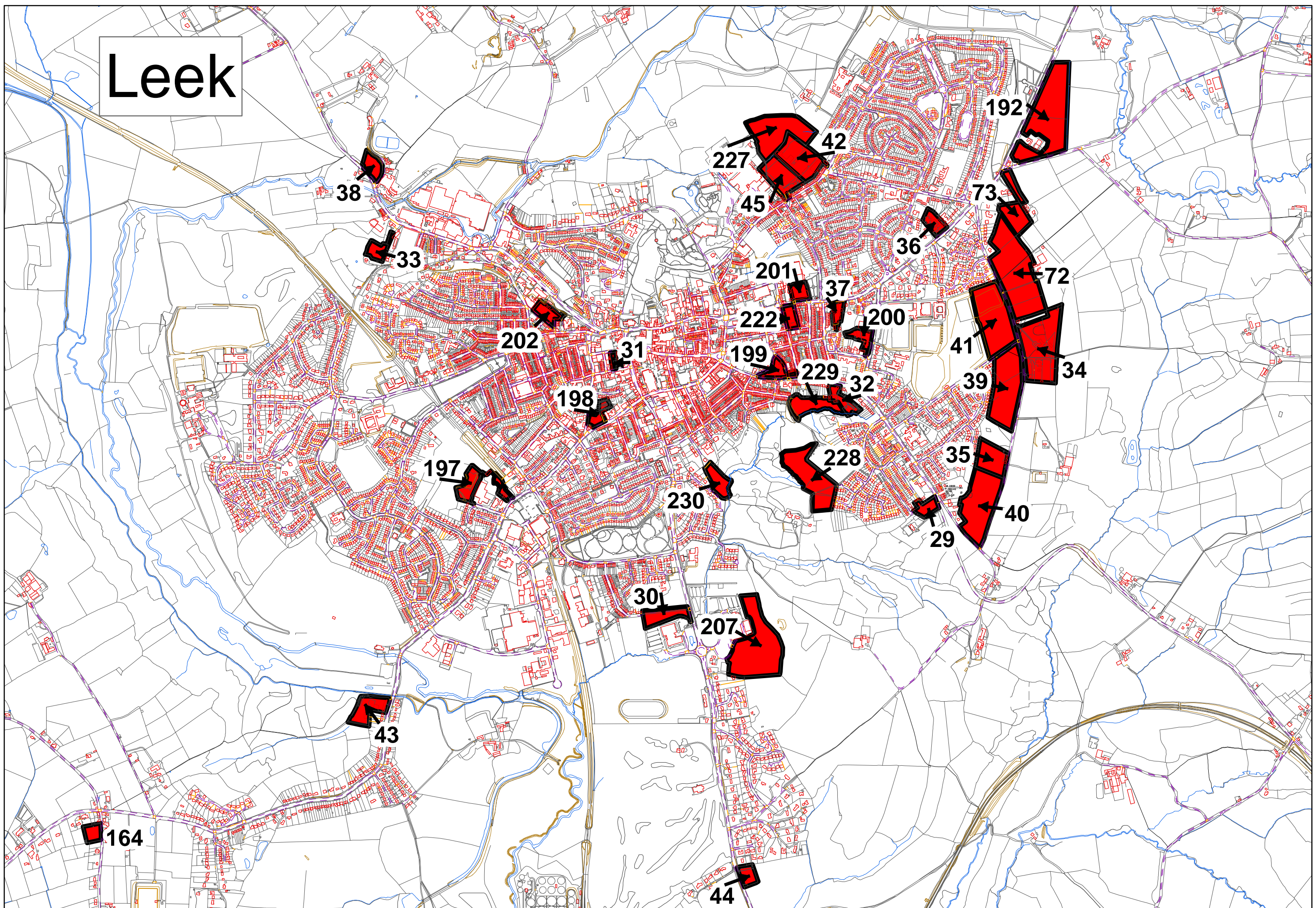


# Leek







# **FID 29**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	10
<b>6. Recommendations</b> .....	11
<b>7. Conclusions</b> .....	11



## **FID 29**

### **1. Introduction**

#### 1.1 Background

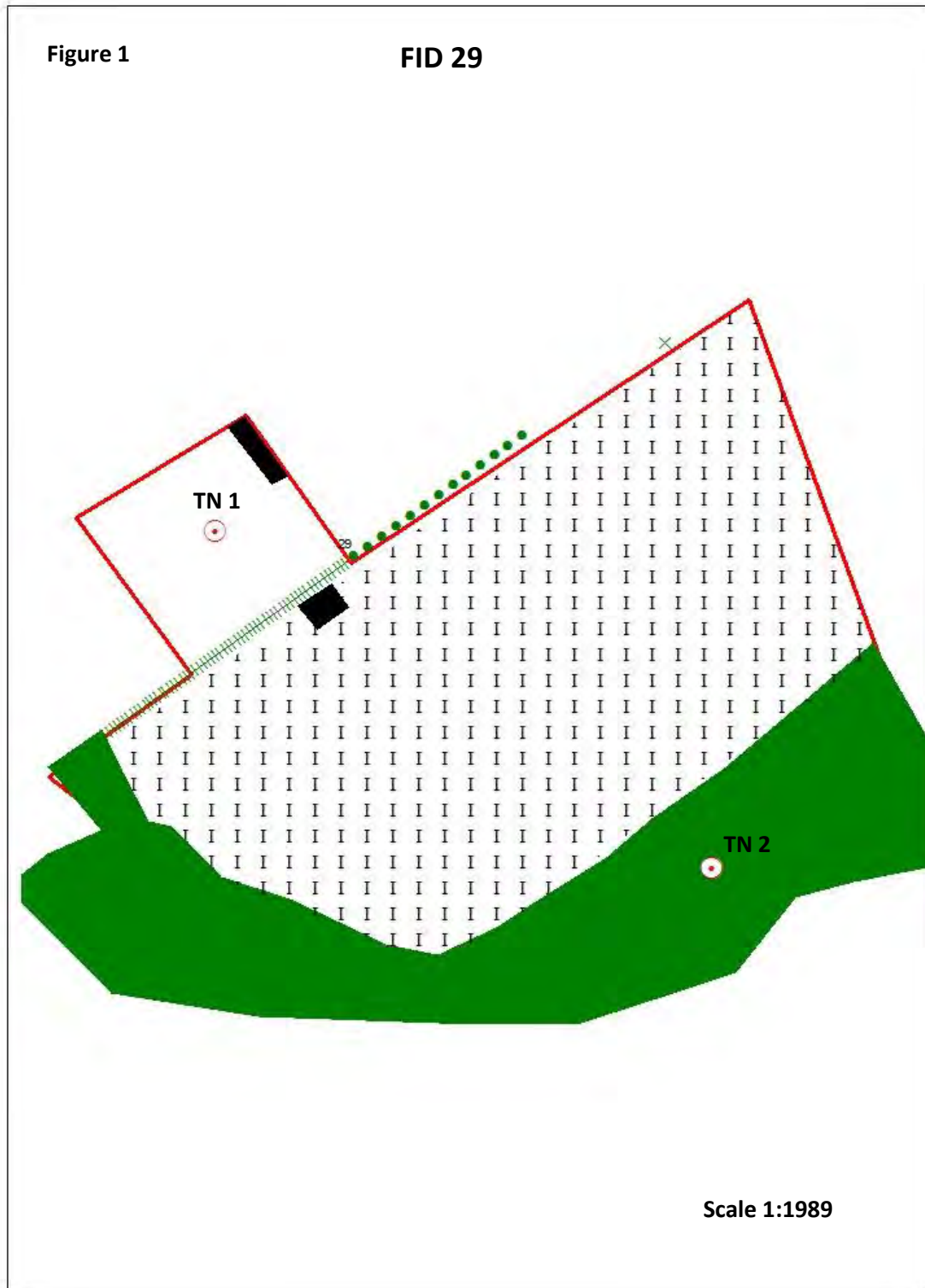
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 29 O.S grid reference SJ9950255906.

FID 29 is located south west of Leek in the Staffordshire Moorlands District, 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 29 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).





## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.





## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Lowe Hill
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl
	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee



## Lockwood Hall Associates Ltd

	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Eurasian Curlew
	European otter
	Four coloured cuckoo bee
	Ghost moth
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat
	Powdered quaker
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot





## Lockwood Hall Associates Ltd

	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano Pipistrelle
	Tall hawkweed
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
INV	American mink
	Japanese rose
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Pipistrelle
	Eurasian Badger
	European otter
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle
	Whiskered bat

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

## Lockwood Hall Associates Ltd

### 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 hedge
- Improved grassland
- Domestic garden

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.37	79
BW	0.04	8
OTHER	0.06	13
TOTALS	0.47	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> , annual meadow grass <i>Poa annua</i> , common nettle <i>Urtica dioica</i> , white clover <i>Trifolium repens</i> , creeping buttercup <i>Ranunculus repens</i>
Trees/ hedgerow	Holly <i>Ilex aquifolium</i> , sycamore <i>Acer pseudoplatanus</i> , beech <i>Fagus sylvatica</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 broadleaved dock *Rumex obtusifolius*, curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* and spear thistle *Cirsium vulgare* 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



## Lockwood Hall Associates Ltd

nest in areas of broadleaved woodland 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	SJ9946355914	Domestic garden
2	SJ9951955875	Broadleaved woodland with beech, sycamore, scot's pine, goat willow and holly

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedge					x
Species poor grassland					x
<b>Overall site importance</b>					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 north but there is good connectivity to the wider countryside with adjacent broadleaved woodland and hedgerows. The broadleaved woodland is directly adjacent to the field and only the canopy is present within the site.

