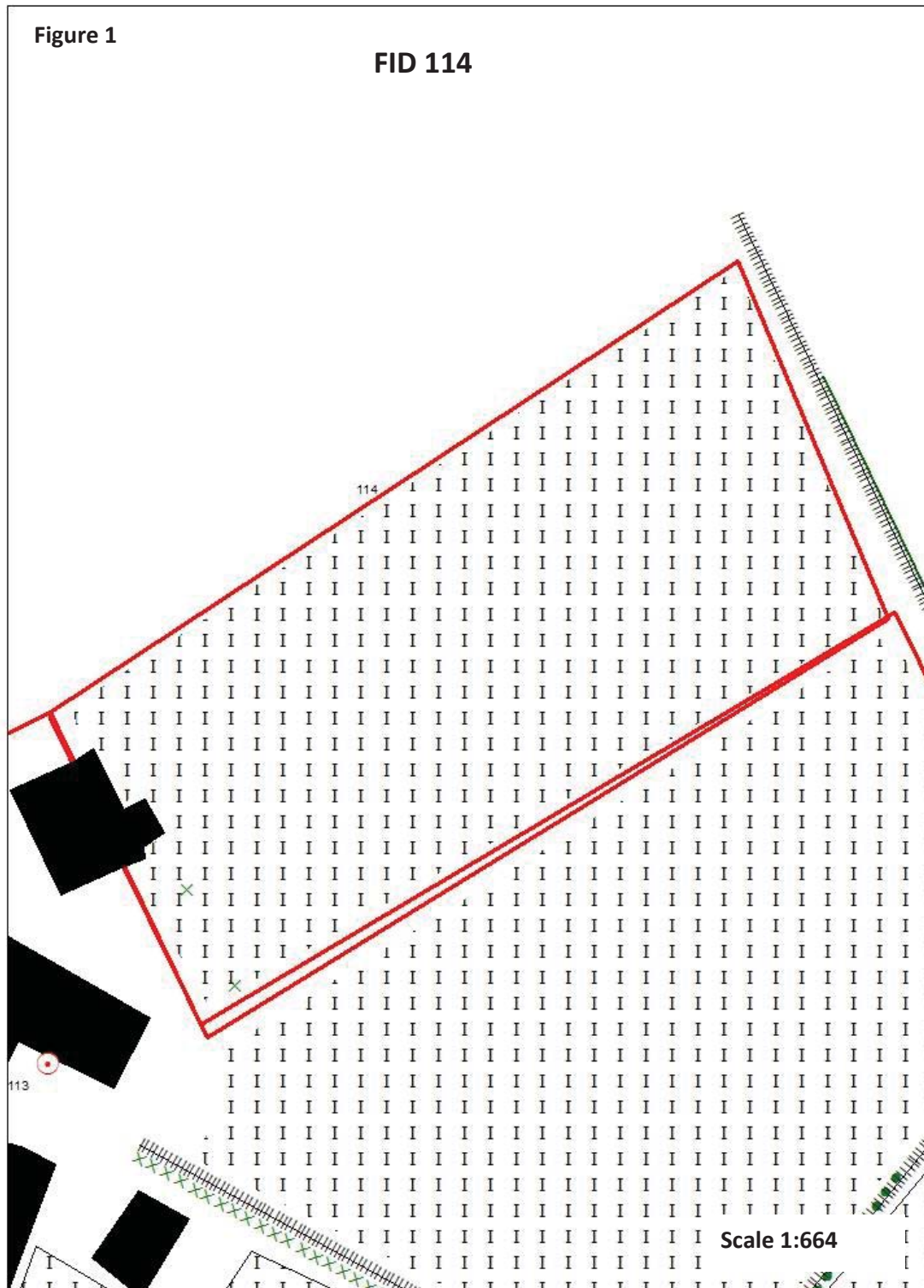
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 114 O.S grid reference SJ9091058103.

FID 114 is located east of Biddulph Moor village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 114 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	UNK
AWI/ SBI	Dalehouse Wood
AWI	Crowborough Road
AWI	Shirkley Wood
AWI	Cliff Wood
AWI	The Sprink
AWI	Spring Wood
AWI	Spring Wood, Biddulph Grange Country Park
BAS	The Nursery (near)
BAS	The Ashes (north of)
SBI	Cliff Wood (east of)
SBI	Cliff Wood
SBI	Greenway Wood
SBI	Shirkley Wood
SBI	Troughstone Hill
SBI	The Sprink

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Bumble Bee
	A flowering plant
	Brown long eared bat
	Buff-tailed Bumble Bee
	Buff ermine
	Brown Hare
	Brown long eared bat
	Buff tailed bumble bee
	Buff ermine
	Common bullfinch

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	Common Carder-bee
	Common pipistrelle
	Common starling
	Common Wasp
	Common toad
	Dot moth
	Dunnoek
	Early Bumble Bee
	Ghost moth
	Grey wagtail
	House sparrow
	Ivy leaved bellflower
	Latticed heath
	Lesser redpoll
	Noctule bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Sky lark
	Small garden bumble bee
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tree Bumble Bee
	West European hedgehog
	White ermine
INV	Indian Balsam
	Japanese Knotweed
	Least duckweed
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brandt's bat
	Brown long eared bat
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

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	Whiskered bat
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.19	98
OTHER	0.00	2
TOTALS	0.19	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , common nettle <i>Urtica dioica</i> , red clover <i>Trifolium pratense</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg,

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded on site at the time of survey.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor improved grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by grazed species poor improved grassland, and farm buildings and is fairly poorly connected to the wider countryside.

The site itself consists of species poor improved grassland (98%), and is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species with the possible exception of foraging badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

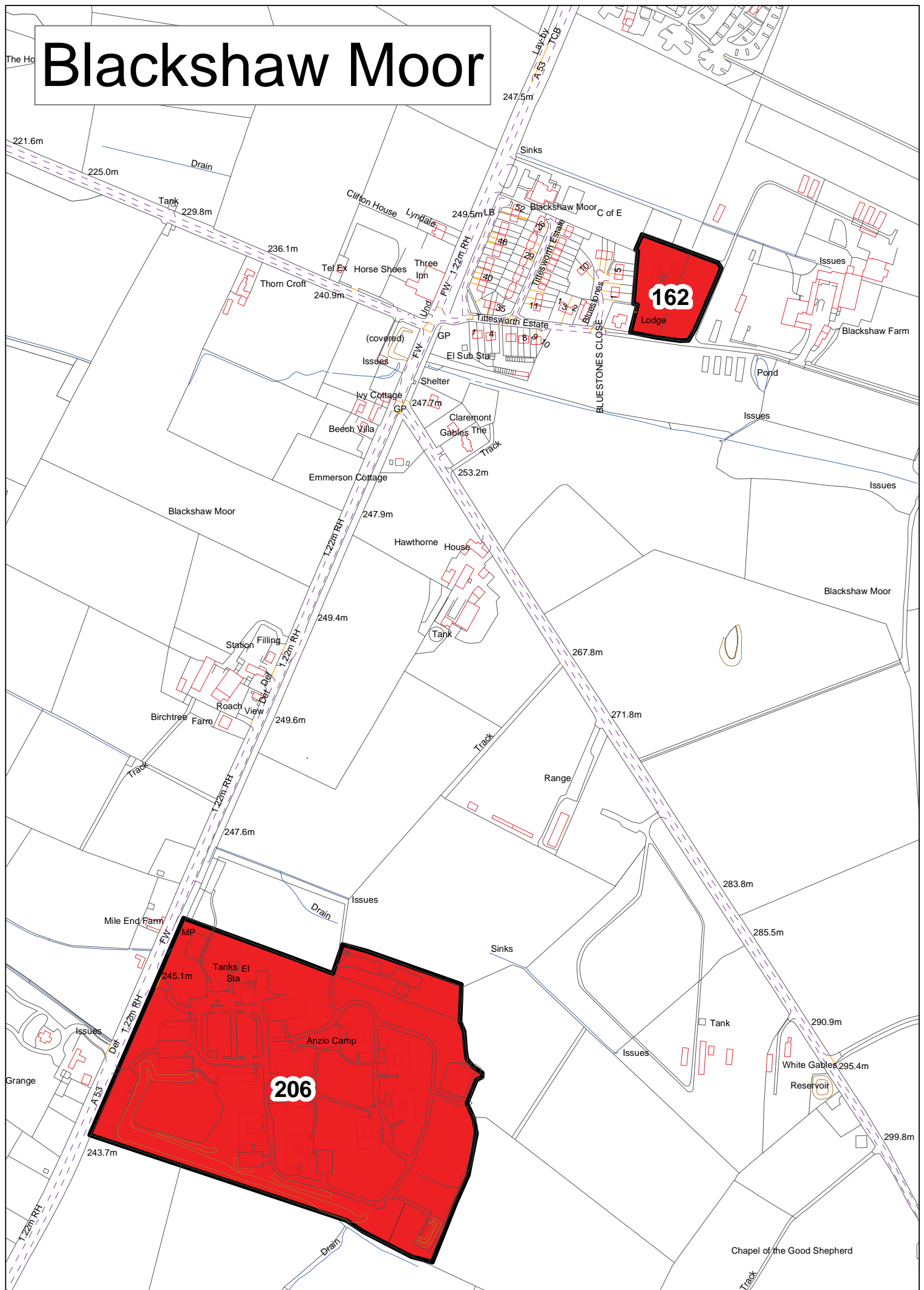
6. Recommendations

As the site only comprises species poor improved grassland there are no recommendations to be made.

7. Conclusion

The site has very low potential to support protected species as the habitats are species poor and poorly connected to other more biodiverse habitats. There are no hedgerows or other ecological features within the site boundary therefore no surveys or actions are required from an ecological perspective.

Blackshaw Moor





FID 162



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FID 162

1. Introduction

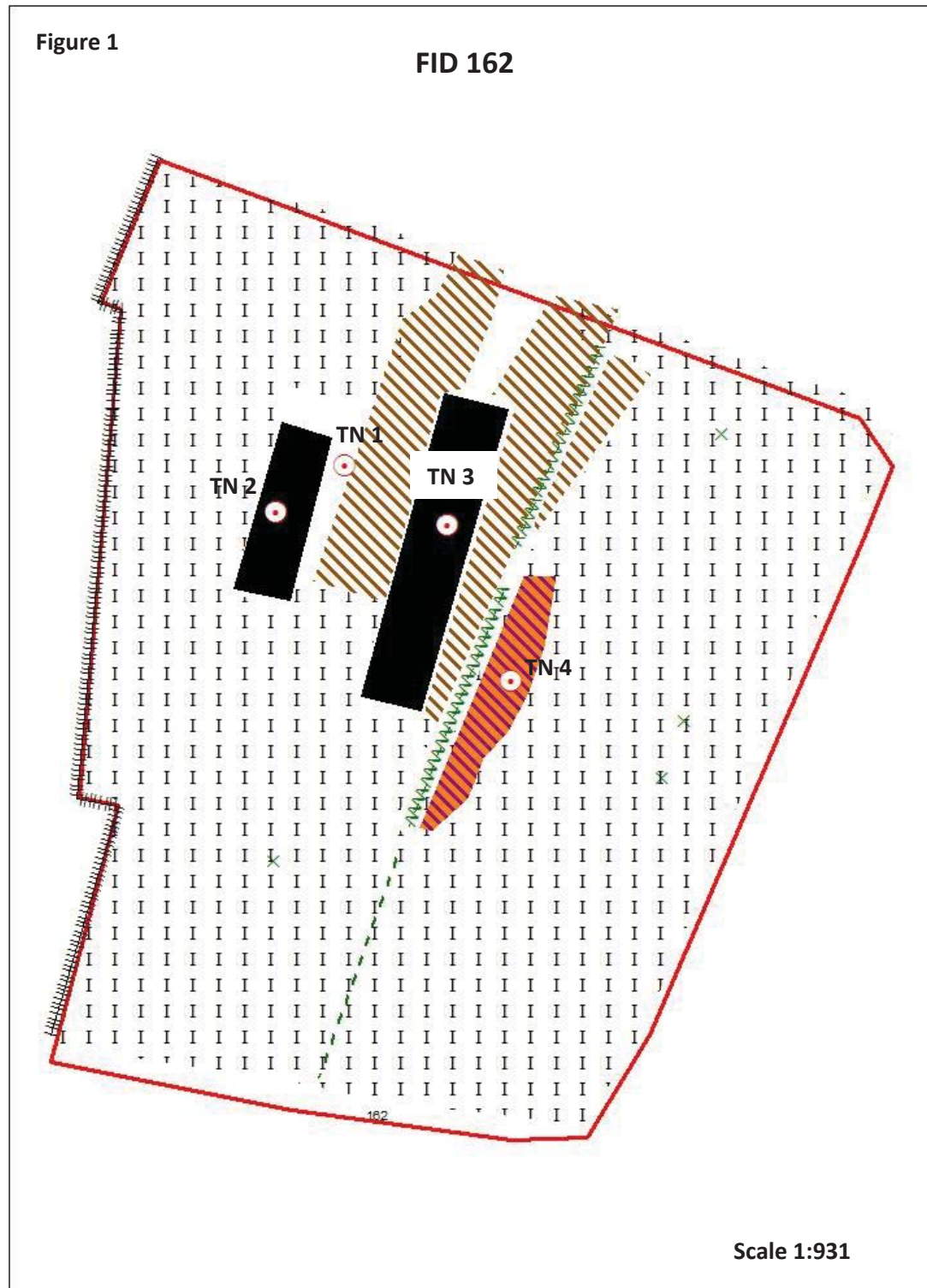
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 162 O.S grid reference SK0114759859.

FID 162 is located in north east Blackshaw Moor surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 162 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SAC/ SPA	South Pennine Moors
SSSI	Leek Moors
SSSI	Thorncliffe Moor
AWI	The Coppice
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
AWI	Big Wood
BAS	Solomon's Hollow
SBI	Blackshaw Moor
SBI	Stoney Cliffe (east of)
SBI	Whitehouse Farm (south-west of)
SBI	Blackshaw Moor (east of)
SBI	Triangle (north east of)
SBI	Thorncliffe (south east of)
SBI	Thorncliffe (west of)
SBI	Edge End Farm (north of)
SBI	Westbrook Head Farm (road verge south of)
SBI	Sheepwalk (east of)
SBI	Edge End Wood
SBI	Old Mixon Hay (south west of)
SBI	Whitehouse Farm (verges south of)
SBI	Anzio Training Camp
RIGS	Hen Cloud

SAC – Special Area of Conservation, SPA – Special Protection Area, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest, RIGS – Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A bumble bee
	Barn Owl

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	Barn swallow
	Barnacle goose
	Black headed gull
	Broom moth
	Brown Hare
	Buff tailed bumble bee
	Buff Ermine
	Common bullfinch
	Common carder bee
	Common cuckoo
	Common goldeneye
	Common gull
	Common kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common redshank
	Common redstart
	Common sandpiper
	Common Snipe
	Common starling
	Common swift
	Common tern
	Common toad
	Dark brocade
	Deep brown dart
	Dunlin
	Duncock
	Dusky Brocade
	Dyer's greenweed
	Early bumble bee
	Eurasian curlew
	Eurasian oystercatcher
	Eurasian teal
	Eurasian tree sparrow
	Eurasian Woodcock
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Gadwall
	Garden dart
	Garganey

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	Grass snake
	Great black backed gull
	Greater scaup
	Greater white fronted goose
	Green sandpiper
	Green Woodpecker
	Grey Dagger
	Grey Partridge
	Grey wagtail
	Greylag goose
	Harvest mouse
	Heath bumble bee
	Herring gull
	House martin
	House sparrow
	Insect – beetle
	Iron blue mayfly
	Jack snipe
	Knot grass
	Large red tailed bumble bee
	Lesser black backed gull
	Lesser redpoll
	Linnet
	Little egret
	Little grebe
	Mallard
	Meadow pipit
	Merlin
	Mistle thrush
	Mottled rustic
	Mountain bumble bee
	Northern lapwing
	Northern pintail
	Northern shoveler
	Osprey
	Pied flycatcher
	Pink fronted goose
	Pipistrelle
	Redwing
	Reed Bunting
	Ring ouzel
	Ringed plover

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	Rosy rustic
	Sallow
	Sand martin
	September Thorn
	Short eared owl
	Shoulder striped wainscot
	Sky lark
	Small phoenix
	Song thrush
	Spotted flycatcher
	Tree pipit
	Tufted duck
	Tundra swan
	Twite
	Vestal cuckoo bee
	Wall
	West European Hedgehog
	Whinchat
	White tailed bumble bee
	White ermine
	Whooper swan
	Willow ptarmigan
	Willow tit
	Willow Warbler
	Yellow vetch
	Yellow wagtail
	Yellowhammer
INV	American mink
	Greater Canada goose
	Japanese knotweed
	Montbretia
	New Zealand pigmyweed
E/ UK PS	A Bat
	Barn Owl
	Barnacle goose
	Bluebell
	Brambling
	Common goldeneye
	Common greenshank
	Common Kingfisher
	Common pipistrelle

	Common tern
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Ferruginous duck
	Fieldfare
	Garganey
	Grass snake
	Greater scaup
	Green sandpiper
	Greylag goose
	Little egret
	Little plover
	Merlin
	Northern pintail
	Osprey
	Peregrine falcon
	Pipistrelle
	Redwing
	Short eared owl
	Tundra swan
	Whooper swan

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Buildings
- Species rich hedgerow
- Marshy grassland
- Tall ruderal vegetation
- Scattered scrub
- Semi-improved species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 .p.)	PERCENTAGE (%)
SI	0.59	84
TR	0.06	9
MG	0.01	2
OTHER	0.03	5
TOTAL	0.69	100

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation, MG – Marshy grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , soft rush <i>Juncus effusus</i> , common nettle <i>Urtica dioica</i> , great willowherb <i>Epilobium hirsutum</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>sambucus nigra</i> , holly <i>Ilex aquifolium</i> , bramble <i>Rubus fruticosus agg</i> , English elm <i>Ulmus procera</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded across the site at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* have been recorded around the site.

4.3.4 Fauna

Bats

The 2 buildings on site appear to be derelict and although they have corrugated roofs there are numerous holes in the brick work and entrance points for bats to potentially roost.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could nest in areas of scrub, broadleaved woodland and semi-improved species poor grassland habitat from March to August when birds in the UK normally breed.

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Incidental records

- Rabbits *Oryctolagus cuniculus*
- Birds including blackbird *Turdus merula*, goldfinch *Carduelis carduelis*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0113359877	Hard standing with scattered debris
2	SK0112659875	Requires bat survey
3	SK0114659873	Requires bat survey
4	SK0115159862	Species poor marshy grassland

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Marshy grassland					x
Tall ruderal vegetation					x
Scattered trees					x
Species poor semi-improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by domestic dwellings, species poor grassland and close to a network of hedgerows and broadleaved woodland.

The site itself consists of species poor semi-improved short grazed grassland (69%) with common species present including annual meadow grass, perennial rye grass, curled dock and creeping buttercup *Ranunculus repens*. Tall ruderal vegetation includes rosebay willowherb, common nettle and occasional spearmint *Mentha spicata*. The marshy grassland area is located within a shallow depression and is also species poor consisting mainly of soft rush.

The species rich hedgerow has 6 species present including hawthorn, holly, elder, dog rose *Rosa canina*, English elm and ash *Fraxinus excelsior*, however it is not connected to other hedgerows so is considered to have low ecological importance.

The site also contains 2 derelict buildings, caravans and cars with a number of areas used as for bonfires.

There have been a number of European and UK protected species recorded within 2km according to the desk study. The site could potentially support roosting bats and foraging badger. The presence of the potential roosts within the buildings warrants the site being given district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 2 buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If scrub and vegetation is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has potential for protected species to be present due to the buildings present on site and has been deemed to have district ecological importance despite fairly poor connectivity to the wider countryside.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the 2 buildings
- Vegetation removal at the appropriate time of year



FID 206



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FID 206

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 206 O.S grid reference SK0077159038.

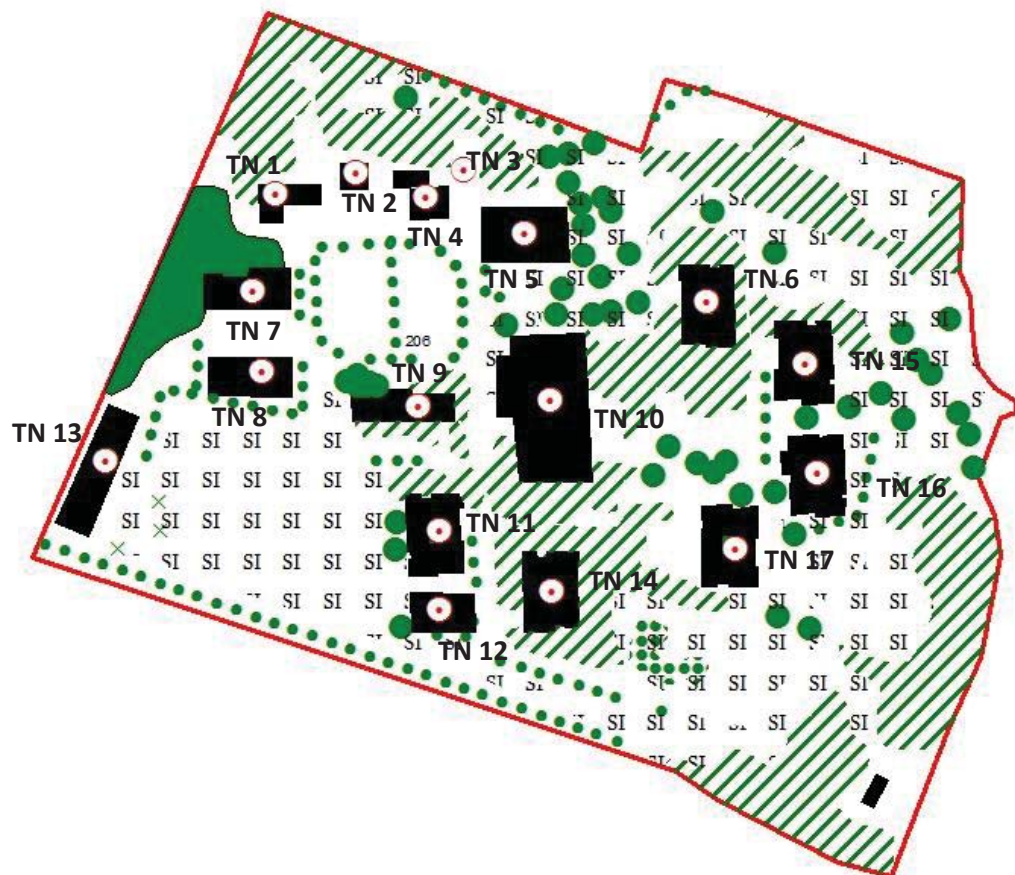
FID 206 is located north-west of Thorncliffe village and south of Blackshaw Moor village surrounded by agricultural land, abuts Anzio Camp SBI (Site of Biological Importance) to the north east, buildings and a camp site across the road to the west.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 206



Scale 1:4010

2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 206 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

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An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

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2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SAC/ SPA	South Pennine Moors
SSSI	Leek Moors
SSSI	Thorncliffe Moor
AWI	Haregate Wood
AWI	South Hills Wood
AWI	Abbey Wood
AWI	Hawthorne Wood
AWI	Oaks Plantation
AWI	The Coppice
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
BAS	Solomon's Hollow
SBI	Blackshaw Moor
SBI	Stoney Cliffe (east of)
SBI	Whitehouse Farm (south-west of)
SBI	Blackshaw Moor (east of)
SBI	Triangle (north east of)
SBI	Thorncliffe (south east of)
SBI	Thorncliffe (west of)
SBI	Edge End Farm (north of)
SBI	Westbrook Head Farm (road verge south of)
SBI	Easing Farm (east of)
SBI	Sheepwalk (east of)
SBI	Back Hills and Abbey Wood
SBI	Edge End Wood
SBI	Old Mixon Hay (south west of)
SBI	Whitehouse Farm (verges south of)
SBI	Kniveden Hall (east of)
SBI	Stare Wood
SBI	Anzio Training Camp (abuts FID 206 in the north east corner)
SBI	Wormlow (north west of)

SAC – Special Area of Conservation, SPA – Special Protection Area, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, SSSI – Site of Special Scientific Interest

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4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Black headed gull
	Broom moth
	Brown Hare
	Buff tailed bumble bee
	Buff Ermine
	Common bullfinch
	Common cuckoo
	Common goldeneye
	Common gull
	Common kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common redshank
	Common redstart
	Common sandpiper
	Common Snipe
	Common starling
	Common swift
	Common tern
	Common toad
	Dark brocade
	Deep brown dart
	Dunlin
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Early bumble bee
	Eurasian curlew
	Eurasian oystercatcher
	Eurasian teal
	Eurasian tree sparrow
	Eurasian Woodcock

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	European otter
	European Water Vole
	Fieldfare
	Gadwall
	Garden dart
	Grass snake
	Green Woodpecker
	Grey Dagger
	Grey Partridge
	Grey wagtail
	Harvest mouse
	Heath bumble bee
	Herring gull
	House martin
	House sparrow
	Insect – beetle
	Iron blue mayfly
	Jack snipe
	Knot grass
	Large red tailed bumble bee
	Lesser black backed gull
	Lesser redpoll
	Lichen
	Linnet
	Little egret
	Mallard
	Meadow pipit
	Mistle thrush
	Mottled rustic
	Northern lapwing
	Northern shoveler
	Osprey
	Pied flycatcher
	Pink fronted goose
	Pipistrelle
	Redwing
	Reed Bunting
	Ring ouzel
	Ringed plover
	Rosy rustic
	Sallow
	Sand martin

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	September Thorn
	Shoulder striped wainscot
	Sky lark
	Small phoenix
	Song thrush
	Soprano pipistrelle
	Spotted flycatcher
	Tall hawkweed
	Tufted duck
	Wall
	West European Hedgehog
	White tailed bumble bee
	White ermine
	Willow tit
	Willow Warbler
	Yellow wagtail
	Yellowhammer
INV	American mink
	Greater Canada goose
	Japanese knotweed
	Montbretia
	New Zealand pigmyweed
	Rhododendron
	Turkey oak
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brambling
	Common goldeneye
	Common Kingfisher
	Common pipistrelle
	Common tern
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Ferruginous duck
	Fieldfare
	Glossy ibis
	Grass snake
	Little egret

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	Little plover
	Osprey
	Pipistrelle
	Redwing

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Buildings x17
- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Semi-improved species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
PBW	2.23	21
SI	2.89	27
BW	0.21	2
SBW	0.05	0
OTHER	5.37	50
TOTALS	9.42	100

PBW – Planted broadleaved woodland, SI – Semi-improved species poor grassland,
BW – Broadleaved woodland, SBW - Scattered broadleaved woodland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Red fescue <i>Festuca rubra</i> , false oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , timothy <i>Phleum pratense</i> , hogweed <i>Heracleum sphondylium</i> , field horsetail <i>Equisetum arvense</i>
Hedgerows/ trees/ scrub	Alder <i>Alnus glutinosa</i> , hawthorn <i>Crataegus monogyna</i> , silver birch <i>Betula pendula</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , whitebeam <i>Sorbus aria</i> sp, willow <i>Salix</i> sp,

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4.3.3 Invasive weeds

Cotoneaster *Cotoneaster species* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and was recorded in 2 areas around the site.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense* and ragwort *Senecio jacobea*, were recorded within the site.

4.3.4 Fauna

All of the buildings on site are derelict and 16 out of the 17 buildings present have numerous entrance points that could allow bats to enter for roosting. The remaining building is a large hangar of metal construction that by design is not conducive to roosting bats.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0063759120	Requires bat survey
2	SK0066859127	Requires bat survey
3	SK0071159127	Requires bat survey
4	SK0069959119	Requires bat survey
5	SK0074459103	Requires bat survey
6	SK0081359076	Requires bat survey
7	SK0085159047	Requires bat survey
8	SK0062359081	Requires bat survey
9	SK0062459044	Requires bat survey
10	SK0068859031	Requires bat survey
11	SK0074959032	Requires bat survey
12	SK0085459008	Requires bat survey
13	SK0056159003	Does not require bat survey
14	SK0069358981	Requires bat survey
15	SK0070658946	Requires bat survey
16	SK0075558955	Requires bat survey
17	SK0081958971	Requires bat survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Buildings x17			x		
Scattered trees					x
Species poor grassland					x
			x		
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by a main road to the west and a mixture of grassland types, with Anzio Training Camp SBI abutting the site to the north east connected by hedgerows to woodland and the wider countryside.

The site is a derelict army training camp (Anzio Camp), which mainly consists of buildings and hard standing (50%), which are all semi boarded up, with missing roof tiles and suffering from anti-social behaviour with litter and graffiti very evident. The remaining habitats consist of scattered alder, hawthorn, goat willow *Salix caprea*, sycamore, whitebeam, silver birch, willow *Salix species*, field maple *Acer campestre*, aspen *Populus tremula* and holly *Ilex aquifolium*.

The species poor semi-improved grassland consists of species such as red fescue, false oat grass, timothy and cock's foot grasses, with herbs including creeping buttercup *Ranunculus repens*, hogweed *Heracleum sphondylium*, common knapweed *Centaurea nigra* with regenerating alder, goat willow, silver birch and oak *Quercus species*.

16 of the 17 buildings present on site could potentially support roosting bats as many of the buildings are missing roof tiles and have open doors and windows that bats could easily enter to roost. Therefore the site is considered to have regional ecological importance. One of the buildings to the south west is a very large open hangar, with a metal roof, the structure of which bats do not tend to use as a roost.

Despite a number of European protected and UKBAP species being recorded within 2km it is unlikely that the site would support many of the species, the exceptions could potentially be roosting bats (recorded around the site), badger (recorded within 150m), West European hedgehog (recorded on site) and reptiles.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 16 highlighted buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Reptiles and amphibians

Reptiles could potentially be present on site due to the large area of suitable habitat and basking areas, particularly suitable for common lizard *Zootoca vivipara* therefore it is recommended that a full reptile survey is carried out and any refugia present is removed by hand under watching brief of a suitably qualified ecologist.

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Vegetation removal

If at all possible it is recommended that as many trees and the hedgerows be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and vegetation are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



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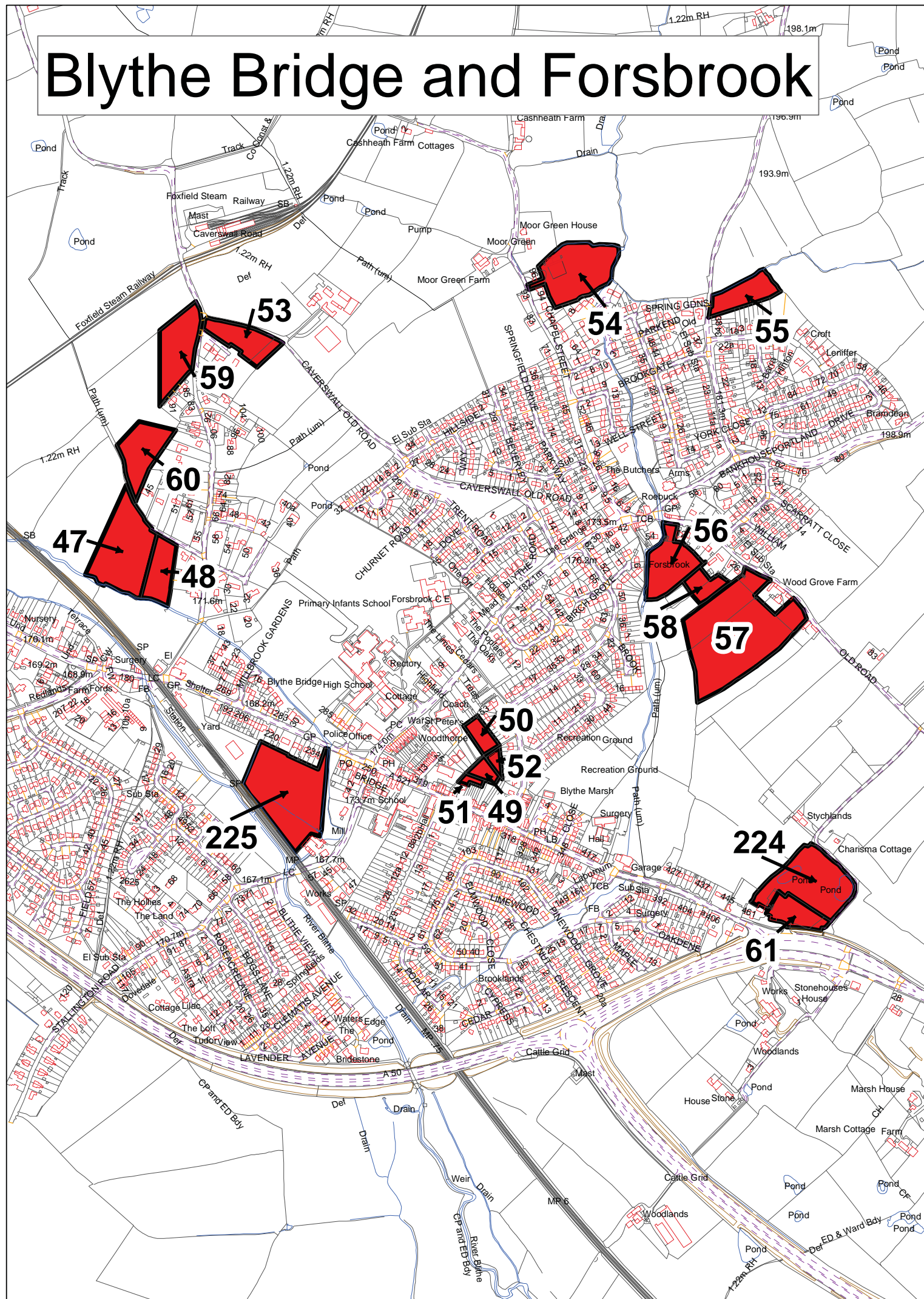
7. Conclusion

The site itself has 16 buildings and a mosaic of planted broadleaved woodland/ semi-improved species poor grassland that could potentially support European and UK protected species. As the site is very large and there are so many buildings with bat potential surrounded by suitable foraging habitat and suitable reptile habitat the site is attributed regional ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the buildings
- Reptile survey
- Vegetation removal at the appropriate time of year

Blythe Bridge and Forsbrook





FID 47 & 48



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FID 47 & 48

1. Introduction

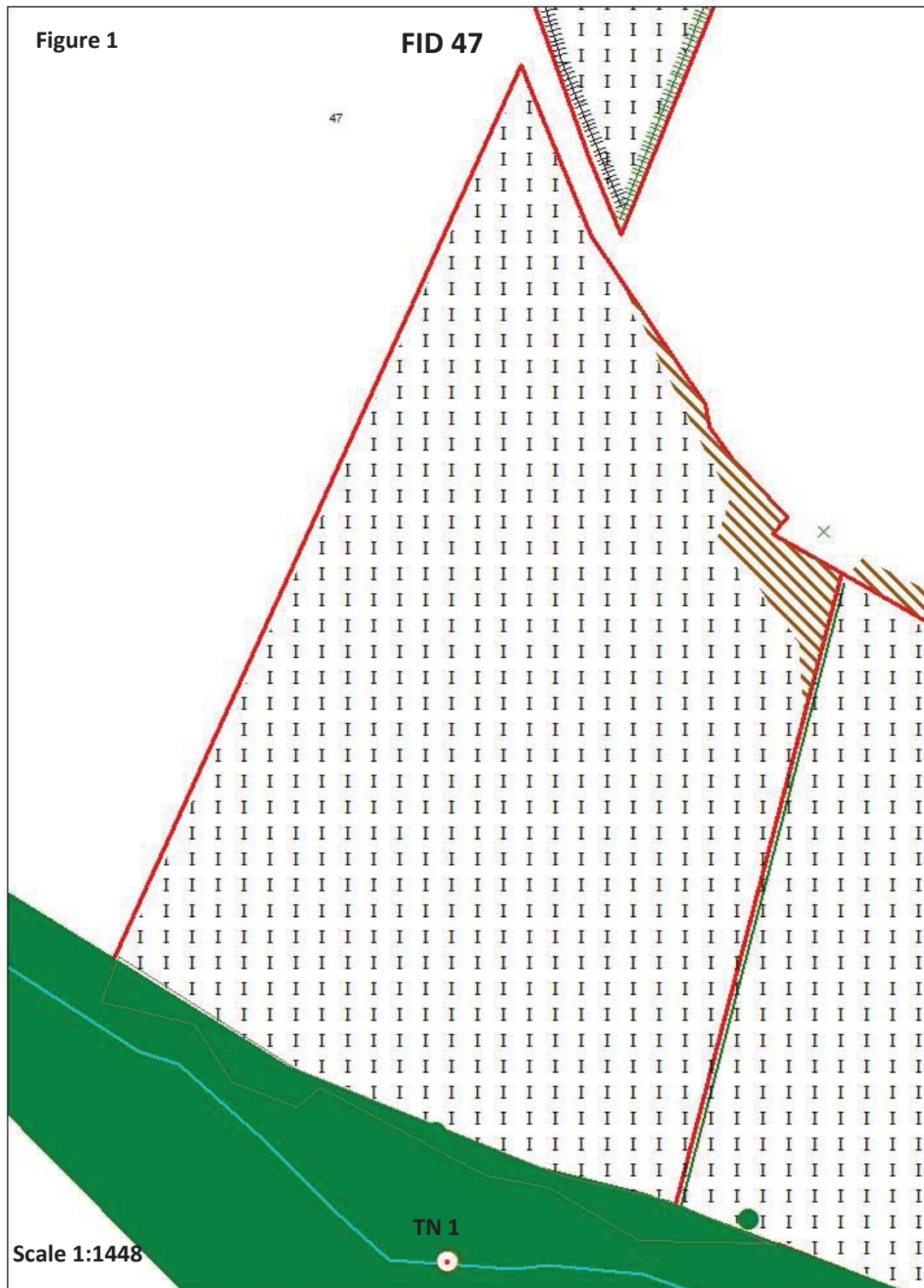
1.1 Background

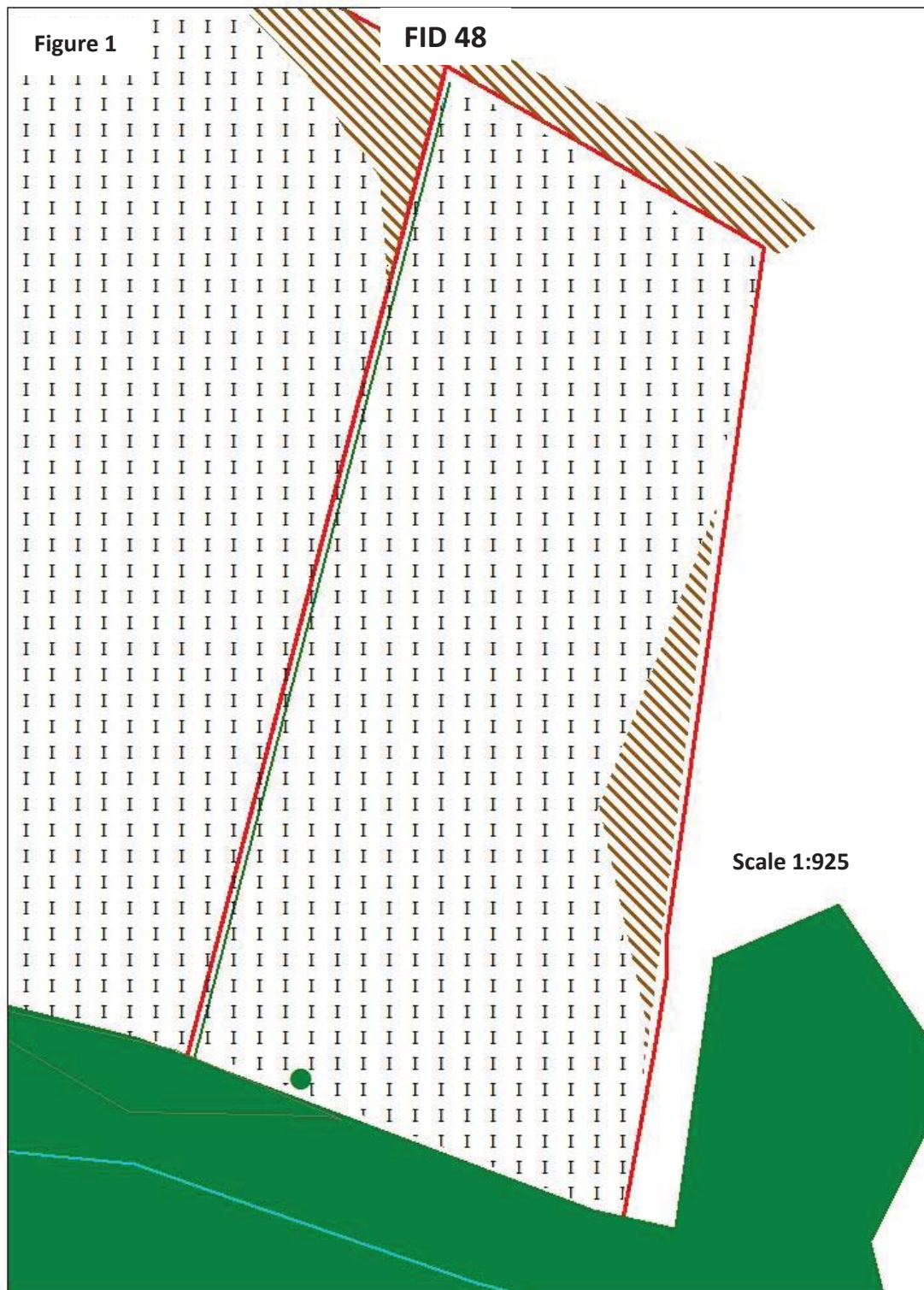
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 47 O.S. grid reference SJ9552241451 & 48 O.S grid reference SJ9559241395.

FID 47 & 48 are located within Blythe Bridge village in the Staffordshire Moorlands District area, surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover surveys for FID47 & FID48 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS (abuts FID 47 & 48)	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown Hare
	Brown long eared bat
	Buff ermine
	Centre-barred Sallow
	Cinnabar
	Common kingfisher
	Common Pipistrelle
	Common snipe
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Grass snake

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	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Skylark
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Tall hawkweed
	West European Hedgehog
	White Ermine
INV	False acacia
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Grass snake
	Noctule Bat
	Pipistrelle
	Polecat

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	Soprano Pipistrelle
	Whiskered bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Broadleaved woodland
- Tall ruderal vegetation
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	1.97	93
TR	0.07	4
TOTALS	2.04	100

TR- Tall ruderal vegetation, DS – Dense scrub, I – Improved grassland,
BW – Broadleaved Woodland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i> , creeping thistle <i>Cirsium arvense</i> , curled dock <i>Rumex crispus</i> , rosebay willowherb <i>Chamerion angustifolium</i> , reed canary grass <i>Phalaris arundinacea</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , goat willow <i>Salix caprea</i> , ash <i>Fraxinus excelsior</i> , alder <i>Alnus glutinosa</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica* Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, and creeping thistle *Cirsium arvense* were found within the grassland and tall ruderal vegetation.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of broadleaved woodland from March to August when birds in the UK normally breed.

Incidental records of fauna

During the walkover survey species observed include the following

- Birds including carrion crow *Corvus corone*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9551641356	Stream within 10m

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Tall ruderal vegetation					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded mainly by domestic dwellings to the north and east with Blyth Bridge Woods BAS (abuts FID47&48) to the south connected to hedgerows and scrub to the wider countryside.

The site itself consists of species poor heavily grazed grassland, with only the canopy of the woodland present within the site boundary.

The species poor improved grassland habitat is particularly common in the UK, having low biodiversity value and is therefore these types of habitats are deemed to have a low value within the matrix, despite being fairly well connected to the wider countryside.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site itself would support most of the species. The exceptions could potentially include foraging bats over the adjacent semi-natural broadleaved woodland and foraging badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Creation of buffer zone

If development works are planned for this site a buffer of planted trees or vegetation between the BAS and the development site is recommended to limit the affect that the development might have on the adjacent BAS.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If vegetation and adjacent trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has mostly low biodiversity value overall in terms of area as it consists of species poor improved grassland and tall ruderal vegetation with adjacent semi-natural broadleaved woodland and wet ditch. Although the site abuts Blyth Bridge Woods BAS it is deemed that development works are likely to have limited effect on its woodland biodiversity for what it has been designated for if a buffer zone is created.