The site has species poor grassland and hedgerow habitats present on site which 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 could potentially include foraging bats, badger and West European hedgehog (recorded <120m 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**

### *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 the species poor grassland area but has some fairly biodiverse areas connected by hedgerows to the south and north. 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 30**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 30**

### **1. Introduction**

#### 1.1 Background

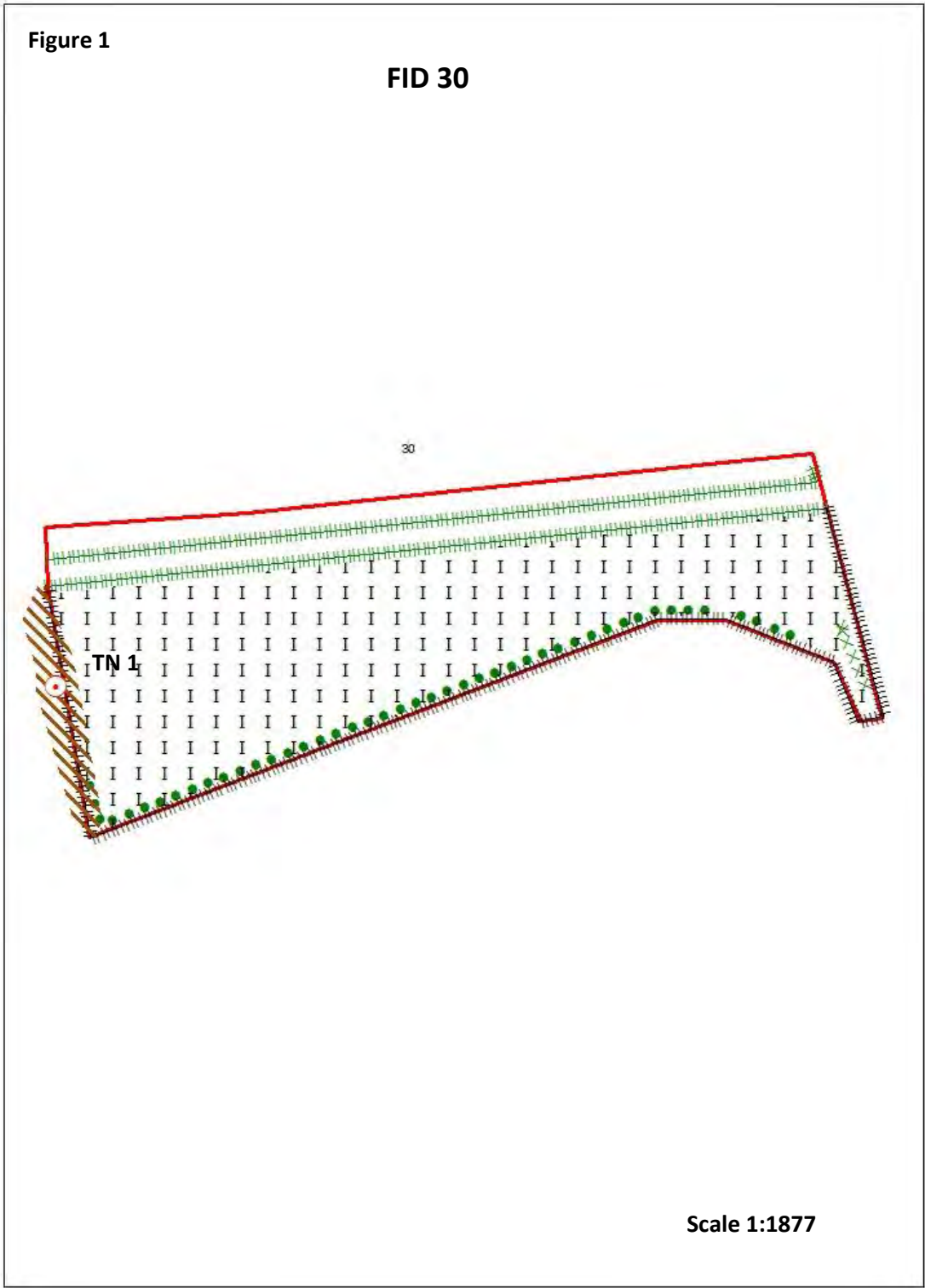
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 30 O.S grid reference SJ9845055465.

FID 30 is located to the south of Leek in the Staffordshire Moorlands District, surrounded by the Barnfields industrial estate and derelict 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 30 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.





## Lockwood Hall Associates Ltd

### 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	Ladderedge Country Park
LNR	Brough Park Fields
AWI	Birchall Wood
AWI	Ballington Wood
AWI	Soils Wood
AWI	Longsdon Wood
AWI	UNK
AWI	West Wood
AWI	Hollinhay Wood
BAS	Leek brook Meadow
BAS	Lowe Hill
BAS	Birchall Meadow
SBI	Cheddleton Heath (dismantled railway)
SBI	Ball Haye Green Disused Tip
SBI	Twinney Woodland and Grassland
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Beech close (SW of), Longsdon
SBI	Longsdon Wood and Cowhay Wood
SBI	Cheddleton heath
SBI	Soils Wood
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Ladydale
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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 TYPES	COMMON NAME
BAP	A Bumble Bee
	Autumnal rustic
	Barn Owl
	Broom moth
	Brown spot pinion
	Brown ant
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common kestrel
	Common Kingfisher
	Common Pipistrelle
	Common Toad
	Common Wasp
	Dot moth
	Double dart
	Dunnock
	Dusky brocade
	Eurasian Curlew
	European Otter
	European water vole
	Figure of eight
	Flounced chestnut
	Four Coloured Cuckoo Bee
	Freshwater White-clawed Crayfish
	Good King Henry
	Grass Snake
	Great Crested Newt
	Green brindled crescent
	Green Woodpecker



## Lockwood Hall Associates Ltd

	Greylag goose
	Heath dog violet
	Hedge rustic
	Honey Bee
	House Sparrow
	Insect – beetle
	Little kneeling eyebright
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse moth
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Reed bunting
	Rosy minor
	Rosy rustic
	Sallow
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Small Garden Bumble Bee
	Small Heath
	Small phoenix
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tall hawkweed
	Tree bumble bee
	Tree Wasp
	Tufted duck
	V-moth
	Wall
	West European Hedgehog
	White letter hairstreak
	White ermine
	Wild pansy
	Willow Warbler
	Yellowhammer

## Lockwood Hall Associates Ltd

INV	American Mink
	Canadian waterweed
	Chinese muntjac
	Greater Canada goose
	Indian balsam
	Japanese rose
	Montbretia
	New Zealand pigmyweed
	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
	Freshwater White-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Greylag goose
	Natterer's Bat
	Noctule bat
	Pipistrelle
	Polecat
	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.

- Species poor hedgerows
- Improved grassland
- Domestic garden



Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.64	68
TR	0.02	2
OTHER	0.28	30
TOTALS	0.93	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	Perennial rye grass <i>Lolium perenne</i> , annual meadow grass <i>Poa annua</i> , rosebay willowherb <i>Chamerion angustifolium</i> , cock's foot <i>Dactylis glomerata</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , ash <i>Fraxinus excelsior</i> , <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.

#### 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 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	SJ9837155446	Species poor tall ruderal vegetation

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedge					x
Scattered trees					x
Species poor grassland					x
<b>Overall site importance</b>					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 industrial buildings to the south and species poor grasslands with poor connectivity to the wider countryside.

The site has species poor grassland, a domestic garden, hedgerow and scattered planted broadleaved trees habitats present on site which 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 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 low overall biodiversity value, with poor connectivity to more biodiverse habitats, therefore the site is deemed 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 31**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 31**

### **1. Introduction**

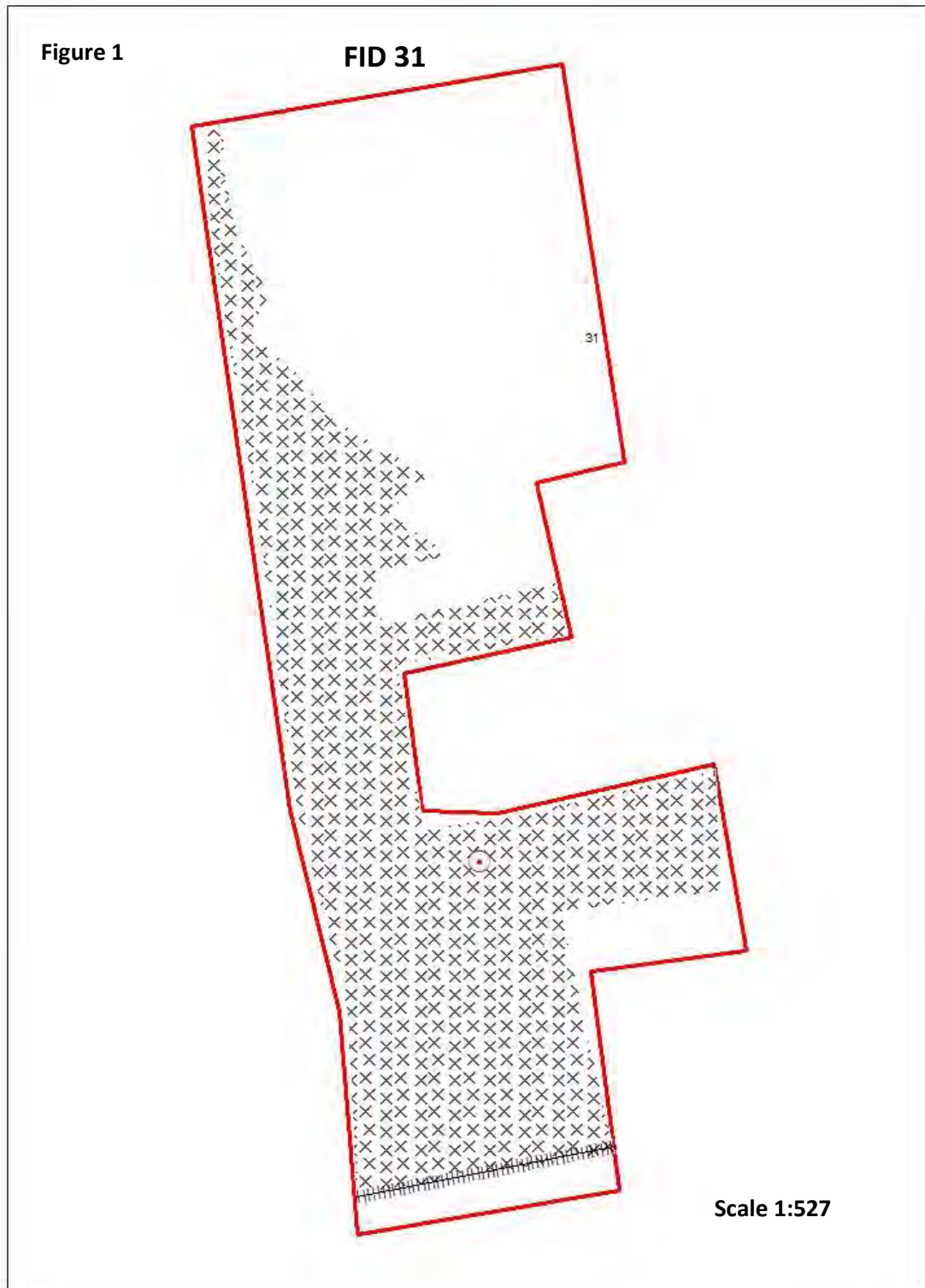
#### 1.1 Background

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 31 O.S grid reference SJ9825356486.

FID 31 is located in the middle of Leek town in the Staffordshire Moorlands District, which is completely surrounded by housing and office 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).







## **2. Methodology**

### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 31 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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

<b>SITE DESIGNATION</b>	<b>NAME</b>
LNR	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Birchall Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
BAS	Birchall Meadow
BAS	Foker Grange
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Kniveden Hall (east of)
SBI	Stare Wood
SBI	Longsdon Wood and Cowhay Wood
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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

<b>SPECIES TYPE</b>	<b>COMMON NAME</b>
BAP	A Bumble Bee
	Autumnal Rustic



## Lockwood Hall Associates Ltd

	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown Ant
	Brown Trout
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth



## Lockwood Hall Associates Ltd

	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree Bumble Bee
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
INV	American Mink
	Canadian waterweed
	Indian balsam
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole

	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Polecat
	Redwing
	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.

- Ephemeral grassland
- Rubble piles

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
ESP	0.06	52
OTHER	0.06	48
TOTALS	0.12	100

ESP – Ephemeral 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> , common bent <i>Agrostis capillaris</i>
Hedgerows/ trees/ scrub	Buddleia <i>Buddleia davidii</i> , silver birch <i>Betula pendula</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.





## Lockwood Hall Associates Ltd

### 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 scattered scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

#### *Incidental records*

- Butterflies including small tortoiseshell *Aglais urticae* and red admiral *Vanessa atalanta*

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9825556469	Domestic garages with Japanese knotweed growing through

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Ephemeral grassland					x
Scattered scrub					x
<b>Overall site importance</b>					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 industrial buildings encompassing the site and hence very poor connectivity to the wider countryside.

The habitats present on site do include small patches of ephemeral colonising buddleia *Buddleia species* which are valuable as nectar sources for butterflies. However, buddleia are a non-native plant and ephemeral grasslands are particularly common in the UK in areas of 'brownfield' and similar derelict sites, have relatively low biodiversity value in this particular context 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.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, 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 scrub 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 has low biodiversity value overall, is set within an urban environment with little connectivity to the wider countryside which lowers the biodiversity of the area considerably, so therefore 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 32**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>13</b>



## **FID 32**

### **1. Introduction**

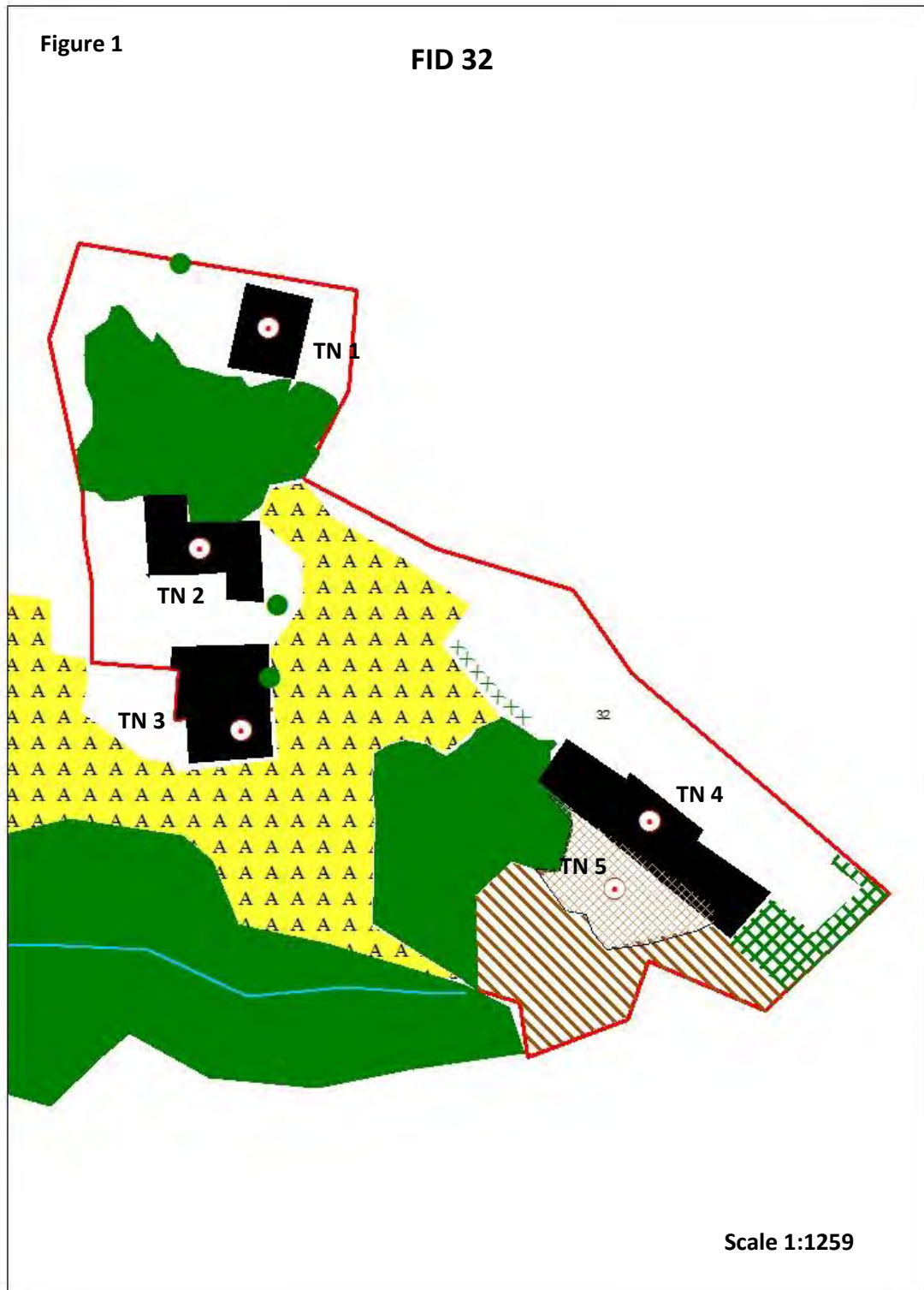
#### **1.1 Background**

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 32 O.S grid reference SJ9917756326.

FID 32 is located in eastern Leek in the Staffordshire Moorlands District, surrounded by Macclesfield Road Industrial Estate, football pitch, housing, agricultural land and Ladydale SBI (Site of Biological Importance).

#### **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 32 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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
LNR	Brough Park Fields
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Oaks Plantation
BAS	Bradnop (north of)
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Hays Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale (FID 32 abuts this SBI)
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	Autumnal Rustic



## Lockwood Hall Associates Ltd

	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Pink Waxcap



## Lockwood Hall Associates Ltd

	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
	Yellow wagtail
INV	American Mink
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake

## Lockwood Hall Associates Ltd

	Great Crested Newt
	Natterer's Bat
	Polecat
	Redwing
	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.

- Buildings x 4
- Broadleaved woodland
- Running water
- Scattered trees
- Introduced shrub/ noxious weeds
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.09	14
DS	0.02	3
BW	0.15	23
TR	0.06	9
IS	0.03	4
OTHER	0.31	47
TOTALS	0.66	100

AM – Amenity grassland, DS – Dense scrub, TR- Tall ruderal vegetation, I – Improved grassland, IS – Introduced shrub, 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	Red fescue <i>Festuca rubra</i> , annual meadow grass <i>Poa annua</i> , rough meadow grass <i>Poa trivialis</i> , rosebay willowherb <i>Chamerion angustifolium</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus agg</i> , holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

Japanese knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found during the walkover survey in various areas within the eastern side of the site.

4.3.4 Fauna

*Bats*

There are 4 fairly old buildings of brick and tile construction present on site of which 3 have at least some potential to support roosting bats. Potential roosting field signs include occasional holes in the brickwork and occasional loose tiles.

*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 blackbird *Turdus merula*, siskin *Carduelis spinus*, greenfinch *Carduelis chloris*, wren *Troglodytes troglodytes*.
- Butterflies including speckled wood *Pararge aegeria*, small tortoiseshell *Aglais urticae*, red admiral *Vanessa atalanta*,

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9910356380	Requires bat survey
2	SJ9909456340	Requires bat survey
3	SJ9913656316	Requires bat survey
4	SJ9920156283	Domestic garages with Japanese knotweed growing through
5	SJ9919056273	Japanese knotweed

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Semi-natural broadleaved woodland			x		
Running water			x		
Scattered trees				x	
Tall ruderal vegetation				x	
Introduced shrub	n/a				
Dense scrub				x	
Species poor amenity grassland					x
<b>Overall site importance</b>			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 forms part of a mosaic of habitats surrounded by domestic dwellings to the north, east and south and Ladydale SBI to the south west. It is directly adjacent to site FID229 to the west and is given regional ecological importance as connective habitat to more biodiverse woodland to the south west.

Habitats mainly include domestic dwellings, outbuildings, hard standing and garden areas. The broadleaved woodland to the north is likely to be a remnant of the semi-natural broadleaved woodland to the south west. The broadleaved woodland to the south consists of ash, sycamore, holly and elder as part of the woodland to the south west.

The tall ruderal vegetation to the south east appears to have evolved from ephemeral grassland as a direct result of vegetation clearance from the adjacent building works. The main area of Japanese knotweed is Target Note 2 but can occasionally found to have spread into the tall ruderal vegetation.

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, foraging badger and 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**

### *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).

### *Noxious weed removal*

It is extremely important that a regime of Japanese knotweed eradication is applied to the large area present on site following guidelines set out in 'Managing Japanese knotweed on development sites' (Environment Agency, 2013).

### *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 and good connectivity to more biodiverse habitat 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 as many trees are retained during development works.

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, tall ruderal vegetation and dense scrub 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.



## **Lockwood Hall Associates Ltd**

### **7. Conclusion**

The site itself has buildings with bat potential, broadleaved woodland, dense scrub and tall ruderal vegetation which are connected to semi-natural broadleaved woodland and running water habitats, which form an important potentially biodiverse mosaic culminating in the site being attributed regional ecological importance.