Therefore the following surveys/actions are recommended prior to any potential development works being carried out:

- Creation of buffer zone
- Vegetation removal at the appropriate time of year



FID 49



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FID 49

1. Introduction

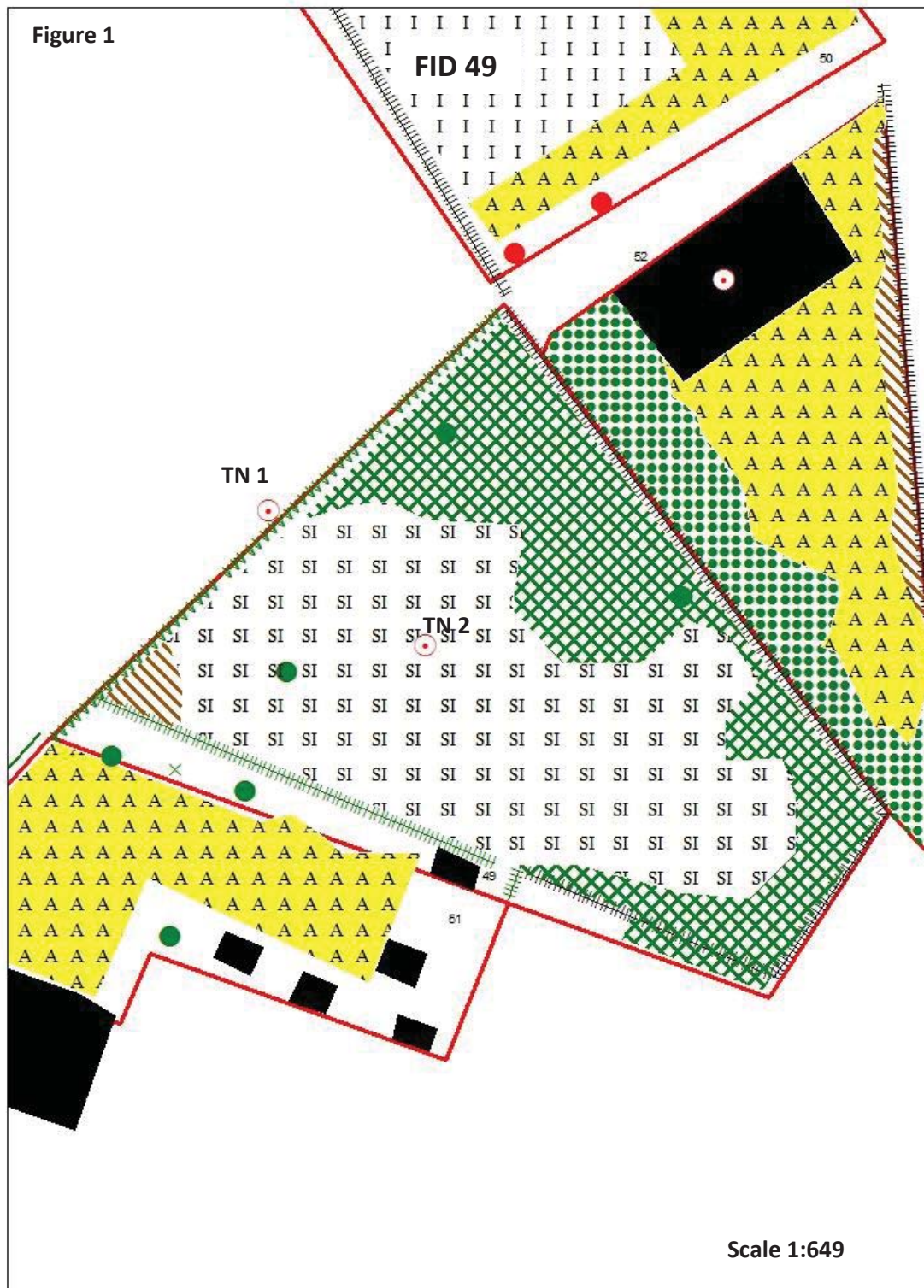
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 49 O.S grid reference SJ9619241033.

FID 49 is located within Blythe Bridge in the Staffordshire Moorlands District, surrounded by housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID49 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Buff Ermine
	Centre-bared Sallow
	Cinnabar
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth
	Noctule Bat
	Northern Lapwing

	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
INV	Giant Hogweed
	New Zealand pigmyweed
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Dense scrub
- Species poor hedgerows
- Tall ruderal vegetation
- Semi-improved species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
DS	0.05	32
SI	0.08	52
TR	0.00	2
OTHER	0.02	14
TOTAL	0.15	100

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation,
DS – Dense scrub

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> , elder <i>Sambucus nigra</i> , ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense* and ragwort *Senecio jacobea* were recorded within the tall ruderal vegetation and grassland sward.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

Incidental records

- Birds including nuthatch *Sitta europea*, blue tit *Cyanistes caeruleus*, house sparrow *Passer domesticus*

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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9617641045	Hedgerow survey required
2	SJ9618741036	Mix of tall grassland and bramble scrub

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Species poor hedgerow					x
Dense scrub					x
Semi-improved species poor grassland					x
Tall ruderal vegetation					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally isolated from the wider countryside with domestic dwellings surrounding all boundaries.

The site is very small in area (0.44 ha's) and mainly consists of species poor grassland (52%), consisting of cock's foot, false oat grass and Yorkshire fog grassland. The remaining habitats consist of dense bramble and hawthorn scrub that are likely to contain small populations of breeding birds, and small mammals as potential prey for owls.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species, especially as the site is completely isolated from the wider countryside. The exceptions would possibly include foraging bats. However, as the site has a species rich hedgerow the site is considered to have district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the dense scrub, vegetation and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site is completely isolated from more biodiverse habitats and generally has low biodiversity apart from the potentially species rich hedge, therefore is attributed district ecological importance.

The following surveys/ actions are recommended prior to any potential development works being carried out:

- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 50



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FID 50

1. Introduction

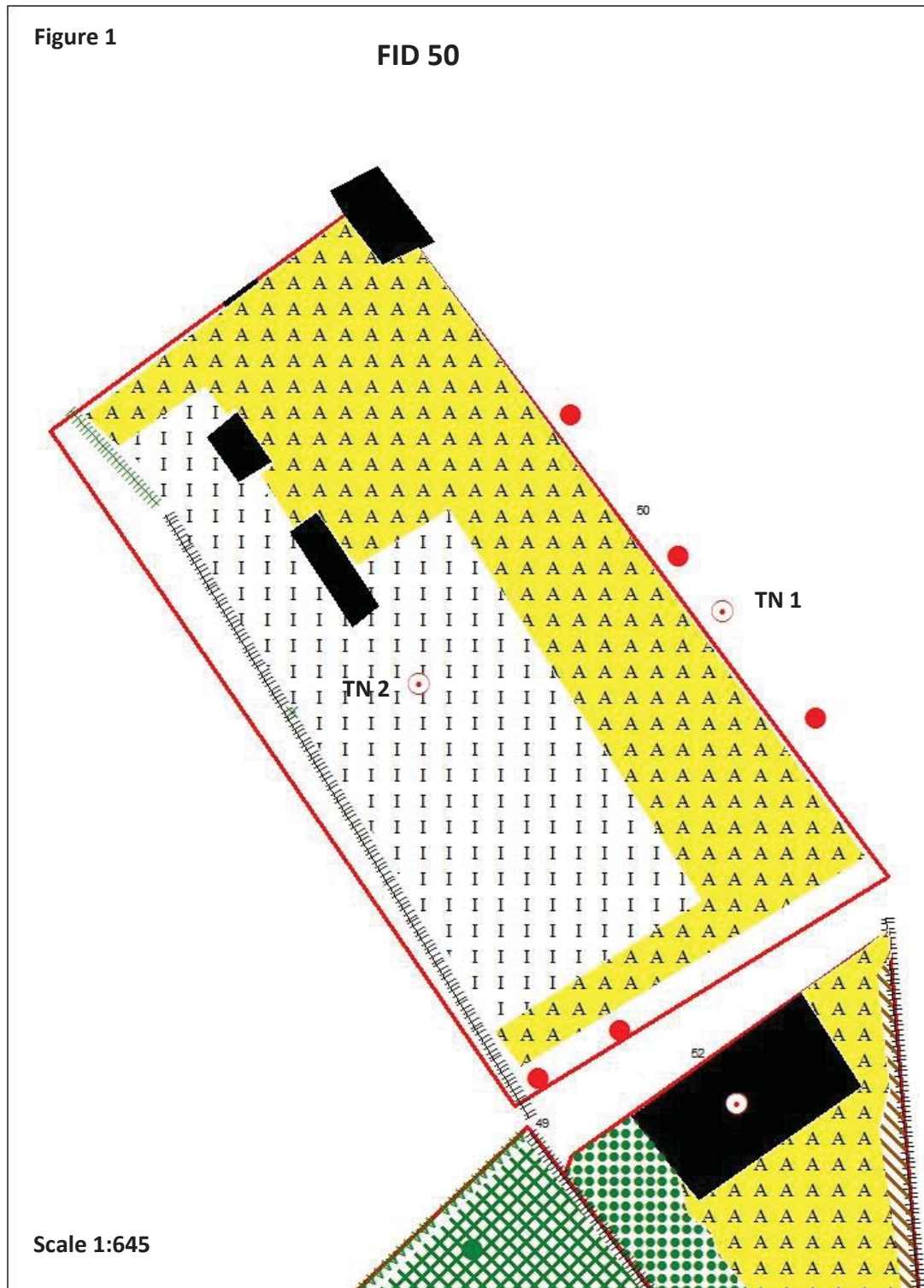
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 50 O.S grid reference SJ9618841099.

FID 50 is located within Blythe Bridge in the Staffordshire Moorlands District, and is completely surrounded by housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 50 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth
	Noctule Bat
	Northern Lapwing

	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
INV	Giant Hogweed
	New Zealand pigmyweed
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Species poor hedgerows
- Scattered scrub
- Species poor grassland
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
AM	0.10	46	
I	0.09	39	
OTHER	0.03	15	
BPT			5
TOTALS	0.22	100	5

AM – Amenity Grassland, I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , common nettle <i>Urtica dioica</i> , creeping thistle <i>Cirsium arvense</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Lime <i>Tilia sp</i> , bramble <i>Rubus fruticosus agg</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 and no weeds listed under the Weeds Act 1959 were recorded during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

Incidental records

- Birds including chickens *Gallus gallus domesticus*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9620641110	Domestic garden
2	SJ9618441091	Allotment and chicken runs

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species poor hedgerow					x
Amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site forms part of a domestic garden, with the owners keeping a number of chickens with corresponding coops, it is also totally isolated from the wider countryside with domestic dwellings surrounding all boundaries.

The site is very small in area (0.61ha's) and mainly consists of species poor grasslands (85%). The 5 scattered trees with bat potential form the main interest from an ecological perspective, therefore the site is attributed district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species, especially as the site is completely isolated from the wider countryside. The exceptions would possibly include roosting/ foraging bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 5 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the scattered trees and hedgerow are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site is completely isolated from more biodiverse habitats and generally has low biodiversity apart from the scattered trees with bat potential which elevates the site's ecological importance to district value.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the 5 highlighted trees
- Vegetation removal at the appropriate time of year



FID 51



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FID 51

1. Introduction

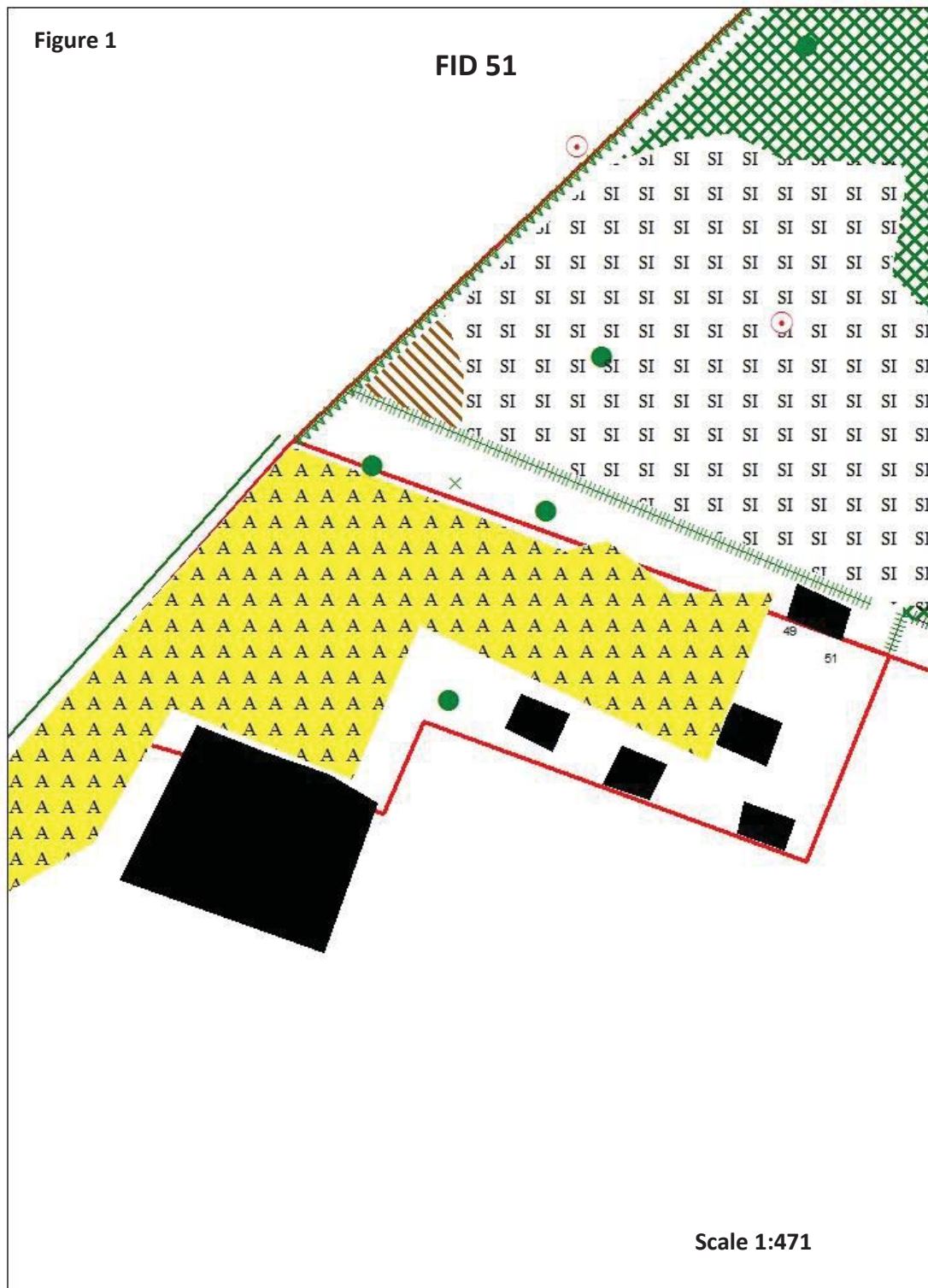
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 51 O.S grid reference SJ9616041017.

FID 51 is located within Blythe Bridge in the Staffordshire Moorlands District, and is completely surrounded by housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 51 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

A walkover survey as part of the Extended Phase 1 Habitat Survey could not be carried out at an appropriate time of year according to CIEEM guidelines (2006). The site encompasses a domestic garden and access was not able to be sought as the owners were not able to be contacted on a number of occasions.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Buff Ermine
	Centre-bared Sallow
	Cinnabar
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth
	Noctule Bat
	Northern Lapwing

	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
INV	Giant Hogweed
	New Zealand pigmyweed
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Scattered trees
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.04	65
OTHER	0.02	35
TOTALS	0.06	100

AM – Amenity grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	UNABLE TO ACCESS
Hedgerows/ trees/ scrub	

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 and no weeds listed under the Weeds Act 1959 were recorded during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Amenity grassland					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside gained from aerial photography.

The site forms part of a domestic garden and is totally isolated from the wider countryside with domestic dwellings surrounding all boundaries.

The site is very small in area (0.17ha's) and mainly consists of species poor amenity grassland (65%), garden plants and shrubs.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species, especially as the site is completely isolated from the wider countryside. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the scattered trees and hedgerow are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site is completely isolated from more biodiverse habitats and is likely to have poor biodiversity which is indicative of most domestic gardens, and therefore assumed to have low ecological importance.

The following surveys/ actions are recommended prior to any potential development works being carried out:

- Full access to carry out Extended Phase 1 Habitat Survey
- Vegetation removal at the appropriate time of year



FID 52



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FID 52

1. Introduction

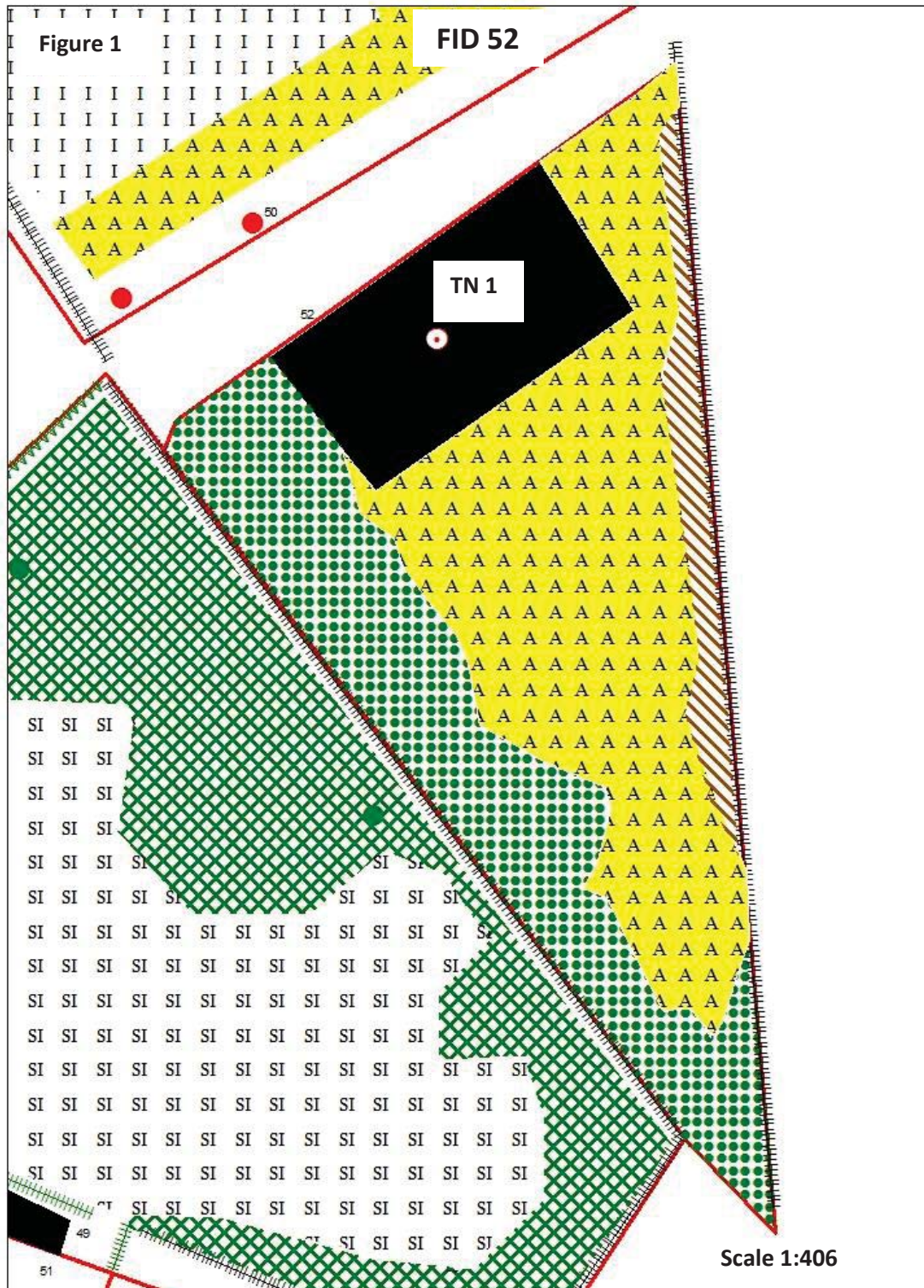
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 52 O.S grid reference SJ9621441046.

FID 52 is located within Blythe Bridge in the Staffordshire Moorlands District, and is completely surrounded by housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 52 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

A walkover survey as part of the Extended Phase 1 Habitat Survey could not be carried out at an appropriate time of year according to CIEEM guidelines (2006). The site was not able to be accessed as it is surrounded by housing, fencing and a locked gate.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Buff Ermine
	Centre-bared Sallow
	Cinnabar
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth
	Noctule Bat
	Northern Lapwing

	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
INV	Giant Hogweed
	New Zealand pigmyweed
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerow
- Scattered trees
- Tall ruderal vegetation
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.03	39
SBW	0.03	31
TR	0.00	4
OTHER	0.02	26
TOTALS	0.08	100

AM – Amenity grassland, SBW – Scattered trees, TR – Tall ruderal vegetation

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

Species were observed through the wire fence to the north of the site.

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 and no weeds listed under the Weeds Act 1959 were recorded during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9620941061	Scout hut, needs further survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Tall ruderal vegetation					x
Amenity grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site forms an area run by the local scout group and is very small in area (0.17ha's) which mainly consists of species poor amenity grassland and scattered trees (70%). The habitats are very common, have fairly low biodiversity and therefore have low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species, especially as the site is completely isolated from the wider countryside. The exceptions could potentially include foraging bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the scattered trees and hedgerow are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site is completely isolated from more biodiverse habitats and generally has low biodiversity which is often indicative of amenity areas, and therefore is considered to have low ecological importance.

Although full access was not available the following surveys/ actions are recommended prior to any potential development works being carried out:

- Full access to carry out an Extended Phase 1 Habitat Survey
- Vegetation removal at the appropriate time of year



FID 53



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FID 53

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 53 O.S grid reference SJ9575441828.

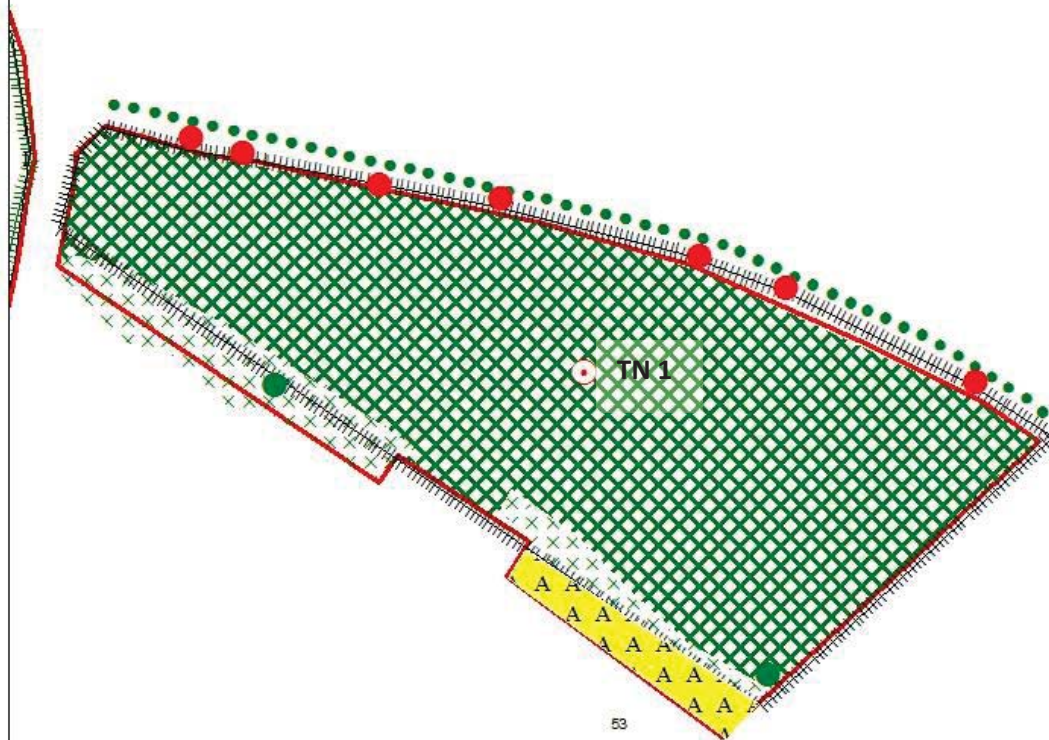
FID 53 is located north of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 53



Scale 1:1431

2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 53 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS	Blythe Bridge Woods
BAS	St. Thomas's Trees
SBI	Stansmore Grassland

BAS - Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Autumnal rustic
	Barn Owl
	Barn swallow
	Beaded chestnut
	Blood-vein
	Brindled Beauty
	Broom moth
	Brown-spot Pinion
	Brown Hare
	Brown long eared bat
	Buff ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kestrel
	Common kingfisher
	Common Pipistrelle
	Common snipe
	Common Toad
	Dark barred twin spot carpet

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	Dark brocade
	Dark spinach
	Deep Brown Dart
	Dot Moth
	Double dart
	Dusky lemon sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Feathered gothic
	Figure of eight
	Freshwater White-clawed Crayfish
	Garden dart
	Garden tiger
	Ghost Moth
	Grass snake
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Heath rustic
	Hedge rustic
	House martin
	Insect – Beetle
	Knot grass
	Large Wainscot
	Latticed heath
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Oak hook tip
	Oak lutestring
	Oblique carpet
	Orache moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Reed bunting
	Rosy minor

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	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Shoulder striped wainscot
	Skylark
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Spinach
	Streak
	Tall hawkweed
	V moth
	Wall
	West European Hedgehog
	White line dart
	White Ermine
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	False acacia
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Grass snake
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Polecat

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	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Dense scrub
- Scattered scrub
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
DS	0.52	86	
AM	0.03	4	
SS	0.06	10	
OTHER	0.00	0	
BPT	0.00		7
TOTALS	0.60	100	7

AM – Amenity Grassland, DS – Dense scrub, SS – Scattered scrub,
BPT – Bat Potential Trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , creeping thistle <i>Cirsium arvense</i>
Hedgerows/ trees/ scrub	Bramble <i>Rubus fruticosus</i> agg, sycamore <i>Acer pseudoplatanus</i> , , ash <i>Fraxinus excelsior</i> , Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 and no weeds listed under the Weeds Act 1959 were recorded during the walkover survey.

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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9575441828	Dense bramble scrub with occasional open patches

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Dense scrub					x
Scattered scrub					x
Amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is located adjacent to species poor grassland and arable fields with a farm to the north east, domestic dwellings to the south west. The site is also fairly poorly connected to more biodiverse habitats as there is very little connective habitat and bordered by roads to the north/ north-east.

The site mainly consists of dense bramble scrub (86%). The site is deemed as having at least district importance due to the presence of 7 trees with bat potential which form the main interest from an ecological perspective and the presence a number of other mature trees. The scattered scrub could also potentially provide habitat for small mammals as prey for owls and raptors.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species, especially as the site is fairly poorly connected to the wider countryside. The exceptions would possibly include roosting/ foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 7 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the scattered trees and hedgerow are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site generally has low biodiversity apart potentially from the scattered mature trees, 7 of which have potential to support roosting bats and is given district importance as a consequence.

The following surveys/ actions are recommended prior to any potential development works being carried out:

- Bat surveys of the 7 trees
- Vegetation removal at the appropriate time of year



FID 54



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FID 54

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 54 O.S grid reference SJ9634941956.

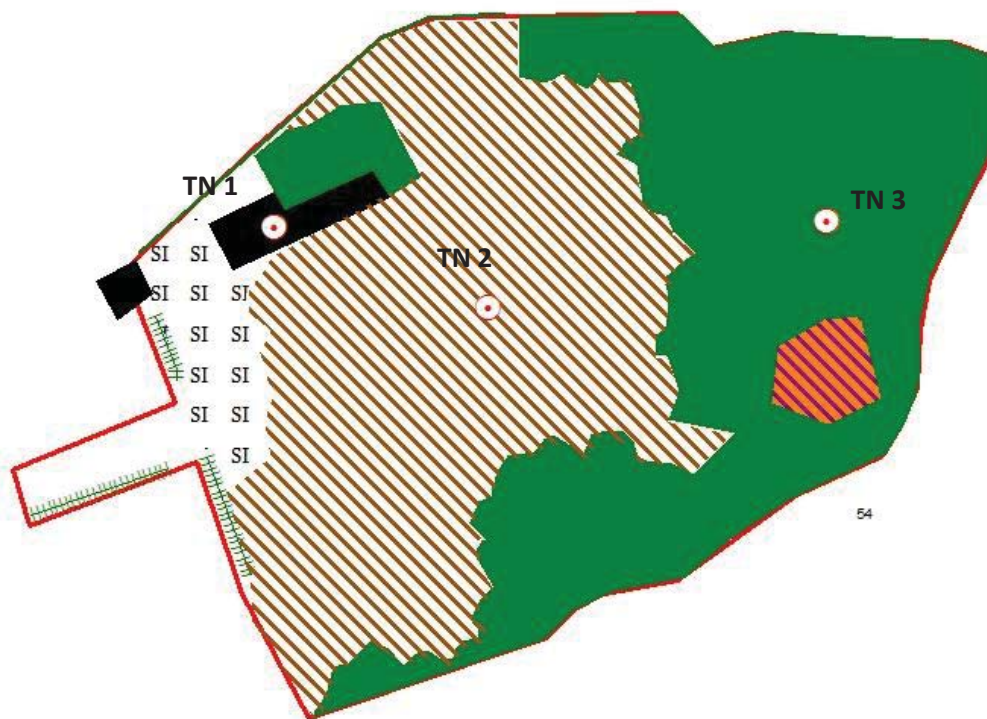
FID 54 is located north east of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, agricultural land and farm buildings.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 54



Scale 1:1493

2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 54 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS	Blythe Bridge Woods
BAS	Fair View (north of)
BAS	St. Thomas's Trees
SBI	Stansmore Grassland

BAS - Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown Hare
	Brown long eared bat
	Buff ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common snipe
	Common Toad
	Deep Brown Dart
	Dot Moth
	Double dart
	Dusky Brocade
	Dusky Thorn

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	Ear Moth
	European Water Vole
	Fieldfare
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Heath rustic
	Hedge rustic
	House martin
	Insect – Beetle
	Large Wainscot
	Latticed heath
	Lichen
	Mallard
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Tall hawkweed
	Wall
	West European Hedgehog
	White Ermine
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed
	Rhododendron

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E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Fieldfare
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Polecat
	Redwing
	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building x1
- Broadleaved woodland
- Marshy grassland
- Tall ruderal vegetation
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.56	45
SI	0.06	5
MG	0.03	2
BW	0.55	44
OTHER	0.04	4
TOTALS	1.24	100

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation, I – Improved grassland, BW – Broadleaved Woodland

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4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Creeping thistle <i>Cirsium arvense</i> , great willowherb <i>Epilobium hirsutum</i> , rough meadow grass <i>Poa trivialis</i> , soft rush <i>Juncus effusus</i> , tufted hair grass <i>Deschampsia cespitosa</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Alder <i>Alnus glutinosa</i> , ash <i>Fraxinus excelsior</i> , sycamore <i>Acer pseudoplatanus</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey in various areas along the stream and tall ruderal vegetation to the north east of the site.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, broadleaved dock *Rumex obtusifolius* and creeping thistle *Cirsium arvense* have been recorded within the tall ruderal vegetation/ species poor grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

Incidental records

- Birds including magpie wren *Troglodytes troglodytes*, magpie *Pica pica*, woodpigeon *Columba palumbus*
- Butterflies speckled wood *Pararge aegeria*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9631841976	Outbuilding does not require bat survey
2	SJ9634941956	Requires reptile survey
3	SJ9641141974	Wet woodland

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Broadleaved woodland			x		
Marshy grassland				x	
Tall ruderal vegetation				x	
Species poor grassland					X
Overall site importance			x		
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of each habitat in terms of their potential loss to the wider countryside.

The site mainly consists of tall ruderal vegetation and broadleaved woodland (85%). The semi-natural broadleaved woodland consists of mainly alder that broadly represents a NVC W6 *Alnus glutinosa* – *Urtica dioica* wet woodland classification, which is a more eutrophic species poor community with frequent common nettle, rough meadow grass and soft rush. This wet woodland community is considered as a UKBAP priority habitat and is the reason for the site being considered to be of regional ecological importance.

The wet woodland forms an intricate habitat mosaic with a small area of marshy grassland within the woodland with abundant soft rush great willowherb *Epilobium hirsutum* and locally frequent greater bird's foot trefoil *Lotus pedunculatus*.

The very dense tall ruderal vegetation is mainly species poor and consists mainly of great willowherb, curled dock, bramble *Rubus fruticosus* agg, and creeping thistle.

The tall ruderal vegetation is significantly large enough to potentially support ground nesting birds and possibly foraging owls including barn owl *Tyto alba*.

The habitats form an intricate mosaic of habitats which are likely to support a fairly diverse ecosystem which could support reptiles, amphibians and a range of invertebrates. Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could possibly include foraging bats and barn owl.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

As the wet woodland area is regarded as a UKBAP priority habitat this should not be cut down removed and developed. It should also be considered to be surveyed for the possible SBI designation in the context of NVC W6 wet woodland within the Staffordshire Moorlands district.

The area of tall ruderal vegetation should have a management regime applied to accentuate the biodiversity of the site as a whole. Some areas of the tall ruderal vegetation should be trimmed at least once a year to encourage a more diverse floral assemblage. Additionally log piles could be added as refugia for reptiles and amphibians and small areas of vegetation could be completely stripped to allow basking areas for reptiles

Reptile survey

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the habitat mosaic a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998).

Vegetation removal

If at all possible it is recommended that this habitat mosaic is not incorporated into development plans due to its intrinsic value to biodiversity within the area.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and vegetation are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site itself although fairly florally species poor it is an important UKBAP priority wet woodland habitat mosaic and should have a management regime applied to encourage conservation rather than be developed. It also has the potential to support a number of UK protected species therefore is attributed regional ecological importance.

Although not advised, if the whole site is to be developed the following surveys/ actions are recommended prior to any potential development works being carried out:

- Another walkover survey to ascertain whether the site qualifies as a potential SBI
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 55



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FID 55

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 55 O.S grid reference SJ9667641917.

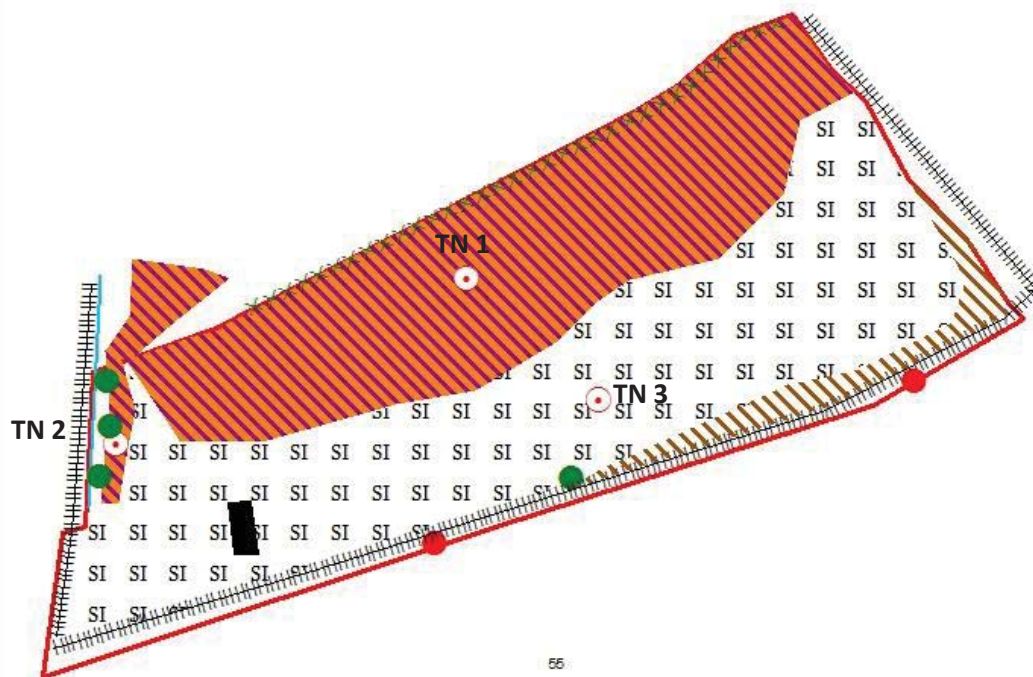
FID 55 is located north east of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 55



Scale 1:1292

2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 55 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
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Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS	Commonside Quarry
BAS	Blythe Bridge Woods
BAS	Fair View (north of)
BAS	St. Thomas's Trees
SBI	Stansmore Grassland

BAS - Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown Hare
	Brown long eared bat
	Buff ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common snipe
	Common Toad
	Deep Brown Dart
	Dot Moth
	Double dart
	Dusky Brocade

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	Dusky Thorn
	Ear Moth
	European Water Vole
	Fieldfare
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Heath rustic
	Hedge rustic
	House martin
	Insect – Beetle
	Large Wainscot
	Latticed heath
	Lichen
	Mallard
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Tall hawkweed
	Wall
	West European Hedgehog
	White Ermine
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed

	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Fieldfare
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Polecat
	Redwing
	Soprano Pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Marshy grassland
- Scattered trees
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
MG	0.21	38	
SI	0.27	51	
TR	0.06	11	
BPT			2
TOTALS	0.54	100	2

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation, BPT – Bat Potential Trees, MG – Marshy grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Soft rush <i>Juncus effusus</i> , common bent <i>Agrostis capillaris</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , meadowsweet <i>Fillipendula ulmaria</i> , creeping buttercup <i>Ranunculus repens</i>
Hedgerows/ trees/ scrub	Pedunculate oak <i>Quercus robur</i> , alder <i>Alnus glutinosa</i> , hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , bramble <i>Rubus fruticosus agg</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey in various areas along the stream and tall ruderal vegetation to the north east of the site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

Incidental records

- Butterflies speckled wood *Pararge aegeria*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9666741923	Botanical survey
2	SJ9661841904	Wet ditch
3	SJ9668041906	Patch of higher floral diversity

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Marshy grassland				x	
Semi-improved species poor grassland				x	
Wet ditch				x	
Tall ruderal vegetation				x	
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

Although the site is located on the edge of a housing estate it is well connected with networks of hedgerows and ditches to the wider countryside, therefore deemed to have district ecological importance.

The site mainly consists of species poor semi-improved grassland (51%) comprising cock's foot, Yorkshire fog and common bent, and herbs including creeping buttercup *Ranunculus repens*. Although these grasses dominate the sward occasional species that tend to colonise more unimproved grassland such as great burnet *Sanguisorba officinalis* and sedges *Carex species* can be found. However the low frequency of such species and similar species classifies the sward as mainly species poor.

The marshy grassland area is also fairly species poor, and dominated by soft rush *Juncus effusus*, but similarly with occasional patches of species less tolerant of agricultural improvement such as meadowsweet, greater bird's foot trefoil *Lotus pedunculatus* and common spike rush *Eleocharis palustris*.

The habitat mosaic is large enough to potentially support ground nesting birds and possibly foraging owls including barn owl *Tyto alba* and potentially a range of other species such as reptiles and amphibians. The site is therefore deemed to have a district value within the matrix despite the main area of the site being species poor grassland.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats, barn owl and West European Hedgehog (recorded 62m away).

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

This site is not recommended for potential development as the marshy grassland habitat and the presence of occasional species of uncommon flora could suggest that the sward if surveyed between June to August could qualify the site as semi-improved species rich grassland.

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 2 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Reptile survey

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the habitat mosaic a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998).

Vegetation removal

Although the site has fairly poor floral diversity the sward could be strimmed at least once a year and possibly sown with hay rattle *Rhinanthus minor* (which parasitises grasses) in the drier grassland area to encourage a more diverse floral assemblage. Additionally log piles could be added as refugia for reptiles and amphibians and small areas of vegetation could be completely stripped to allow basking areas for reptiles

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.



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If trees and vegetation are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself although florally fairly species poor it has the potential to become a species rich grassland mosaic with an appropriate management regime applied to encourage conservation rather than be developed. The presence of a number less common species could suggest that the site could have some species missed due to seasonal vegetative die back. The site also has potential to support roosting bats and reptiles so is therefore considered to have district ecological importance.

Although development is not advised, the following surveys/ actions are recommended prior to any potential development works being carried out:

- Floral resurvey of the site between June to August
- Bat survey of the trees deemed as having bat potential
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 56



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FID 56

1. Introduction

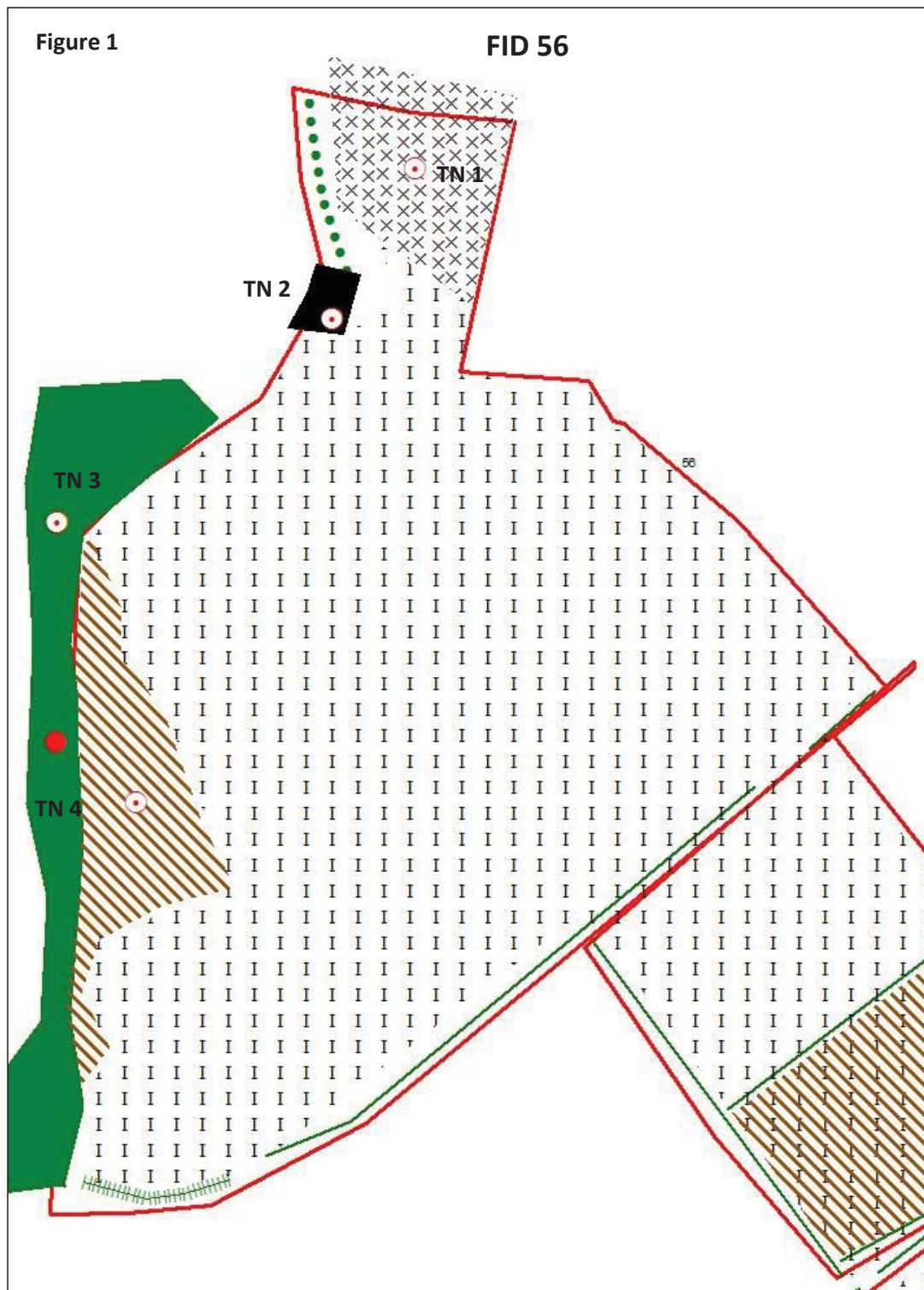
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 56 O.S grid reference SJ9653341417.

FID 56 is located north east of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID56 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	St. Thomas's Trees
BAS	Caverswall Castle (west of)
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown long eared bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt

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	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Lichen
	Lichen
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
	Willow warbler
	Yellowhammer
INV	Giant Hogweed
	Japanese rose
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building x2
- Scattered trees
- Species poor hedgerows
- Ephemeral grassland
- Tall ruderal vegetation

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.65	80	
TR	0.06	7	
ESP	0.04	5	
BW	0.01	1	
OTHER	0.05	7	
BPT	0.00		1
TOTAL	0.81	100	1

TR- Tall ruderal vegetation, I – Improved grassland, ESP – Ephemeral grassland, BW – Broadleaved Woodland, BPT – Bat Potential Trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , tufted hair grass <i>Deschampsia cespitosa</i> , rosebay willowherb <i>Chamerion angustifolium</i> , spear thistle <i>Cirsium vulgare</i> , common nettle <i>Urtica dioica</i> , ribwort plantain <i>Plantago lanceolata</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , ash <i>Fraxinus excelsior</i> , bramble <i>Rubus fruticosus</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was found during the walkover survey in various areas along the stream and tall ruderal vegetation to the north east of the site.