If the whole site is to be developed the following surveys/actions are recommended prior to development works being carried out:

- A bat survey regime to ascertain whether bats roost in the 4 buildings
- Japanese knotweed removal
- Reptile survey
- Vegetation removal at the appropriate time of year



# **FID 33**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 33**

### **1. Introduction**

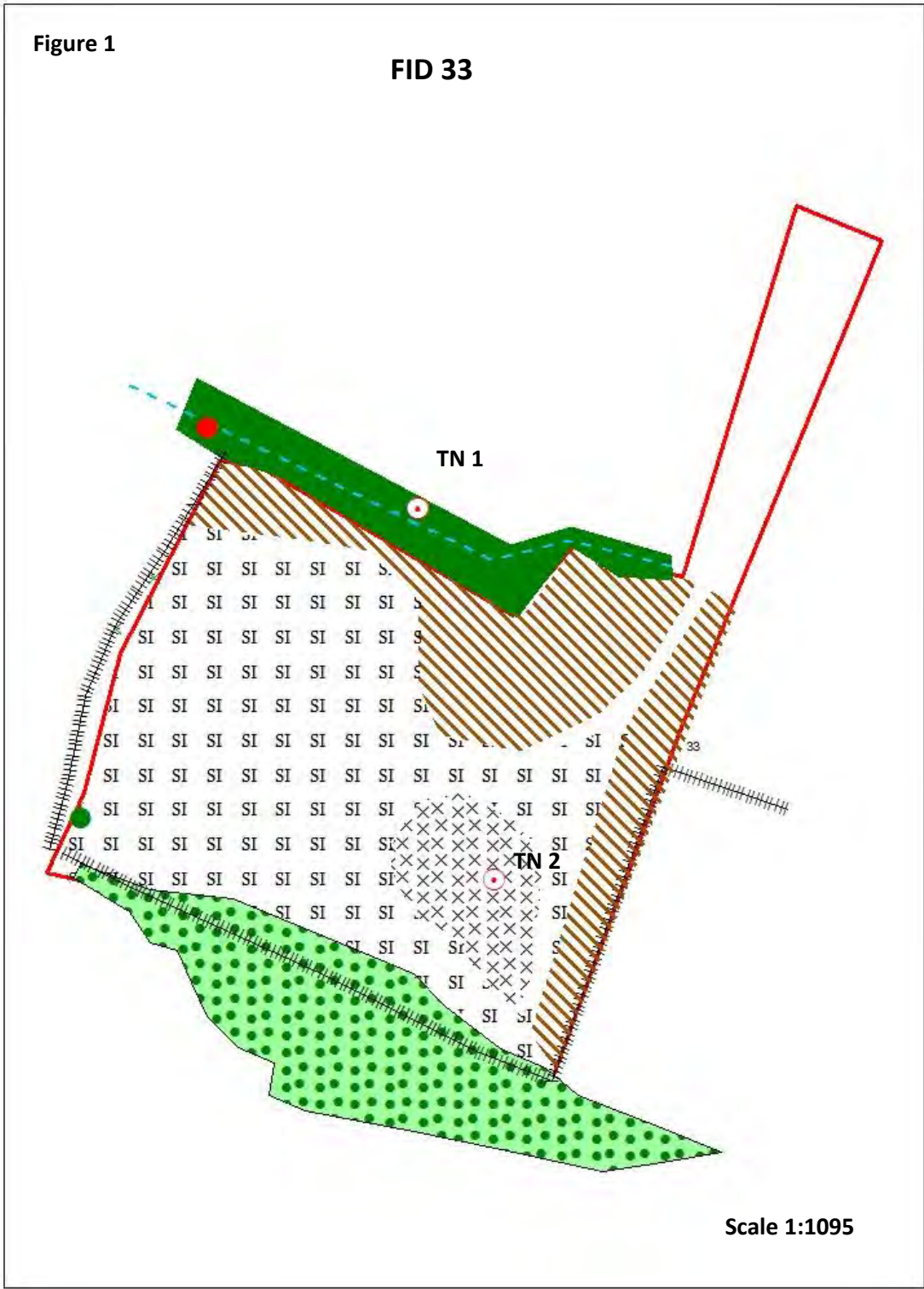
#### **1.1 Background**

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 33 O.S grid reference SJ9731556915.

FID 33 is located north west of Leek town in the Staffordshire Moorlands District, which is surrounded by a football pitch, industrial 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).







## Lockwood Hall Associates Ltd

### 2. Methodology

#### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 33 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Cowhay Wood
AWI	Abbey Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Ballington Wood
BAS	Birchall Meadow
BAS	Foker Grange
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Longsdon Wood and Cowhay Wood
SBI	Stare Wood
SBI	Harpers Gate
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	Autumnal Rustic
	Barn Owl
	Black headed cardinal beetle
	Box
	Broom Moth



## Lockwood Hall Associates Ltd

	Brown-spot Pinion
	Brown Ant
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Noctule bat
	Northern lapwing
	Pink Waxcap



## Lockwood Hall Associates Ltd

	Pipistrelle
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree Bumble Bee
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
INV	American Mink
	Canadian waterweed
	Indian balsam
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt

	Natterer's Bat
	Noctule bat
	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.

- Tall ruderal vegetation
- Scattered tree
- Ephemeral grassland
- Semi-Improved species poor grassland
- Planted mixed woodland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
SI	0.25	48	
TR	0.12	23	
MW	0.04	7	
ESP	0.04	8	
OTHER	0.07	14	
BPT			1
TOTALS	0.52	100	1

SI – Semi-improved grassland, TR – Tall ruderal vegetation, MW – Mixed woodland  
ESP – Ephemeral 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	Cock's foot <i>Dactylis glomerata</i> , red fescue <i>Festuca rubra</i> , rosebay willowherb <i>Chamerion angustifolium</i> , common nettle <i>Urtica dioica</i> , common knapweed <i>Centaurea nigra</i>
Hedgerows/ trees/ scrub	Silver birch <i>Betula pendula</i> , Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , goat willow <i>Salix caprea</i>



## Lockwood Hall Associates Ltd

### 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 are likely to nest in areas of broadleaved woodland and hedgerows from March to August when birds in the UK normally breed.

#### *Incidental records of fauna*

During the walkover survey a dog walker said that she had seen badger *Meles meles* foraging on site on numerous occasions.

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9732356947	Linear broadleaved woodland consisting of hawthorn, holly, lime, elder and goat willow
2	SJ9733056900	Area of species poor ephemeral grassland



**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Planted mixed woodland					x
Tall ruderal vegetation					x
Scattered trees					x
Species poor grassland					x
<b>Overall site importance</b>					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 industrial buildings to the north and domestic dwellings and amenity grassland to the south and east. The site is fairly poorly connected to the wider countryside by a small dry ditch and narrow strip of broadleaved woodland.

The habitats present on site are particularly common in the UK, have fairly low biodiversity value and therefore are deemed to have a low ecological 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 (anecdotally confirmed with a sett recorded <170m away 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 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 fairly low biodiversity overall, with fairly poor connectivity to more biodiverse habitats therefore is attributed low ecological importance.

Although anecdotal evidence suggests that badger do use the site for foraging, no field signs were found at the time of survey and no setts were present.

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 34**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	13



## **FID 34**

### **1. Introduction**

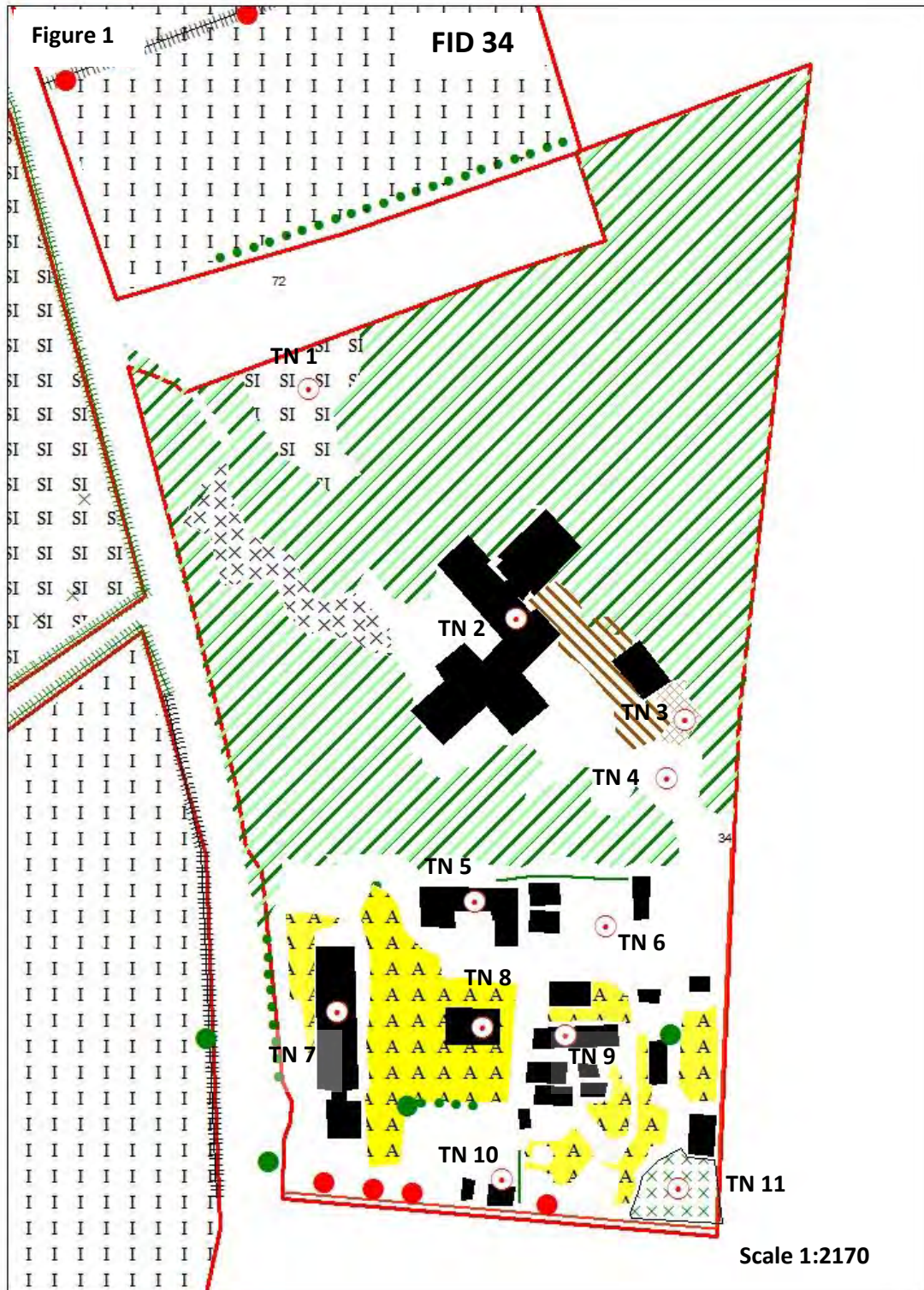
#### 1.1 Background

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 34 O.S grid reference SJ9994756525.

FID 34 is located to the east of Leek town, 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 34 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).





## Lockwood Hall Associates Ltd

### 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.





## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Low Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	Eurasian oystercatcher
	Four coloured cuckoo bee
	Ghost moth
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Northern lapwing
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat



## Lockwood Hall Associates Ltd

	Powdered quaker
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Japanese rose
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Pipistrelle
	Eurasian Badger
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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

## Lockwood Hall Associates Ltd

### 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 x 14
- Planted mixed woodland
- Scattered trees
- Scattered scrub
- Tall ruderal vegetation
- Allotments
- Gardens
- Log/ brush piles
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
MW	1.91	53	
AM	0.30	8	
SI	0.08	2	
ESP	0.08	2	
TR	0.05	2	
BPT			4
OTHER	1.21	33	
TOTAL	3.63	100	

MW – Mixed woodland, AM – Amenity grassland, SI – Semi – improved grassland, ESP – Ephemeral 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	Annual meadow grass <i>Poa annua</i> , Himalayan balsam <i>Impatiens glandulifera</i> , rosebay willowherb <i>Chamerion angustifolium</i> , rough meadow grass <i>Poa trivialis</i> , common nettle <i>Urtica dioica</i> , cock's foot <i>Dactylis glomerata</i> .
Trees/ shrubs/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , ash <i>Fraxinus excelsior</i> , beech <i>Fagus sylvatica</i> , Rhododendron <i>Rhododendron ponticum</i> spp, cherry laurel <i>Prunus laurocerasus</i> , snowberry <i>symphoricarpos albus</i>



## Lockwood Hall Associates Ltd

### 4.3.3 Invasive weeds

Himalayan balsam and Rhododendron are listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded in large areas dotted around the site.

### 4.3.4 Fauna

#### *Bats*

The site has 14 brick and tile buildings of various ages of which 11 are deemed suitable to support roosting bats as there are numerous potential entrances under roof tiles, within soffit boards and within holes that could allow bats to roost. Additionally, 4 trees have also been highlighted as having 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 are likely to nest in areas of mixed planted woodland, scattered trees, scattered scrub, tall ruderal vegetation, buildings from March to August when birds in the UK normally breed.

#### *Incidental records*

- Mammals including grey squirrel *Sciurus carolinensis*, rabbit *Oryctolagus cuniculus*
- Birds including magpie *Pica pica*, woodpigeon *Columba palumbus*
- Butterflies including speckled wood *Pararge aegeria*

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9990056617	Tall grassland
2	SJ9995356556	Bat survey needed
3	SJ9999456523	Himalayan balsam
4	SJ9999656505	Log/ brash piles
5	SJ9994156476	Bat survey needed
6	SJ9997856471	Bat survey needed
7	SJ9990956448	Bat survey needed
8	SJ9994556445	Bat survey needed
9	SJ9996856442	Bat survey needed
10	SJ9995356399	Bat survey needed
11	SJ9999956402	Scattered scrub as part of garden

## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Mixed planted woodland				x	
Semi-improved species poor grassland					x
Ephemeral grassland					x
Tall ruderal vegetation					x
Species poor amenity grassland					x
<b>Overall site importance</b>				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 species poor grazed grasslands and fairly poor connectivity to the wider countryside, though the site is located 20m away from FID41 which does support a mosaic of habitats.

The site encompasses a number of large council buildings and offices and its grounds in the northern half of the site, being scattered planted mixed woodland with typical species including beech, lime *Tilia species*, monkey puzzle *Araucaria araucana*, pine *Pinus species*, horse chestnut *Aesculus hippocastanum*, silver birch *Betula pendula* and ash.

The habitats present on site are fairly common in the UK, the northern half of the site constituting mainly mixed woodland likely to be planted by the previous owners in the early 20<sup>th</sup> century, with often a poor non-native understorey consisting of rhododendron, snowberry and cherry laurel and species poor associated ground flora. Areas have also been cleared and developed leading to the colonisation of ephemeral grassland and tall ruderal vegetation, with some areas dominated by Himalayan balsam. Therefore the woodland mosaic and buildings that could potentially support roosting bats culminate in the site being considered to have district ecological importance.

The southern half of the site consists of a mixture of buildings used as a care home facility, gardens, amenity grassland and working allotments with a number of sheds and small outbuildings.

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

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 and 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 all of the buildings and the 4 trees located to the south of the site that could potentially 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 the buildings 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.

There are a considerable amount of trees located around the site, so 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.





## **Lockwood Hall Associates Ltd**

### **7. Conclusion**

The site consists mainly of common habitats, mixed planted woodland, buildings, amenity grassland and associated gardens, allotments and amenity grassland and the site is fairly isolated with little connectivity to the wider countryside, apart from being located 20m away from FID 41. The woodland and habitat mosaic as well as the buildings that could potentially support roosting bats and therefore the whole site has been 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 buildings and 4 trees
- Invasive species removed and disposed of according to strict appropriate guidelines.
- Vegetation removal at the appropriate time of year



# **FID 35**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 35**

### **1. Introduction**

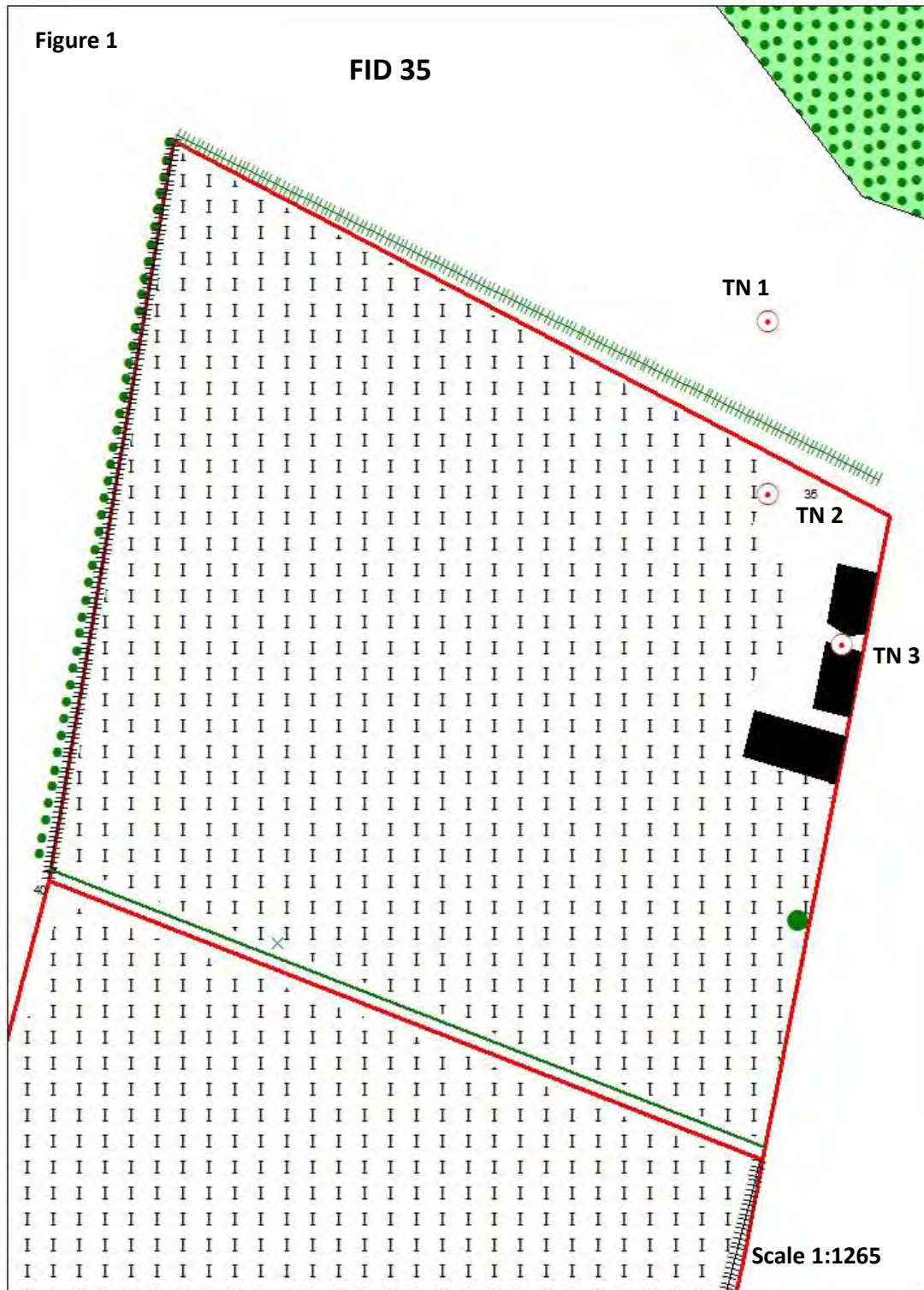
#### **1.1 Background**

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 35 O.S grid reference SJ9975456096.

FID 35 is located to the south east of Leek town in the Staffordshire Moorlands District, 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).





## **2. Methodology**

### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 35 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.





## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Lowe Hill
BAS	Solomon's Hollow
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Stare Wood
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot moth
	Duncock
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European water vole
	Four coloured cuckoo bee
	Ghost moth
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Northern lapwing
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat
	Powdered quaker



## Lockwood Hall Associates Ltd

	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Japanese rose
	Montbretia
	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
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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



## Lockwood Hall Associates Ltd

### 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
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	1.15	89
OTHER	0.14	11
TOTALS	1.29	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> , creeping buttercup <i>Ranunculus repens</i>
Hedgerows/ trees	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , beech <i>Fagus sylvatica</i> , Scot's pine <i>Pinus sylvestris</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

##### Bats

There are 3 buildings present on site of which 2 have been fairly recently re-pointed and repaired. The building to the south however has loose roof tiles which could potentially support roosting bats.



## Lockwood Hall Associates Ltd

### *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 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	SJ9979656153	Small copse of beech, sycamore and Scot's pine, grazed
2	SJ9980156117	Domestic garden
3	SJ9981256092	Bat survey needed

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Scattered trees					x
Species poor grassland					x
<b>Overall site importance</b>					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 west and species poor grasslands with poor connectivity to the wider countryside and more biodiverse habitats.