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Weeds listed under the Weeds Act 1959 including broadleaved dock *Rumex obtusifolius*, spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense* and ragwort *Senecio jacobea* were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

Incidental records

- Birds including magpie *Pica pica*, carrion crow *Corvus corone* and woodpigeon *Columba palumbus*
- Butterflies speckled wood *Pararge aegeria*, large white *Pieris brassicae*
- Dragonflies including ruddy darter *Sympetrum sanguineum* and brown hawker *Aeshna grandis*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9653741470	Ephemeral grassland over some hard standing
2	SJ9653041461	Bat survey required
3	SJ9649241437	Ash trees
4	SJ9650141400	Species poor tall ruderal vegetation

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Tall ruderal vegetation					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site mainly consists of species poor improved grassland (80%) and grazed by horses. The remaining habitats are species poor and very common within the local area and the UK as a whole.

There are 2 buildings and 2 trees present on or adjacent to the site that could potentially support roosting bats therefore the site is considered to have district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats (maternity roost recorded within 100m to the east) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 2 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

If at all possible it is recommended that as many trees in the hedgerow are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



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7. Conclusion

The site itself has 2 trees and 2 buildings with bat potential, species poor hedgerows, and tall ruderal vegetation which are connected to a series of other hedgerows and habitats and is deemed to have district ecological importance.

The following surveys/ actions are recommended prior to any potential development works being carried out:

- A bat survey regime is therefore recommended to ascertain whether bats roost in the trees and buildings
- Vegetation removal at the appropriate time of year



FID 57



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FID 57

1. Introduction

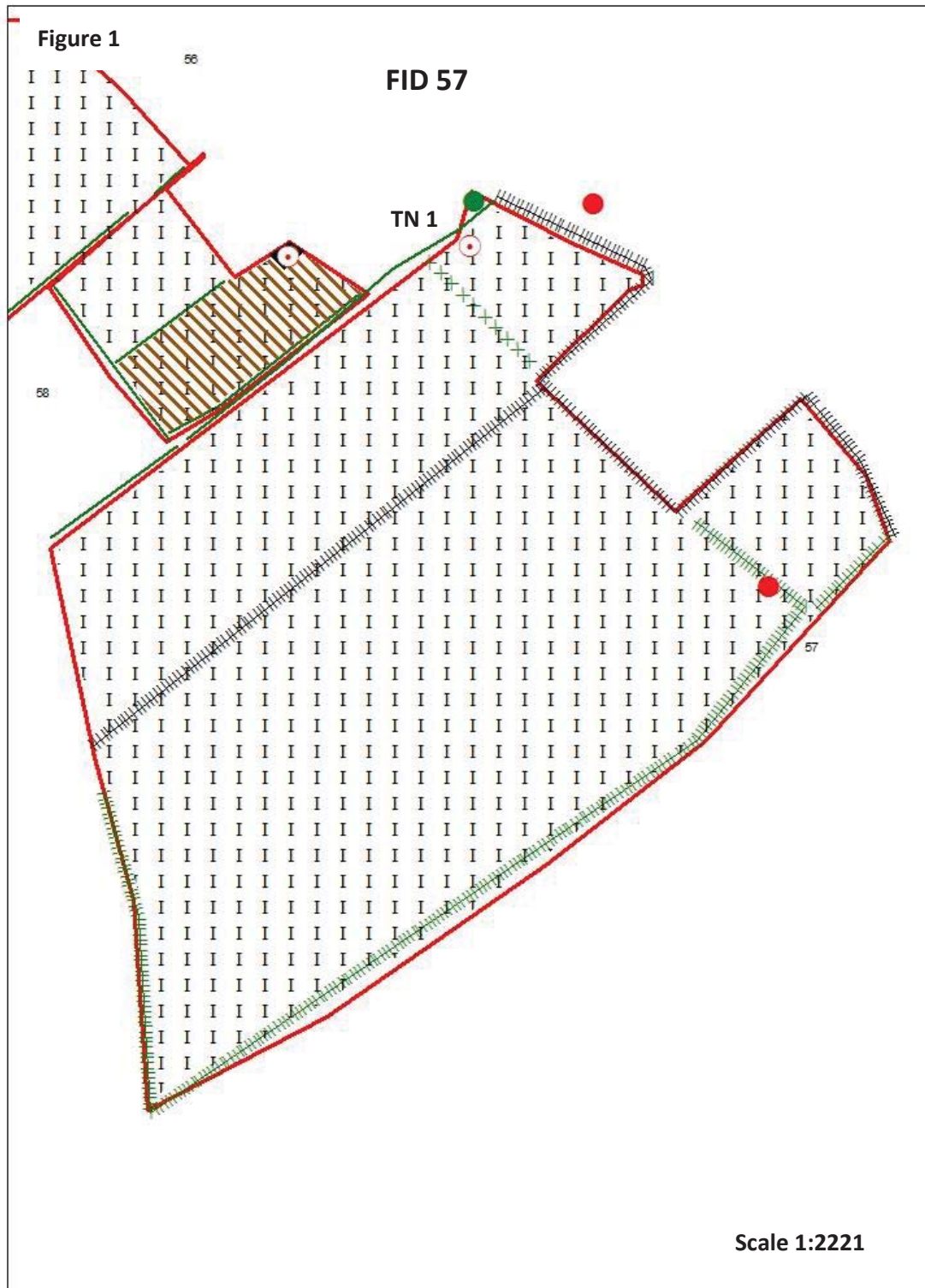
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 57 O.S grid reference SJ9663941284.

FID 57 is located north east of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID57 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Commonside Quarry
BAS	St. Thomas's Trees
BAS	Caverswall Castle (west of)
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown long eared bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth

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	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Lichen
	Lichen
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
	Willow warbler
	Yellowhammer
INV	Giant Hogweed
	Japanese rose
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Tall ruderal vegetation
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	2.87	100	
OTHER	0.01	0	
BPT			2
TOTALS	2.88	100	2

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , red fescue <i>Festuca rubra</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , ash <i>Fraxinus excelsior</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was found during the walkover survey in various areas along the stream and tall ruderal vegetation to the north east of the site.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could

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potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9667441389	Electrical sub-station

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Tall ruderal vegetation					x
Scattered scrub					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site mainly consists of species poor improved grassland grazed by cows. The remaining habitats are species poor and very common within the local area and the UK as a whole.

2 trees are present on or adjacent to the site that could potentially support roosting bats, therefore the site has been attributed district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats (maternity roost recorded within 100m to the north) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 2 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

If at all possible it is recommended that as many trees in the hedgerow are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has 2 trees with bat potential and species poor hedgerows which are connected to a series of other hedgerows and habitats within a rural landscape, so is therefore attributed district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Vegetation removal at the appropriate time of year



FID 58



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FID 58

1. Introduction

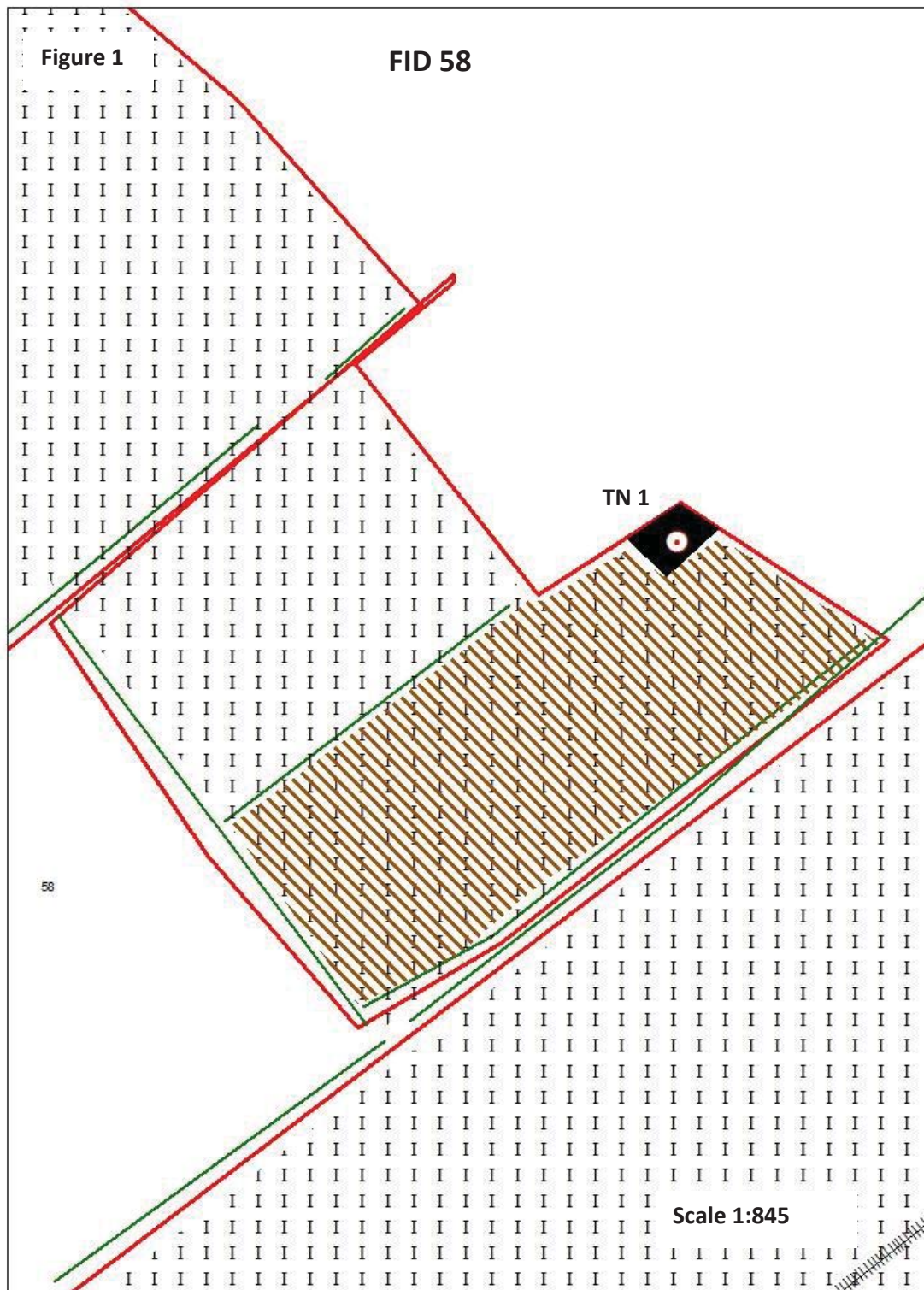
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 58 O.S grid reference SJ9659841373.

FID 58 is located north east of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 58 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Commonside Quarry
BAS	St. Thomas's Trees
BAS	Caverswall Castle (west of)
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown long eared bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth

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	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Lichen
	Lichen
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
	Willow warbler
	Yellowhammer
INV	Giant Hogweed
	Japanese rose
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Species poor improved grassland
- Tall ruderal vegetation

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.14	50
I	0.11	38
OTHER	0.04	12
TOTALS	0.29	100

TR – Tall ruderal vegetation, I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , annual meadow grass <i>Poa annua</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , broadleaved dock <i>Rumex obtusifolius</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , bramble <i>Rubus fruticosus</i> agg.

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9662641391	Stable with very low bat roosting potential



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Tall ruderal vegetation					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site mainly consists mainly of species poor improved grassland heavily grazed by horses. The remaining habitats are species poor and very common within the local area and the UK as a whole. Therefore the site is considered to have low ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Vegetation removal

If at all possible it is recommended that as many trees in the hedgerow are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has species poor hedgerows which are connected to a series of other hedgerows and habitats within a rural landscape but have a low biodiversity value and are deemed to have low ecological importance overall.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 59



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FID 59

1. Introduction

1.1 Background

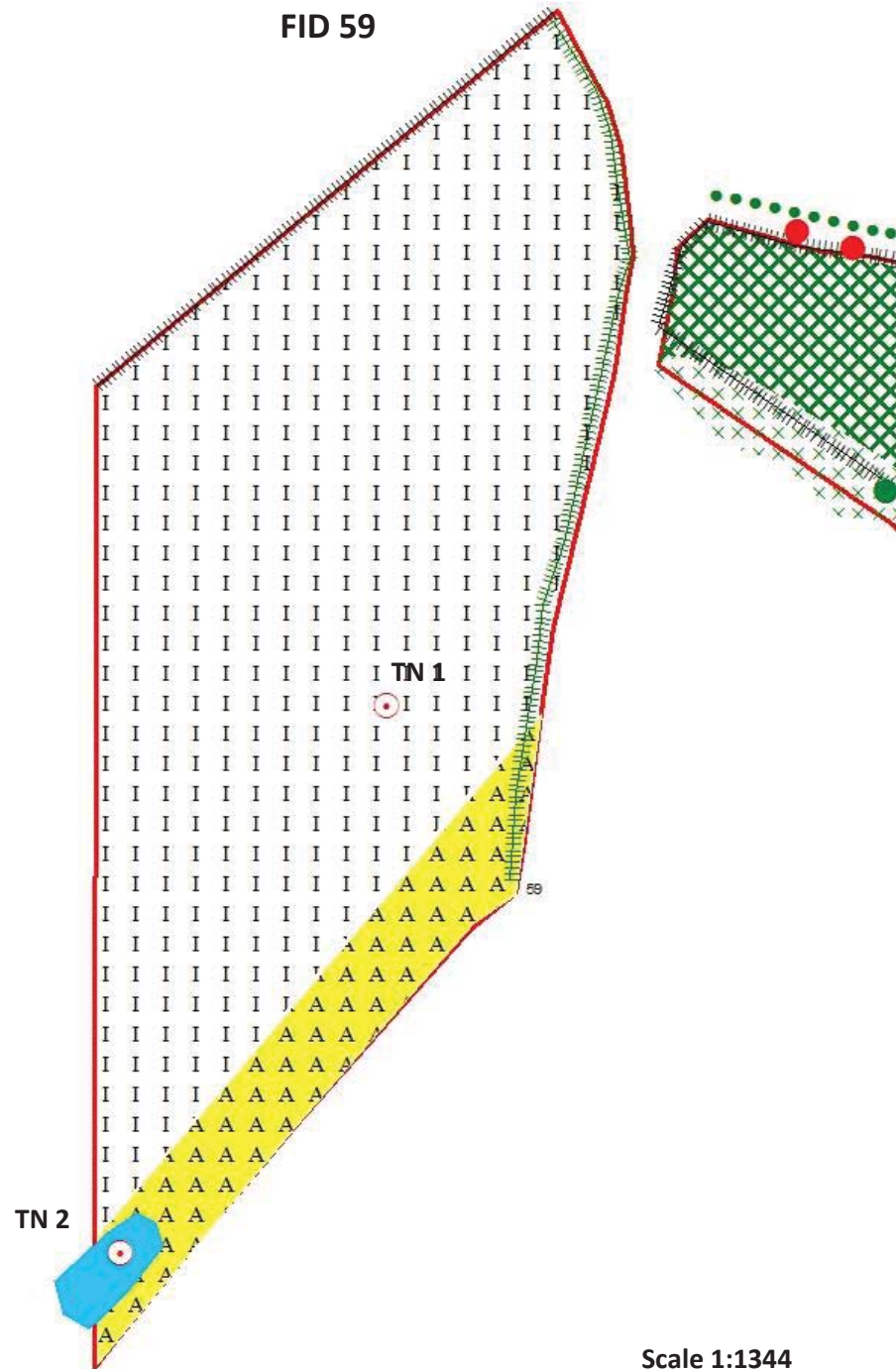
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 59 O.S grid reference SJ9560741814.

FID 59 is located north of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 59 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS	Blythe Bridge Woods
BAS	St. Thomas's Trees
SBI	Stansmore Grassland

BAS - Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Autumnal rustic
	Barn Owl
	Barn swallow
	Beaded chestnut
	Blood-vein
	Brindled Beauty
	Broom moth
	Brown-spot Pinion
	Brown Hare
	Brown long eared bat
	Buff ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common kestrel
	Common kingfisher
	Common Pipistrelle
	Common snipe
	Common Toad
	Dark barred twin spot carpet

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	Dark brocade
	Dark spinach
	Deep Brown Dart
	Dot Moth
	Double dart
	Dusky lemon sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Feathered gothic
	Figure of eight
	Freshwater White-clawed Crayfish
	Garden dart
	Garden tiger
	Ghost Moth
	Grass snake
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Heath rustic
	Hedge rustic
	House martin
	Insect – Beetle
	Knot grass
	Large Wainscot
	Latticed heath
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Oak hook tip
	Oak lutestring
	Oblique carpet
	Orache moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Reed bunting
	Rosy minor

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	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Shoulder striped wainscot
	Skylark
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Spinach
	Streak
	Tall hawkweed
	V moth
	Wall
	West European Hedgehog
	White line dart
	White Ermine
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	False acacia
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Grass snake
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Polecat

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	Soprano Pipistrelle
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Species poor improved grassland
- Open water
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.10	12
I	0.78	87
OW	0.01	1
OTHER	0.00	0
TOTALS	0.89	100

AM – Amenity grassland, I – Improved grassland, OW – Open water

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , white clover <i>Trifolium repens</i> , dandelion <i>Taraxacum officinale agg</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , hazel <i>Corylus avellana</i> , bramble <i>Rubus fruticosus</i> , ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9562741781	Overhead cables
2	SJ9560041725	Fish pond

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Open water				x	
Amenity grassland					x
Species poor improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of each habitat in terms of their potential loss to the wider countryside.

The site mainly consists solely of species poor improved grassland cut for silage. The remaining habitats are species poor and very common within the local area and the UK as a whole.

The pond located in the site is a turbid ornamental fish pond. As a preliminary assessment for the purposes of potentially supporting great crested newt it is deemed likely to score low according to the standard 'Habitat Suitability Index' (Oldham *et al*, 2000). The pond also appears to be fairly new, contains fish, is isolated from other standing water and has poor surrounding riparian, terrestrial habitat and connectivity. Great crested newts have also not been recorded within 2km.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species apart from amphibians and foraging badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

Although the preliminary assessment of the pond might suggest that it potentially has a low suitability score it is still recommended that a great crested newt survey is carried out prior to any development works according to the 'Great crested newt conservation handbook' (Froglife, 2001).

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Vegetation removal

If at all possible it is recommended that the hedgerow be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the hedgerow is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has species poor hedgerows which are connected to a series of other hedgerows and habitats within a rural landscape. Although the site has low biodiversity value the site is considered to have district ecological importance overall as the pond could potentially support great crested newts.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey
- Vegetation removal at the appropriate time of year



FID 60



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FID 60

1. Introduction

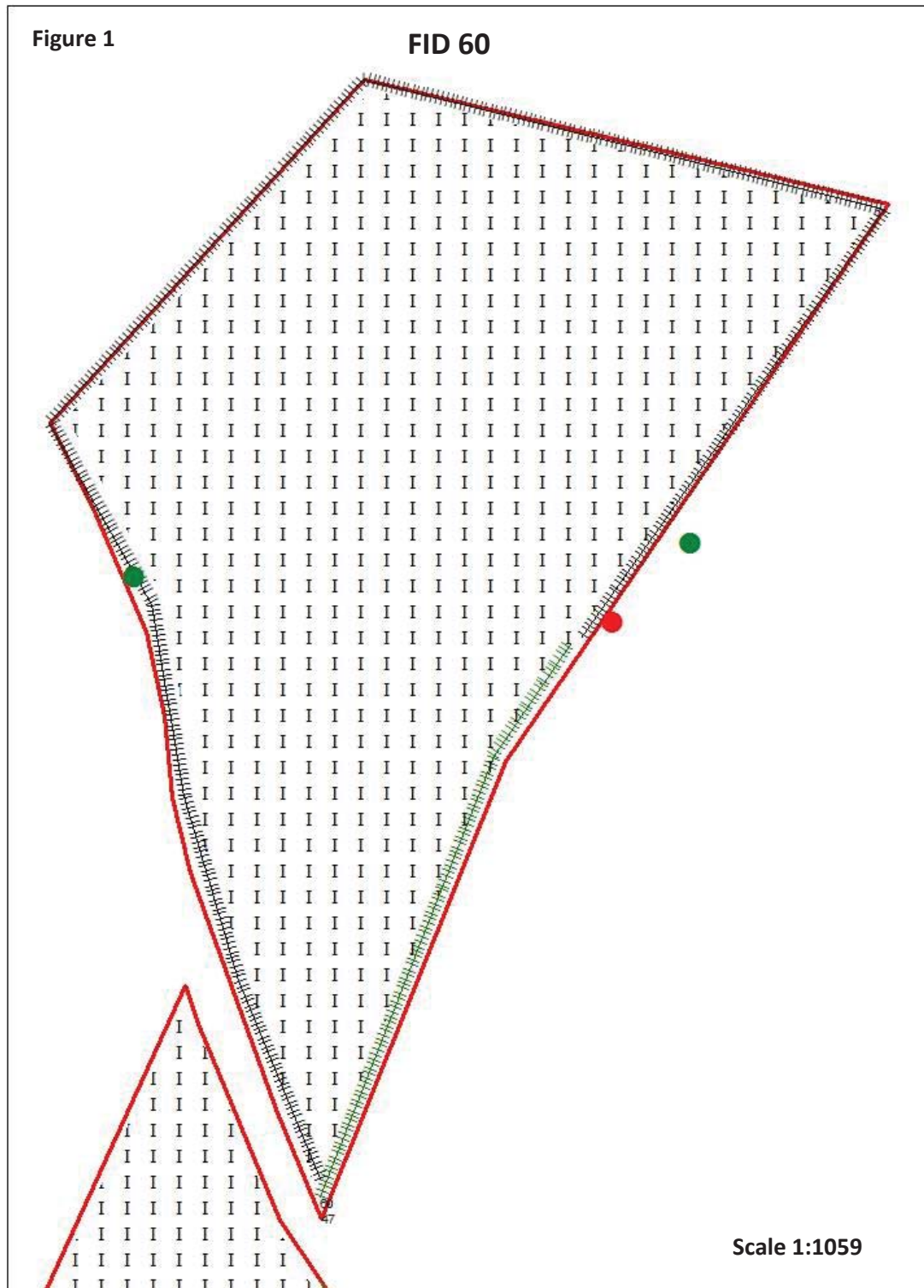
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 60 O.S grid reference SJ9556241633.

FID 60 is located north of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID60 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS (abuts FID 47 & 48)	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown Hare
	Brown long eared bat
	Buff ermine
	Centre-barred Sallow
	Cinnabar
	Common kingfisher
	Common Pipistrelle
	Common snipe
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Grass snake

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	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Polecat
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Skylark
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Tall hawkweed
	West European Hedgehog
	White Ermine
INV	False acacia
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Grass snake
	Noctule Bat
	Pipistrelle
	Polecat

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	Soprano Pipistrelle
	Whiskered bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species poor hedgerows
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.73	99	
OTHER	0.00	1	
BPT			1
TOTALS	0.74	100	1

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye-grass <i>Lolium perenne</i> , false oat grass <i>Arrhenatherum elatius</i> , common couch <i>Elymus repens</i> , red clover <i>Trifolium pratense</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Ornamental species including garden privet <i>Ligustrum sp</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was found during the walkover survey in various areas along the stream and tall ruderal vegetation to the north east of the site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could

potentially nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species poor hedgerow					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of each habitat in terms of their potential loss to the wider countryside.

The site is deemed to have low ecological importance as it is surrounded by species poor grassland, domestic dwellings to the east, and mainly consists of species poor improved grassland cut for silage, with limited connectivity to the wider countryside. The remaining habitats are species poor and very common within the local area and the UK as a whole.

1 tree is present on site that could potentially support roosting bats therefore the site is considered to have district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species apart potentially from foraging bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the tree recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

If at all possible it is recommended that as many trees in the hedgerow are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has 1 tree with bat potential and a species poor hedgerow which is poorly connected to habitats within a rural landscape, and therefore assigned district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the tree
- Vegetation removal at the appropriate time of year



FID 61



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FID 61

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 61 O.S grid reference SJ9676640772.

FID 61 is located north east of Blythe Bridge in the Staffordshire Moorlands District, and is surrounded by housing, farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID61 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown hare
	Brown long eared bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common kingfisher
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European otter
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger

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	Insect – Beetle
	Large Wainscot
	Lichen
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
INV	Giant Hogweed
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Buildings
- Planted broadleaved woodland
- Introduced shrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
PBW	0.14	30
IS	0.00	0
OTHER	0.32	70
TOTALS	0.46	100

PBW – Planted broadleaved woodland, IS – Introduced shrub

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , mugwort <i>Artemisia vulgaris</i>
Hedgerows/ trees/ scrub	White poplar <i>Populus alba</i> , hawthorn <i>Crataegus monogyna</i> , aspen <i>Populus tremula</i> , ash <i>fraxinus excelsior</i> , leylandii <i>Cuprocypressus x leylandii</i> , sycamore <i>Acer pseudoplatanus</i>

4.3.3 Invasive weeds

Cotoneaster *Cotoneaster species* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and was recorded in one area of the site.

4.3.4 Fauna

Bats

The site has 2 buildings, the one to the west is fairly new and of brick and tile roof construction which is deemed potentially suitable to support roosting bats, although there are no obvious entrance points. The adjacent building is of metal construction with very low potential to support roosting bats.

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Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could nest in areas of planted broadleaved woodland from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9673040774	Area of cotoneaster <i>Cotoneaster sp</i>
2	SJ9678440768	Building with bat roosting potential
3	SJ9672840760	Potential reptiles

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Planted broadleaved woodland					x
Introduced shrub					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by a main road to the south, domestic dwellings to the south west. The remaining boundaries are adjacent to a landscaped habitat mosaic of ponds, species poor grassland and planted broadleaved trees (FID 224) which are well connected to the wider countryside by a network of hedgerows.

The site consists of a working yard and its associated buildings with 76%% of the site being hard standing. The remaining habitats present on site are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix. However, the building with potential to support roosting bats elevates the ecological importance of the site to district value.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would possibly include foraging bats, badger and possibly great crested newts that if present within the ponds to the north, could use paving slabs or pieces of derelict equipment as refugia. Similarly the site could be used by reptiles for refuge and basking opportunities.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the building should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that the building is checked for the presence of breeding birds at the same time as the bat surveys.

Great crested newt survey

As great crested newts could potentially be present on site under refugia, due to the presence of ponds to the north, it is recommended that any refugia present is removed by hand under watching brief of a suitably qualified great crested newt licensed ecologist. Any individuals found should be moved to a previously agreed locality.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site under refugia, due to the presence of ponds to the north, so it is recommended that any refugia present is removed by hand under watching brief of a suitably qualified ecologist.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees are retained if the site is to be developed.

If trees and the introduced shrub are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

Although the site has mostly low biodiversity value overall there is a building with potential to support roosting bats and potential for protected species to be present due to the fairly close proximity of two ponds, under refugia and potentially using the area as a basking opportunity.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the building
- Great crested newt survey
- Removal of any refugia by hand under watching brief of a suitably qualified and licensed ecologist.
- Vegetation removal at the appropriate time of year



FID 224



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FID 224

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 224 O.S grid reference SJ9681440826. Note the map in Figure 1 below also includes FID 61 to the south [See separate site report].

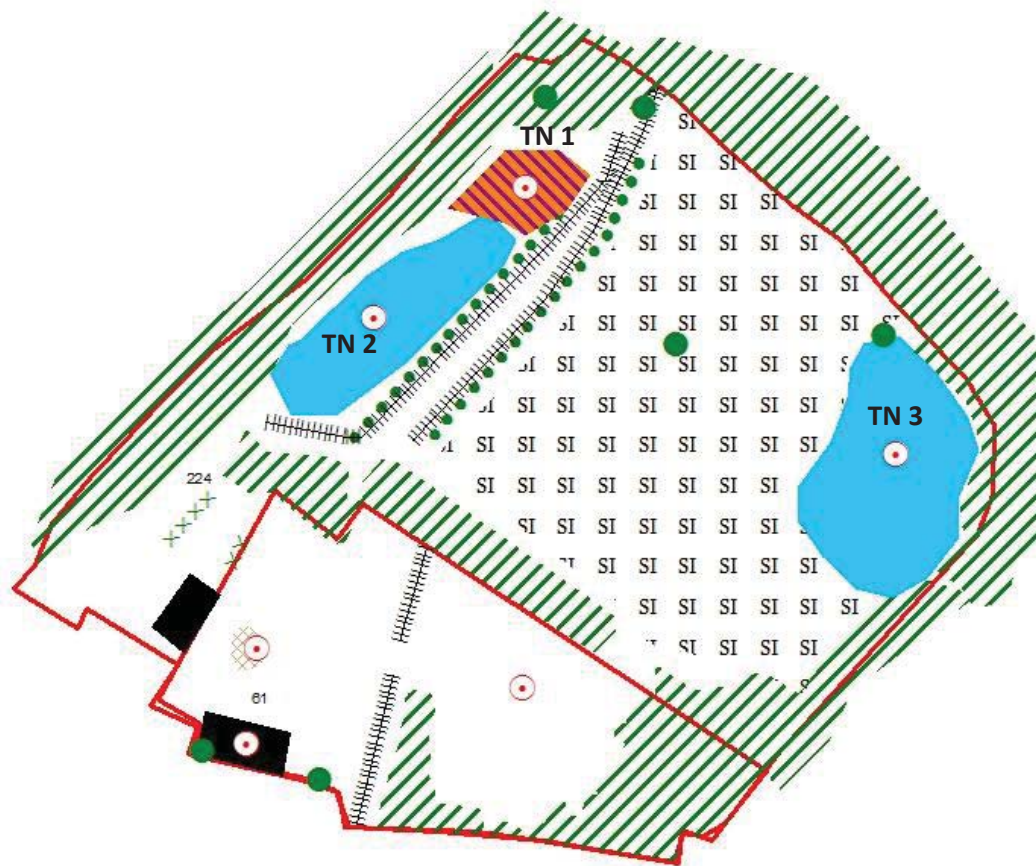
FID 224 is located east of Blythe Bridge surrounded by agricultural land, farm buildings and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 224



Scale 1:1999



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 224 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Barn swallow
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Brown hare
	Brown long eared bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common kingfisher
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European otter
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger

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	Insect – Beetle
	Large Wainscot
	Lichen
	Mouse Moth
	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White Ermine
INV	Giant Hogweed
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Noctule Bat
	Pipistrelle
	Soprano Pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building
- Planted broadleaved woodland
- Open water
- Marshy grassland
- Scattered trees
- Introduced shrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	0.60	43
OW	0.18	13
PBW	0.37	26
MG	0.03	2
OTHER	0.22	16
TOTALS	1.4	100

SI – Species poor semi-improved grassland, OW – Open water, PBW – Planted broadleaved Woodland, MG – Marshy grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , soft rush <i>Juncus effusus</i> , common reedmace <i>Typha latifolia</i> , great willowherb <i>Epilobium hirsutum</i> , common reed <i>Phragmites australis</i>
Hedgerows/ trees/ scrub	Crack willow <i>salix fragilis</i> , white poplar <i>Populus alba</i> , aspen <i>Populus tremula</i> , goat willow <i>Salix caprea</i> , sycamore <i>Acer pseudoplatanus</i> , silver birch <i>Betula pendula</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

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4.3.4 Fauna

Bats

The site has 1 low building with a flat pitched roof which has very low potential to support roosting bats.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could nest in areas of planted broadleaved woodland, marshy grassland, riparian vegetation and scattered trees from March to August when birds in the UK normally breed.

Incidental records

- Birds including house sparrow *Passer domesticus*, mallard *Anas platyrhynchos*, moorhen *Gallinula chloropus*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9678740864	Requires great crested newt survey
2	SJ9675640840	Requires reptile survey
3	SJ9685640813	Requires great crested newt survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Open water				x	
Planted broadleaved woodland				x	
Scattered trees					
Marshy grassland				x	
Species poor grassland					x
Overall site importance			x		
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by planted broadleaved woodland, domestic dwellings and farm buildings, species poor grasslands and FID 61 to the south, with a number of hedgerows connecting the site to the wider countryside.

The site consists of semi-improved species poor grazed grassland (38%) planted broadleaved woodland/ scattered trees (23%) consisting of white poplar, ash *Fraxinus excelsior*, goat willow, sycamore, aspen, willow *Salix species* and crack willow,

The 2 ponds appear to be fairly recently excavated with fairly poorly established riparian vegetation/ marshy grassland consisting mainly of common reedmace, great willowherb, yellow iris *Iris pseudacorus*, compact rush *Juncus articulatus*, soft rush and common reed.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats, badger and amphibians including great crested newt *Triturus cristatus*. Similarly the site could be used by reptiles for refuge and basking opportunities. Therefore the site mosaic as a whole, with good connectivity to the wider countryside and potential to support a number of protected species warrants the site being attributed regional ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

As great crested newts could breed within the 2 ponds and potentially be present on site, it is recommended that a full great crested newt survey is carried out. Additionally any refugia present on site should be removed by hand under watching brief of a suitably qualified great crested newt licensed ecologist.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site within terrestrial habitats and under refugia, due to the presence of the ponds, it is recommended that a full reptile survey is carried out and any refugia present are removed by hand under watching brief of a suitably qualified ecologist.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and vegetation is retained if the site is to be developed.

If trees and vegetation are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



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7. Conclusion

The site has good potential to support protected species due to the presence of 2 ponds and associated riparian habitat as well as adequate terrestrial habitat and potential refuges. The site is also well connected to more biodiverse habitats and the wider countryside. Therefore the site is considered to have regional ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey of the 2 ponds
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 225



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FID 225

1. Introduction

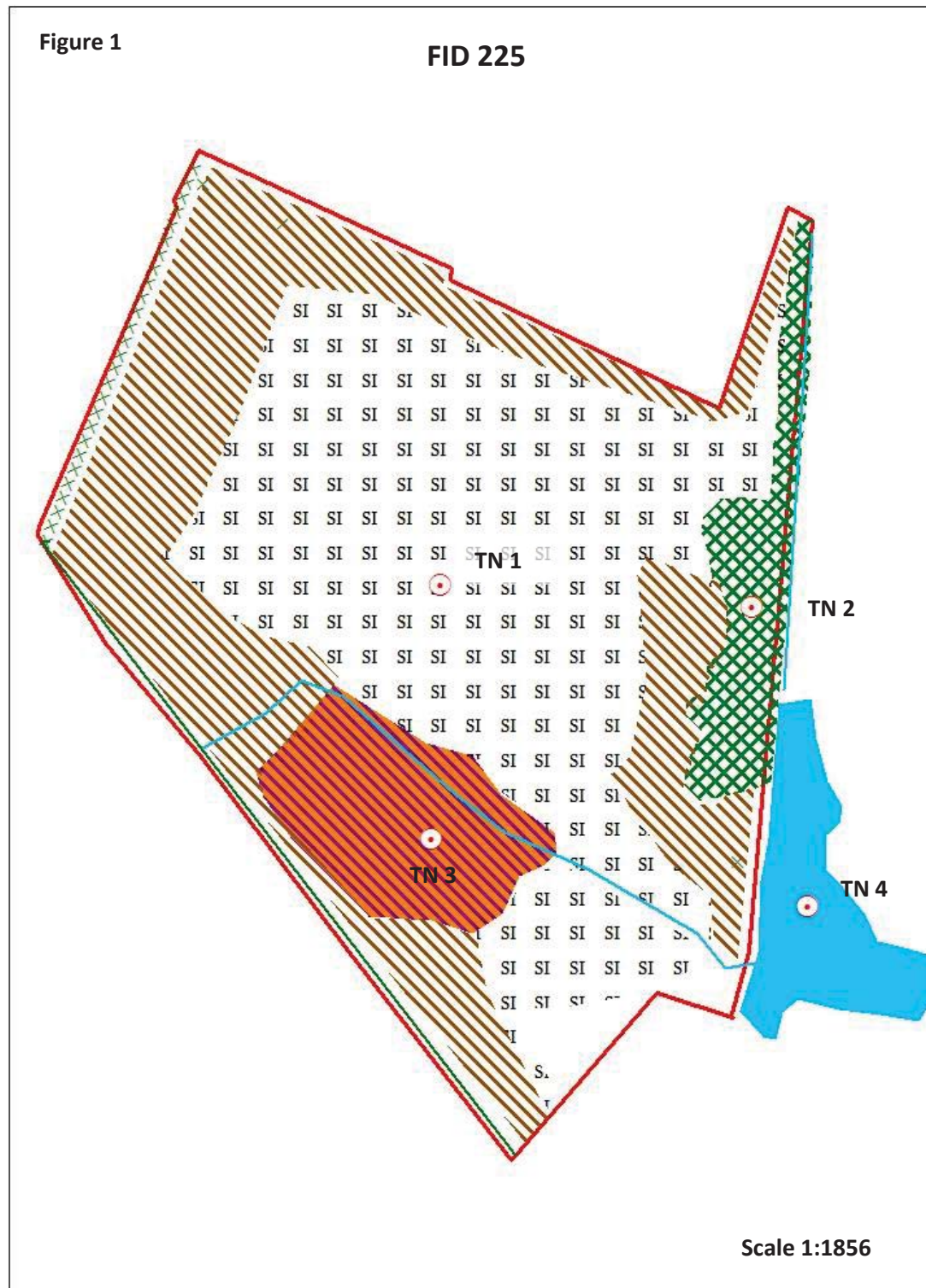
1.1 Background

Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates Ltd to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 225 O.S. Grid reference SJ9582240998.

FID 225 is located within Blythe Bridge village in the Staffordshire Moorlands District, surrounded by housing and cut off by a working railway line to the south.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 225 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.



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In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

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Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There was no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
BAS	Creswellford Crossing
BAS	Caverswall Castle (west of)
BAS	Blythe Bridge Woods

BAS - Biodiversity Alert Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Blood-vein
	Brindled Beauty
	Brown-spot Pinion
	Buff Ermine
	Centre-bared Sallow
	Cinnabar
	Common Pipistrelle
	Common Toad
	Deep Brown Dart
	Dot Moth
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European Water Vole
	Freshwater White-clawed Crayfish
	Ghost Moth
	Great Crested Newt
	Green-brindled Crescent
	Grey Dagger
	Insect – Beetle
	Large Wainscot
	Mouse Moth

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	Noctule Bat
	Northern Lapwing
	Pipistrelle
	Powdered Quaker
	Rosy Rustic
	Rustic
	Sallow
	Shaded Broad-bar
	Small Phoenix
	Small Square-spot
	Soprano Pipistrelle
	West European Hedgehog
	White Ermine
INV	False acacia
	Giant Hogweed
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Freshwater-White-clawed Crayfish
	Great Crested Newt
	Grass snake
	Noctule Bat
	Pipistrelle
	Polecat
	Soprano Pipistrelle
	Whiskered bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Running water
- Dense goat willow scrub
- Species poor hedgerows
- Tall ruderal vegetation
- Marshy grassland
- Semi-improved species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	0.94	49
TR	0.54	28
DS	0.12	6
MG	0.17	9
OTHER	0.15	8
TOTALS	1.92	100

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation, DS – Dense scrub, MG – Marshy Grassland

4.3.2. Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Tufted hair grass <i>Deschampsia cespitosa</i> , Yorkshire fog <i>Holcus lanatus</i> , common nettle <i>Urtica dioica</i> , soft rush <i>Juncus effusus</i> , common reed <i>Phragmites australis</i> , great willowherb <i>Epilobium hirsutum</i> , reed canary grass <i>Phalaris arundinacea</i> , cock's foot <i>Dactylis glomerata</i> , creeping thistle <i>Cirsium arvense</i>
Hedgerows/ trees/ scrub	Goat willow <i>Salix caprea</i> , bramble <i>Rubus fruticosus agg</i> , crack willow <i>Salix fragilis</i> , hawthorn <i>Crataegus monogyna</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was occasionally found during the walkover survey in various areas along the stream and tall ruderal vegetation to the east of the site.

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Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle and ragwort *Senecio jacobea* have been recorded within the tall ruderal vegetation and grassland sward.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

Incidental records

- Birds including magpie *Pica pica*, blackbird *Turdus merula*, blackcap *Sylvia atricapilla*, wren *Troglodytes troglodytes*, mallard *Anas platyrhynchos* Butterflies including speckled wood *Pararge aegeria*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9582240998	Tall semi-improved grassland - reptile survey
2	SJ9589040982	Scattered goat willow scrub
3	SJ9589840919	Tall marshy grassland - reptile survey
4	SJ9590340925	Pond – requires great crested newt survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Dense scrub				x	
Marshy grassland				x	
Running water				x	
Semi-improved species poor grassland				x	
Tall ruderal vegetation				x	
Species poor grassland				x	
Species poor hedgerow					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of each habitat in terms of their potential loss to the wider countryside.

The site is almost totally isolated from the wider countryside with domestic dwellings/ industrial warehouse surrounding all boundaries apart from the western boundary which is directly adjacent to a live railway line. The site is additionally located adjacent to a large pond that could support amphibians and reptiles.

The site mainly consists of species poor grassland (63%), although not florally diverse at the time of survey the mainly tufted hair grass, cock's foot and Yorkshire fog grassland certain species could have been missed due to natural seasonal vegetative die back. The remaining habitats form an intricate mosaic of wet habitats which are likely to support a fairly diverse ecosystem of birds, mammals, reptiles, amphibians and invertebrates.

The dense goat willow scrub is establishing itself within the site and is likely to form the climax vegetation in the near future.

The tall ruderal/ marshy grassland vegetation is significantly large enough to potentially support ground nesting birds and possibly foraging barn owl *Tyto alba*.

The site is therefore deemed to have a district value within the matrix despite the main area of the site being species poor grassland and is deemed to potentially qualify as an SBI.

Despite a number of European protected and UKBAP species being recorded within 2km it is unlikely that the site would support most of the species.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

The great crested newt is afforded strict protection under the Conservation of Habitats and Species Regulations, 2010 and the Wildlife & Countryside Act 1981 (as amended by the CRow Act 2000).

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Therefore as there is a pond within 500m it is recommended that a great crested newt survey is carried out according to 'Common Standards Monitoring Guidance' (JNCC 2004).

Reptiles and amphibians

If at all possible it is recommended that the whole site is not incorporated into development plans due to its intrinsic value and potential value to biodiversity within the area.

The great crested newt is afforded strict protection under the Conservation of Habitats and Species Regulations, 2010 and the Wildlife & Countryside Act 1981 (as amended by the CRow Act 2000).

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Therefore as there is a pond adjacent to the site it is recommended that a great crested newt survey is carried out according to 'Common Standards Monitoring Guidance' (JNCC 2004).

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the habitat mosaic to it is recommended a reptile survey is carried out according to guidelines set out in the 'Herpetofauna workers manual' (Gent and Gibson 1998).

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill,

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injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the dense scrub, vegetation and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

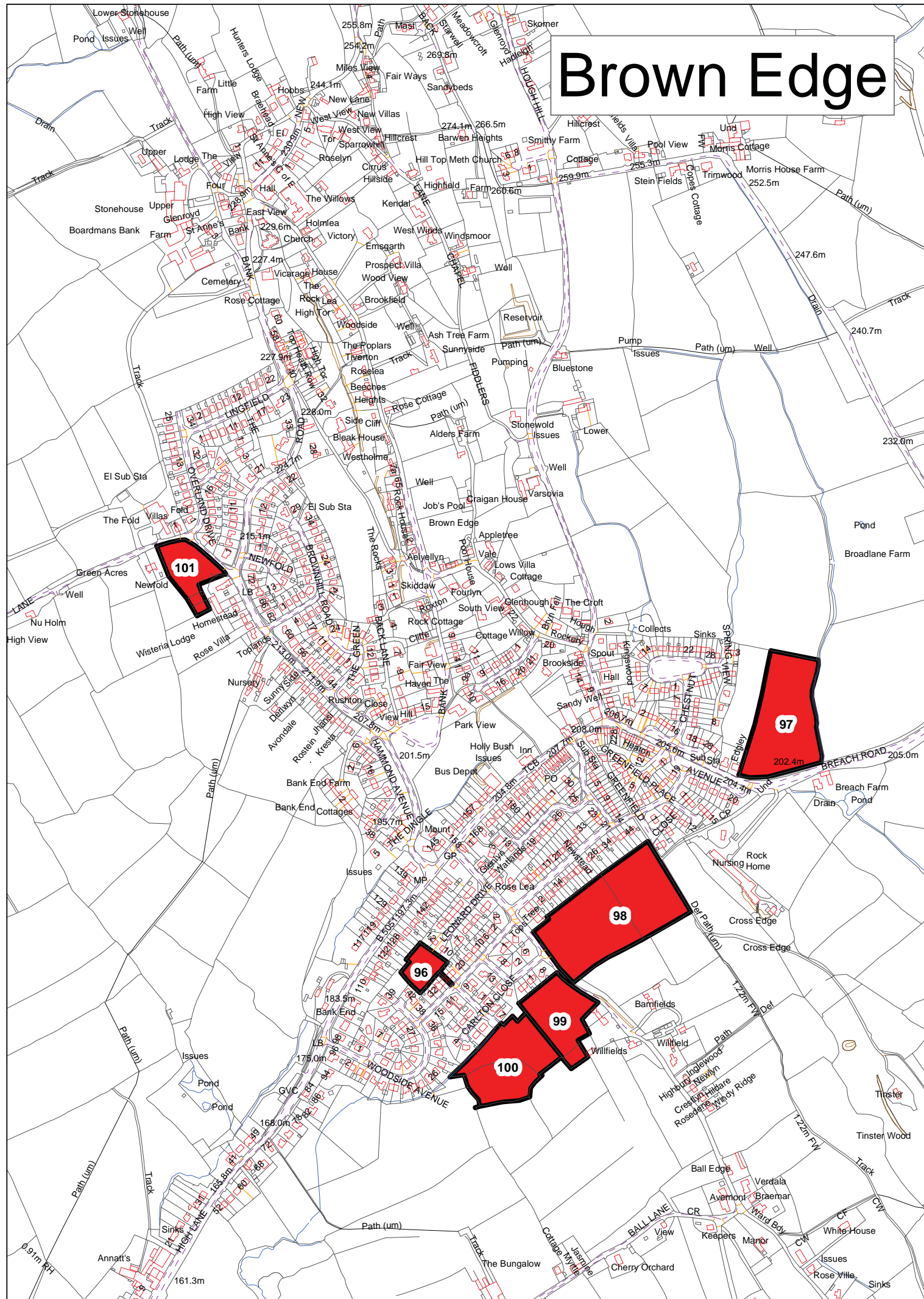
7. Conclusion

The site as a whole contains a fairly diverse mosaic of wet grassland, riparian habitat, unmanaged semi-improved grassland and pockets of willow scrub, adjacent to a large pond, which could potentially support populations of amphibians, reptiles, raptors, owls, ground nesting birds and foraging bats. It is also deemed that the site could potentially qualify as an SBI for its potential floral diversity.