The site has species poor grassland, hedgerows and scattered planted broadleaved trees habitats present on site which are particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

The domestic dwellings to the east of the site have been newly pointed and do not appear suitable to support roosting bats at the time of survey, although the outbuilding does not appear to have been refurbished.

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, badger and West European hedgehog.

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 is considered to have low overall ecological importance, with low potential to support protected species apart from roosting bats, with poor connectivity to more biodiverse habitats.

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

- Bat survey of the southern outbuilding to the east
- Vegetation removal at the appropriate time of year



# **FID 36**





## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 36**

### **1. Introduction**

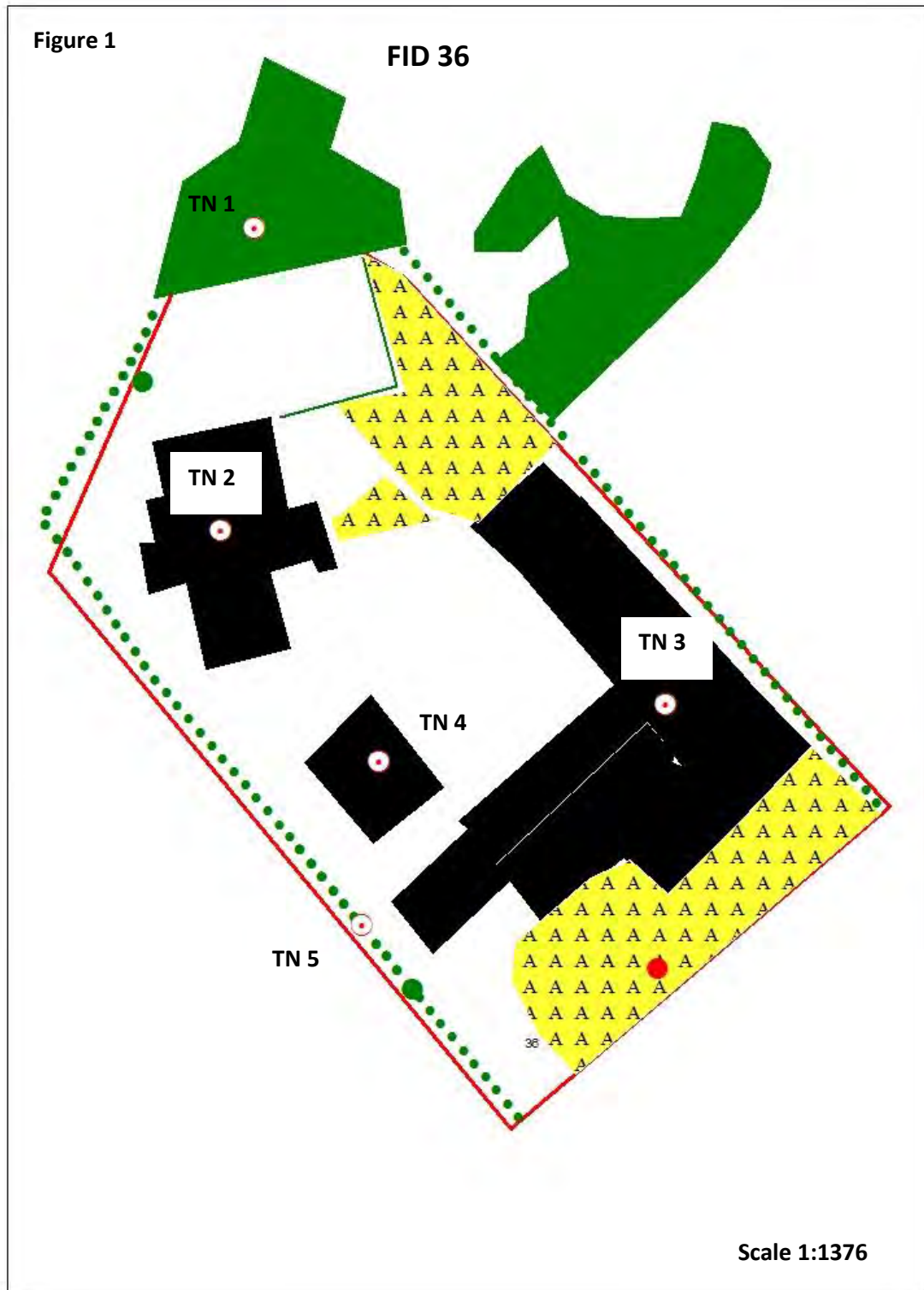
#### **1.1 Background**

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 36 O.S grid reference SJ9952357025.

FID 36 is located to the north east in Leek town in the Staffordshire Moorlands District, surrounded by housing and offices.

#### **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).





## Lockwood Hall Associates Ltd

## 2. Methodology

### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 36 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Abbey Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
AWI	UNK
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Solomons Hollow
BAS	Lowe Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Autumnal rustic
	Barn Owl
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common goldeneye
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dyer's greenweed
	Early bumble bee
	Eurasian Curlew
	European otter
	Four coloured cuckoo bee
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Grizzled skipper
	Honey bee
	House Sparrow
	Mallard
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed bunting
	Sky Lark





## Lockwood Hall Associates Ltd

	Small Heath
	Song thrush
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	White tailed bumble bee
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common goldeneye
	Common kingfisher
	Common Pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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

## Lockwood Hall Associates Ltd

### 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
- Buildings
- Scattered trees
- Species poor hedgerow
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
AM	0.10	18	
BW	0.01	3	
OTHER	0.42	79	
BPT			1
TOTAL	0.53	100	1

AM – Amenity Grassland, 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	Annual meadow grass <i>Poa annua</i> , white clover <i>Trifolium repens</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , sycamore <i>Acer pseudoplatanus</i> , beech <i>Fagus sylvatica</i> , ash <i>Fraxinus excelsior</i> , leylandii <i>Cuprocypressus leylandii</i> , holly <i>Ilex aquifolium</i> , ornamental shrubs and trees

#### 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.



## Lockwood Hall Associates Ltd

### 4.3.4 Fauna

#### *Bats*

The site is a Staffordshire Moorlands District Council day centre for special needs people with numerous buildings on site. The buildings themselves have pitched roofs, 3 of which are flat. The roofs and structure seem fairly well maintained and secure with no obvious entrance points for bats to potentially roost. There is also 1 mature sycamore *Acer pseudoplatanus* 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 are likely to nest in areas of scattered trees, hedgerows and possibly 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	SJ9950557075	Small copse with variable native and non-native species
2	SJ9950257040	Building with sloping pitched roof - requires bat survey
3	SJ9955157024	Building with flat pitched roof - requires bat survey
4	SJ9951957013	Building with flat pitched roof - requires bat survey
5	SJ9951656997	Scattered mix of native and non-native trees

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Semi-natural broadleaved woodland					x
Species poor hedgerow					x
Species poor amenity grassland					x
<b>Overall site importance</b>				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 gardens encompassing the site and hence very poor connectivity to the wider countryside.

The habitats present on site are particularly common in the UK and in the locality, have fairly low biodiversity value and therefore are deemed to have a low value within the matrix. The scattered trees, semi-natural broadleaved woodland and species poor hedgerow are however likely to support breeding birds and attract foraging bats. The buildings and 1 tree also have fairly low potential to support roosting bats.

Despite a number of European and UK protected 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.

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.

Despite the buildings having fairly low potential to support bats it is still recommended that all of 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 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 and is deemed to have low ecological importance overall while being set within an urban environment with little connectivity to the wider countryside. The site is attributed district ecological importance as there is potential for buildings and a tree to support roosting bats.

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

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



# **FID 37**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 37**

### **1. Introduction**

#### 1.1 Background

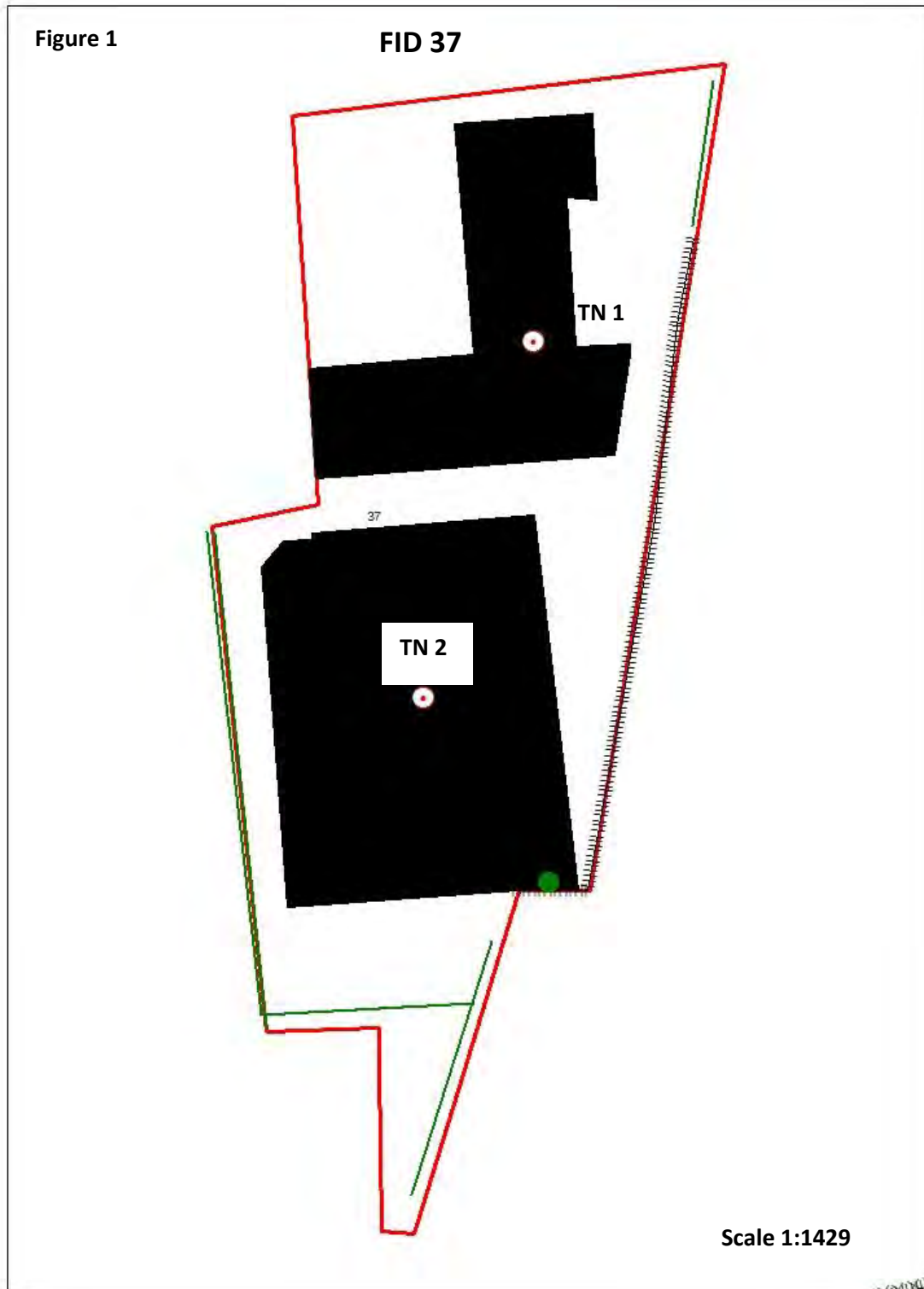
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 37 O.S grid reference SJ9914456671.