The following surveys/ actions are recommended prior to any potential development works being carried out:

- Resurvey of whole site between June and August to fully assess the site's potential to become an SBI.
- Great crested newt survey on the adjacent pond
- Reptile survey
- Vegetation removal at the appropriate time of year

Brown Edge





FID 96



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FID 96

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 96 O.S grid reference SJ9074252967.

FID 96 is located within Brown Edge village in the Staffordshire Moorlands District, surrounded completely by housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 96 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Marshes Hill Common
AWI	Houghwood
AWI	Tinster Wood
AWI	Stoney Wood
BAS	Westfield Wood
BAS	Holehouse Farm
SBI	Stonehouse Drumble
SBI	Marshes Hill
SBI	Windy Croft
SBI	Tank Field
SBI	Postbridge farm (west of)
SBI	Tinster Wood
SBI	Houghwood
SBI	Greenway Hall Golf Course
SBI	Heakley Marshes
SBI	Ball Lane Wood
SBI	The Green, Baddeley
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Flowering Plant
	A True Fly
	Adder
	Barn Owl
	Barn Swallow

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	Blood vein
	Brown hare
	Brown long eared bat
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common snipe
	Common Starling
	Common Swift
	Common Toad
	Common whitethroat
	Corn Chamomile
	Dark barred twin spot carpet
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Eurasian Curlew
	Eurasian teal
	Eurasian woodcock
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Ghost moth
	Gipsy cuckoo bee
	Grass Snake
	Great Crested Newt
	Green Woodpecker
	Grey dagger
	Grey partridge
	Grey wagtail
	House Sparrow
	Knot grass
	Latticed heath
	Lesser Black-backed Gull

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	Lesser Redpoll
	Linnet
	Mallard
	Marsh stitchwort
	Marsh Tit
	Meadow pipit
	Northern Lapwing
	Pied flycatcher
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Ring ouzel
	Rosy minor
	Rosy rustic
	Sallow
	September Thorn
	Shaded broad bar
	Shrubby cinquefoil
	Sky lark
	Small heath
	Small phoenix
	Small square spot
	Song Thrush
	Spotted flycatcher
	Sword grass
	West European Hedgehog
	White tailed bumble bee
	White ermine
	Willow Tit
	Willow warbler
	Yellow wagtail
	Yellowhammer
INV	American Mink
	Giant Hogweed
	Indian Balsam
	Japanese Knotweed
	Japanese rose
	Montbretia
	Rhododendron
E/ UK PS	A Bat

	Adder
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Hazel dormouse
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Species poor hedgerows
- Scattered trees
- Tall ruderal vegetation
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.16	62
SI	0.07	27
OTHER	0.03	11
TOTALS	0.26	100

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation

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4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , tufted hair grass <i>Deschampsia cespitosa</i> ,
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , damson <i>Prunus domestica</i> ssp <i>institia</i> , leylandii <i>Cuprocypressus x leylandii</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* have been recorded within the tall ruderal vegetation.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9076152975	Scattered fruit tree saplings
2	SJ9071552949	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow					x
Scattered trees					x
Species poor hedgerows					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally surrounded by domestic dwellings and is completely isolated from the wider countryside. The habitats present on site are particularly common in the UK, have fairly low biodiversity value and therefore are deemed to have a low value within the matrix.

The site mainly consists of tall ruderal vegetation and species poor improved grassland (84%) with species including tufted hair grass, Yorkshire fog, white clover *Trifolium repens* and curled dock.

The species rich hedgerow consists of 5 species including hawthorn, blackthorn, elder, sycamore and ash, but is given a low value as it has very poor connectivity to other biodiverse habitats.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats (roost within 80m to the east).

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and particularly the potentially species rich hedgerow are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly low biodiversity value overall in terms of area, surrounded by domestic dwellings with poor connectivity to the wider countryside and therefore is deemed as having low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 97



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FID 97

1. Introduction

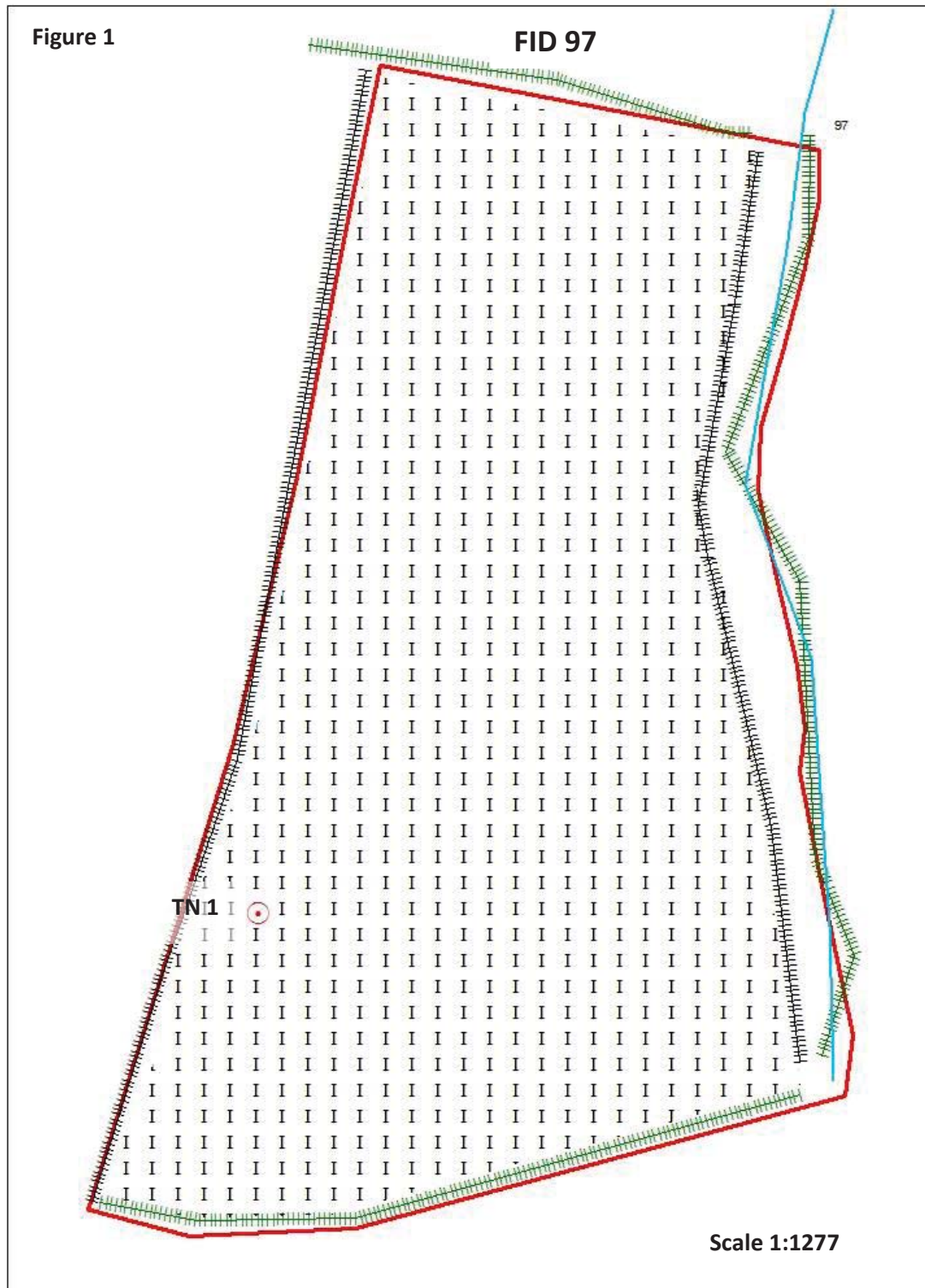
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 97 O.S grid reference SJ9126353332.

FID 97 is located east of Brown Edge village in the Staffordshire Moorlands District, surrounded by farm buildings and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 97 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Marshes Hill Common
AWI	Houghwood
AWI	Tinster Wood
AWI	Stoney Wood
BAS	Stanley Pool
BAS	Westfield Wood
BAS	Holehouse Farm
SBI	Stonehouse Drumble
SBI	Marshes Hill
SBI	Windy Croft
SBI	Tank Field
SBI	Postbridge farm (west of)
SBI	Tinster Wood
SBI	Houghwood
SBI	Greenway Hall Golf Course
SBI	Heakley Marshes
SBI	Ball Lane Wood
SBI	The Green, Baddeley
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Flowering Plant
	A True Fly
	Adder
	Barn Owl

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	Barn Swallow
	Brown hare
	Brown long eared bat
	Brown trout
	Buff tailed bumble bee
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common snipe
	Common Starling
	Common Swift
	Common Toad
	Common whitethroat
	Corn Chamomile
	Dunnock
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Gipsy cuckoo bee
	Grass Snake
	Great Crested Newt
	Green Woodpecker
	Grey partridge
	Grey wagtail
	Hazel dormouse
	House Sparrow
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh stitchwort
	Marsh Tit
	Meadow pipit
	Noctule bat

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	Northern Lapwing
	Pied flycatcher
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Ring ouzel
	September Thorn
	Shaded broad bar
	Shrubby cinquefoil
	Sky lark
	Small heath
	Song Thrush
	Spotted flycatcher
	West European Hedgehog
	White tailed bumble bee
	Willow Tit
	Willow warbler
	Yellow wagtail
	Yellowhammer
INV	American Mink
	Giant Hogweed
	Indian Balsam
	Japanese Knotweed
	Japanese rose
	Montbretia
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Grass Snake

	Great Crested Newt
	Hazel dormouse
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Redwing

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	1.28	87
OTHER	0.19	13
TOTALS	1.48	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , white clover <i>Trifolium repens</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , alder <i>Alnus glutinosa</i> , field maple <i>Acer campestre</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9122753291	Small wet depression with occasional soft rush <i>Juncus effusus</i>

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally surrounded by species poor grassland and scattered trees, domestic dwellings to the south and Breach road to the south which is fairly well connected to the north by hedgerows and a wet ditch to the wider countryside.

The wet ditch is very shaded with species poor flora, with the remaining habitats present on site particularly common in the UK, have fairly low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly low biodiversity value overall in terms of area, although it is well connected to the wider countryside and is deemed to have a low ecological value overall.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 98



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FID 98

1. Introduction

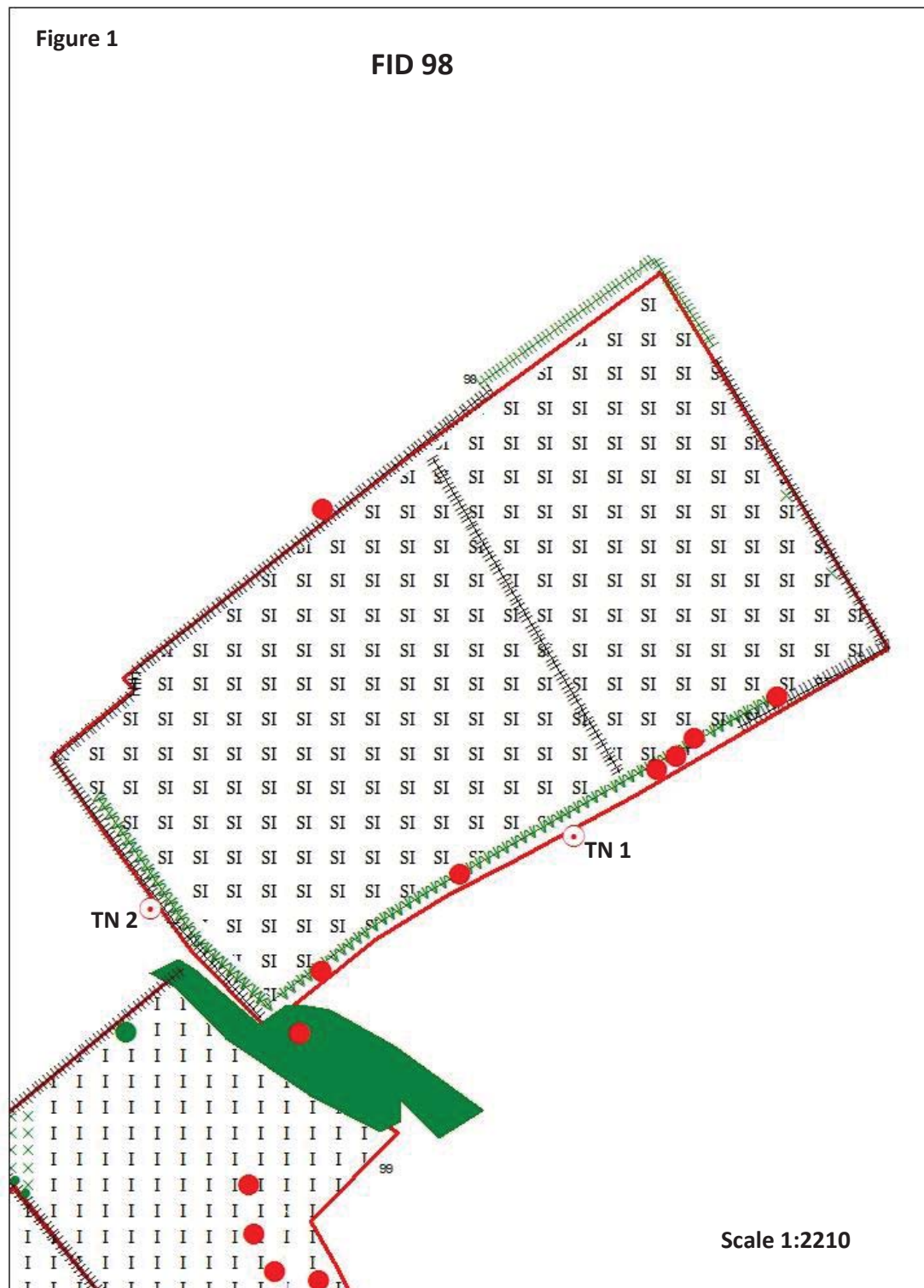
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 98 O.S grid reference SJ9100853049.

FID 98 is located within Brown Edge village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 98 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

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In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Marshes Hill Common
AWI	Houghwood
AWI	Tinster Wood
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BAS	Stanley Pool
BAS	Westfield Wood
BAS	Holehouse Farm
SBI	Stonehouse Drumble
SBI	Marshes Hill
SBI	Windy Croft
SBI	Tank Field
SBI	Postbridge farm (west of)
SBI	Tinster Wood
SBI	Houghwood
SBI	Greenway Hall Golf Course
SBI	Heakley Marshes
SBI	Ball Lane Wood
SBI	The Green, Baddeley
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Flowering Plant
	A True Fly
	Adder
	Barn Owl

Lockwood Hall Associates Ltd

	Barn Swallow
	Brown hare
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	Buff tailed bumble bee
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common snipe
	Common Starling
	Common Swift
	Common Toad
	Common whitethroat
	Corn Chamomile
	Dunnock
	Eurasian Curlew
	Eurasian teal
	Eurasian woodcock
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Gipsy cuckoo bee
	Grass Snake
	Great Crested Newt
	Green Woodpecker
	Grey partridge
	Grey wagtail
	Hazel dormouse
	House Sparrow
	Knot grass
	Latticed heath
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh stitchwort
	Marsh Tit
	Meadow pipit
	Northern Lapwing

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	Pied flycatcher
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Ring ouzel
	September Thorn
	Shrubby cinquefoil
	Sky lark
	Small heath
	Song Thrush
	Spotted flycatcher
	West European Hedgehog
	White tailed bumble bee
	White ermine
	Willow Tit
	Willow warbler
	Yellow wagtail
	Yellowhammer
INV	American Mink
	Giant Hogweed
	Indian Balsam
	Japanese Knotweed
	Japanese rose
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	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Grass Snake
	Great Crested Newt

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	Hazel dormouse
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Species poor hedgerows
- Scattered trees
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
SI	1.99	90	
OTHER	0.21	10	
BPT			8
TOTALS	2.20	100	8

SI – Semi improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common knapweed <i>Centaurea nigra</i> , sweet vernal grass <i>Anthoxanthum odoratum</i> , red fescue <i>Festuca rubra</i> , tufted hair grass <i>Deschampsia cespitosa</i> , meadow foxtail <i>Alopecurus pratensis</i> , rosebay willowherb <i>Chamerion angustifolium</i>
Hedgerows/ trees/ scrub	Holly <i>Ilex aquifolium</i> , Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , hazel <i>Corylus avellana</i>

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4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* have been recorded within the tall ruderal vegetation.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9103952996	Requires hedgerow survey
2	SJ9093452974	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Scattered trees				x	
Species poor grassland				x	
Species poor hedgerows				x	
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally surrounded by domestic dwellings to the north and west, species poor grassland to the south and good connectivity to semi-natural broadleaved woodland to the south west.

The site mainly consists of tall semi-improved relatively species poor grassland (90%) with species including tufted hair grass, Yorkshire fog, common bent *Agrostis stolonifera* grasses with occasional more florally rich areas of bird's foot trefoil *Lotus corniculatus*, common knapweed, sweet vernal grass, and occasionally tall fescue *Festuca arundinacea*. The species rich hedgerow consists of 6 species including hawthorn, blackthorn *Prunus spinosa*, elder *Sambucus nigra*, holly and ash, and is given at least district value as it has good connectivity to other biodiverse habitats and a large number of mature trees with bat potential.

Numerous European and UK protected species have been recorded within 2km and the site could support some of these. Barn owl has been recorded on site and a bat roost has been located <100m away to the south west. The site could also potentially support foraging bats, badger other owls and raptors as well as reptiles.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 8 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Reptile survey

Reptiles 'tins' were encountered during the survey, and were searched without finding any individuals. The site does have some potential to support reptiles with this tall occasionally tussocky grassland favouring species like common lizard *Lacerta vivipara*, and potentially grass snake *Natrix natrix* as open water is located nearby.

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard, adder *Vipera berus* and grass snake, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of ponds to the north it is recommended that a full reptile survey is carried out

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and particularly the potentially species rich hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly low to medium biodiversity value overall in terms of area. It is surrounded by domestic dwellings and species poor grassland with fairly good connectivity to the wider countryside, therefore is deemed to have at least district importance due to the presence of some areas of floral diversity and the assemblage of mature trees of which 8 are deemed to have potential to support roosting bats.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the trees with bat roosting potential
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 99



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FID 99

1. Introduction

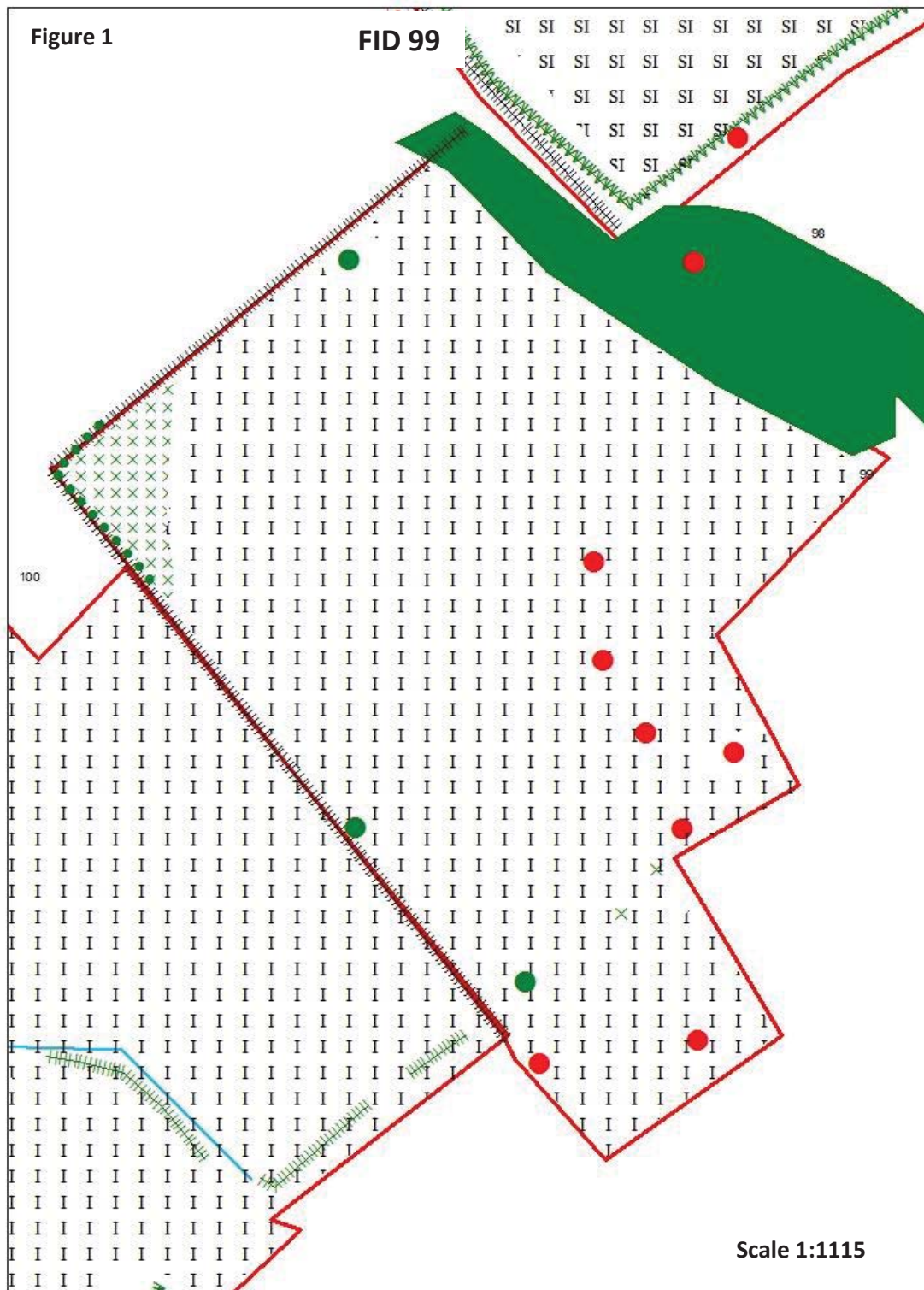
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 99 O.S grid reference SJ9093752909.

FID 99 is located within Brown Edge village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 99 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Marshes Hill Common
AWI	Houghwood
AWI	Tinster Wood
AWI	Stoney Wood
BAS	Stanley Pool
BAS	Westfield Wood
BAS	Holehouse Farm
SBI	Stonehouse Drumble
SBI	Marshes Hill
SBI	Windy Croft
SBI	Tank Field
SBI	Postbridge farm (west of)
SBI	Tinster Wood
SBI	Houghwood
SBI	Greenway Hall Golf Course
SBI	Heakley Marshes
SBI	Ball Lane Wood
SBI	The Green, Baddeley
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Flowering Plant
	A True Fly
	Adder
	Barn Owl

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	Barn Swallow
	Brown hare
	Brown long eared bat
	Buff tailed bumble bee
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common snipe
	Common Starling
	Common Swift
	Common Toad
	Common whitethroat
	Corn Chamomile
	Dunnock
	Eurasian Curlew
	Eurasian teal
	Eurasian woodcock
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Gipsy cuckoo bee
	Grass Snake
	Great Crested Newt
	Green Woodpecker
	Grey partridge
	Grey wagtail
	Hazel dormouse
	House Sparrow
	Knot grass
	Latticed heath
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh stitchwort
	Marsh Tit
	Meadow pipit
	Northern Lapwing

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	Pied flycatcher
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Ring ouzel
	September Thorn
	Shrubby cinquefoil
	Sky lark
	Small heath
	Song Thrush
	Spotted flycatcher
	West European Hedgehog
	White tailed bumble bee
	White ermine
	Willow Tit
	Willow warbler
	Yellow wagtail
	Yellowhammer
INV	American Mink
	Giant Hogweed
	Indian Balsam
	Japanese Knotweed
	Japanese rose
	Montbretia
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Grass Snake
	Great Crested Newt

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	Hazel dormouse
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Semi-natural broadleaved woodland
- Scattered trees
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.64	82	
BW	0.02	3	
OTHER	0.12	15	
BPT			7
TOTALS	0.79	100	7

I – Improved grassland, BW – Broadleaved Woodland, BPT – Bat Potential Trees,

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , rosebay willowherb <i>Chamerion angustifolium</i> , perennial rye grass <i>Lolium perenne</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i> , hazel <i>Corylus avellana</i> , bramble <i>Rubus fruticosus</i> agg, snowberry <i>Symphoricarpos albus</i>



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4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and woodland from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Broadleaved woodland				x	
Scattered scrub					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally surrounded by domestic dwellings to the north and west, species poor grassland to the south and good connectivity to semi-natural broadleaved woodland to the north east.

The site mainly consists of species poor improved grassland with 7 mature trees deemed to have potential to support roosting bats including pedunculate oak *Quercus robur* and unusually mature silver birch *Betula pendula*. Therefore the site is given at least district ecological importance.

Numerous European and UK protected species have been recorded within 2km and the site could support species including roosting/ foraging bats (roost recorded within 100m) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 7 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees are retained if the site is to be developed.

If trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly low biodiversity value overall in terms of area, surrounded by domestic dwellings and species poor grassland with fairly good connectivity to the wider countryside. However the presence of mature trees especially with 7 of them having the potential to support roosting bats qualifies the site to have at least district importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the 7 trees with bat roosting potential
- Vegetation removal at the appropriate time of year



FID 100



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FID 100

1. Introduction

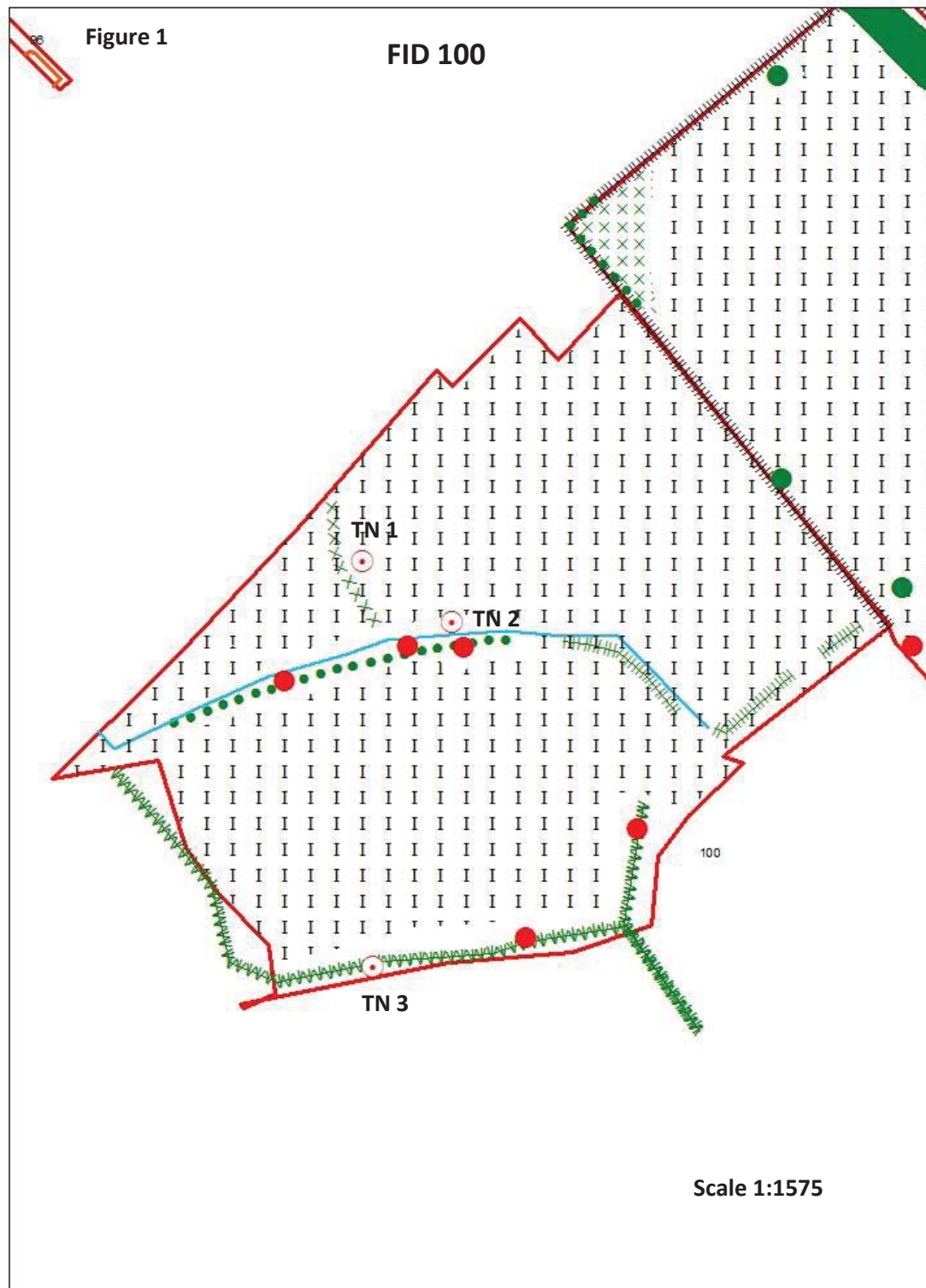
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 100 O.S grid reference SJ9087352839.

FID 100 is located south of Brown Edge village in the Staffordshire Moorlands District, surrounded by housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 100 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Marshes Hill Common
AWI	Houghwood
AWI	Tinster Wood
AWI	Stoney Wood
BAS	Stanley Pool
BAS	Westfield Wood
BAS	Holehouse Farm
SBI	Stonehouse Drumble
SBI	Marshes Hill
SBI	Windy Croft
SBI	Tank Field
SBI	Postbridge farm (west of)
SBI	Tinster Wood
SBI	Houghwood
SBI	Greenway Hall Golf Course
SBI	Heakley Marshes
SBI	Ball Lane Wood
SBI	The Green, Baddeley
SBI	Baddeley Edge Ridge
RIGS	Houghwood
RIGS	Baddeley Edge Ridge

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance, RIGS – Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Flowering Plant
	A True Fly
	Adder
	Barn Owl

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	Barn Swallow
	Brown hare
	Brown long eared bat
	Buff tailed bumble bee
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common snipe
	Common Starling
	Common Swift
	Common Toad
	Common whitethroat
	Corn Chamomile
	Dunnock
	Eurasian Curlew
	Eurasian teal
	Eurasian woodcock
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Gipsy cuckoo bee
	Grass Snake
	Great Crested Newt
	Green Woodpecker
	Grey partridge
	Grey wagtail
	Hazel dormouse
	House Sparrow
	Knot grass
	Latticed heath
	Lesser Black-backed Gull
	Lesser Redpoll
	Linnet
	Mallard
	Marsh stitchwort
	Marsh Tit
	Meadow pipit
	Northern Lapwing

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	Pied flycatcher
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Ring ouzel
	September Thorn
	Shrubby cinquefoil
	Sky lark
	Small heath
	Song Thrush
	Spotted flycatcher
	West European Hedgehog
	White tailed bumble bee
	White ermine
	Willow Tit
	Willow warbler
	Yellow wagtail
	Yellowhammer
INV	American Mink
	Giant Hogweed
	Indian Balsam
	Japanese Knotweed
	Japanese rose
	Montbretia
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	European otter
	European Water Vole
	Ferret
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Grass Snake
	Great Crested Newt

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	Hazel dormouse
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerows
- Wet ditch
- Species poor hedgerows
- Scattered scrub
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.02	88	
OTHER	0.14	12	
BPT			5
TOTALS	1.16	100	5

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , great willowherb <i>Epilobium hirsutum</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, pedunculate oak <i>Quercus robur</i> , holly <i>Ilex aquifolium</i> , hazel <i>Corylus avellana</i>

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4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees, hedgerows, dense scrub from March to August when birds in the UK normally breed.

Incidental records

- Birds including magpie *Pica pica*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9084252845	Scattered scrub
2	SJ9085952834	Shallow stream
3	SJ9083752770	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerows				x	
Wet ditch					x
Scattered scrub					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by domestic dwellings to the north and species poor grassland, as well as being fairly well connected to other habitats by a number of hedgerows.

The site mainly consists of species poor grassland (88%), dominated by species such as perennial rye grass and is grazed by cows. There are 5 scattered ash and pedunculate oak trees with bat roosting potential, of which 2 form part of a species rich hedgerow with hazel, holly and hawthorn and is hence given at least a district ecological importance. The shallow wet ditch forms part of the sites mosaic but is not considered an integral part due to its limited biodiversity.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats (roost recorded within 60m to the north) and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 5 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees and the species rich hedgerows are retained if the site is to be developed to preserve some biodiversity within the area.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site itself has 5 trees with bat potential, species rich hedgerows, and tall ruderal vegetation which are connected to a series of other hedgerows and habitats, that forms an important potentially biodiverse mosaic and therefore warrants being assigned at least a district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 101



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FID 101

1. Introduction

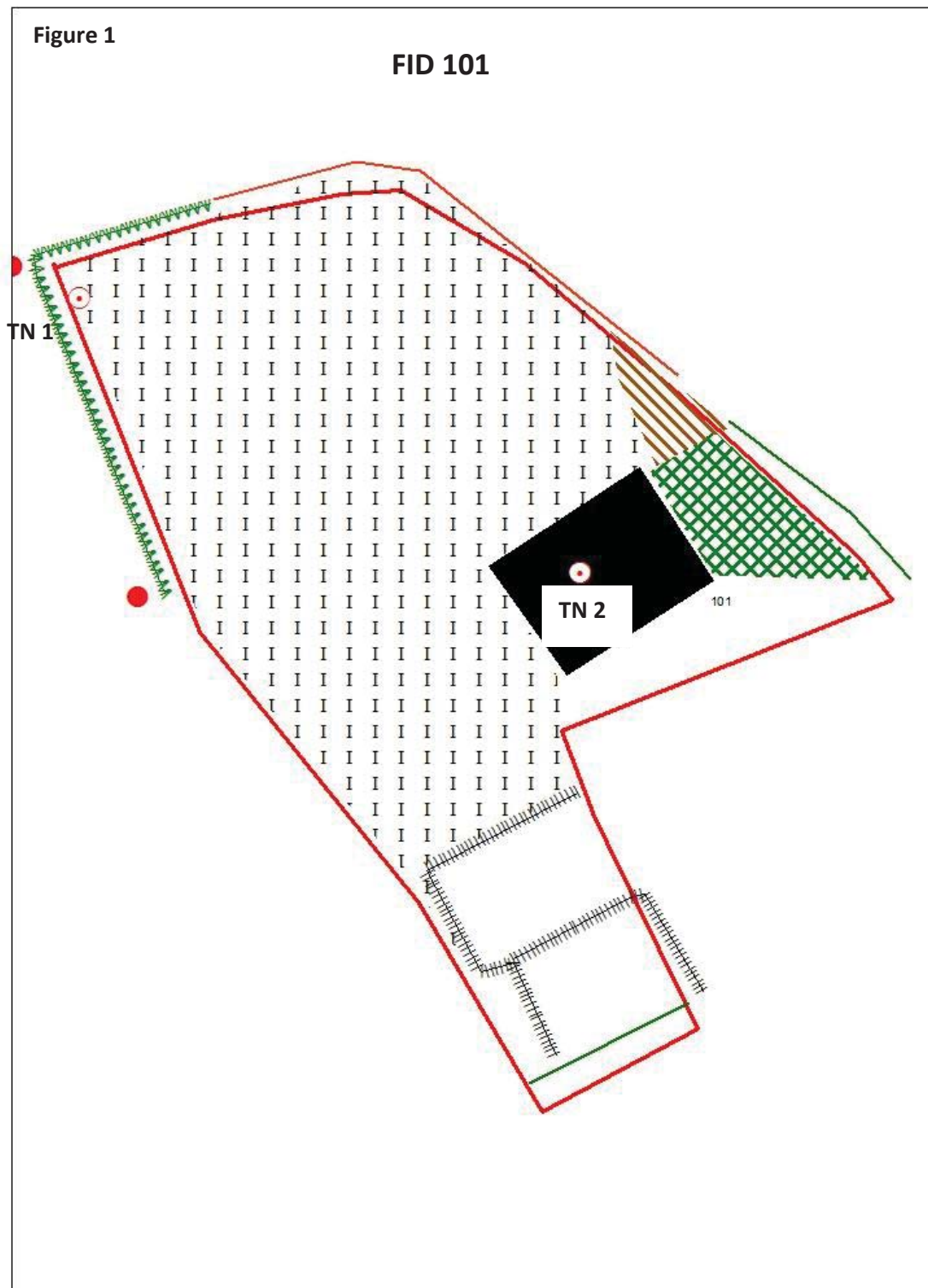
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 101 O.S grid reference SJ9039453552.

FID 101 is located west of Brown Edge village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 101 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Marshes Hill Common
LNR	Whitfield Valley
AWI	Hollin wood
AWI	Greenway Wood, Plankhollow Wood
AWI/ BAS	Dallows Wood
AWI	Tinster Wood
AWI	Stoney Wood
BAS	Rushy Moor Wood
BAS	Westfield Wood
BAS	Holehouse Farm
SBI	Stonehouse Drumble
SBI	Marshes Hill
SBI	Tank Field
SBI	Tinster Wood
SBI	Heakley Marshes
SBI	Ball Lane Wood
SBI	The Green, Baddeley

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A Flowering Plant
	A True Fly
	Adder
	Barn Owl
	Barn Swallow
	Blood vein
	Brown hare
	Brown long eared bat
	Buff ermine

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	Centre barred sallow
	Cinnabar
	Common Bullfinch
	Common grasshopper warbler
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common snipe
	Common Starling
	Common Swift
	Common Toad
	Common whitethroat
	Corn Chamomile
	Dark barred twin spot carpet
	Dingy skipper
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Eurasian Curlew
	Eurasian teal
	Eurasian woodcock
	European otter
	European Water Vole
	Field cuckoo bee
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Ghost moth
	Gipsy cuckoo bee
	Grass Snake
	Great Crested Newt
	Green brindled crescent
	Green Woodpecker
	Grey dagger
	Grey partridge
	Grey wagtail
	Hazel dormouse
	House Sparrow
	Knot grass
	Latticed heath
	Linnet
	Mallard

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	Marsh stitchwort
	Meadow pipit
	Mistle thrush
	Noctule bat
	Northern Lapwing
	Northern wheatear
	Pied flycatcher
	Pipistrelle
	Polecat
	Reed Bunting
	Ring ouzel
	Rosy minor
	Rosy rustic
	Rustic
	Sallow
	September Thorn
	Shaded broad bar
	Shrubby cinquefoil
	Sky lark
	Small heath
	Small phoenix
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Sword grass
	West European Hedgehog
	White letter hairstreak
	White tailed bumble bee
	White ermine
	Willow Tit
	Willow warbler
	Yellow wagtail
	Yellowhammer
INV	American Mink
	Giant Hogweed
	Chinese muntjac
	Greater Canada goose
	Indian Balsam
	Japanese Knotweed
	Japanese rose

	Marsh frog
	Montbretia
	Rhododendron
E/ UK PS	A Bat
	Adder
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Fieldfare
	Freshwater Whited-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Hazel dormouse
	Noctule bat
	Pipistrelle
	Pipistrelle Bat Species
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building
- Scattered trees
- Species rich hedgerows
- Species poor hedgerows
- Tall ruderal vegetation
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.35	67	
DS	0.02	4	
TR	0.01	2	
OTHER	0.14	27	
BPT			2
TOTALS	0.52	100	2

TR- Tall ruderal vegetation, DS – Dense scrub, I – Improved grassland, BPT – Bat Potential Trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , ash <i>Fraxinus excelsior</i> , poplar <i>Populus sp</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense*, curled dock *Rumex crispus* and ragwort *Senecio jacobea* were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees, hedgerows and dense scrub from March to August when birds in the UK normally breed.

Bats

The building on site is an outbuilding with a corrugated roof that is deemed to have low potential to support roosting bats.



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9036053566	Hedgerow survey required
2	SJ9042153535	Building, no bat survey required

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerows				x	
Species poor hedgerow					x
Tall ruderal vegetation					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site mainly consists of species poor improved grassland (67%). The species rich hedgerows contain 2 ash trees with bat roosting potential and contain 4 other species including hawthorn, holly, poplar and elder. Therefore the site has been attributed at least a district ecological importance. The remaining habitats such as the goat willow scrub are species poor and common within the local area and the UK as a whole.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 2 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

If at all possible it is recommended that as many trees and especially the species rich hedgerow be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

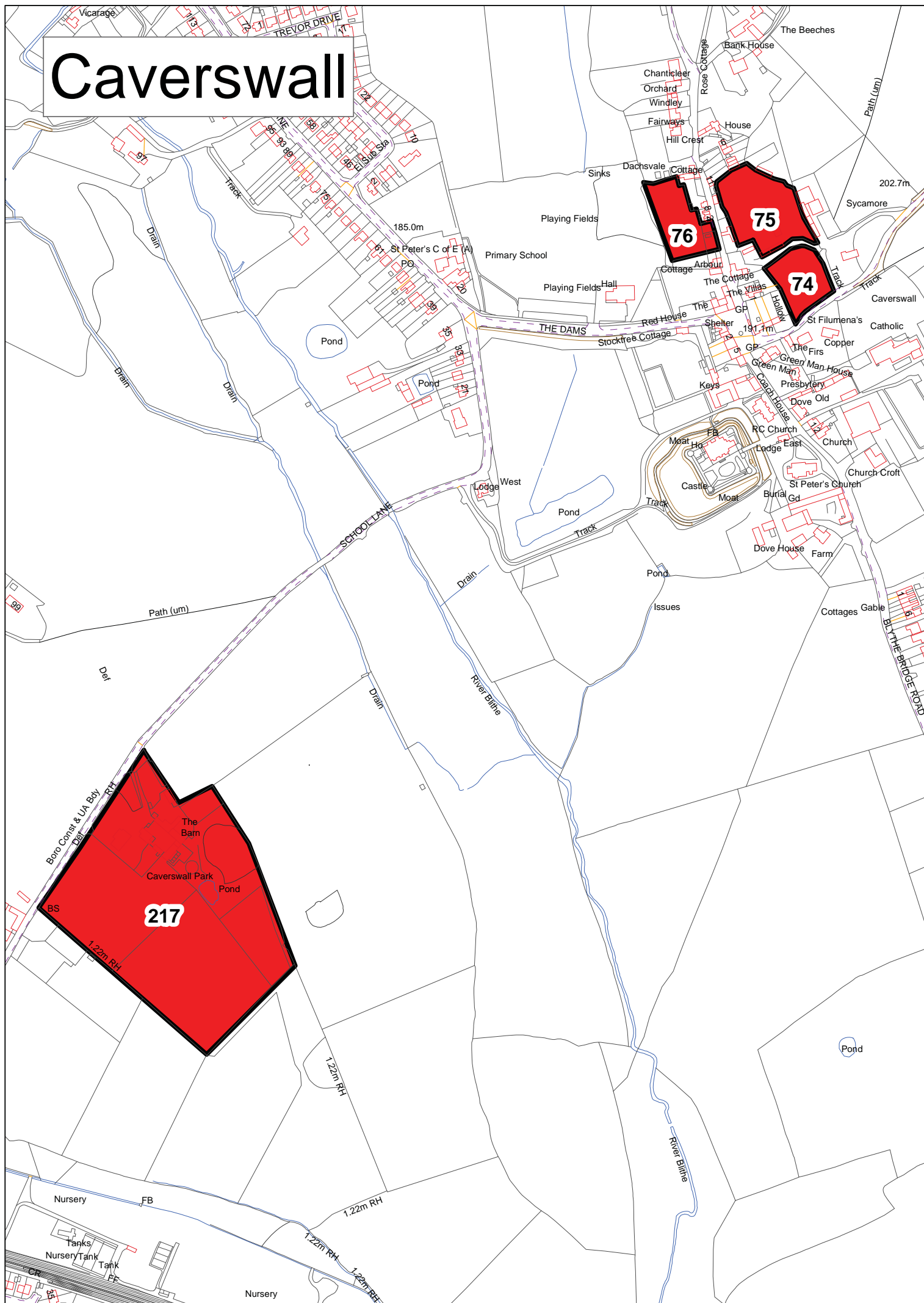
7. Conclusion

The site itself has 2 trees with bat potential, and species rich hedgerows which form the main biodiversity interest and therefore the site has been deemed to have at least district importance, although is fairly poorly connected to other biodiverse habitats within the locality.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Vegetation removal at the appropriate time of year

Caverswall





FID 74



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FID 74

1. Introduction

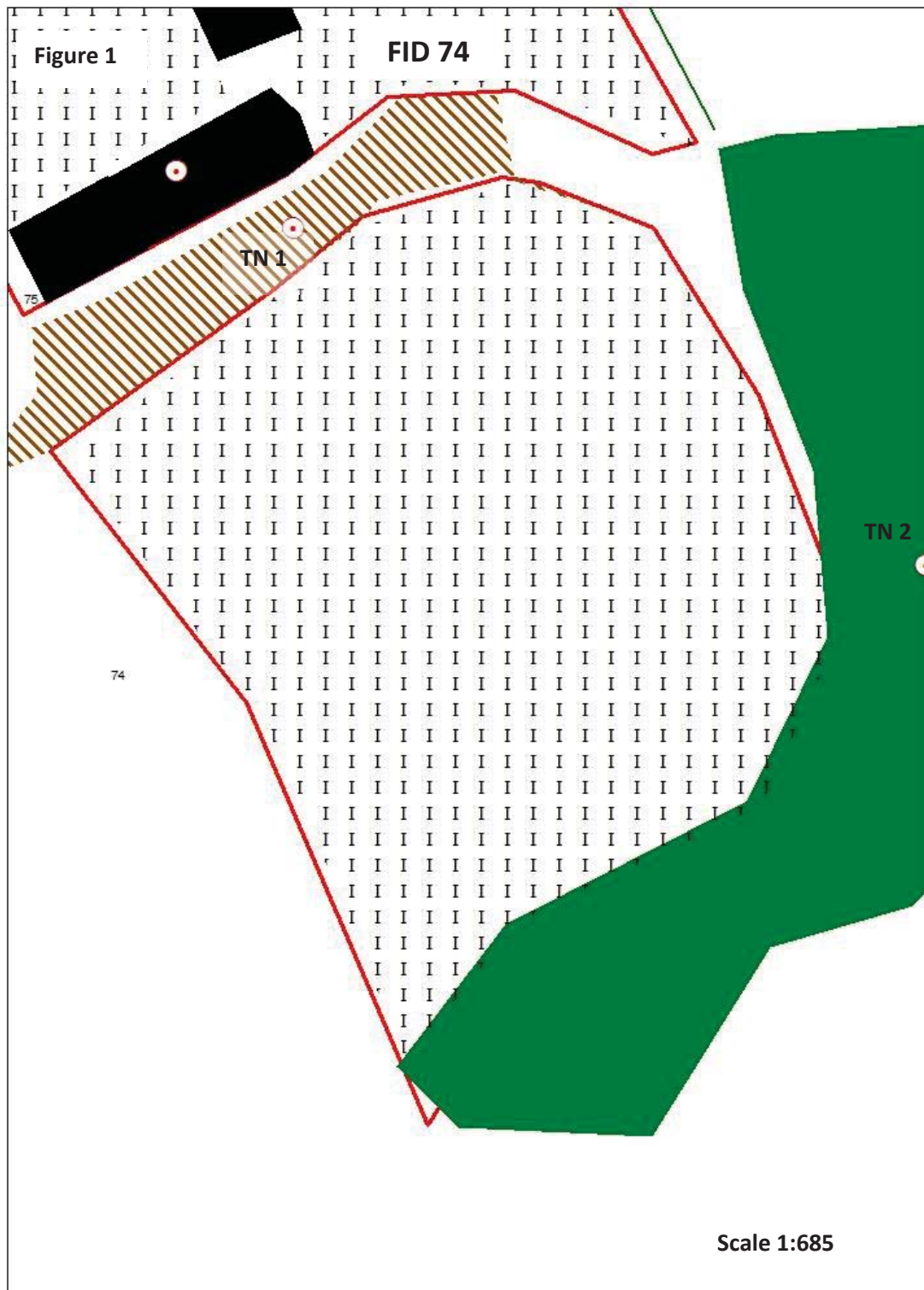
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 74 O.S grid reference SJ9516542982.

FID 74 is located to the east of Caverswall village in the Staffordshire Moorlands District, and is surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 74 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Weston
AWI	Stansmore Wood
BAS	Cresswellford Crossing
BAS	Blythe Bridge Woods
BAS	Caverswall Castle (west of)
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Creswell's Piece
SBI	Weston Sprink

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Autumnal Rustic
	Barn Owl
	Barn swallow
	Beaded Chestnut
	Blood-vein
	Brindled Beauty
	Broom Moth
	Brown-spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common Kestrel
	Common Kingfisher
	Common Snipe

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	Corn spurrey
	Dark-barred Twin-spot Carpet
	Dark Brocade
	Dark Spinach
	Deep Brown Dart
	Dingy skipper
	Dot Moth
	Double Dart
	Dusky-lemon Sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	Early bumble bee
	Eurasian woodcock
	European water vole
	Feathered Gothic
	fieldfare
	Figure Of Eight
	Freshwater white clawed crayfish
	Garden Dart
	Garden Tiger
	Ghost Moth
	Grass Snake
	Green-brindled Crescent
	Green Woodpecker
	Grey Dagger
	Heath Rustic
	Hedge Rustic
	House martin
	House sparrow
	Knot Grass
	Large Wainscot
	Latticed Heath
	lichen
	Mallard
	Minor Shoulder Knot
	Monk's-rhubarb
	Mottled rustic
	Mouse Moth
	Noctule bat
	Northern lapwing
	Oak Hook-tip

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	Oak Lutestring
	Oblique Carpet
	Orache Moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Shrubby cinquefoil
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Spinach
	Streak
	Tall Hawkweed
	V-moth
	White-line Dart
	White Ermine
	Wild pansy
	Willow warbler
	yellowhammer
INV	Curly waterweed
	False acacia
	Giant hogweed
	Japanese rose
	Montbretia
	New Zealand pigmyweed
	Rhododendron
	Russian vine
E/ UK PS	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher

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	Common pipistrelle
	Eurasian badger
	European water vole
	Fieldfare
	Freshwater white clawed crayfish
	Grass Snake
	Noctule bat
	Pipistrelle
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Broadleaved woodland
- Scattered trees
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.27	90
BW	0.02	7
OTHER	0.01	3
TOTALS	0.30	100

I – Improved grassland, BW – Broadleaved woodland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , Perennial rye grass <i>Lolium perenne</i> , crested dog's tail <i>Cynosurus cristatus</i> , curled dock <i>Rumex crispus</i> , common ragwort <i>Senecio jacobea</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , sycamore <i>Acer pseudoplatanus</i> , holly <i>Ilex aquifolium</i> , Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including curled dock, broadleaved dock *Rumex obtusifolius* and common ragwort have been recorded within the grassland sward.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of broadleaved woodland and scattered trees from March to August when birds in the UK normally breed, and barn owl could potentially nest in the outbuildings and stables.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9515043007	Tall ruderal vegetation and scrub forming a buffer between sites
2	SJ9519742995	Small broadleaved woodland

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Broadleaved woodland				x	
Scattered trees					x
Species poor amenity grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site consists mainly of species poor improved grassland with typical associated floral species such as Yorkshire fog, cock's foot and crested dog's tail grasses and herbs including ribwort plantain *Plantago lanceolata*. The area of broadleaved woodland forms the southern and eastern boundaries that are well connected to further broadleaved woodland strips and hedgerows. Domestic dwellings exist to the west and FID75 to the north.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

If at all possible it is recommended that as many trees are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and vegetation are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The majority of the site contains fairly species poor habitats although they are well connected to the wider countryside they have been deemed to have low ecological importance overall.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 75



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FID 75

1. Introduction

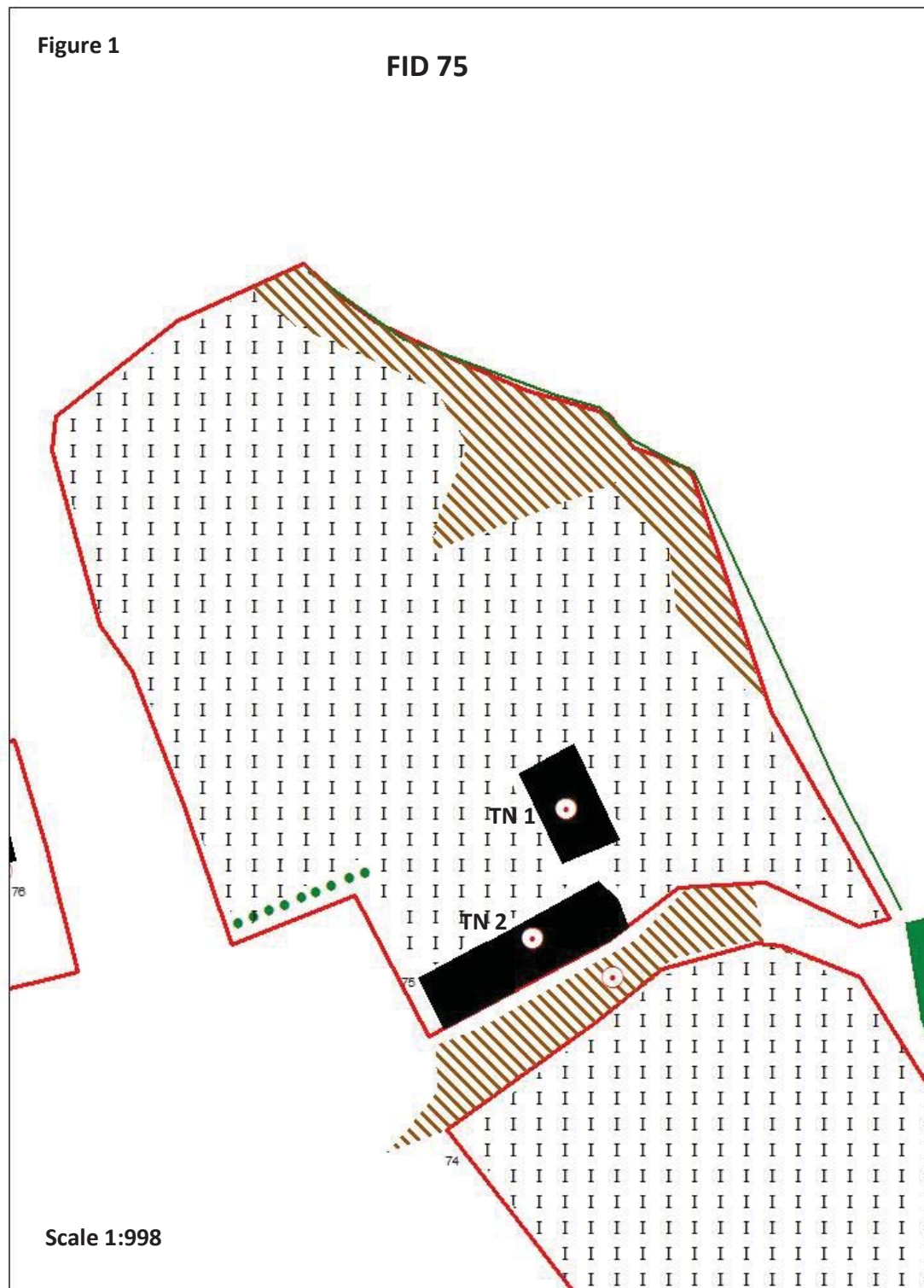
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 75 O.S grid reference SJ9512843057.

FID 75 is located in Caverswall village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 75 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Weston
AWI	Stansmore Wood
BAS	Cresswellford Crossing
BAS	Blythe Bridge Woods
BAS	Caverswall Castle (west of)
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Creswell's Piece
SBI	Weston Sprink

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Autumnal Rustic
	Barn Owl
	Barn swallow
	Beaded Chestnut
	Blood-vein
	Brindled Beauty
	Broom Moth
	Brown-spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common Kestrel
	Common Kingfisher
	Common Snipe

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	Corn spurrey
	Dark-barred Twin-spot Carpet
	Dark Brocade
	Dark Spinach
	Deep Brown Dart
	Dingy skipper
	Dot Moth
	Double Dart
	Dusky-lemon Sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	Early bumble bee
	Eurasian woodcock
	European water vole
	Feathered Gothic
	fieldfare
	Figure Of Eight
	Freshwater white clawed crayfish
	Garden Dart
	Garden Tiger
	Ghost Moth
	Grass Snake
	Green-brindled Crescent
	Green Woodpecker
	Grey Dagger
	Heath Rustic
	Hedge Rustic
	House martin
	House sparrow
	Knot Grass
	Large Wainscot
	Latticed Heath
	lichen
	Mallard
	Minor Shoulder Knot
	Monk's-rhubarb
	Mottled rustic
	Mouse Moth
	Noctule bat
	Northern lapwing
	Oak Hook-tip

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	Oak Lutestring
	Oblique Carpet
	Orache Moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
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	Shrubby cinquefoil
	Sky Lark
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	Spinach
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	Tall Hawkweed
	V-moth
	White-line Dart
	White Ermine
	Wild pansy
	Willow warbler
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INV	Curly waterweed
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	New Zealand pigmyweed
	Rhododendron
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	Bluebell
	Brown Long-eared Bat
	Common Kingfisher

	Common pipistrelle
	Eurasian badger
	European water vole
	Fieldfare
	Freshwater white clawed crayfish
	Grass Snake
	Noctule bat
	Pipistrelle
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerow
- Scattered trees
- Tall ruderal vegetation
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.44	79
TR	0.07	12
OTHER	0.05	9
TOTALS	0.56	100

I – Improved grassland, TR – Tall ruderal vegetation

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , Perennial rye grass <i>Lolium perenne</i> , crested dog's tail <i>Cynosurus cristatus</i> , curled dock <i>Rumex crispus</i> , common ragwort <i>Senecio jacobea</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , sycamore <i>Acer pseudoplatanus</i> , holly <i>Ilex aquifolium</i> , hawthorn <i>Crataegus monogyna</i> , silver birch <i>Betula pendula</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, broadleaved dock *Rumex obtusifolius* and common ragwort *Senecio jacobea* have been recorded within the grassland sward.

4.3.4 Fauna

Bats

There are 2 buildings on site of brick and tile construction with occasional loose tiles and holes within the brickwork that could potentially allow bats to roost.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed, and barn owl could potentially nest in the outbuildings and stables.

Incidental records

- Birds including lesser redpoll *Carduelis flammea* (UK BAP species), blackbird *Turdus merula*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9514743032	Requires bat survey
2	SJ9514243014	Requires bat survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Scattered trees					x
Tall ruderal vegetation					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site consists mainly of species poor improved grassland with typical associated floral species such as Yorkshire fog, cock's foot and crested dog's tail grasses and herbs including ribwort plantain *Plantago lanceolata*. The site is surrounded mainly by domestic dwellings, FID74 to the south and a further similar habitat to the north east. However, the site has 2 buildings that are considered to have potential to support roosting bats, therefore the site is attributed district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. Polecat *Mustela putorius* has been recorded <200m away, therefore the exceptions could potentially include polecat, roosting/foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that the building is checked for the presence of breeding birds at the same time as the bat surveys.

Polecat survey

Polecats have been recorded during the desk study within 2km. As there are suitable outbuildings to support polecats and potentially food sources around the locality it is recommended that these buildings are surveyed by a suitably qualified ecologist prior to any development works.

The polecat is afforded protection under the Wildlife and Countryside Act 1981 and is a UK BAP priority species mammal, protected as species of principal importance for the conservation of biological diversity in England under Section 74 of the Countryside and Rights of Way (CRow) Act 2000.

Vegetation removal

If at all possible it is recommended that as many trees are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site contains fairly species poor habitats and common species, although it is fairly well connected to the wider countryside. As 2 buildings are present with the potential to support roosting bats the site is deemed to have district ecological importance.



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The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the buildings
- Vegetation removal at the appropriate time of year



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FID 76

1. Introduction

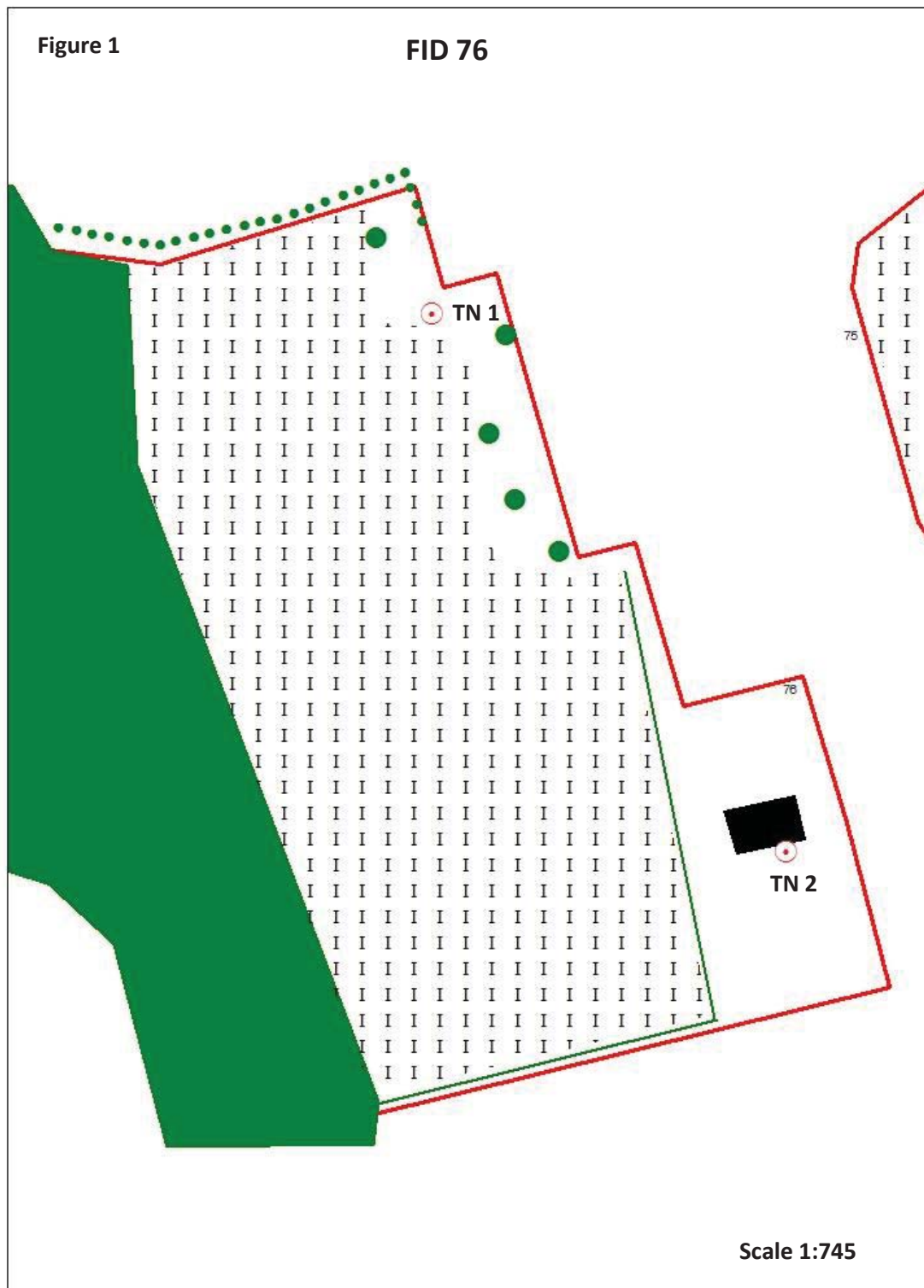
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 76 O.S grid reference SJ9504443045.

FID 76 is located in Caverswall in the Staffordshire Moorlands District, surrounded by broadleaved woodland, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 76 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Weston
AWI	Stansmore Wood
BAS	Cresswellford Crossing
BAS	Blythe Bridge Woods
BAS	Caverswall Castle (west of)
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Creswell's Piece
SBI	Parkhall Country Park
SBI	Weston Sprink

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Autumnal Rustic
	Barn Owl
	Barn swallow
	Beaded Chestnut
	Blood-vein
	Brindled Beauty
	Broom Moth
	Brown-spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common Kestrel

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	Common Kingfisher
	Common Snipe
	Corn spurrey
	Dark-barred Twin-spot Carpet
	Dark Brocade
	Dark Spinach
	Deep Brown Dart
	Dingy skipper
	Dot Moth
	Double Dart
	Dusky-lemon Sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	Early bumble bee
	Eurasian woodcock
	European water vole
	Feathered Gothic
	fieldfare
	Figure Of Eight
	Flounced chestnut
	Freshwater white clawed crayfish
	Garden Dart
	Garden Tiger
	Ghost Moth
	Grass Snake
	Green-brindled Crescent
	Green Woodpecker
	Grey Dagger
	Heath Rustic
	Hedge Rustic
	House martin
	House sparrow
	Knot Grass
	Large Wainscot
	Latticed Heath
	lichen
	Mallard
	Minor Shoulder Knot
	Monk's-rhubarb
	Mottled rustic
	Mouse Moth

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	Northern lapwing
	Oak Hook-tip
	Oak Lutestring
	Oblique Carpet
	Orache Moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Shrubby cinquefoil
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Spinach
	Streak
	Tall Hawkweed
	V-moth
	White-line Dart
	White Ermine
	Wild pansy
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	False acacia
	Giant hogweed
	Japanese rose
	Montbretia
	New Zealand pigmyweed
	Rhododendron
	Russian vine
E/ UK PS	Barn Owl
	Bluebell

	Brown Long-eared Bat
	Common Kingfisher
	Common pipistrelle
	Eurasian badger
	European water vole
	Fieldfare
	Freshwater white clawed crayfish
	Grass Snake
	Pipistrelle
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Broadleaved woodland
- Scattered trees
- Species poor hedgerow
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.25	72
BW	0.01	4
OTHER	0.08	24
TOTALS	0.34	100

I – Improved grassland, BW – Broadleaved woodland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Cherry laurel <i>Prunus laurocerasus</i> , leylandii <i>Cuprocypressus x leylandii</i> , hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , willow <i>Salix sp</i> , sycamore <i>Acer pseudoplatanus</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of broadleaved woodland, hedgerow and scattered trees from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9504443066	Part of domestic garden
2	SJ9507243018	Part of domestic garden

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Broadleaved woodland				x	
Scattered trees					x
Species poor hedgerow					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site consists mainly of species poor habitats including, species poor improved grassland (72%) that has been cut for silage and domestic gardens (24%). The area of broadleaved woodland forms the western boundary that is well connected to further broadleaved woodland strips and hedgerows. Domestic dwellings exist to the north and east and a car park is located adjacent to the southern boundary.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include polecat *Mustela putorius* and foraging bats, therefore is considered to have district ecological importance, especially as there is good connective habitats adjacent to the site.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the building should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that the building is checked for the presence of breeding birds and polecat at the same time as the bat surveys.

Polecat survey

Polecats have been recorded during the desk study within 2km. As there are suitable outbuildings and stables to support polecats and potentially food sources around the locality it is recommended that these buildings are surveyed by a suitably qualified ecologist prior to any development works.

The polecat is afforded protection under the Wildlife and Countryside Act 1981 and is a UK BAP priority species mammal, protected as species of principal importance for the conservation of biological diversity in England under Section 74 of the Countryside and Rights of Way (CRow) Act 2000.

Vegetation removal

If at all possible it is recommended that as many trees are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site contains fairly species poor habitats and diversity although is well connected from the western boundary to the wider countryside through an area of semi-natural broadleaved woodland. The site is deemed to have district ecological importance due to its good connectivity to the wider countryside and the potential to support polecat populations.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the buildings
- Check for presence of polecat in outbuildings
- Vegetation removal at the appropriate time of year



FID 217



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FID 217

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 217 O.S grid reference SJ9455242320.

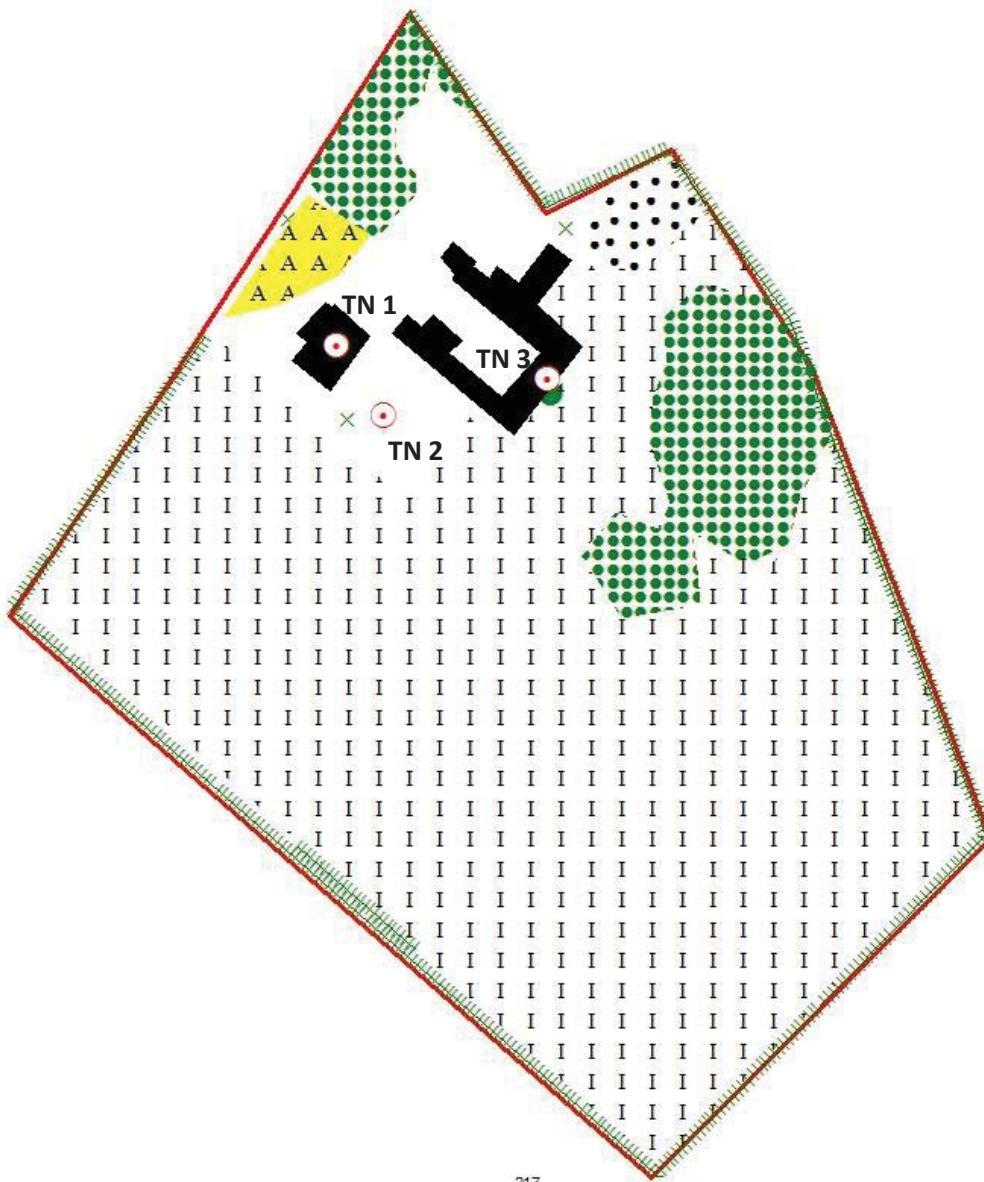
FID 217 is located south-west of Caverswall village surrounded by agricultural land and farm buildings.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 217



Scale 1:2516

2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 217 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
LNR	Weston
LNR/ SBI	Birch Wood
BAS	Cresswellford Crossing
BAS	Blythe Bridge Woods
BAS	Caverswall Castle (west of)
SBI	Parkhall Country Park
SBI	Weston Sprink

LNR – Local Nature Reserve, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	A moth
	Autumnal Rustic
	Barn Owl
	Beaded Chestnut
	Blood-vein
	Brindled Beauty
	Broom Moth
	Brown-spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Kestrel
	Common Kingfisher
	Common Snipe
	Corn spurrey
	Dark-barred Twin-spot Carpet



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	Dark Brocade
	Dark Spinach
	Deep Brown Dart
	Dingy skipper
	Dot Moth
	Double Dart
	Dusky-lemon Sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	European water vole
	Feathered Gothic
	Figure Of Eight
	Flounced chestnut
	Freshwater white clawed crayfish
	Garden Dart
	Garden Tiger
	Ghost Moth
	Grass Snake
	Green-brindled Crescent
	Great crested newt
	Green Woodpecker
	Grey Dagger
	Heath Rustic
	Hedge Rustic
	House sparrow
	Insect - beetle
	Knot Grass
	Large Wainscot
	Latticed Heath
	Mallard
	Minor Shoulder Knot
	Monk's-rhubarb
	Mottled rustic
	Mouse Moth
	Northern lapwing
	Oak Hook-tip
	Oak Lutestring
	Oblique Carpet
	Orache Moth
	Pipistrelle
	Polecat

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	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Shrubby cinquefoil
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Spinach
	Streak
	Tall Hawkweed
	V-moth
	Wall
	West European hedgehog
	White-line Dart
	White Ermine
	Wild pansy
INV	Canadian goldenrod
	False acacia
	Giant hogweed
	Japanese rose
	Montbretia
	New Zealand pigmyweed
	Rhododendron
	Russian vine
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common pipistrelle
	Eurasian badger
	European water vole
	Fieldfare

	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species poor hedgerow
- Marshy grassland
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	2.97	70
SBW	0.42	10
AM	0.05	1
BG	0.06	1
OTHER	0.74	18
TOTALS	4.24	100

I – Improved grassland, BW – Broadleaved Woodland, SBW – Scattered broadleaved woodland, BG – Bare ground, AM – Amenity grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , beech <i>Fagus sylvatica</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found within the site at the time of survey.

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense*, curled dock *Rumex crispus* and broadleaved dock *Rumex obtusifolius* have been recorded within the site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9448442418	Requires bat survey
2	SJ9449942396	Requires bat survey
3	SJ9453742407	Part of domestic garden

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Species poor grasslands					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site consists of a farm building and associated cattery which is surrounded by species poor grasslands and connected by a number of hedgerows to the surrounding countryside.

The habitats present on site include mainly semi-improved species poor grasslands (71%).

The species poor hedgerows consist of hawthorn, holly, elder and damson *Prunus domestica institia* and the scattered trees include sycamore and beech.

The site has low biodiversity value overall, as it is unlikely that the site would support many European and UK protected species that have been recorded within 2km, but could potentially include roosting/ foraging bats and badger. As the buildings have potential to support roosting bats the site has been given elevated status to district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that the building is checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees are retained if the site is to be developed.

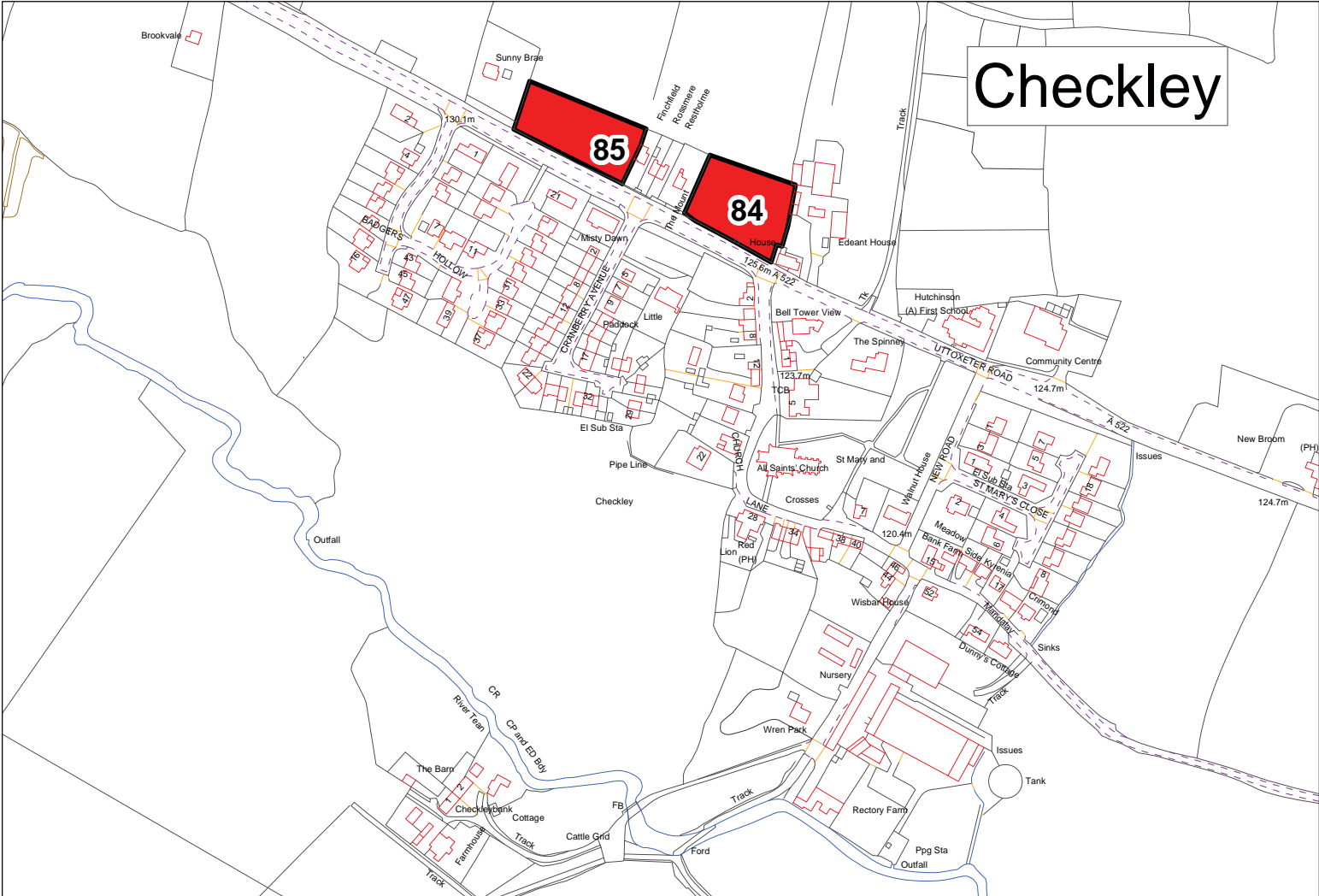
If the trees and hedgerow are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has species poor habitats present on site, but has buildings with bat roosting potential which gives the site at least district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the buildings
- Vegetation removal at the appropriate time of year



Scale 1: 2100

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Site label numbers denote Site FID reference numbers used in Study.



FID 84



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FID 84

1. Introduction

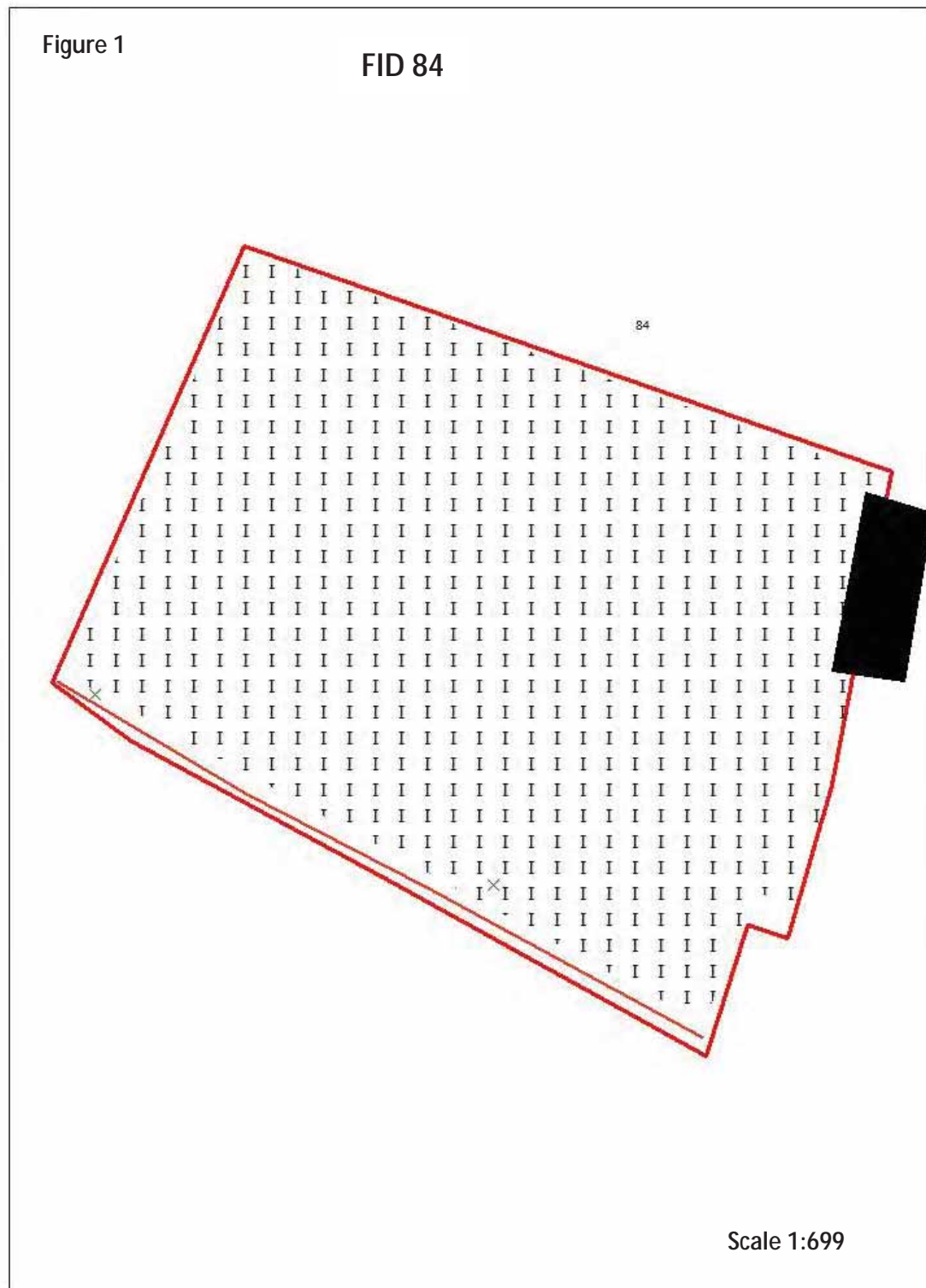
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 84 O.S grid reference SK0276538061.

FID 84 is located in Checkley village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 84 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	Hell Clough
AWI	Slang Drumble
AWI/ BAS	The Wing Drumble
AWI/ SBI	Broadgatehall Drumble
AWI	Freehay Wood
BAS	Leighbank Gorse
SBI	Slang Drumble and Hell Clough
SBI	Brook Lane
SBI	Newton (north-east of)

AWI – listed on Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance,

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn swallow
	Brown Hare
	Brown long eared bat
	Common bullfinch
	Common Pipistrelle
	Common snipe
	Eurasian woodcock
	European Otter
	European Water Vole
	German wasp
	Great Crested Newt
	hornet
	Insect - Hymenopteran
	Jacob's-ladder
	Lichen

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	Mallard
	Northern lapwing
	Pipistrelle
	Polecat
	Skylark
	Wall
	West European Hedgehog
	White ermine
INV	American mink
	Indian Balsam
	Japanese knotweed
	Japanese rose
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Daubenton's Bat
	Eurasian Badger
	European Otter
	European Water Vole
	Natterer's bat
	Pipistrelle
	Polecat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered scrub
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.27	93
OTHER	0.02	7
TOTALS	0.29	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , white clover <i>Trifolium repens</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , creeping thistle <i>Cirsium arvense</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered scrub from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered scrub					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally surrounded by domestic dwellings to the east and west, main road to the south and species poor grassland to the north and is poorly connected to more biodiverse habitats. The site has low biodiversity value and therefore is deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging badger and bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the scattered scrub is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has very low biodiversity value overall in terms of area, is adjacent to a main road to the south and farm buildings to the east, domestic dwellings to the west and species poor grasslands to the north with poor connectivity. Therefore the site is considered to have low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 85



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FID 85

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 85 O.S grid reference SK0266138107.