FID 37 is located in Leek town (centrally and to the east) in the Staffordshire Moorlands District, surrounded by housing, industrial buildings and offices.

#### 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 37 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Birchall Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
BAS	Bradnop (north of)
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Ball Haye Green Disused Tip
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale (adjacent to)
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Autumnal Rustic
	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent



## Lockwood Hall Associates Ltd

	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
	Yellow wagtail
INV	American Mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl

	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Polecat
	Redwing
	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.

- Buildings
- Scattered trees
- Species poor hedgerow

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
OTHER	0.35	100
TOTALS	0.35	100

##### 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>
Hedgerows/ trees	Holly <i>Ilex aquifolium</i> , sycamore <i>Acer pseudoplatanus</i>





## Lockwood Hall Associates Ltd

### 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

#### *Bats*

The site has 6 buildings on site of which the 2 to the north (shop) have sloping pitched roofs with no obvious entrance points visible. The remaining buildings are warehouse/ hangar style with corrugated roofs.

#### *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	SJ9915256690	2 buildings require bat surveys
2	SJ9914256654	4 buildings do not require bat surveys

## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species poor hedgerow					x
Scattered trees					x
<b>Overall site importance</b>				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 gardens encompassing the site and hence very poor connectivity to the wider countryside.

The habitats present on site are particularly common in the UK and in the locality, have low biodiversity value and therefore are deemed to have a low value within the matrix. The species poor hedgerow and scattered trees could potentially support breeding birds.

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 bats which elevates the ecological importance of the site to district level.



## **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 to the north 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 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 and is set within an urban environment with little connectivity to the wider countryside. However, due to the potential for 2 of the buildings to support roosting bats the site is considered as having district ecological importance.

The following surveys/ actions are however recommended prior to any 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



# **FID 38**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 38**

### **1. Introduction**

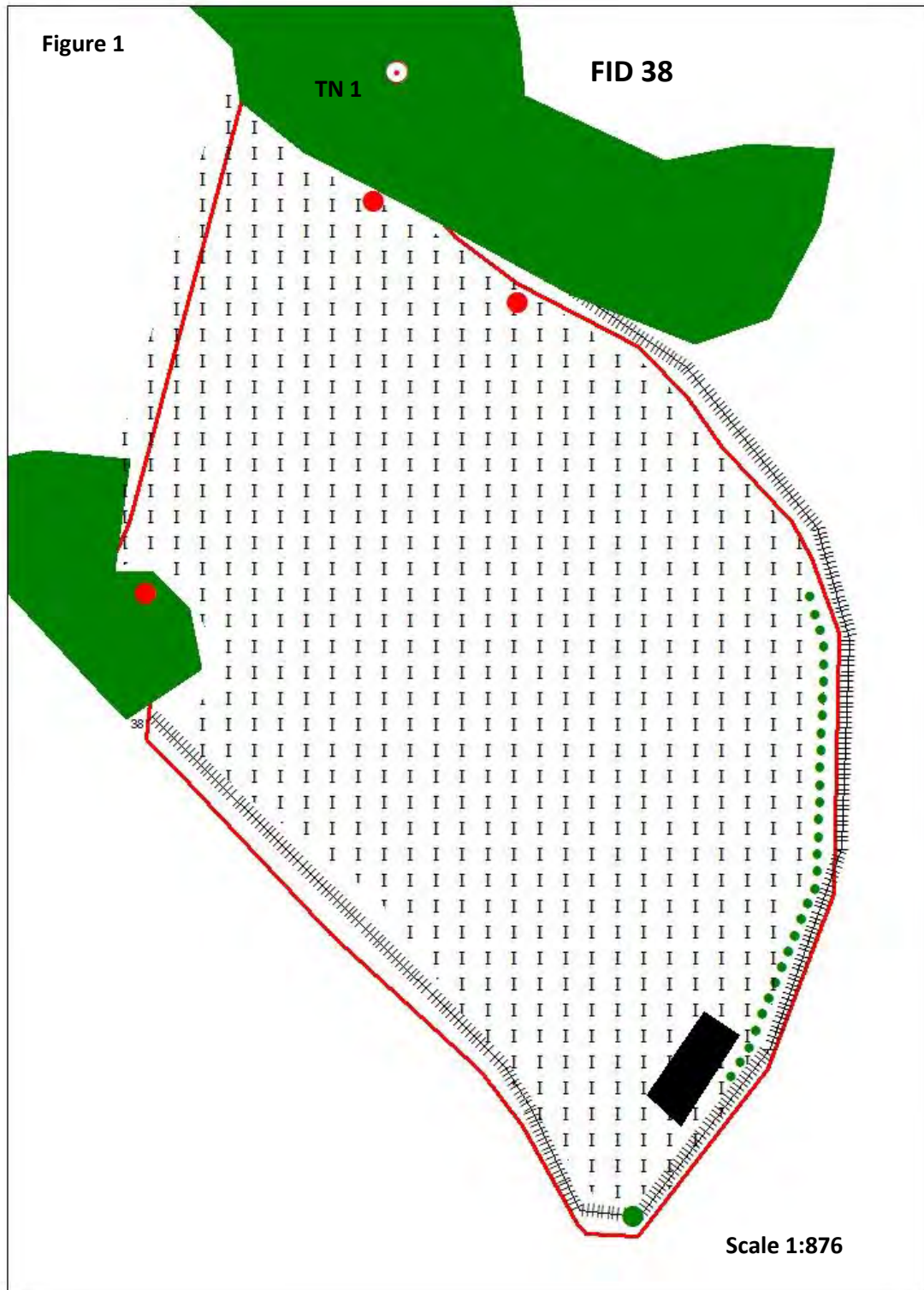
#### **1.1 Background**

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 38 O.S grid reference SJ9730157262.

FID 38 is located to the north west of Leek town in the Staffordshire Moorlands District, surrounded by housing, amenity grassland 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 38 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).





## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Cowhay Wood
AWI	Abbey Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Ballington Wood
BAS	Birchall Meadow
BAS	Foker Grange
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Longsdon Wood and Cowhay Wood
SBI	Stare Wood
SBI	Rudyard Dismantled Railway
SBI	Harpers Gate
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	Autumnal Rustic
	Barn Owl
	Black headed cardinal beetle
	Box



## Lockwood Hall Associates Ltd

	Broom Moth
	Brown-spot Pinion
	Brown Ant
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Noctule bat
	Northern lapwing



## Lockwood Hall Associates Ltd

	Pink Waxcap
	Pipistrelle
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree Bumble Bee
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
INV	American Mink
	Canadian waterweed
	Indian balsam
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake

## Lockwood Hall Associates Ltd

	Great Crested Newt
	Natterer's Bat
	Noctule bat
	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
- Scattered trees
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.52	88	
BW	0.01	3	
OTHER	0.05	9	
BPT			3
TOTALS	0.58	100	3

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	Hogweed <i>Heracleum sphondylium</i> , common nettle <i>Urtica dioica</i> , cock's foot <i>Dactylis glomerata</i> , creeping bent <i>Agrostis stolonifera</i> , common knapweed <i>Centaurea nigra</i>
Hedgerows/ trees	Sycamore <i>Acer pseudoplatanus</i> , ash <i>Fraxinus excelsior</i> , hawthorn <i>Crataegus monogyna</i> , 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.



## Lockwood Hall Associates Ltd

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 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 and scattered trees 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	SJ 9729857318	Broadleaved woodland with range of broadleaved species as well as rhododendron <i>Rhododendron ponticum</i> spp

## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Broadleaved woodland				x	
Scattered trees				x	
Species poor grassland					x
<b>Overall site importance</b>				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 broadleaved woodlands assemblage of mature trees, 3 of which have potential to support roosting bats and networks of semi-natural broadleaved woodland with a single mature Scot's pine *Pinus sylvestris* connected to hedgerows and scrub to the wider countryside, have contributed to these habitats being deemed to have district ecological importance.

The site itself consists of species poor heavily grazed grassland, with only the canopy of the woodland present within the site boundary and a small wooden stable to the south east.

Species poor improved grasslands are particularly common in the UK, have low biodiversity value and therefore 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 roosting/ foraging bats over the adjacent semi-natural broadleaved woodland.

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 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 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 solely of species poor improved grassland with adjacent semi-natural broadleaved woodland. The site is considered to have district ecological importance due to the presence of tree with bat roosting potential and the adjacent broadleaved woodland.