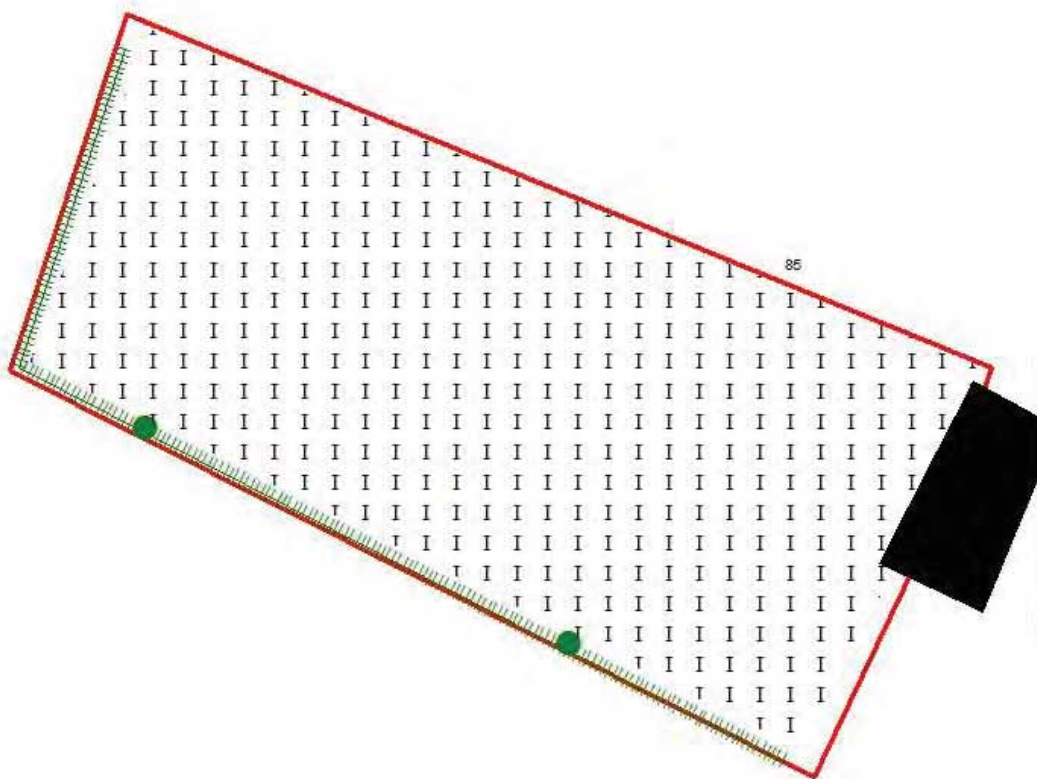
FID 85 is located in Checkley village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 85



Scale 1:832



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 85 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	Hell Clough
AWI	Slang Drumble
AWI/ BAS	The Wing Drumble
AWI/ SBI	Broadgatehall Drumble
AWI	Freehay Wood
BAS	Leighbank Gorse
SBI	Slang Drumble and Hell Clough
SBI	Brook Lane
SBI	Newton (north-east of)

AWI – listed on Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance,

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn swallow
	Brown Hare
	Brown long eared bat
	Common bullfinch
	Common Pipistrelle
	Common snipe
	Eurasian woodcock
	European Otter
	European Water Vole
	German wasp
	Great Crested Newt
	hornet
	Insect - Hymenopteran
	Jacob's-ladder
	Lichen

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	Mallard
	Northern lapwing
	Pipistrelle
	Polecat
	Skylark
	Wall
	West European Hedgehog
	White ermine
INV	American mink
	Indian Balsam
	Japanese knotweed
	Japanese rose
	Rhododendron
E/ UK PS	A Bat
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Daubenton's Bat
	Eurasian Badger
	European Otter
	European Water Vole
	Natterer's bat
	Pipistrelle
	Polecat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Scattered trees
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.26	91
OTHER	0.03	9
TOTALS	0.29	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , creeping thistle <i>Cirsium arvense</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , wych elm <i>Ulmus glabra</i> , bramble <i>Rubus fruticosus</i> agg

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica* Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense* have been recorded within the grassland sward.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerows					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by domestic dwellings to the west and east, main road to the south and species poor grassland to the north and is poorly connected to the wider countryside. The habitats present on site are particularly common in the UK, have fairly low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and particularly the potentially species rich hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

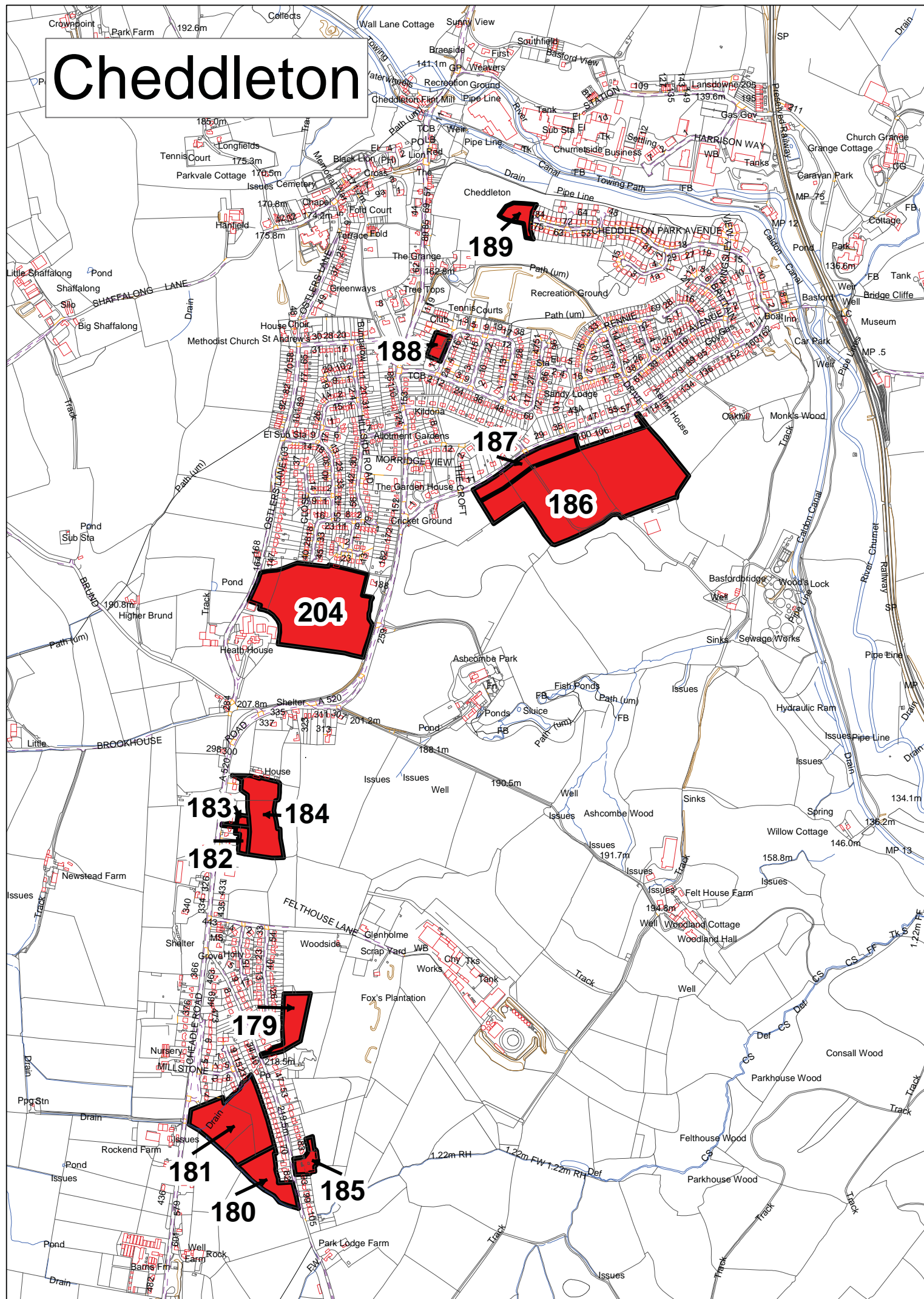
7. Conclusion

The site has mostly low biodiversity value overall in terms of area, is adjacent to a main road to the south and domestic dwellings to the east west and species poor grasslands to the north, and has poor connectivity. Therefore the site is considered to have low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year

Cheddleton





FID 179



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FID 179

1. Introduction

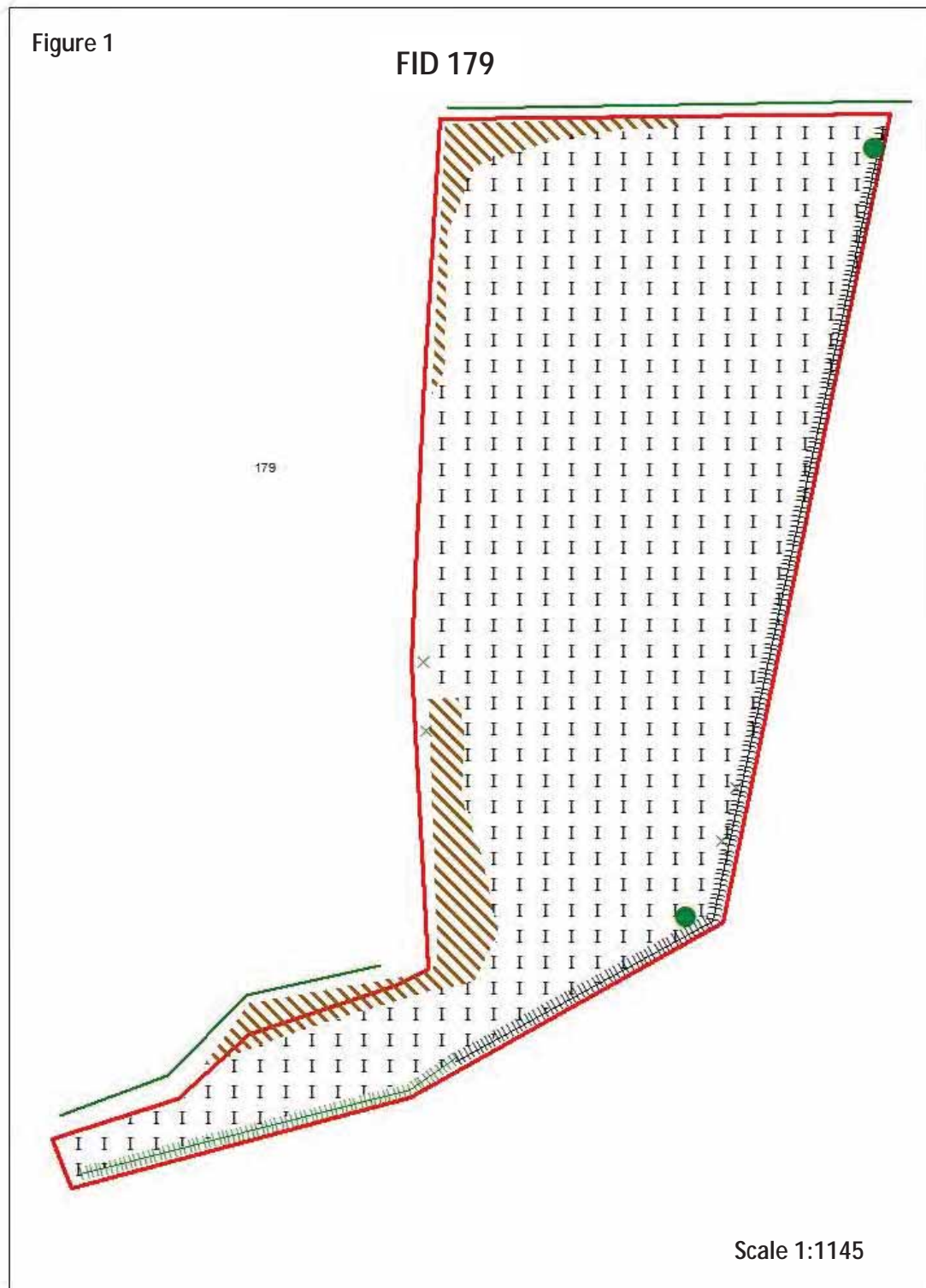
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 179 O.S grid reference SJ9695050397.

FID 179 is located east of Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 179 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.



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In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with



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corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Churnet Valley
AWI/ BAS	Felthouse Wood
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Platt (north of)
SBI	Basford Green (west of)
SBI	Smithy Pool (north of)
SBI	Consall Forge
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

SSSI – Site of Scientific Interest, AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Autumnal rustic
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow

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	Cinnabar
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Corn spurrey
	Dot moth
	Dusky thorn
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Grass Snake
	Great crested newt
	Green woodpecker
	Hedge rustic
	House martin
	Insect - Hymenopteran
	Jacob's ladder
	Little kneeling eyebright
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	Wall
	West European Hedgehog
	Willow warbler

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INV	Canadian waterweed
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, EPS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Scattered trees
- Tall ruderal vegetation

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.64	88
TR	0.05	7
OTHER	0.03	5
TOTALS	0.72	100

TR- Tall ruderal vegetation, I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , common nettle <i>Urtica dioica</i> , dandelion <i>Taraxacum officinale</i> agg
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, garden privet <i>Ligustrum</i> sp, goat willow <i>Salix caprea</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* have been recorded within the tall ruderal vegetation.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerows, scattered trees and tall ruderal vegetation from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Scattered trees					x
Tall ruderal vegetation					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by domestic dwellings, species poor grassland and semi-natural broadleaved woodland connected by the hedgerow to the north.

The species poor hedgerows consist of hawthorn, goat willow, elder *Sambucus nigra*, damson *Prunus domestica* and ornamental species such as garden privet. The hedgerows are bordered by species poor tall ruderal vegetation such as common nettle, rosebay willowherb *Chamerion angustifolium* and creeping thistle.

There are a number of European and UK protected species recorded within 2km according to the desk study. The site could also potentially support foraging bats (potential roost recorded within 165m), and especially foraging badger due to the close proximity of the broadleaved woodland within 100m. The site is deemed as having district ecological importance due to the potential of support reptile populations.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Reptiles and amphibians

Reptiles could potentially be present on site due to the close proximity and connection to the semi-natural broadleaved woodland to the east, south facing hedgerow and a relatively small area of suitable terrestrial habitat, so it is recommended that a full reptile survey and any refugia present on site should be carried out and removed by a suitably qualified ecologist.

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees, scrub and vegetation is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has some potential for protected species to be present due to the proximity and connection to semi-natural broadleaved woodland. However, as a reptile survey is recommended the site is considered to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Reptile survey
- Vegetation removal at the appropriate time of year



FID 180



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FID 180

1. Introduction

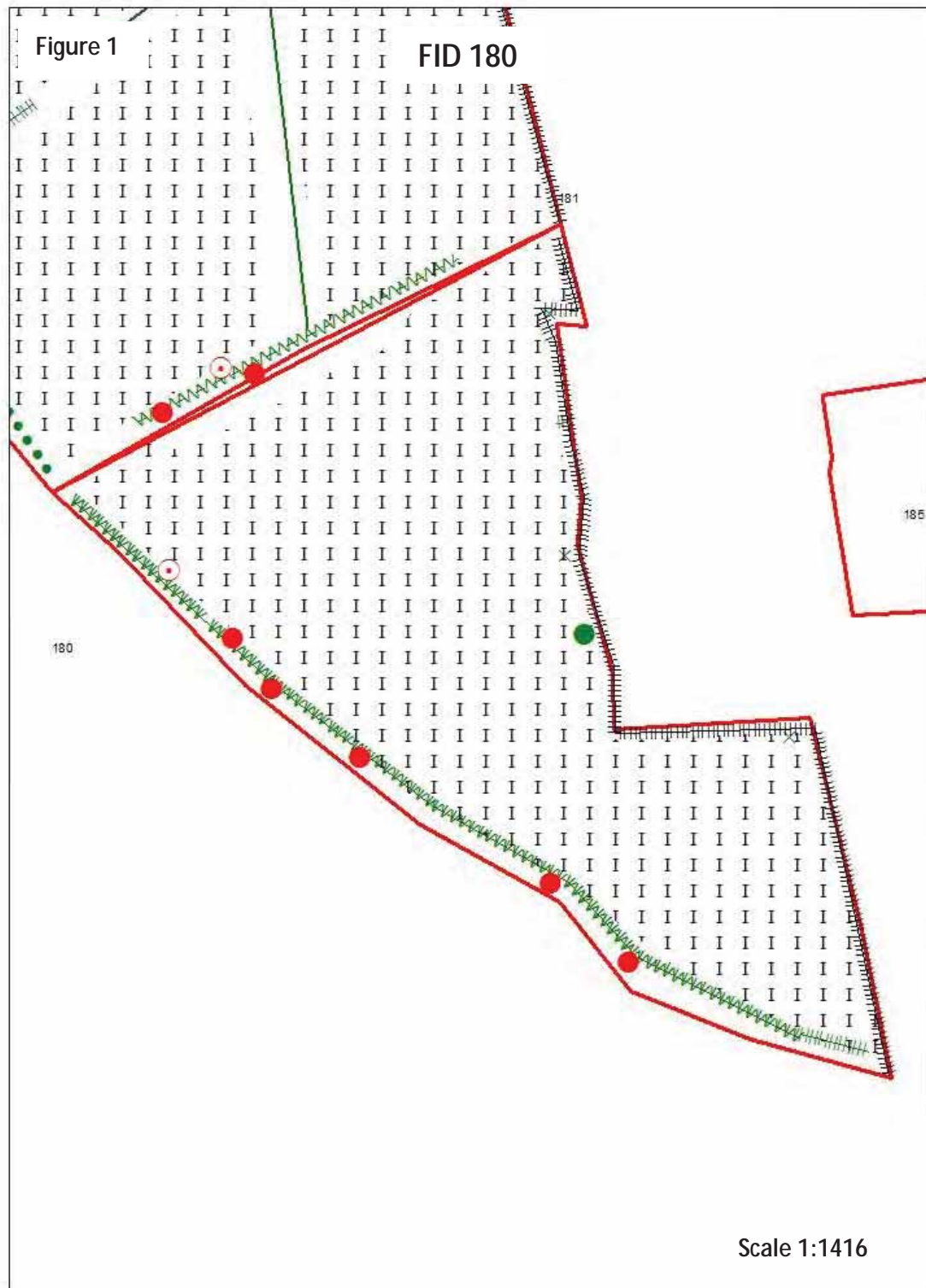
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 180 O.S grid reference SJ9689250024.

FID 180 is located south of Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 180 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

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2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Churnet Valley
AWI/ BAS	Felthouse Wood
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood, Little Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Platt (north of)
SBI	Basford Green (west of)
SBI	Smithy Pool (north of)
SBI	Consall Forge
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

SSSI – Site of Scientific Interest, AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe

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	Dot moth
	Dusky thorn
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Grass Snake
	Great crested newt
	Green woodpecker
	Grey wagtail
	Jacob's ladder
	Little kneeling eyebright
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	West European Hedgehog
	Willow warbler
INV	Canadian waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole

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	Grass Snake
	Noctule bat
	Pipistrelle
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Scattered trees
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.71	84	
OTHER	0.13	16	
BPT			5
TOTALS	0.84	100	5

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , silver birch <i>Betula pendula</i> , holly <i>Ilex aquifolium</i> , bramble <i>Rubus fruticosus</i> agg, pedunculate oak <i>Quercus robur</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.



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4.3.4 Fauna

Bats

The site has 5 trees recorded in the walkover survey that could potentially support roosting bats, as they have at least one of the corresponding features.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9683750040	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerow				x	
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands (84%) and domestic dwellings, with FID181 to the north-west, which is poorly connected to the wider countryside.

The 5 pedunculate oak trees with bat potential present on site are deemed to have the highest value as their loss as roosts could adversely affect regional bat populations. The trees form a line of mature trees, but are poorly connected to other habitats which could reduce their overall potential value to support roosting bats.

The species rich hedgerow consists of mainly hawthorn, silver birch, holly, and elder *Sambucus nigra* and is given district ecological importance.

The species poor grassland habitats are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would potentially include roosting and foraging bats and foraging badger, therefore the whole site is attributed district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in 'bat mitigation guidelines' Mitchell-Jones (2004).

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed. It is also recommended to obtain information as to whether these mature trees have Tree Preservation Orders (TPO) on them as they are close to a housing estate. Mature trees also evolve to have a greater biodiversity value over time as they develop more characteristics that wider families of invertebrates and vertebrates can utilise as shelter and food sources.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site has mostly low biodiversity value overall in terms of area. However, the major aspects of interest are the significant bat potential in the 5 trees and the species rich hedgerow which constitutes the site being given district importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 181



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FID 181

1. Introduction

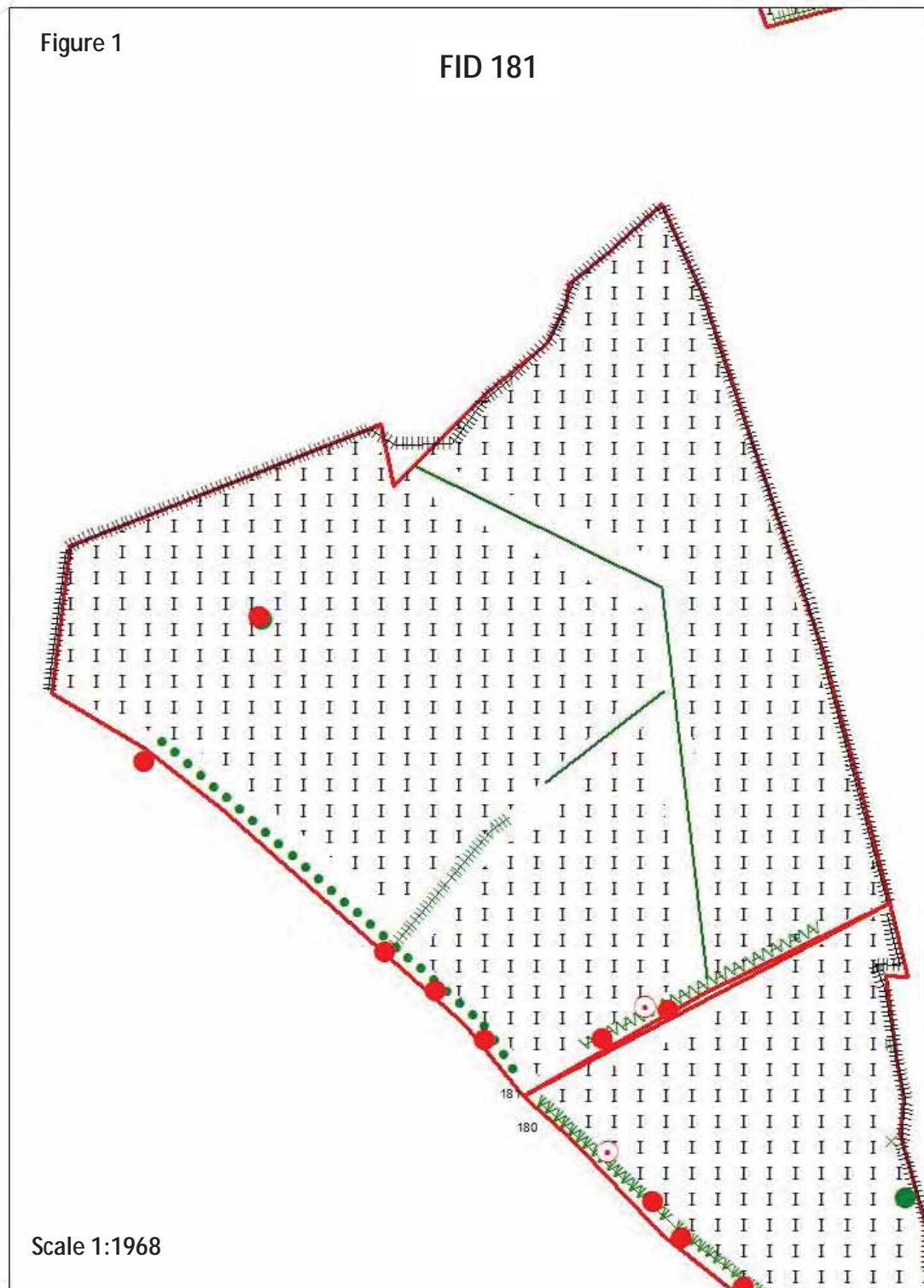
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 181 O.S grid reference SJ9682650156.

FID 181 is south of Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 181 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Churnet Valley
AWI/ BAS	Felthouse Wood
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood, Little Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Platt (north of)
SBI	Deep Hayes Country Park
SBI	Basford Green (west of)
SBI	Smithy Pool (north of)
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

SSSI – Site of Scientific Interest, AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Owl
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Dot moth

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	Dusky thorn
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Grass Snake
	Great crested newt
	Green woodpecker
	Grey wagtail
	Jacob's ladder
	Little kneeling eyebright
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	West European Hedgehog
	Willow warbler
INV	Canadian waterweed
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter

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	European water vole
	Floating water plantain
	Grass Snake
	Noctule bat
	Pipistrelle
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerow
- Species poor hedgerows
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.96	84	
OTHER	0.36	16	
BPT			7
TOTALS	2.32	100	7

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , soft rush <i>Juncus effusus</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , creeping buttercup <i>Ranunculus repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, alder <i>Alnus glutinosa</i> , sycamore <i>Acer pseudoplatanus</i> , pedunculate oak <i>Quercus robur</i>



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4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* and broadleaved dock *Rumex obtusifolius* have all been recorded within the grassland.

4.3.4 Fauna

Bats

The site has 7 trees recorded in the walkover survey that could potentially support roosting bats, as they have at least one of the corresponding features.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9685650076	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerow				x	
Species poor hedgerows					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands (84%) and domestic dwellings, and a main road, with FID 180 to the south-east, with good connections to the wider countryside through hedgerows. The species poor grassland habitats are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

The 7 pedunculate oak trees with bat potential present on site are deemed to have regional value as their loss as roosts could adversely affect regional bat populations. The trees form a line of mature trees which include alder but are poorly connected to other habitats which could reduce their overall potential value to support roosting bats.

The species rich hedgerow consists of mainly hawthorn, silver birch, alder, rowan *Sorbus aucuparia* and elder *Sambucus nigra* and is considered to have district value.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species, the exceptions could potentially include roosting and foraging bats and foraging badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 7 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in 'bat mitigation guidelines' Mitchell-Jones (2004).

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed. It is also recommended to obtain information as to whether these mature trees have Tree Preservation Orders (TPO) on them as they are close to a housing estate. Mature trees also evolve to have a greater biodiversity value over time as they develop more characteristics that wider families of invertebrates and vertebrates can utilise as shelter and food sources.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site has mostly low biodiversity value overall in terms of area. However, the major aspects of interest are the significant bat potential in the 7 trees and species rich hedgerow which values the site as having district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 182



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FID 182

1. Introduction

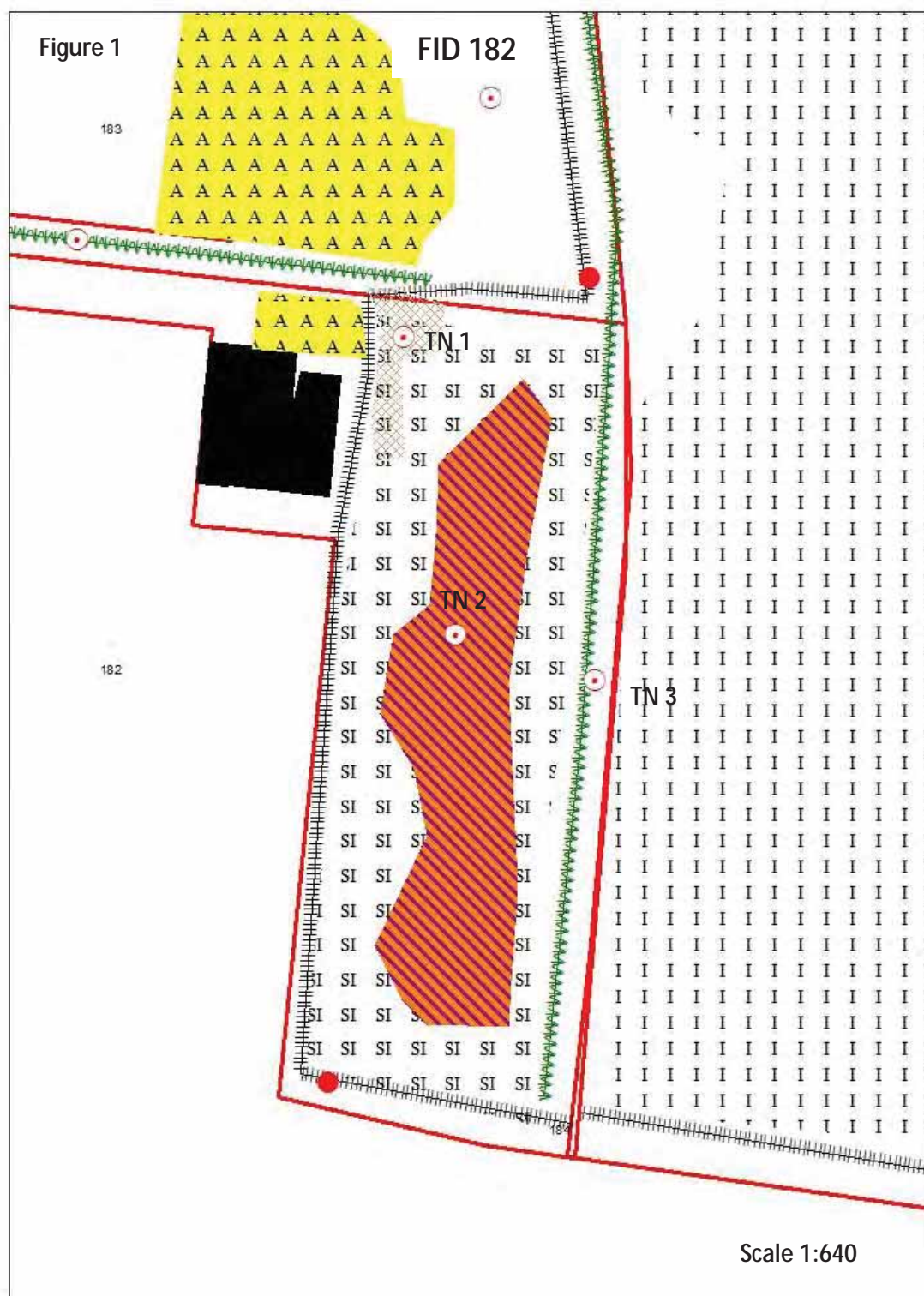
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 182 O.S grid reference SJ9682750850.

FID 182 is located within southern Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 182 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/ BAS	Felthouse Wood
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Rosebank
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar



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	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Green woodpecker
	Grey wagtail
	Hedge rustic
	House martin
	Insect - Hymenopteran
	Jacob's ladder
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	West European Hedgehog
	Willow tit

	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerow
- Species poor hedgerows
- Marshy grassland
- Improved grassland
- Introduced shrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
SI	0.07	37	
MG	0.04	22	
AM	0.00	2	
IS	0.00	2	
OTHER	0.07	37	
BPT			1
TOTALS	0.18	100	1

SI – Species poor semi-improved grassland, AM – Amenity Grassland, IS – Introduced shrub, BPT – Bat Potential Trees, MG – Marshy Grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Soft rush <i>Juncus effusus</i> , Yorkshire fog <i>Holcus lanatus</i> , creeping bent <i>Agrostis stolonifera</i> , tufted hair grass <i>Deschampsia cespitosa</i> , rosebay willowherb <i>Chamerion angustifolium</i> , common knapweed <i>Centaurea nigra</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , bramble <i>Rubus fruticosus</i> agg, elder <i>Sambucus nigra</i> ,

4.3.3 Invasive weeds

Japanese knotweed *Fallopia japonica* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and was recorded in one area to the north west of the site at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* and common ragwort *Senecio jacobea* have all been recorded on site.

4.3.4 Fauna

Bats

The site has 1 tree recorded in the walkover survey that could potentially support roosting bats, as it has at least one of the corresponding features.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9682750854	Japanese knotweed
2	SJ9683150839	Sparse marshy grassland
3	SJ9684350837	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerow				x	
Species poor hedgerows					x
Marshy grassland					x
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands and domestic dwellings, with FID 183 and FID 184 adjacent to the east, which is connected to the wider countryside with one hedgerow to the north.

The site consists of mainly species poor grassland (37%) with marshy grassland (22%) and species including soft rush, Yorkshire fog, tufted hair grass and creeping bent grasses. Herbs include common knapweed, creeping buttercup *Ranunculus repens* and rosebay willowherb.

1 oak *Quercus species* tree with bat potential is present on site which is a lone standard but is still afforded district ecological value.

The species rich hedgerow consists of mainly hawthorn, holly, silver birch *Betula pendula*, rowan *Sorbus aucuparia*, elder and fairly unusually greengage *Prunus domestica italica*.

The site also consists of a domestic garden (37%) of which are generally species poor habitats are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

A small area of Japanese knotweed to the north west of the site is growing through the neighbouring garden, and could potentially spread around the site if dealt with inappropriately.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would potentially include roosting/ foraging bats and badger. Therefore due to the presence of a tree with bat potential and a species rich hedgerow the site is deemed to have district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to

migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the tree recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in 'bat mitigation guidelines' Mitchell-Jones (2004).

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Noxious weed removal

It is extremely important that a regime of Japanese knotweed eradication is applied to the area present on site following guidelines set out in 'Managing Japanese knotweed on development sites' (Environment Agency, 2013).

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed. It is also recommended to obtain information as to whether these mature trees have Tree Preservation Orders (TPO) on them as they are close to a housing estate. Mature trees also evolve to have a greater biodiversity value over time as they develop more



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characteristics that wider families of invertebrates and vertebrates can utilise as shelter and food sources.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly low biodiversity value overall in terms of area. However, the major aspects of interest are the species rich hedgerow and bat potential in the oak tree which constitutes the site being considered to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime is recommended to ascertain whether bats roost in the tree
- Japanese knotweed eradication
- Vegetation removal at the appropriate time of year



FID 183



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FID 183

1. Introduction

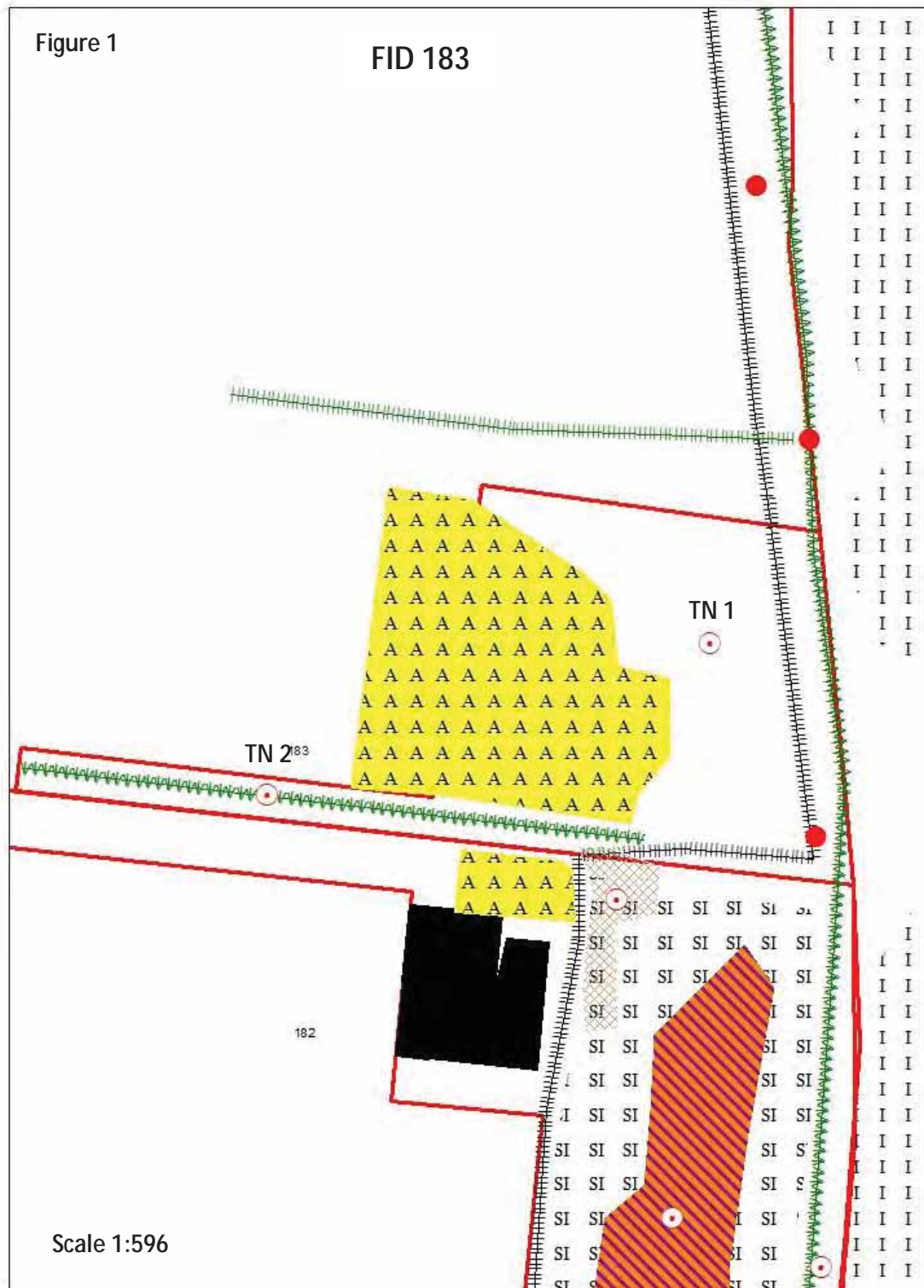
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 183 O.S grid reference SJ9682450871.

FID 183 is located within southern Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 183 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/ BAS	Felthouse Wood
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Rosebank
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar



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	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Green woodpecker
	Grey wagtail
	Hedge rustic
	House martin
	Insect - Hymenopteran
	Jacob's ladder
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	West European Hedgehog
	Willow tit

	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerow
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
AM	0.03	35	
OTHER	0.05	65	
BPT			1
TOTALS	0.08	100	1

AM – Amenity grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , daisy <i>Bellis perennis</i> , dandelion <i>Taraxacum officinale</i> agg, white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle *Cirsium arvense* have both been recorded on site.

4.3.4 Fauna

Bats

The site has 1 sycamore tree recorded during the walkover survey that could potentially support roosting bats, as it has at least one of the corresponding features.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9682150868	Part of domestic garden
2	SJ9680350863	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerow				x	
Species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands and domestic dwellings, with FID 182 and FID184 adjacent to the east, which is connected to the wider countryside with one hedgerow to the north.

The site has scattered broadleaved trees (52%) with a species rich hedgerow including sycamore, oak, hawthorn, elder *Sambucus nigra*, wild cherry *Prunus avium*, goat willow *Salix caprea* and holly, and 1 sycamore tree that has potential to support roosting bats.

The remaining habitats are contained within the domestic garden, mainly species poor amenity grassland and garden plants and shrubs that are particularly common in the UK, have fairly low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would potentially include roosting and foraging bats. Therefore the site is deemed to have district ecological importance due to the presence of a species rich hedgerow and tree with bat roosting potential.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the tree recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in 'bat mitigation guidelines' Mitchell-Jones (2004).

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site has mostly low biodiversity value overall in terms of area. The major aspects of interest are focussed on the species rich hedgerow, bat potential in the sycamore tree and general potential for supporting breeding birds in the scattered trees and hedgerows. The site is therefore considered to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the tree
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 184



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FID 184

1. Introduction

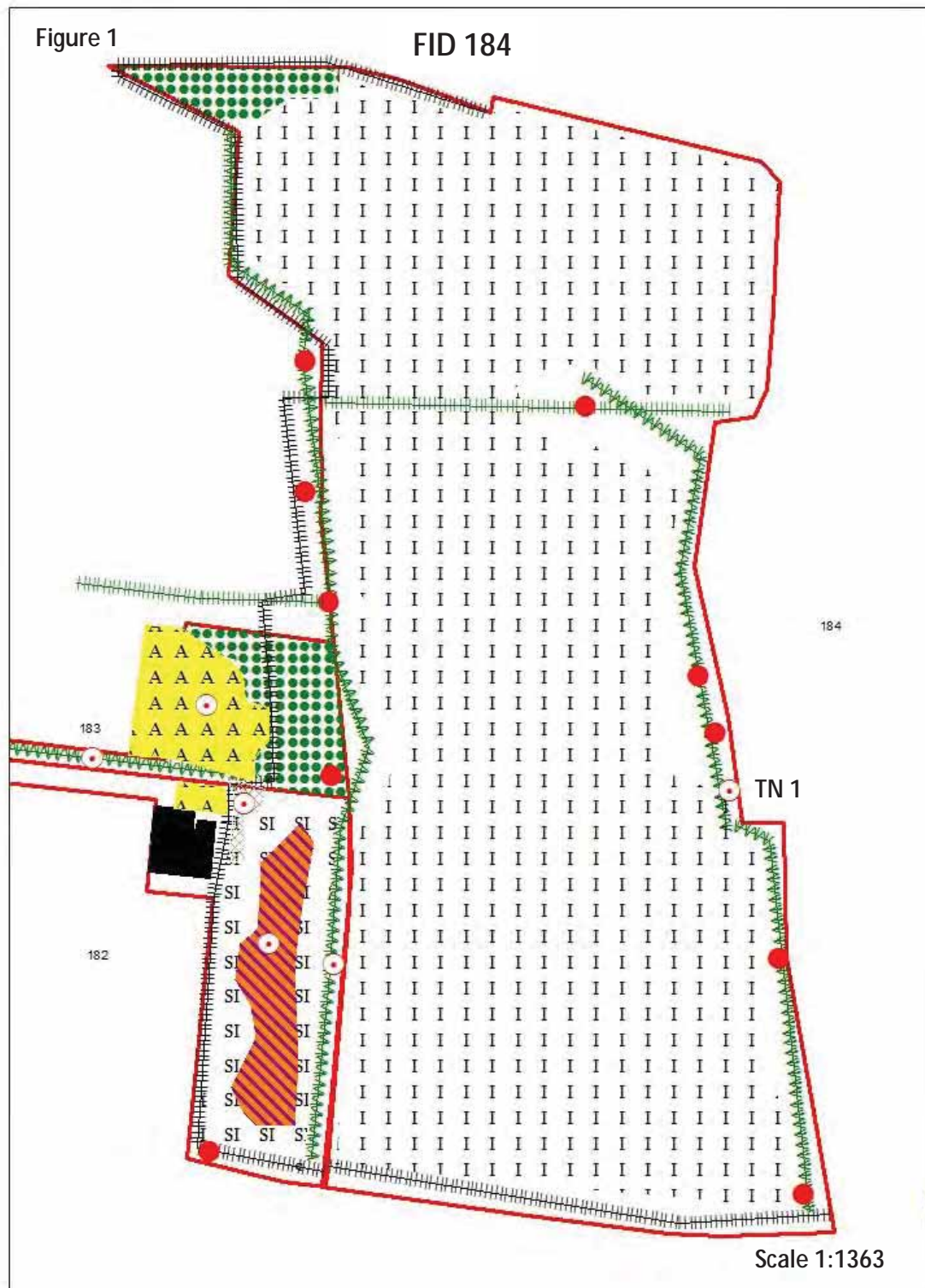
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 184 O.S grid reference SJ9687750858.

FID 184 is located east of Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 184 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Churnet Valley
AWI/ BAS	Felthouse Wood
AWI	UNK
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Rosebank
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

SSSI – Site of Scientific Interest, AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat



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	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Green woodpecker
	Grey wagtail
	Hedge rustic
	House martin
	Insect - Hymenopteran
	Jacob's ladder
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee

	Wall
	West European Hedgehog
	Willow tit
	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerows
- Species poor hedgerow
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.15	82	
SBW	0.02		
OTHER	0.23	18	
BPT			8
TOTALS	1.40	100	8

I – Improved grassland, SBW – Scattered broadleaved woodland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Yorkshire fog <i>Holcus lanatus</i> , perennial rye grass <i>Lolium perenne</i> , tufted hair grass <i>Deschampsia cespitosa</i> , creeping buttercup <i>Ranunculus repens</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , bramble <i>Rubus fruticosus</i> agg, elder <i>Sambucus nigra</i> , silver birch <i>Betula pendula</i> , crab apple <i>Malus sylvestris</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* have been recorded on site.

4.3.4 Fauna

Bats

The site has 8 trees recorded in the walkover survey that could potentially support roosting bats, as it has at least one of the corresponding features.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9690950860	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species rich hedgerow				x	
Species poor hedgerow					x
Species poor grassland					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands and domestic dwellings, with FID 182 and FID183 adjacent to the west, which is connected to the wider countryside with one hedgerow to the south.

The site consists mainly of species poor grassland (82%) consisting of tufted hair grass, Yorkshire fog and perennial rye grass with herbs including creeping buttercup and common nettle.

The hedgerows include species such as sycamore, oak *Quercus species* hawthorn, elder, crab apple, silver birch and holly. There are also 8 oak and sycamore trees that are deemed to have potential to support roosting bats. Therefore the site is considered to have district ecological importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats and foraging badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 8 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in 'bat mitigation guidelines' Mitchell-Jones (2004).

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site has mostly low biodiversity value overall in terms of area. The major aspects of interest are focussed on the species rich hedgerow and bat potential in the oak and sycamore trees and general potential for supporting breeding birds in the scattered trees and hedgerows. Therefore the site is deemed to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 185

Unable to access site



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FID 186



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FID 186

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 186 O.S grid reference SJ9770051695.

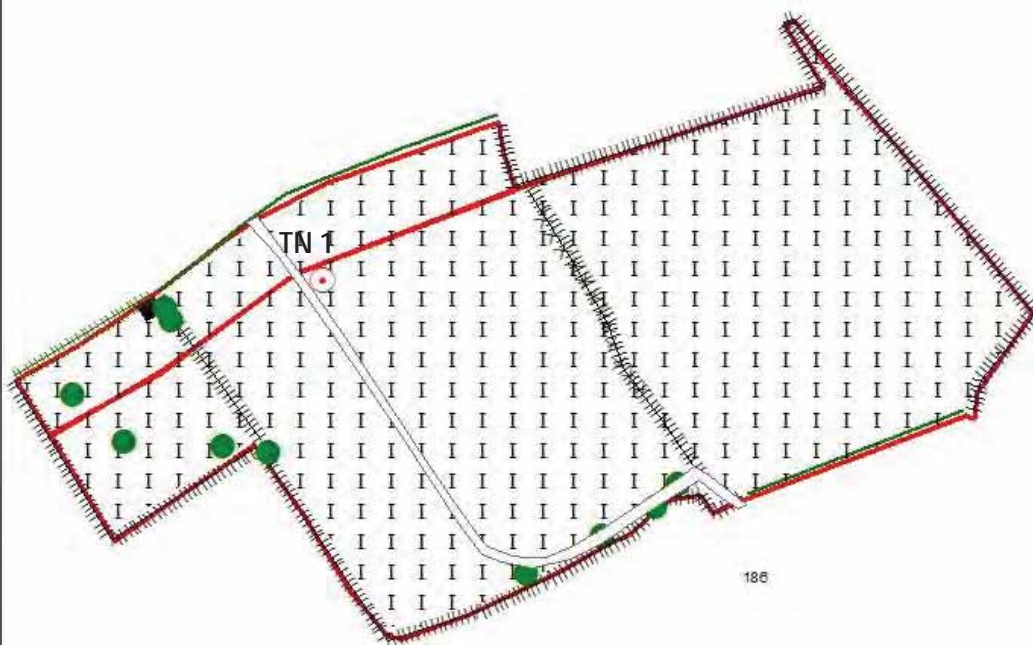
FID 186 is located south-east of Cheddleton village surrounded by agricultural land, sports pitch and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 186



Scale 1:4813



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 186 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Churnet Valley
RSPB NR	Combes and Churnet RSPB Nature Reserve
AWI/SBI	Soils Wood
AWI/ SBI	The Ridge
AWI	Spiritholes Wood, Low Wood, Mill Wood
AWI/ BAS	Felthouse Wood
AWI	UNK
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Hill Farm (north west of)
BAS	Mill Wood (near)
BAS	Leek Brook Meadow
BAS	Horse Bridge (east of)
SBI	Upper Fernyhill Farm (south east of)
SBI	Mosslee Mill farm (east of)
SBI	Cheddleton Heath (dismantled railway)
SBI	Cheddleton Heath
SBI	Consall Forge (north of), Caldon Canal
SBI	Ringehay Grassland
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Rosebank
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

SSSI – Site of Scientific Interest, AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

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4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Common toad
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Frogbit
	Grass Snake
	Great crested newt
	Greater butterfly orchid
	Green woodpecker
	Grey wagtail
	Hedge rustic

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	House martin
	House sparrow
	Insect - beetle
	Insect - Hymenopteran
	Jacob's ladder
	Knot grass
	Little grebe
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	Tubular water dropwort
	Tufted duck
	Wall
	West European Hedgehog
	Willow tit
	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Chinese muntjac
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle

	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Scattered scrub
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	6.82	97
OTHER	0.32	3
TOTALS	7.14	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Beech <i>Fagus sylvatica</i> , hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , pedunculate oak <i>Quercus robur</i>



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4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in one location at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* have been recorded on site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and scrub from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9752351713	Electricity sub-station

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands and domestic dwellings, with FID 187 adjacent to the north, which is connected to the wider countryside to the south by a small area of scattered broadleaved woodland.

The site consists mainly of species poor grassland (97%) and a species poor hedgerow consisting of hawthorn and elder with scattered trees including beech and pedunculate oak.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats, badger West European hedgehog (recorded within 40m). Therefore the site is considered to have low ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

As Himalayan balsam is present on site it is recommended a regime of eradication either through spraying glyphosate, mowing or hand pulling over 2 years according to 'Information Sheet 3: Himalayan Balsam' (Centre for Ecology and Hydrology, 2004).

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has very low biodiversity value overall with only trees and the hedgerow having potential for supporting breeding birds, foraging bats and badger. Therefore the site is considered to have low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Himalayan balsam eradication
- Vegetation removal at the appropriate time of year



FID 187



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FID 187

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 187 O.S grid reference SJ9754751744.

FID 187 is located to the east of Cheddleton village surrounded by agricultural land, sports pitch and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 187 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Churnet Valley
RSPB NR	Combes and Churnet RSPB Nature Reserve
AWI/SBI	Soils Wood
AWI/ SBI	The Ridge
AWI	Spiritholes Wood, Low Wood, Mill Wood
AWI/ BAS	Felthouse Wood
AWI	UNK
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Hill Farm (north west of)
BAS	Mill Wood (near)
BAS	Leek Brook Meadow
BAS	Horse Bridge (east of)
SBI	Upper Fernyhill Farm (south east of)
SBI	Mosslee Mill farm (east of)
SBI	Cheddleton Heath (dismantled railway)
SBI	Cheddleton Heath
SBI	Consall Forge (north of), Caldon Canal
SBI	Ringehay Grassland
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Rosebank
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

SSSI – Site of Special Scientific Interest, AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

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4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Common toad
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Frogbit
	Grass Snake
	Great crested newt
	Greater butterfly orchid
	Green woodpecker
	Grey wagtail
	Hedge rustic



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	House martin
	House sparrow
	Insect - beetle
	Insect - Hymenopteran
	Jacob's ladder
	Knot grass
	Little grebe
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Reed bunting
	Rosy rustic
	Rustic
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	Tubular water dropwort
	Tufted duck
	Wall
	West European Hedgehog
	Willow tit
	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Chinese muntjac
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle

	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species poor hedgerow
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)
I	0.84	88
OTHER	0.12	12
TOTALS	0.96	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , pedunculate oak <i>Quercus robur</i>



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4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in one location at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* have been recorded on site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and scrub from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands and domestic dwellings, with FID186 adjacent to the south, which is very poorly connected to the wider countryside.

The site consists mainly of species poor grassland (88%) and a species poor hedgerow consisting of hawthorn and elder and scattered trees including pedunculate oak.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats, badger and West European hedgehog (recorded within 30m). However, the site is considered to have low ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has very low biodiversity value overall with only trees and the hedgerow having potential for supporting breeding birds, and foraging bats and badger. Therefore the site has been attributed low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 188



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FID 188

1. Introduction

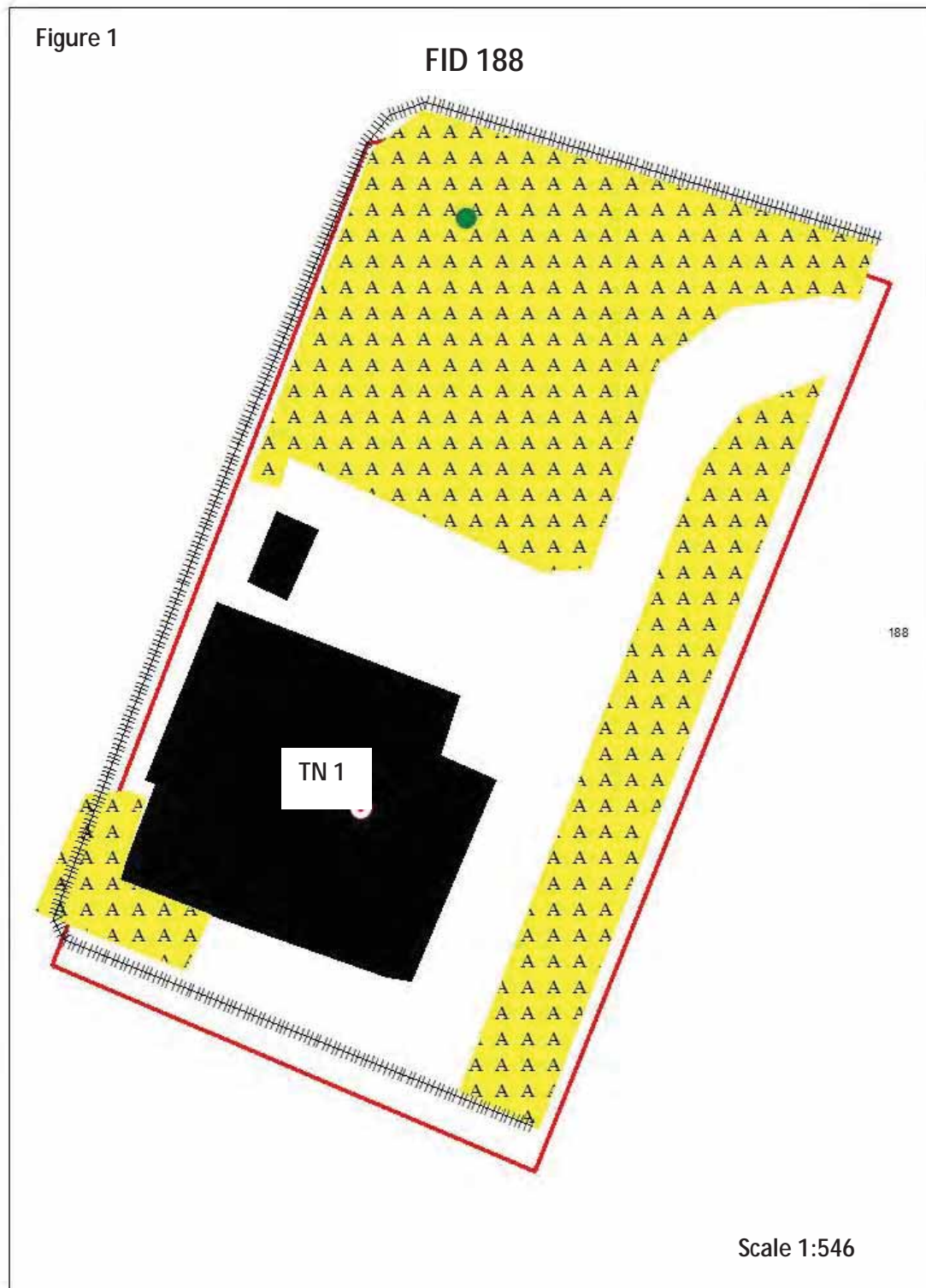
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 188 O.S grid reference SJ9729451998.

FID 188 is located in the north of Cheddleton village surrounded by housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 188 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/SBI	Soils Wood
AWI	Hollinhay Wood
AWI/ BAS	Felthouse Wood
AWI	UNK
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Horse Bridge
BAS	Leek Brook Meadow
BAS	Horse Bridge (east of)
SBI	Cheddleton Heath (dismantled railway)
SBI	Cheddleton Heath
SBI	Consall Forge (north of), Caldon Canal
SBI	Ringhay Grassland
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)

AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl

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	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common cudweed
	Common kingfisher
	Common Pipistrelle
	Common redstart
	Common sandpiper
	Common snipe
	Common toad
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Frogbit
	Grass Snake
	Great crested newt
	Greater butterfly orchid
	Green woodpecker
	Grey wagtail
	Hedge rustic
	House martin
	House sparrow
	Insect - beetle
	Insect - Hymenopteran
	Jacob's ladder
	Knot grass
	Little grebe
	Mallard

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	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Red grouse
	Reed bunting
	Rosy rustic
	Rustic
	Small heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow tit
	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Chinese muntjac
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Freshwater white clawed crayfish

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	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building
- Scattered trees
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.09	42
OTHER	0.13	58
TOTALS	0.22	100

AM – Amenity grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus agg</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.



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4.3.4 Fauna

Bats

The site is derelict and has 1 large and one small building that appears to have some loose roof tiles and potential entrances that could allow bats to roost.

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. Although there is only one tree on site a range of common birds could potentially nest within it from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9728751985	Requires bat survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered tree					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by habitats of low biodiversity value, with domestic dwellings encompassing the site and hence very poor connectivity to the wider countryside.

The habitats present on site are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species apart from roosting bats. The building's potential to support roosting bats has elevated the site's status to district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the building should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that the building is checked for the presence of breeding birds at the same time as the bat surveys.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that the tree is retained if the site is to be developed.

If the tree is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly very low biodiversity value overall and is set within an urban environment with little connectivity to the wider countryside which lowers the biodiversity of the area considerably. However, the potential of the building to support roosting bats has increased the site's importance to district level.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the building
- Vegetation removal at the appropriate time of year



FID 189



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FID 189

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 189 O.S grid reference SJ9748352303.

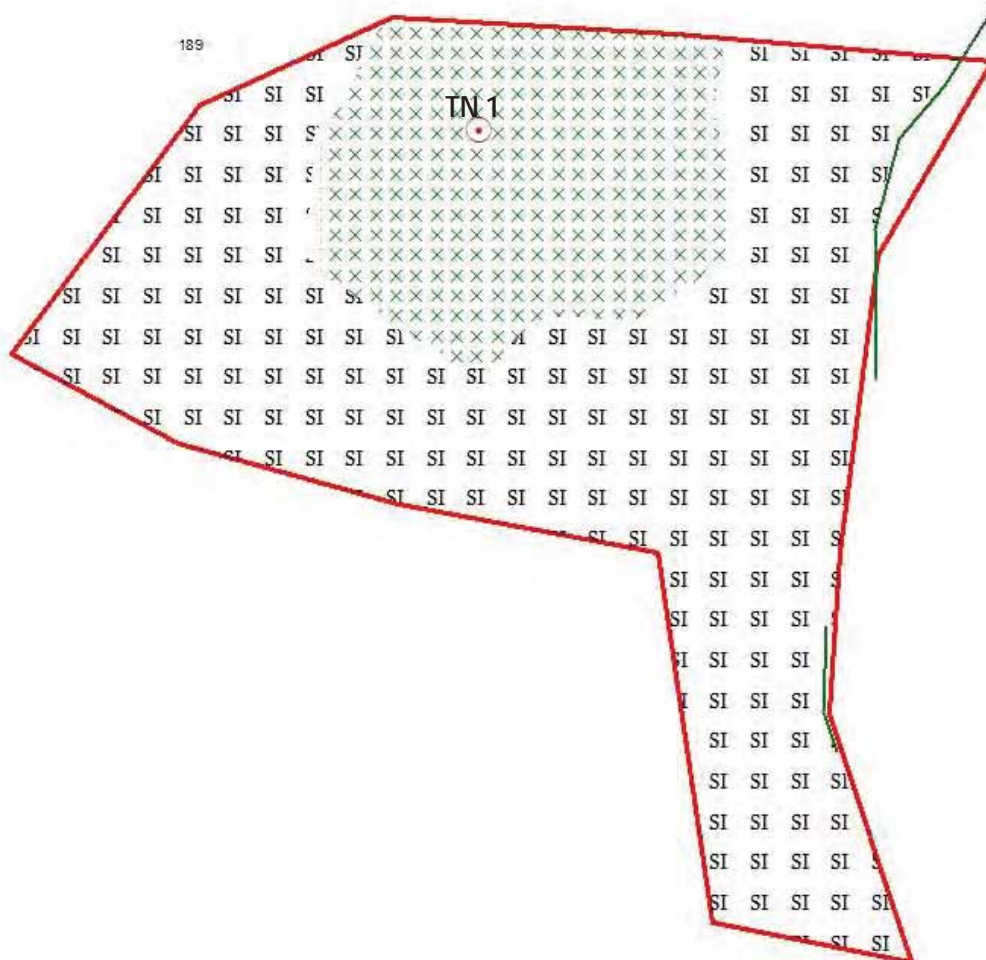
FID 189 is located in north Cheddleton village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 189



Scale 1:872



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 189 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/SBI	Soils Wood
AWI	Hollinhay Wood
AWI	UNK
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood, Little Susan's Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
BAS	Horse Bridge
BAS	Leek Brook Meadow
BAS	Horse Bridge (east of)
SBI	Beech Close (SW of Longsdon)
SBI	Park Lane Farm (north and east of), Caldon Canal
SBI	Cheddleton Heath (dismantled railway)
SBI	Cheddleton Heath
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Ringhay Grassland
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)

AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Barn Owl



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	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common cudweed
	Common kingfisher
	Common Pipistrelle
	Common redstart
	Common sandpiper
	Common snipe
	Common toad
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Frogbit
	Grass Snake
	Great crested newt
	Greater butterfly orchid
	Green woodpecker
	Grey wagtail
	Greylag goose
	Hedge rustic
	House martin
	House sparrow
	Insect - beetle
	Insect - Hymenopteran
	Jacob's ladder
	Knot grass
	Little grebe

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	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Red grouse
	Reed bunting
	Rosy rustic
	Rustic
	Small heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow tit
	Yellowhammer
INV	Canadian waterweed
	Chinese muntjac
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Freshwater white clawed crayfish

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	Grass Snake
	Great crested newt
	Greylag goose
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered scrub
- Species poor hedgerow
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	0.25	70
SS	0.10	28
OTHER	0.01	2
TOTALS	0.35	100

SI – Species poor semi-improved grassland, SS – Scattered scrub

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Red fescue <i>Festuca rubra</i> , crested dog's tail <i>Cynosurus cristatus</i> , cock's foot <i>Dactylis glomerata</i> , creeping thistle <i>Cirsium arvense</i>
Hedgerows/ trees/ scrub	Gorse <i>Ulex europaeus</i> , broom <i>Cytisus scoparius</i> , hawthorn

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.



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Weeds listed under the Weeds Act 1959 including creeping thistle have been recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. A range of common birds could potentially nest in the scattered scrub from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9748252326	Sparse scattered scrub

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered scrub					x
Species poor hedgerow					x
Species poor amenity grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by habitats of low biodiversity value, with domestic dwellings and species poor grassland encompassing the site and hence very poor connectivity to the wider countryside.

The scattered scrub (28%) consists of gorse and broom with species poor grassland (70%) surrounding the area consisting mainly of crested dog's tail, cock's foot and creeping thistle.

The habitats present on site are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would any of these species.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the scrub is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has mostly very low biodiversity overall and is located near to an urban environment with little connectivity to the wider countryside which lowers the biodiversity of the area considerably. Therefore the site is deemed to have low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



FID 204



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FID 204

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 204 O.S grid reference SJ9701551385.

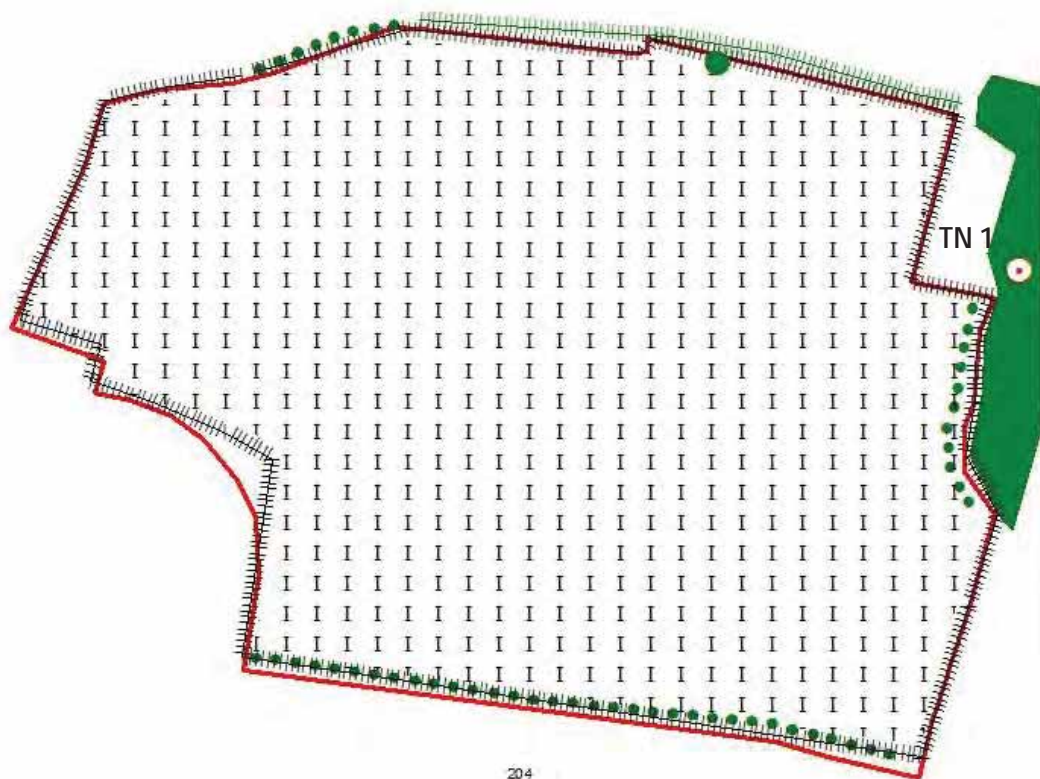
FID 204 is located south of Cheddleton surrounded by agricultural land, farm buildings and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 204



Scale 1:2848



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 204 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).



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2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/ BAS	Felthouse Wood
AWI	UNK
AWI	Consall Wood
AWI/ BAS	Big Susan's Wood, Little Susan's Wood
AWI/ SBI	Littlewood Wood, Hall Wood
AWI/ SBI	The Rookery
BAS	Ashcombe Deer Park
SBI	Basford Green (west of)
SBI	Cheddleton Marsh
SBI	Caldon Canal
SBI	Rosebank
SBI	Deep Hayes Country Park
SBI	Caldon Canal (south of Basford Bridge)
SBI	Wetley Rocks
SBI	The Rookery

AWI – Listed in Ancient Woodland Inventory, BAS – Biodiversity Action Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Autumnal rustic
	Beaded chestnut
	Black headed gull
	Brown birch bolette
	Brown Hare
	Brown Long-eared Bat
	Centre barred sallow
	Cinnabar



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	Common bullfinch
	Common cudweed
	Common kingfisher
	Common Pipistrelle
	Common sandpiper
	Common snipe
	Common toad
	Corn spurrey
	Dot moth
	Dusky thorn
	Dyer's greenweed
	Ear moth
	Eurasian teal
	European otter
	European water vole
	Feathered gothic
	Floating water plantain
	Freshwater white clawed crayfish
	Frogbit
	Grass Snake
	Great crested newt
	Greater butterfly orchid
	Green woodpecker
	Grey wagtail
	Hedge rustic
	House martin
	Insect - Hymenopteran
	Jacob's ladder
	Little grebe
	Mallard
	Noctule bat
	Northern Lapwing
	Northern shoveler
	Pipistrelle
	Polecat
	Red grouse
	Reed bunting
	Rosy rustic
	Rustic
	Small heath
	Small phoenix

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	Small square spot
	Song thrush
	Soprano pipistrelle
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Willow tit
	Willow warbler
	Yellowhammer
INV	Canadian waterweed
	Curly waterweed
	Greater Canada goose
	Indian Balsam
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Brown Long-eared Bat
	Common kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Floating water plantain
	Freshwater white clawed crayfish
	Grass Snake
	Great crested newt
	Noctule bat
	Pipistrelle
	Polecat
	Soprano pipistrelle

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

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4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species poor hedgerow
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)
I	4.72	100
TOTALS	4.72	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i> , horse chestnut <i>Aesculus hippocastaneum</i> , lime <i>Tilia</i> sp, sycamore <i>Acer pseudoplatanus</i> ,

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in one location at the time of survey.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* have been recorded on site.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and scrub from March to August when birds in the UK normally breed.



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9714651407	Semi-natural broadleaved woodland

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by species poor grasslands and domestic dwellings, with FID186 adjacent to the south, which is fairly poorly connected to the wider countryside.

The site consists mainly of species poor grassland (88%) and a species poor hedgerow consisting of hawthorn, elder and scattered trees including pedunculate oak.

Despite a number of European protected species being recorded within 2km it is unlikely that the site would support most of the species, and therefore the site is considered to have low ecological importance. The exceptions could potentially include foraging bats, badger and West European hedgehog (recorded within 40m).

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that as many trees and hedgerows are retained if the site is to be developed.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

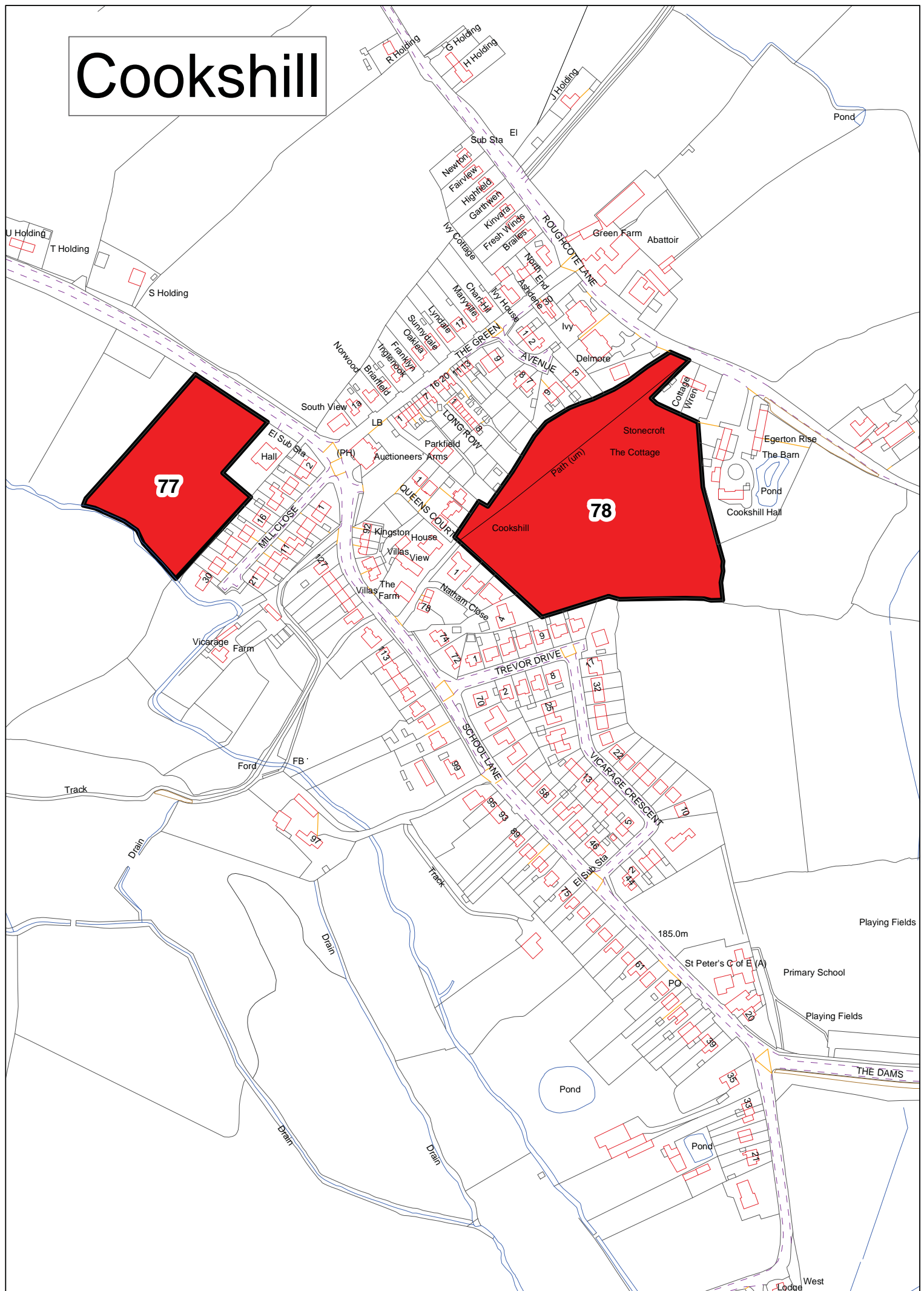
7. Conclusion

The site has very low biodiversity value overall with only trees and the hedgerow having potential for supporting breeding birds, and foraging bats and badger. Therefore the site is attributed a low ecological value.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year

Cookshill





FID 77



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FID 77

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 77 O.S grid reference SJ9440043376.

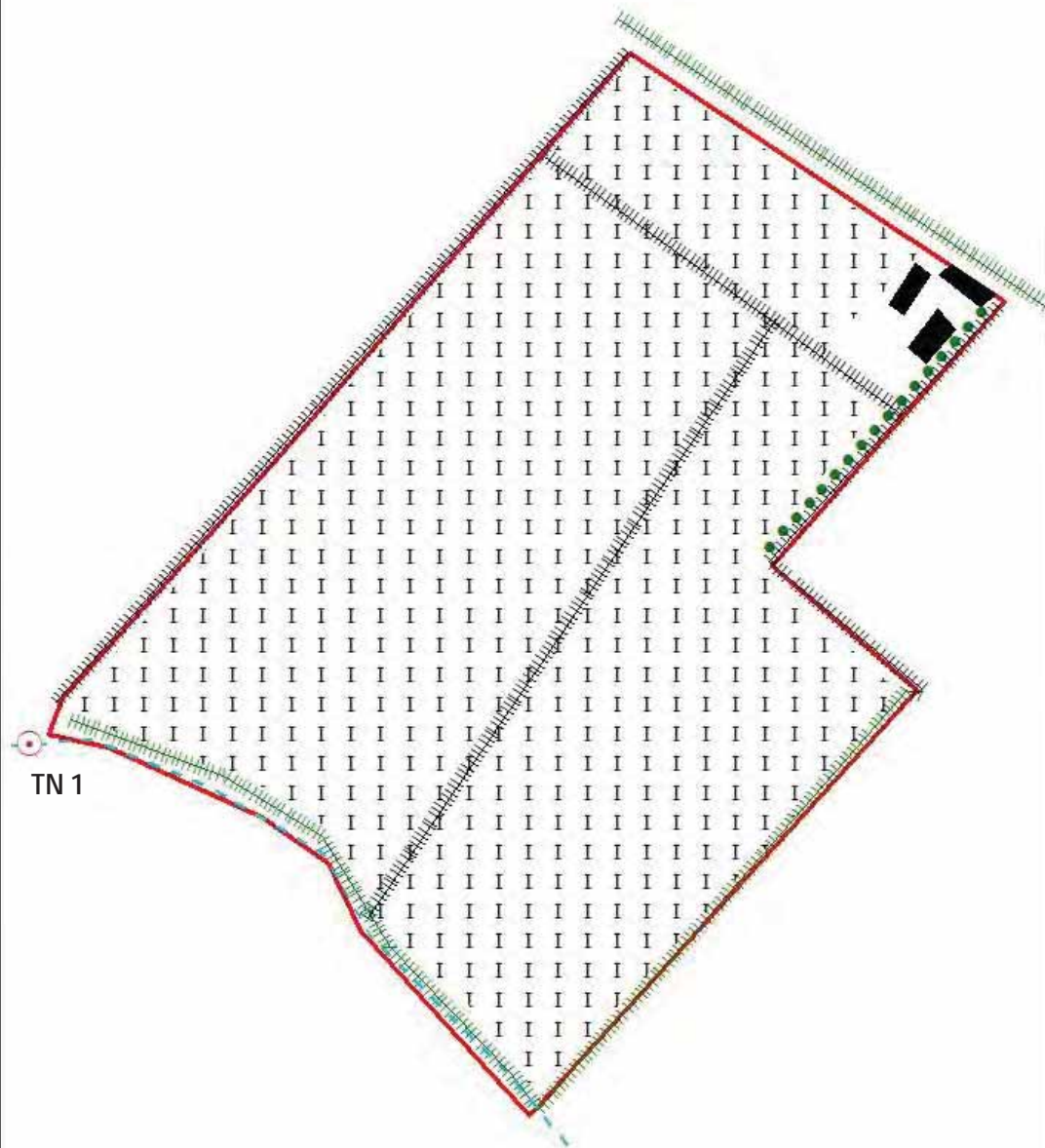
FID 77 is located west of Cookshill in the Staffordshire Moorlands District, surrounded by broadleaved woodland, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 77



Scale 1:1326



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 77 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Hulme Quarry
LNR	Weston
LNR	Birch Wood
LNR	Ransom
BAS	Cresswellford Crossing
BAS	Caverswall Castle (west of)
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Creswell's Piece
SBI	Parkhall Country Park
SBI	Ransome Wood
SBI	Birch Wood
SBI	Weston Sprink

SSSI – Site of Special Scientific Interest, LNR – Local Nature Reserve, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A moth
	Argent and sable
	Autumnal Rustic
	Barn Owl
	Barn swallow
	Beaded Chestnut
	Blood-vein
	Brindled Beauty
	Broom Moth
	Brown-spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine



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	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common cudweed
	Common Kestrel
	Common Kingfisher
	Common Snipe
	Common toad
	Corn spurrey
	Dark-barred Twin-spot Carpet
	Dark Brocade
	Dark Spinach
	Deep Brown Dart
	Dingy skipper
	Dot Moth
	Double Dart
	Dusky-lemon Sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	Early bumble bee
	Eurasian woodcock
	European water vole
	Feathered Gothic
	Fieldfare
	Figure Of Eight
	Flounced chestnut
	Freshwater white clawed crayfish
	Galingale
	Garden Dart
	Garden Tiger
	Ghost Moth
	Grass Snake
	Great crested newt
	Green-brindled Crescent
	Green Woodpecker
	Grey Dagger
	Heath Rustic
	Hedge Rustic
	House martin
	Horsetail weevil



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	House sparrow
	Knot Grass
	Large red tailed bumble bee
	Large Wainscot
	Latticed Heath
	Mallard
	Minor Shoulder Knot
	Monk's-rhubarb
	Mottled rustic
	Mouse Moth
	Noctule bat
	Northern lapwing
	Oak Hook-tip
	Oak Lutestring
	Oblique Carpet
	Orache Moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Shrubby cinquefoil
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Spinach
	Streak
	Tall Hawkweed
	V-moth
	Wall
	White-line Dart
	White Ermine
	Wild pansy

	Willow warbler
	Yellowhammer
INV	Canadian goldenrod
	Curly waterweed
	False acacia
	Japanese knotweed
	Japanese rose
	Montbretia
	New Zealand pigmyweed
	Rhododendron
	Russian vine
E/ UK PS	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian badger
	European water vole
	Fieldfare
	Freshwater white clawed crayfish
	Grass Snake
	Noctule bat
	Pipistrelle
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas (polygon only) measured through ArcGIS version 10.2.2.

- Species poor hedgerow
- Dry ditch
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.90	90
OTHER	0.10	10
TOTALS	1.00	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , holly <i>Ilex aquifolium</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including curled dock have been recorded within the grassland sward.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9432943347	Dry ditch with cock's foot and occasional willow <i>Salix sp</i>

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Dry ditch					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site consists mainly of species poor improved grazed grassland (90%). The site is surrounded by domestic dwellings to the east and species poor grasslands as well as hedgerows which form the remaining adjacent land. The dry ditch located on the southern boundary appears to connect to a marshy grassland area and pond <300m away. The pond appears to be a temporary one after assessment from aerial photographs.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include reptiles and amphibians within the dry ditch, as well as foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

The pond to the west of the site should be scoped through an HSI survey to ascertain whether a great crested newt survey is needed to be carried out prior to any development works going ahead. If the pond is assessed to be suitable to support great crested newts then a survey is recommended.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the dry ditch connected to a pond to the south of the site a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998), especially concentrated on the dry ditch border to the south and connecting hedgerow to the east.

Vegetation removal

If at all possible it is recommended that as many trees are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



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7. Conclusion

The site mostly contains fairly species poor habitats but with some potential to support European and UK protected species along the dry ditch and connecting hedgerow, which is well connected to potentially biodiverse habitats and able to support European and UK protected species. Therefore the site is considered to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A preliminary HSI survey for great crested newts, and potential follow up full great crested newt survey
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 78



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FID 78

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 78 O.S grid reference SJ9472143354.

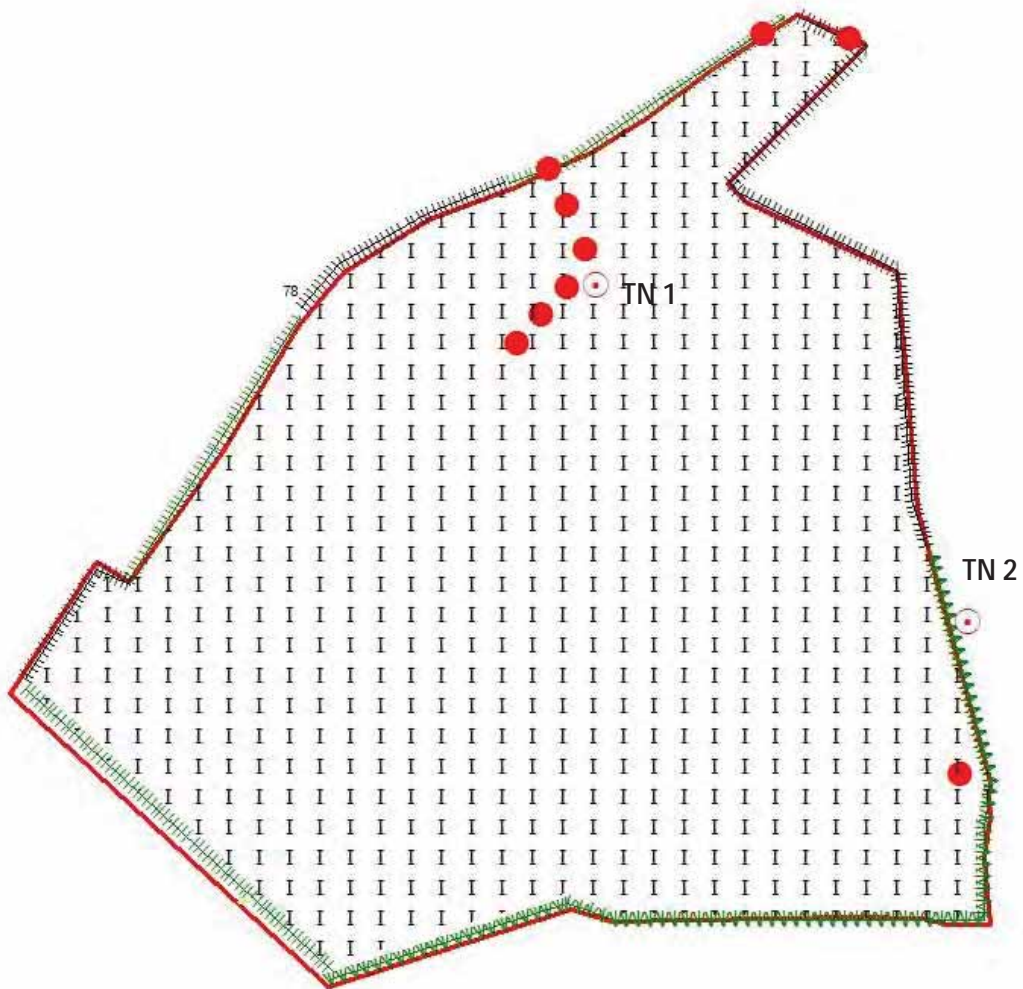
FID 78 is located west of Cookshill in the Staffordshire Moorlands District, surrounded by broadleaved woodland, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 78



Scale 1:1929



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 78 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

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2.5 Aerial photography

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In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation
Table 1

SITE DESIGNATION	NAME
SSSI	Hulme Quarry
LNR	Weston
LNR	Birch Wood
LNR	Ransom
AWI	Stansmore Wood
BAS	Cresswellford Crossing
BAS	Caverswall Castle (west of)
BAS	Blythe Bridge Woods
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Creswell's Piece
SBI	Parkhall Country Park
SBI	Birch Wood
SBI	Weston Sprink

SSSI – Site of Special Scientific Interest, LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Argent and sable
	Autumnal Rustic
	Barn Owl
	Barn swallow
	Beaded Chestnut
	Blood-vein
	Brindled Beauty
	Broom Moth
	Brown-spot Pinion
	Brown Hare
	Brown Long-eared Bat
	Buff Ermine



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	Centre-barred Sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common cudweed
	Common Kestrel
	Common Kingfisher
	Common Snipe
	Common toad
	Corn spurrey
	Dark-barred Twin-spot Carpet
	Dark Brocade
	Dark Spinach
	Deep Brown Dart
	Dingy skipper
	Dot Moth
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	Dusky-lemon Sallow
	Dusky Brocade
	Dusky Thorn
	Ear Moth
	Early bumble bee
	Eurasian woodcock
	European water vole
	Feathered Gothic
	Fieldfare
	Figure Of Eight
	Flounced chestnut
	Freshwater white clawed crayfish
	Galingale
	Garden Dart
	Garden Tiger
	Ghost Moth
	Grass Snake
	Great crested newt
	Green-brindled Crescent
	Green Woodpecker
	Grey Dagger
	Heath Rustic
	Hedge Rustic
	House martin
	Horsetail weevil



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	House sparrow
	Knot Grass
	Large red tailed bumble bee
	Large Wainscot
	Latticed Heath
	Mallard
	Minor Shoulder Knot
	Monk's-rhubarb
	Mottled rustic
	Mouse Moth
	Noctule bat
	Northern lapwing
	Oak Hook-tip
	Oak Lutestring
	Oblique Carpet
	Orache Moth
	Pipistrelle
	Polecat
	Powdered Quaker
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Shrubby cinquefoil
	Sky Lark
	Small heath
	Small Phoenix
	Small Square-spot
	Spinach
	Streak
	Tall Hawkweed
	V-moth
	Wall
	White-line Dart
	White Ermine
	Wild pansy

	Willow warbler
	Yellowhammer
INV	Canadian goldenrod
	Curly waterweed
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	Common pipistrelle
	Daubenton's bat
	Eurasian badger
	European water vole
	Fieldfare
	Freshwater white clawed crayfish
	Grass Snake
	Noctule bat
	Pipistrelle
	Polecat
	Redwing
	Whiskered/ Brandt's bat

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerows
- Species poor hedgerows
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	2.25	96	
OTHER	0.09	4	
BPT			9
TOTALS	2.33	100	9

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , annual meadow grass, curled dock <i>Rumex crispus</i> , common nettle <i>Urtica dioica</i> , redshank <i>Persicaria maculosa</i> , pineappleweed <i>Matricaria discoidea</i>
Hedgerows/ trees/ scrub	Sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> , holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey.

Weeds listed under the Weeds Act 1959 including curled dock and creeping thistle *Cirsium arvense* were recorded within the grassland.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9472843408	6 sycamore trees requiring bat surveys
2	SJ9478843354	Hedgerow survey required

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerows				x	
Scattered trees				x	
Species poor hedgerow					x
Species poor grassland					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by domestic dwellings to the south west, west and north, with farm buildings and species poor grassland to the east and south east.

The site mainly consists of species poor improved grassland (96%) which is heavily grazed by cows. The remaining habitats including 9 trees with bat potential and the potentially 2 species rich hedgerows are deemed to have at least district importance due to so many mature trees being present, although the site is fairly poorly connected to other habitats.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 9 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

If at all possible it is recommended that as many trees in the hedgerow are retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees and hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



7. Conclusion

The site itself has 9 trees with bat potential and 2 species rich hedgerows which are fairly poorly connected to the wider countryside and therefore the site is deemed to have at least district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- A bat survey regime to ascertain whether bats roost in the trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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Site label numbers denote Site FID reference numbers used in Study.



FID 213



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FID 213

1. Introduction

1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 213 O.S grid reference SJ9807038825.

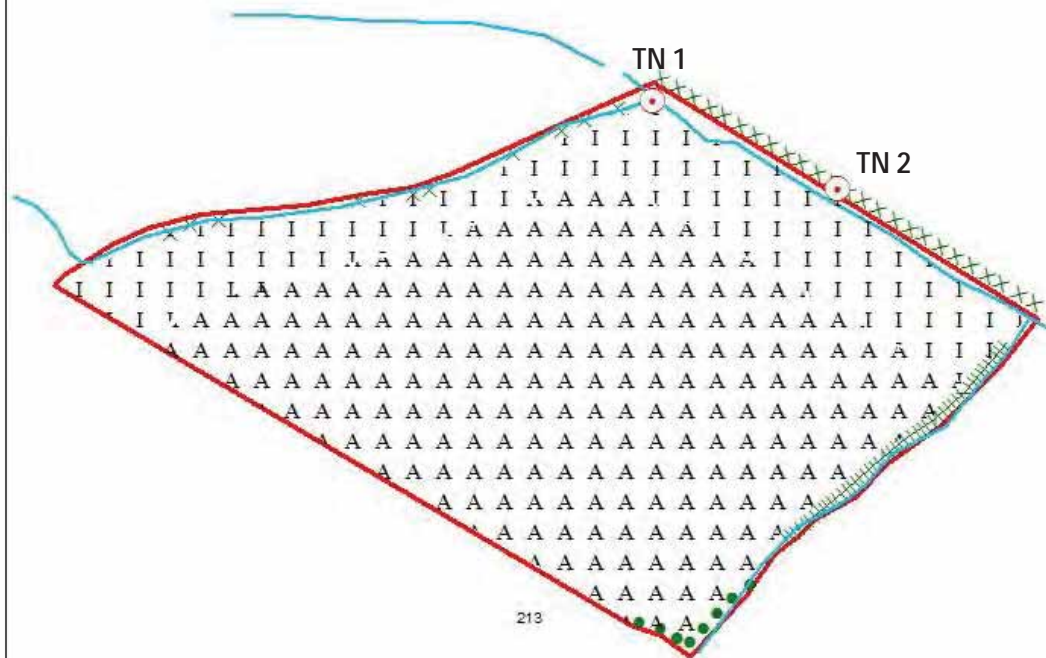
FID 213 is located east of Cresswell village by agricultural land and industrial buildings with the site abutting Paynsley Hall Pond BAS (Biodiversity Alert Site) to the east.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Figure 1

FID 213



Scale 1:5273



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 213 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.



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2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/ SBI	Hose Wood
AWI	Hose Wood Park
BAS	New Inn (near)
BAS	Paynsley Hall Pond (FID213 abuts this BAS)
SBI	Mount Pleasant (west of)
SBI	Blythe House (south west of)
SBI	Newton (north-east of)

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Brown Hare
	Brown Long-eared Bat
	Cinnabar
	Common Kestrel
	Common Kingfisher
	Common pipistrelle
	Common snipe
	Common toad
	Dark leaved hawkweed
	Eurasian curlew
	Eurasian woodcock
	European otter
	European water vole
	Grass Snake
	Great crested newt
	Grey wagtail
	House sparrow
	Insect – beetle

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	Lichen
	Mallard
	Native black poplar
	Pipistrelle
	Sky Lark
	Soprano pipistrelle
	Tall Hawkweed
	Wall
	Western European hedgehog
INV	Giant hogweed
	Indian balsam
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	A bat
	Barn Owl
	Bluebell
	Brandt's bat
	Brown Long-eared Bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian badger
	European otter
	European water vole
	Grass Snake
	Great crested newt
	Pipistrelle
	Soprano pipistrelle
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species rich hedgerows
- Running water
- Species poor hedgerows
- Tall ruderal vegetation
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES)	PERCENTAGE (%)
A	5.81	68
I	2.16	26
OTHER	0.53	6
TOTALS	8.50	100

A – Arable land, I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation/ aquatic vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , rosebay willowherb <i>Chamerion angustifolium</i> , Himalayan balsam, great willowherb <i>Epilobium hirsutum</i> , water crowfoot <i>Ranunculus sp.</i>
Hedgerows/ trees/ scrub	Goat willow <i>Salix caprea</i> , crack willow <i>Salix fragilis</i> , Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , alder <i>Alnus glutinosa</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was found during the walkover survey in various areas along the stream.



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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9808638951	Wet ditch with species poor tall ruderal vegetation
2	SJ9819238906	Mesotrophic stream with developed riparian vegetation

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Running water				x	
Scattered trees					x
Species poor hedgerow					x
Tall ruderal vegetation					x
Scattered scrub					x
Species poor grassland					x
Arable land					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by industrial buildings, arable land and species poor grasslands.

The site mainly consists of arable land (69%) and species poor grassland (26%). However the remaining habitats form an intricate mosaic of stream and riparian habitats which has good connectivity to other similar habitats and therefore given district ecological importance. The stream to the west has species poor riparian habitat with species including Himalayan balsam, great willowherb and common nettle. The northern stream appears to be fairly mesotrophic with occasional patches of water crowfoot species, which is fairly unusual, and reed canary grass *Phalaris arundinacea* with scattered alder, hawthorn and goat willow.

The hedgerow and wet ditch to the west consist of hawthorn, goat willow, crack willow, oak *Quercus species* and tall ruderal vegetation such as rosebay willowherb *Chamerion angustifolium* and raspberry *Rubus idaeus*.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. Skylarks have been recorded on site. The exceptions could potentially include water vole, foraging bats using a flight line along the streams/ vegetation and reptiles.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

It is recommended that any proposed development of the site should avoid the stream habitat and create a buffer between this and the development.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the running water and riparian vegetation which is connected to Paynsley Hall Ponds BAS a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998).

Water vole survey

Water vole have been recorded within 2km therefore it is recommended to carry out a water vole survey at the same time as other prescribed surveys along the stream and ditch.

Water voles received habitat protection in 1998 through inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of section 9(4) only. This section of the Act protects the water vole's place of shelter or protection e.g. their burrows, but does not protect the voles themselves. Under the legislation, it is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or to disturb water voles whilst they are using such a place.

Otter

Otter have been recorded within 2km of the site 400m downstream to the south east near to Paynsley Hall Ponds BAS therefore an otter survey is recommended to search for holts and field signs such as feeding remains, footprints and spraints.

Otters are fully protected through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 2010 as European protected species. Under the legislation, it is an offence to intentionally kill, injure or take an otter as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by an otter. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of otter to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

Vegetation removal

If at all possible it is recommended that as many trees and the hedgerow is retained if at all possible, and that the development does not affect the stream habitats.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further



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protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees, hedgerows and tall ruderal vegetation is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

Although the site is mainly species poor in terms of area its boundary riparian habitats have some potential to support reptile populations, therefore the site is given district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Reptile survey
- Otter survey
- Water vole survey
- Vegetation removal at the appropriate time of year

Dilhorne

The map displays the Dilhorne area with the following features:

- Highlighted Plots:** Four plots are highlighted in red and labeled with white numbers: 105, 106, 107, and 190.
- Streets:** NEW ROAD, SARVER LANE, HIGH STREET, and SOLEY LANE are visible.
- Buildings and Landmarks:** Dilhorne Recreation Centre, Tennis Court, Bowling Green, Pavilion, Community Centre, The Old Vicarage, Beech Lodge, Heather House, The Royal Oak Post House, Rose Cott, Leigh, Rock, Rock View Mill Cottage, Millbank, Mill Bank, Rock Cottage, Delvern Cottage, Hinters Lodge, Fountain Lodge, 400m, 211.5m, 202.7m, 211.2m, 213.5m, 215.5m, 216.5m, 217.5m, 218.5m, 219.5m, 220.5m, 221.5m, 222.5m, 223.5m, 224.5m, 225.5m, 226.5m, 227.5m, 228.5m, 229.5m, 230.5m, 231.5m, 232.5m, 233.5m, 234.5m, 235.5m, 236.5m, 237.5m, 238.5m, 239.5m, 240.5m, 241.5m, 242.5m, 243.5m, 244.5m, 245.5m, 246.5m, 247.5m, 248.5m, 249.5m, 250.5m, 251.5m, 252.5m, 253.5m, 254.5m, 255.5m, 256.5m, 257.5m, 258.5m, 259.5m, 260.5m, 261.5m, 262.5m, 263.5m, 264.5m, 265.5m, 266.5m, 267.5m, 268.5m, 269.5m, 270.5m, 271.5m, 272.5m, 273.5m, 274.5m, 275.5m, 276.5m, 277.5m, 278.5m, 279.5m, 280.5m, 281.5m, 282.5m, 283.5m, 284.5m, 285.5m, 286.5m, 287.5m, 288.5m, 289.5m, 290.5m, 291.5m, 292.5m, 293.5m, 294.5m, 295.5m, 296.5m, 297.5m, 298.5m, 299.5m, 300.5m, 301.5m, 302.5m, 303.5m, 304.5m, 305.5m, 306.5m, 307.5m, 308.5m, 309.5m, 310.5m, 311.5m, 312.5m, 313.5m, 314.5m, 315.5m, 316.5m, 317.5m, 318.5m, 319.5m, 320.5m, 321.5m, 322.5m, 323.5m, 324.5m, 325.5m, 326.5m, 327.5m, 328.5m, 329.5m, 330.5m, 331.5m, 332.5m, 333.5m, 334.5m, 335.5m, 336.5m, 337.5m, 338.5m, 339.5m, 340.5m, 341.5m, 342.5m, 343.5m, 344.5m, 345.5m, 346.5m, 347.5m, 348.5m, 349.5m, 350.5m, 351.5m, 352.5m, 353.5m, 354.5m, 355.5m, 356.5m, 357.5m, 358.5m, 359.5m, 360.5m, 361.5m, 362.5m, 363.5m, 364.5m, 365.5m, 366.5m, 367.5m, 368.5m, 369.5m, 370.5m, 371.5m, 372.5m, 373.5m, 374.5m, 375.5m, 376.5m, 377.5m, 378.5m, 379.5m, 380.5m, 381.5m, 382.5m, 383.5m, 384.5m, 385.5m, 386.5m, 387.5m, 388.5m, 389.5m, 390.5m, 391.5m, 392.5m, 393.5m, 394.5m, 395.5m, 396.5m, 397.5m, 398.5m, 399.5m, 400.5m, 401.5m, 402.5m, 403.5m, 404.5m, 405.5m, 406.5m, 407.5m, 408.5m, 409.5m, 410.5m, 411.5m, 412.5m, 413.5m, 414.5m, 415.5m, 416.5m, 417.5m, 418.5m, 419.5m, 420.5m, 421.5m, 422.5m, 423.5m, 424.5m, 425.5m, 426.5m, 427.5m, 428.5m, 429.5m, 430.5m, 431.5m, 432.5m, 433.5m, 434.5m, 435.5m, 436.5m, 437.5m, 438.5m, 439.5m, 440.5m, 441.5m, 442.5m, 443.5m, 444.5m, 445.5m, 446.5m, 447.5m, 448.5m, 449.5m, 450.5m, 451.5m, 452.5m, 453.5m, 454.5m, 455.5m, 456.5m, 457.5m, 458.5m, 459.5m, 460.5m, 461.5m, 462.5m, 463.5m, 464.5m, 465.5m, 466.5m, 467.5m, 468.5m, 469.5m, 470.5m, 471.5m, 472.5m, 473.5m, 474.5m, 475.5m, 476.5m, 477.5m, 478.5m, 479.5m, 480.5m, 481.5m, 482.5m, 483.5m, 484.5m, 485.5m, 486.5m, 487.5m, 488.5m, 489.5m, 490.5m, 491.5m, 492.5m, 493.5m, 494.5m, 495.5m, 496.5m, 497.5m, 498.5m, 499.5m, 500.5m, 501.5m, 502.5m, 503.5m, 504.5m, 505.5m, 506.5m, 507.5m, 508.5m, 509.5m, 510.5m, 511.5m, 512.5m, 513.5m, 514.5m, 515.5m, 516.5m, 517.5m, 518.5m, 519.5m, 520.5m, 521.5m, 522.5m, 523.5m, 524.5m, 525.5m, 526.5m, 527.5m, 528.5m, 529.5m, 530.5m, 531.5m, 532.5m, 533.5m, 534.5m, 535.5m, 536.5m, 537.5m, 538.5m, 539.5m, 540.5m, 541.5m, 542.5m, 543.5m, 544.5m, 545.5m, 546.5m, 547.5m, 548.5m, 549.5m, 550.5m, 551.5m, 552.5m, 553.5m, 554.5m, 555.5m, 556.5m, 557.5m, 558.5m, 559.5m, 560.5m, 561.5m, 562.5m, 563.5m, 564.5m, 565.5m, 566.5m, 567.5m, 568.5m, 569.5m, 570.5m, 571.5m, 572.5m, 573.5m, 574.5m, 575.5m, 576.5m, 577.5m, 578.5m, 579.5m, 580.5m, 581.5m, 582.5m, 583.5m, 584.5m, 585.5m, 586.5m, 587.5m, 588.5m, 589.5m, 590.5m, 591.5m, 592.5m, 593.5m, 594.5m, 595.5m, 596.5m, 597.5m, 598.5m, 599.5m, 600.5m, 601.5m, 602.5m, 603.5m, 604.5m, 605.5m, 606.5m, 607.5m, 608.5m, 609.5m, 610.5m, 611.5m, 612.5m, 613.5m, 614.5m, 615.5m, 616.5m, 617.5m, 618.5m, 619.5m, 620.5m, 621.5m, 622.5m, 623.5m, 624.5m, 625.5m, 626.5m, 627.5m, 628.5m, 629.5m, 630.5m, 631.5m, 632.5m, 633.5m, 634.5m, 635.5m, 636.5m, 637.5m, 638.5m, 639.5m, 640.5m, 641.5m, 642.5m, 643.5m, 644.5m, 645.5m, 646.5m, 647.5m, 648.5m, 649.5m, 650.5m, 651.5m, 652.5m, 653.5m, 654.5m, 655.5m, 656.5m, 657.5m, 658.5m, 659.5m, 660.5m, 661.5m, 662.5m, 663.5m, 664.5m, 665.5m, 666.5m, 667.5m, 668.5m, 669.5m, 670.5m, 671.5m, 672.5m, 673.5m, 674.5m, 675.5m, 676.5m, 677.5m, 678.5m, 679.5m, 680.5m, 681.5m, 682.5m, 683.5m, 684.5m, 685.5m,

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FID 105

1. Introduction

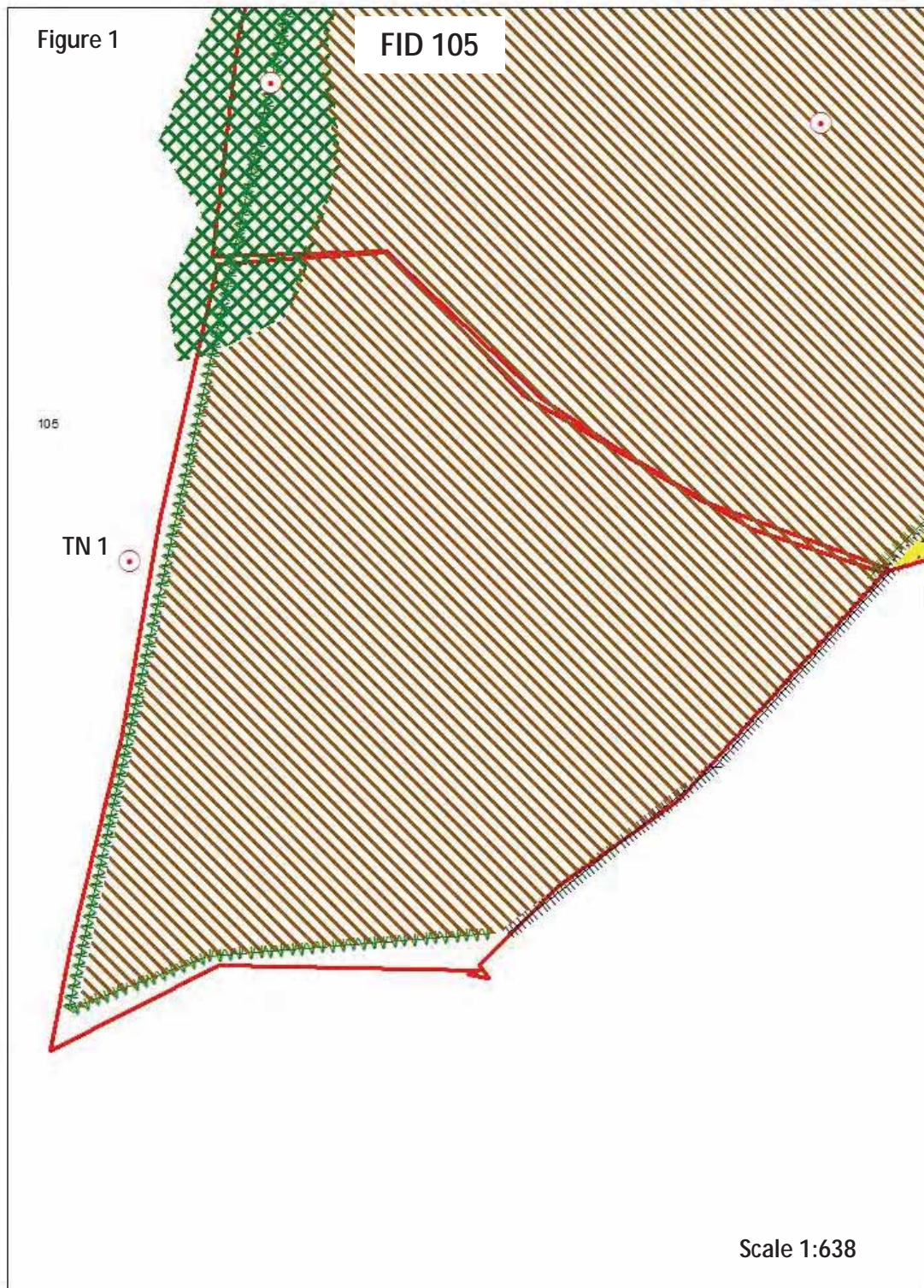
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 105 O.S grid reference SJ9731743681.

FID 105 is located within Dilhorne village in the Staffordshire Moorlands District, surrounded by farm buildings, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 105 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	Foxfield Wood
AWI	Dilhorne Wood
AWI	Stansmore Wood
AWI	Grangewood
BAS	Fair View (north of)
BAS	St. Thomas's Trees
BAS	Heywood Grange Wood
BAS	Dilhorne Wood
BAS	Creswellford Crossing
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Foxfield and Pearcroft Woods

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site,
SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn swallow
	Brown hare
	Brown long eared bat
	Common bullfinch
	Common Kingfisher
	Common Pipistrelle
	Common Snipe
	Corn spurrey
	Dingy skipper
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Green woodpecker

	House martin
	Lichen
	Monk's rhubarb
	Northern lapwing
	Pipistrelle
	Redwing
	Small heath
	Tall hawkweed
	Wall
	West European Hedgehog
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	Japanese knotweed
	Japanese rose
	New Zealand pigmyweed
E/ UK PS	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Fieldfare
	Pipistrelle
	Redwing

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Tall ruderal vegetation
- Dense scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.19	85
DS	0.00	2
OTHER	0.03	13
TOTALS	0.22	100

TR – Tall ruderal vegetation, DS – Dense scrub

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , creeping buttercup <i>Ranunculus repens</i> , hogweed <i>Heracleum sphondylium</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i> , goat willow <i>Salix caprea</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in various locations adjacent to the River Tean at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerow, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9728743688	Requires hedgerow survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Tall ruderal vegetation				x	
Dense scrub				x	
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by New lane to the south a public house and domestic dwellings to the east and rough grassland, hedgerow, and broadleaved woodland and open water <300m to the west and a further 2 more lakes <850m away which is all connected by a series of wetland areas, trees and scrub.

The site itself consists of species poor tall ruderal vegetation (85%) consisting mainly of curled dock, common nettle, hogweed and false oat grass. The species rich hedgerow consists of holly, hawthorn, elder, oak *Quercus species* and ash which is well connected to the broadleaved woodland/ wet mosaic habitats to the west and dense goat willow scrub. This connective habitat warrants the site being given at least district ecological importance.

The desk study has recorded great crested newt *Triturus cristatus* populations within 2km and therefore due to the proximity of extensive areas of open water, could potentially support terrestrial populations. Additionally, reptiles could be supported and bats could use the site for foraging.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

Due to the presence of the intricate habitat mosaic and close proximity to nearby ponds and wetland habitat that it is recommended that the open water is surveyed for presence of great crested newt according to the 'Great crested newt conservation handbook' (Froglife, 2001)..

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Reptiles could potentially be present on site within the large area of tall ruderal habitat, mainly due to the close proximity of ponds/ wetland area to the west it is recommended that a full reptile survey is carried out and any refugia present is removed by hand under watching brief of a suitably qualified ecologist.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as species rich according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.



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If at all possible it is recommended that as many trees are retained if the site is to be developed.

If hedgerow, scrub and tall ruderal vegetation is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has potential for protected species to be present due to close proximity of ponds and wetland habitats and the good connectivity to these potentially biodiverse habitats and the wider countryside. Therefore the site is deemed having at least district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey
- Reptile survey
- Removal of any refugia by hand under watching brief of a suitably qualified and licensed ecologist.
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 106



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FID 106

1. Introduction

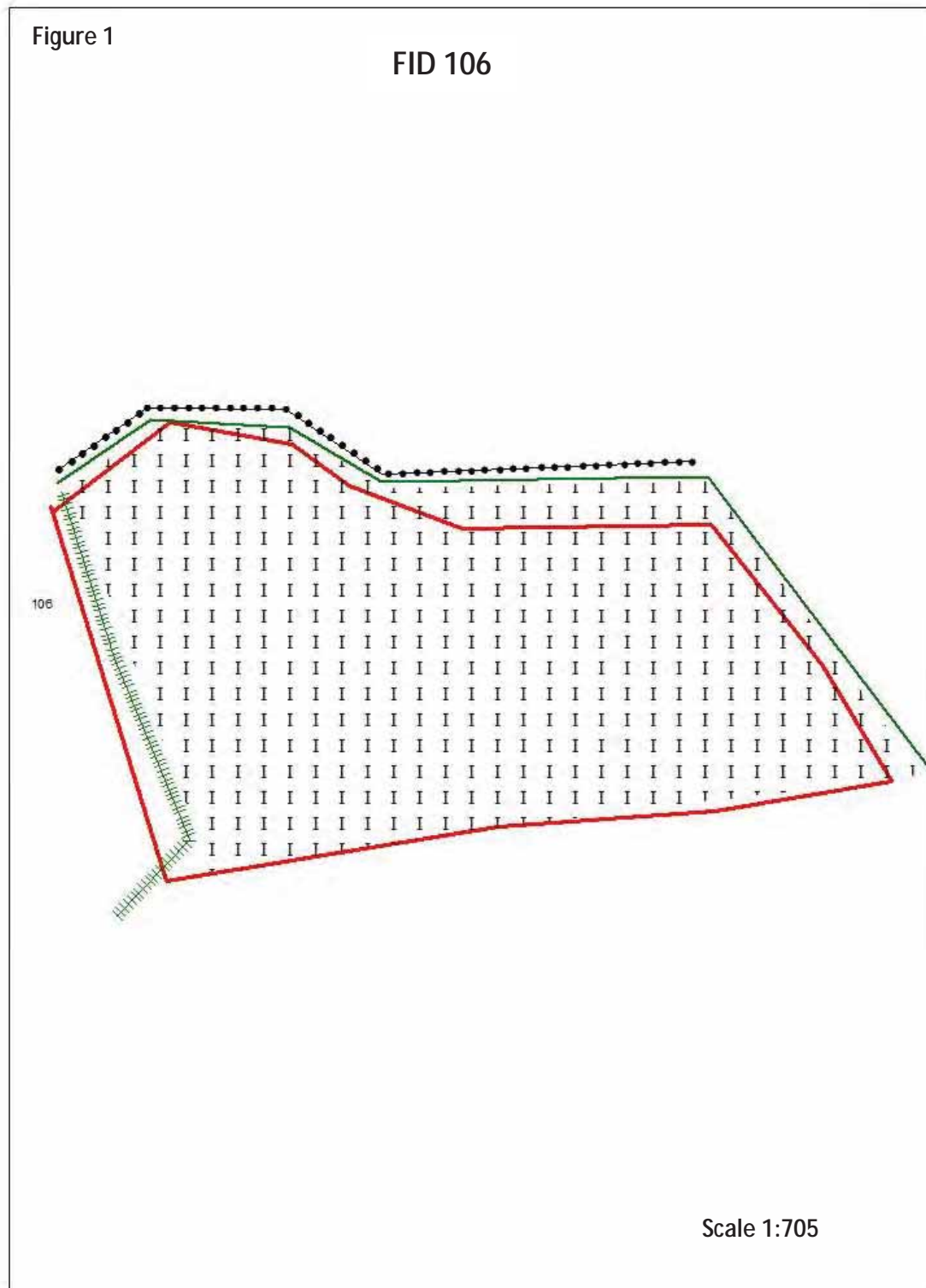
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 106 O.S grid reference SJ9742643626.

FID 106 is located in Dilhorne village in the Staffordshire Moorlands District, surrounded by agricultural land, farm buildings and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 106 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	Foxfield Wood
AWI	Dilhorne Wood
AWI	Stansmore Wood
AWI	Grangewood
BAS	Commonside Quarry
BAS	Fair View (north of)
BAS	St. Thomas's Trees
BAS	Heywood Grange Wood
BAS	Dilhorne Wood
BAS	Creswellford Crossing
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Foxfield and Pearcroft Woods

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site,
SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn swallow
	Brown hare
	Brown long eared bat
	Common bullfinch
	Common Kingfisher
	Common Pipistrelle
	Common Snipe
	Corn spurrey
	Dingy skipper
	Eurasian woodcock

	European Water Vole
	Fieldfare
	Green woodpecker
	House martin
	Lichen
	Monk's rhubarb
	Northern lapwing
	Pipistrelle
	Redwing
	Small heath
	Tall hawkweed
	Wall
	West European Hedgehog
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	Japanese knotweed
	Japanese rose
	New Zealand pigmyweed
E/ UK PS	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Fieldfare
	Pipistrelle
	Redwing

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species poor hedgerows
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.17	94
OTHER	0.01	6
TOTALS	0.18	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , snowberry <i>Symphoricarpos albus</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , blackthorn <i>Prunus spinosa</i>

4.3.3 Invasive weeds

No noxious weeds such as Japanese knotweed *Fallopia japonica* Himalayan balsam *Impatiens glandulifera* and or any other flora listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerows					x
Species poor grassland					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is totally surrounded by domestic dwellings, farm buildings and species poor grassland, but is fairly well connected to the south west to the wider countryside by a hedgerow. The habitats present on site are particularly common in the UK, have fairly low biodiversity value and therefore are deemed to have a low value within the matrix.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats and badger.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If at all possible it is recommended that hedgerows are retained if the site is to be developed.

If the hedgerows are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site is designated as having low ecological importance as it has mostly low biodiversity value overall in terms of area, is adjacent to a road to the north, farm buildings and domestic dwellings on the edge of a small village with fairly poor connectivity to the wider countryside through one hedgerow.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Vegetation removal at the appropriate time of year



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FID 107

Site FID 107 was recently granted planning permission in June 2014. As an accompanying ecological survey for this site had already been undertaken (in May 2012) and submitted to Staffordshire Moorlands District Council there was no need to survey the site.

Figure 1

FID 107





FID 190



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FID 190

1. Introduction

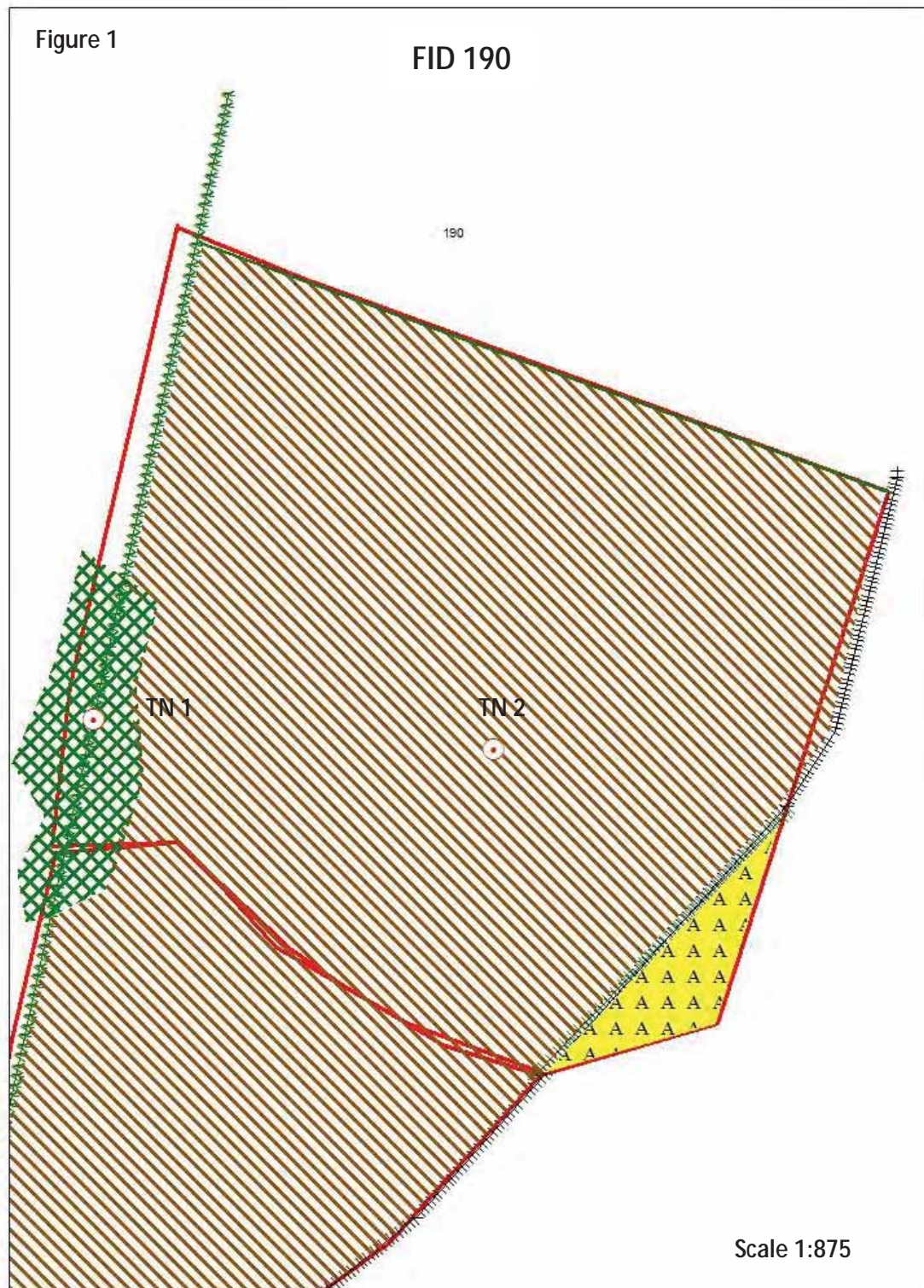
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 190 O.S grid reference SJ9734143728.

FID 190 is located in Dilhorne village surrounded by agricultural land and housing.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 190 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI	Foxfield Wood
AWI	Dilhorne Wood
AWI	Stansmore Wood
AWI	Grangewood
BAS	Fair View (north of)
BAS	St. Thomas's Trees
BAS	Heywood Grange Wood
BAS	Dilhorne Wood
BAS	Creswellford Crossing
SBI	Stansmore Wood and Grassland
SBI	Stansmore Grassland
SBI	Foxfield and Pearcroft Woods

AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site,
SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn swallow
	Brown hare
	Brown long eared bat
	Common bullfinch
	Common Kingfisher
	Common Pipistrelle
	Common Snipe
	Corn spurrey
	Dingy skipper
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Green woodpecker

	House martin
	Lichen
	Monk's rhubarb
	Northern lapwing
	Pipistrelle
	Redwing
	Small heath
	Tall hawkweed
	Wall
	West European Hedgehog
	Willow warbler
	Yellowhammer
INV	Curly waterweed
	Japanese knotweed
	Japanese rose
	New Zealand pigmyweed
E/ UK PS	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common Pipistrelle
	Eurasian Badger
	European Water Vole
	Fieldfare
	Pipistrelle
	Redwing

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Tall ruderal vegetation
- Dense scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.46	88
DS	0.02	4
AM	0.01	3
OTHER	0.03	5
TOTALS	0.52	100

TR – Tall ruderal vegetation, DS – Dense scrub, AM – Amenity grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , creeping buttercup <i>Ranunculus repens</i> , hogweed <i>Heracleum sphondylium</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded at the time of survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of hedgerow, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9730743718	Requires hedgerow survey
2	SJ9735043717	Requires reptile survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Tall ruderal vegetation				x	
Dense scrub				x	
Amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is bordered by FID 105 to the south a public house and domestic dwellings to the east and rough grassland, hedgerow, and broadleaved woodland and open water <300m to the west and a further 2 more lakes <850m away which is all connected by a series of wetland areas, trees and scrub.

The site itself consists of species poor tall ruderal vegetation (88%) consisting mainly of curled dock, common nettle, hogweed and false oat grass.

The species rich hedgerow is well connected to the broadleaved woodland/ wet mosaic habitats to the west and consists of holly, hawthorn, elder, oak and ash, and the dense scrub consists solely of goat willow.

The desk study has recorded great crested newt *Triturus cristatus* populations within 2km and therefore due to the proximity of extensive areas of open water, could potentially support terrestrial populations. Additionally the site could also support reptiles, foraging bats, barn owl and badger. Therefore the site as a whole is attributed district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

Due to the presence of the intricate habitat mosaic and close proximity to nearby ponds and wetland habitat that it is recommended that the open water is surveyed for presence of great crested newt according to the 'Great crested newt conservation handbook' (Froglife, 2001)..

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Reptiles could potentially be present on site within the large area of tall ruderal habitat, mainly due to the close proximity of ponds/ wetland area to the west it is recommended that a full reptile survey is carried out and any refugia present is removed by hand under watching brief of a suitably qualified ecologist.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as species rich according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.



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If at all possible it is recommended that as many trees are retained if the site is to be developed.

If hedgerow, scrub and tall ruderal vegetation is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has potential for protected species to be present due to close proximity of ponds and wetland habitats and the good connectivity to these potentially biodiverse habitats through species rich hedgerows and adjacent habitat to the wider countryside. Therefore the site is deemed to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey
- Reptile survey
- Removal of any refugia by hand under watching brief of a suitably qualified and licensed ecologist.
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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Site label numbers denote Site FID reference numbers used in Study.



FID 79



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FID 79

1. Introduction

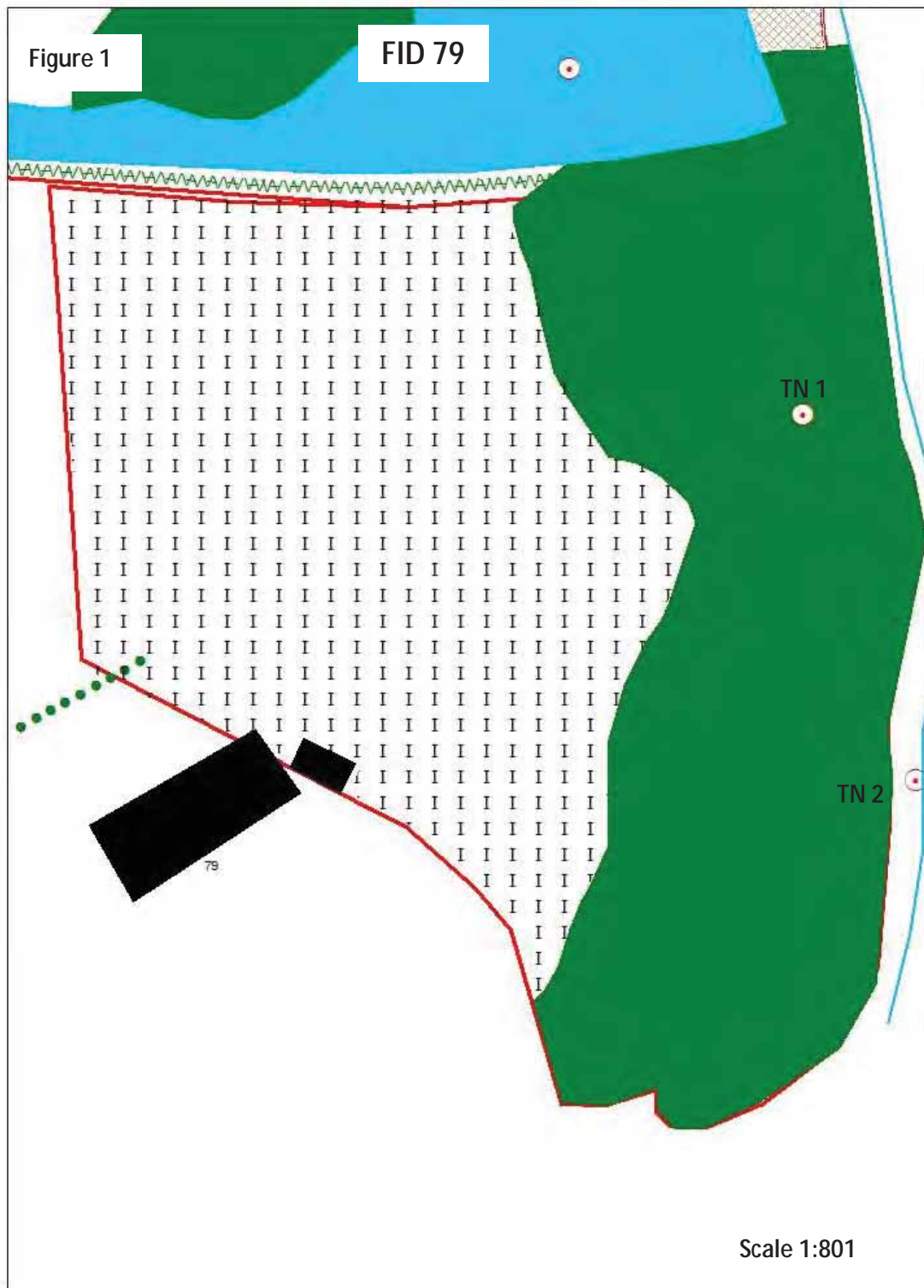
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 79 O.S grid reference SJ9833340123.

FID 79 is located at Draycott in the Moor in the Staffordshire Moorlands District, surrounded by a small broadleaved copse, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 79 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
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Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Hulme Quarry
AWI/ SBI	Huntley Wood
BAS	Commonside Quarry
BAS	Draycott Common Wood
BAS	Paynsley Hall Pond
SBI	Newton (north of)

SSSI – Site of Special Scientific Interest, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Brown Hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Cinnabar
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common pipistrelle
	Dingy skipper
	Early mining bee
	European water vole
	Four coloured cuckoo bee
	Grass Snake
	Great crested newt
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	House sparrow
	Insect – beetle

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	Insect - Hymenopteran (x11 different species)
	Large red tailed bumble bee
	Leaden spider wasp
	lichen
	Native black poplar
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Pipistrelle
	Sand martin
	Sky Lark
	Small heath
	Soprano pipistrelle
	Tall Hawkweed
	Wall
	Western European hedgehog
INV	Giant hogweed
	Indian balsam
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian badger
	European otter
	European water vole
	Grass Snake
	Great crested newt
	Pipistrelle
	Soprano pipistrelle
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Semi-natural broadleaved woodland
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.31	55
BW	0.25	44
OTHER	0.01	1
TOTALS	0.56	100

I – Improved grassland, BW – Broadleaved woodland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , lime <i>Tilia sp</i> , hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , horse chestnut <i>Aesculus hippocastaneum</i> , hazel <i>Corylus avellana</i> , bramble <i>Rubus fruticosus</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 was found along the northern boundary and stream along the eastern boundary during the walkover survey.

4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in the broadleaved woodland from March to August when birds in the UK normally breed.



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4.3.4 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9836440139	Broadleaved woodland
2	SJ9837140094	Shallow stream approximately 10ft wide

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Semi-natural broadleaved woodland				x	
Species poor improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by FID80 to the north and a large pond, a stream on the eastern boundary with a road adjacent, main road to the south and species poor improved grassland to the west.

The site mainly consists of species poor improved grassland (55%) in the western half and semi-natural broadleaved woodland with typical species including lime, horse chestnut and occasional ash *Fraxinus excelsior* with ground flora mainly consisting of ivy *Hedera helix*. Therefore the site is designated as having district importance, especially as the site has good connectivity to more diverse habitats. Rabbit holes are also located to the western side of the woodland.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats, badger (sett recorded <400m away) and West European hedgehog (recorded 10m away to the south).

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Great crested newt survey

Despite great crested newts not being recorded within 2km the pond that is adjacent to the site could potentially support their terrestrial habitat, and therefore a great crested newt survey is recommended. Although the preliminary assessment of the pond might suggest that it potentially has a low suitability score it is still recommended that a great crested newt survey according to the 'great crested newt conservation handbook' (Froglife, 2001) is carried out prior to any development works.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Vegetation removal

If at all possible it is recommended that as much of the broadleaved woodland be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the woodland is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has species poor grassland, a small semi-natural broadleaved woodland connected to a pond to the north and further woodland and scrub contained to the east of FID80 within a rural landscape, which has been deemed to have district ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey of the nearby pond
- Vegetation removal at the appropriate time of year



FID 80



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FID 80

1. Introduction

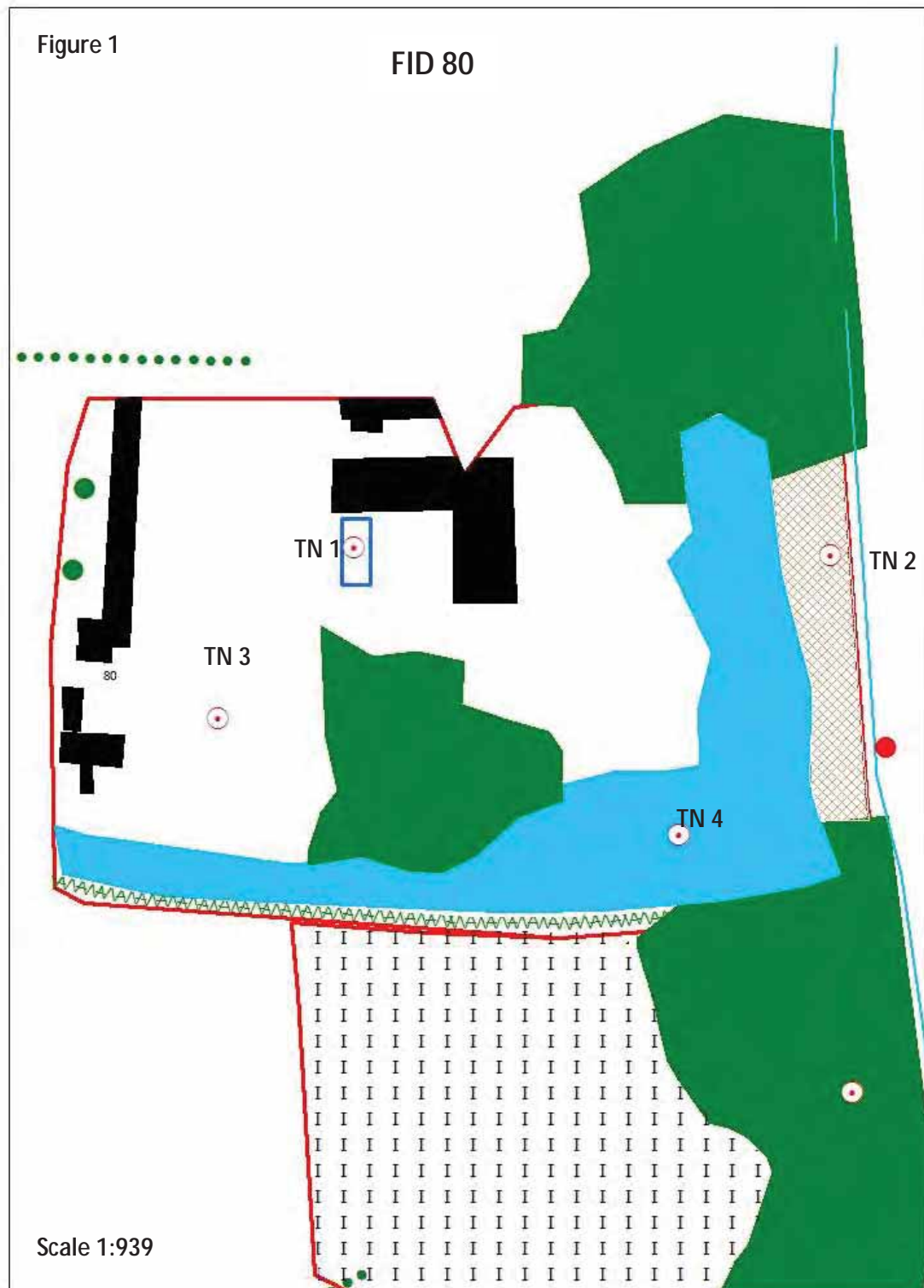
1.1 Background

The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 80 O.S grid reference SJ9813640184.

FID 80 is located at Draycott in the Moor in the Staffordshire Moorlands District, surrounded by a small broadleaved copse, housing and agricultural land.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 80 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).

2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis* sp.

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

Access was gained from the landowner and a number of friendly dogs were running free around the property

4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
SSSI	Hulme Quarry
AWI/ SBI	Huntley Wood
BAS	Commonside Quarry
BAS	Draycott Common Wood
BAS	Paynsley Hall Pond
SBI	Newton (north of)

SSSI – Site of Special Scientific Interest, AWI – listed in Ancient Woodland Inventory, BAS – Biodiversity Alert Site, SBI – Site of Biological Importance

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Owl
	Brown Hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Cinnabar
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common pipistrelle
	Dingy skipper
	Early mining bee
	European water vole
	Four coloured cuckoo bee
	Grass Snake
	Great crested newt
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	House sparrow
	Insect – beetle

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	Insect - Hymenopteran (x11 different species)
	Large red tailed bumble bee
	Leaden spider wasp
	lichen
	Native black poplar
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Pipistrelle
	Sand martin
	Sky Lark
	Small heath
	Soprano pipistrelle
	Tall Hawkweed
	Wall
	Western European hedgehog
INV	Giant hogweed
	Indian balsam
	Japanese rose
	New Zealand pigmyweed
	Rhododendron
E/ UK PS	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian badger
	European otter
	European water vole
	Grass Snake
	Great crested newt
	Pipistrelle
	Soprano pipistrelle
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species,
E/ UK PS – European/ UK Protected Species

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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Open water
- Scattered trees
- Broadleaved woodland
- Introduced shrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
OW	0.17	23	
BW	0.12	16	
IS	0.03	4	
OTHER	0.41	57	
BPT			1
TOTALS	0.73	100	

OW – Open water, BW – Broadleaved woodland, IS – Introduced shrub

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i> , hogweed <i>Heracleum sphondylium</i> , mugwort <i>Artemisia vulgaris</i>
Hedgerows/ trees/ scrub	Sycamore <i>Acer pseudoplatanus</i> , Rhodedendron <i>Rhodedendron ponticum</i> sp, yew <i>Taxus baccata</i> , hawthorn <i>Crataegus monogyna</i> , goat willow <i>Salix caprea</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* and Rhodedendron is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and were recorded during the walkover survey. The former found along the pond to the south and the latter along the eastern boundary.

4.3.4 Fauna

Bats

The large domestic dwelling is fairly run down and has occasional loose roof tiles and holes in the brickwork that could potentially support roosting bats.



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Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in the broadleaved woodland, scattered trees and introduced shrub from March to August when birds in the UK normally breed.

Incidental records

- Birds including moorhen *Gallinula chloropus*, mallard *Anas platyrhynchos*, house sparrow *Passer domesticus*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9829840196	Swimming pool
2	SJ9835940200	Rhododendron
3	SJ9828140168	Vegetable garden
4	SJ9834040160	Pond

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Open water				x	
Scattered trees					x
Semi-natural broadleaved woodland				x	
Garden/ allotment					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by FID79 to the south, a stream on the eastern boundary with a road adjacent, scattered trees and species poor grasslands to the north and west.

The site consists mainly of a house and its gardens/ allotment as well as a derelict swimming pool (57%). Chickens, domestic ducks and dogs run freely around the property. Numerous derelict cars and a bus lay around the site also.

The pond is fairly large and shallow, appearing to suffer from siltation and lack of recent rain. The pond has poor marginal and no aquatic vegetation with locally frequent soft rush *Juncus effusus* and great willowherb *Epilobium hirsutum*.

The patches of broadleaved woodland include species such as yew, sycamore and goat willow among other species.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats, reptiles and amphibians and therefore the site is considered to have district ecological importance.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.

6. Recommendations

Trees and buildings with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the building and ash tree recorded within the woodland as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Great crested newt survey

Despite great crested newts not being recorded within 2km the pond could potentially support them, and therefore a great crested newt survey is recommended. Although the preliminary assessment of the pond might suggest that it potentially has a low suitability score with a large number of water fowl and fish present it is still recommended that a great crested newt survey according to the 'great crested newt conservation handbook' (Froglife, 2001) is carried out prior to any development works.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptile survey

The site could potentially support reptile populations with the mosaic of garden habitats next to a pond providing adequate habitats, therefore it is recommended that a full reptile survey is carried out and any refugia present are removed by hand under watching brief of a suitably qualified ecologist.

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.



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Vegetation removal

If at all possible it is recommended that as much of the broadleaved woodland be retained to preserve some biodiversity within the locality.

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If the woodland is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site itself has a number of habitats present on site including a pond, and a tree with bat potential. The site is well connected to the stream to the east, scattered trees and hedgerows and has fairly good potential to support European and UK protected species. If the site does support protected species the district ecological importance could be elevated.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey
- Bat survey
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 223

Unable to access site

Figure 1

FID 223



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