Therefore the following surveys/ actions are 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 39**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 39**

### **1. Introduction**

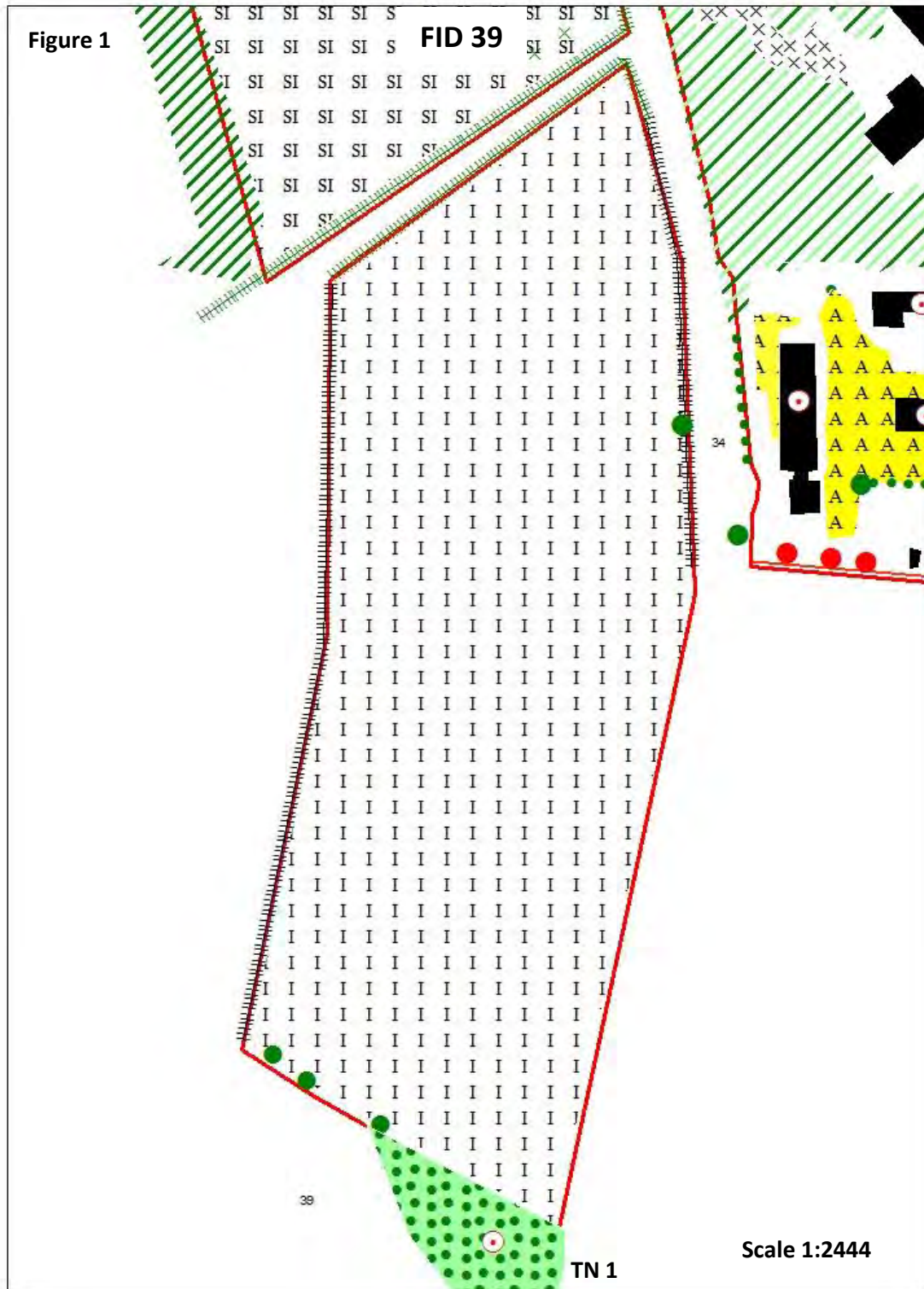
#### 1.1 Background

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 39 O.S grid reference SJ9982056379.

FID 39 is located to the east of Leek town 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 39 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.





## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Low Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	Eurasian oystercatcher
	Four coloured cuckoo bee
	Ghost moth
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Northern lapwing
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat



## Lockwood Hall Associates Ltd

	Powdered quaker
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Japanese rose
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Pipistrelle
	Eurasian Badger
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	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.

- Scattered trees
- Species poor hedgerow
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	3.16	100
OTHER	0.00	0
TOTALS	3.16	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>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</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.

#### 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 scattered trees and the species poor hedgerow from March to August when birds in the UK normally breed.



## Lockwood Hall Associates Ltd

### *Incidental records of fauna*

During the walkover survey species observed include the following

- Birds including woodpigeon *Columba palumbus*

#### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9981756195	Small mixed woodland copse with Scot's pine, beech and hawthorn

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Species poor hedgerow					x
Species poor grassland					x
<b>Overall site importance</b>					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 domestic dwellings to the west, species poor grassland to the north (FID 41) south and FID34 mixed planted woodland, council buildings and gardens to the east.

The species poor improved grassland and scattered trees are particularly common in the UK and the locality have low biodiversity value and therefore is deemed to have a low value within the matrix, especially as being fairly poorly connected to other more biodiverse habitats with two roads intersecting habitats to the north and east.

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, badger and West European hedgehog.

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.



## Lockwood Hall Associates Ltd

### 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 are retained if the site is to be developed.

If 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 solely of species poor improved grassland with one species poor hedgerow. Therefore the site has been 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 40**





## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 40**

### **1. Introduction**

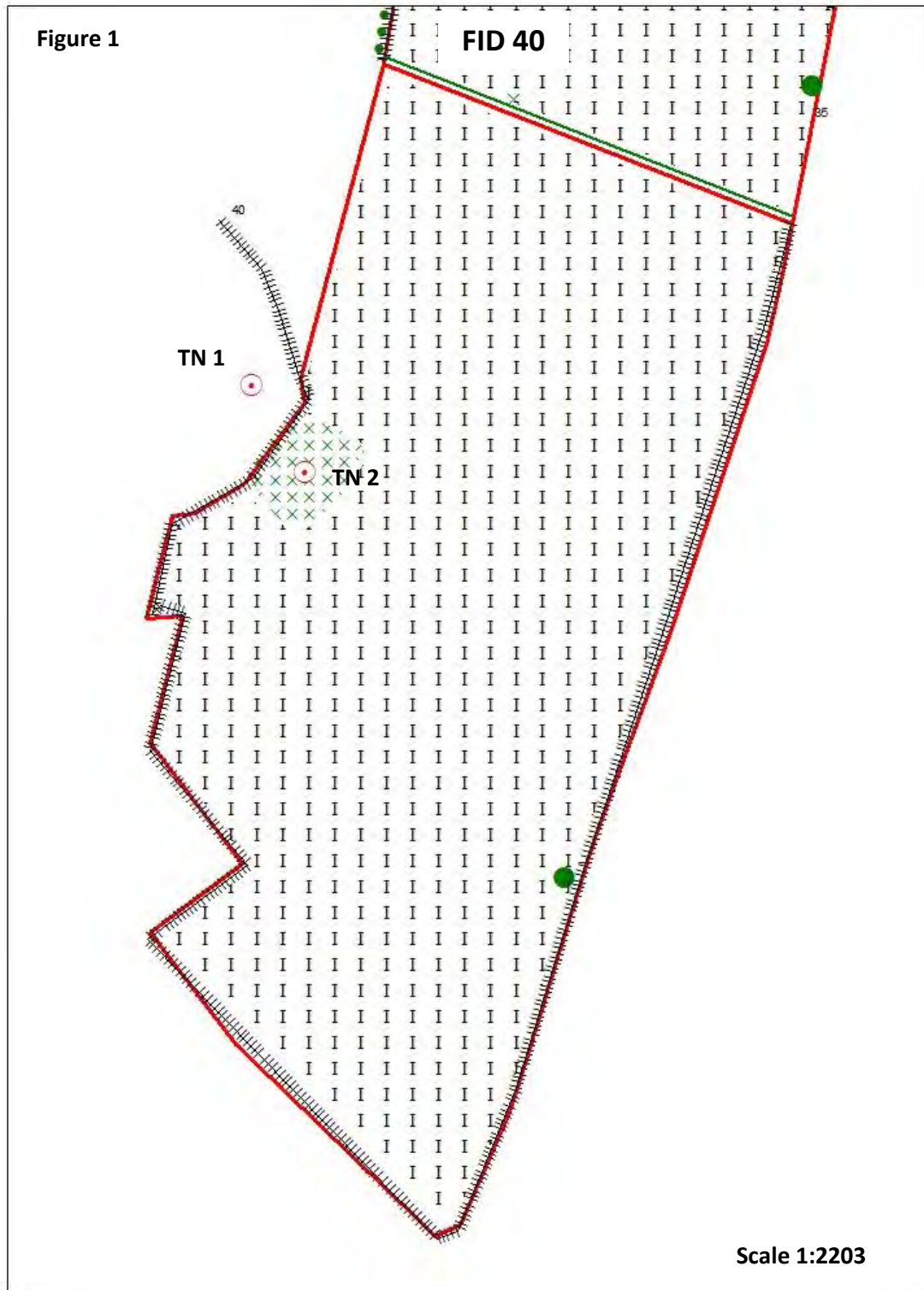
#### **1.1 Background**

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 40 O.S grid reference SJ9971255936.

FID 40 is located to the south east of Leek town in the Staffordshire Moorlands District, surrounded by agricultural land, industrial site 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).





## Lockwood Hall Associates Ltd

### 2. Methodology

#### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 40 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Lowe Hill
BAS	Solomon's Hollow
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Stare Wood
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European water vole
	Four coloured cuckoo bee
	Ghost moth
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Northern lapwing
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat
	Powdered quaker





## Lockwood Hall Associates Ltd

	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Japanese rose
	Montbretia
	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
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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



## Lockwood Hall Associates Ltd

### 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
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	2.89	92
SS	0.06	2
OTHER	0.20	6
TOTALS	3.15	100

I – 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	Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i> , great willowherb <i>Epilobium hirsutum</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , ash <i>Fraxinus excelsior</i> , goat willow <i>Salix caprea</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 all been recorded within the tall ruderal vegetation amongst the area of scattered scrub.



## Lockwood Hall Associates Ltd

### 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 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	SJ9963955977	Mix of broadleaved woodland and scrub
2	SJ9967055947	Small area of goat willow scrub and tall ruderal vegetation



## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Scattered scrub					x
Species poor grassland					x
<b>Overall site importance</b>					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 domestic dwellings to the west, species poor grassland to the north (FID 35)/ and east and scrub to the south with roads forming the eastern and southern boundaries.

The species poor improved grassland and scattered trees are particularly common in the UK, and the locality. The small scattered scrub area consists of goat willow scrub and some tall ruderal vegetation adjacent to an area of semi-natural broadleaved woodland has fairly low biodiversity value and therefore deemed to have a low value within the matrix, especially as being fairly poorly connected to other more biodiverse habitats with two roads intersecting habitats to the north and east.

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 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 are retained if the site is to be developed.

If 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 very low biodiversity value overall in terms of area as it consists of species poor improved grassland, one small area of scattered scrub with one species poor hedgerow. Therefore the site is considered to have low ecological value.

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

- Vegetation removal at the appropriate time of year



# **FID 41**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 41**

### **1. Introduction**

#### **1.1 Background**

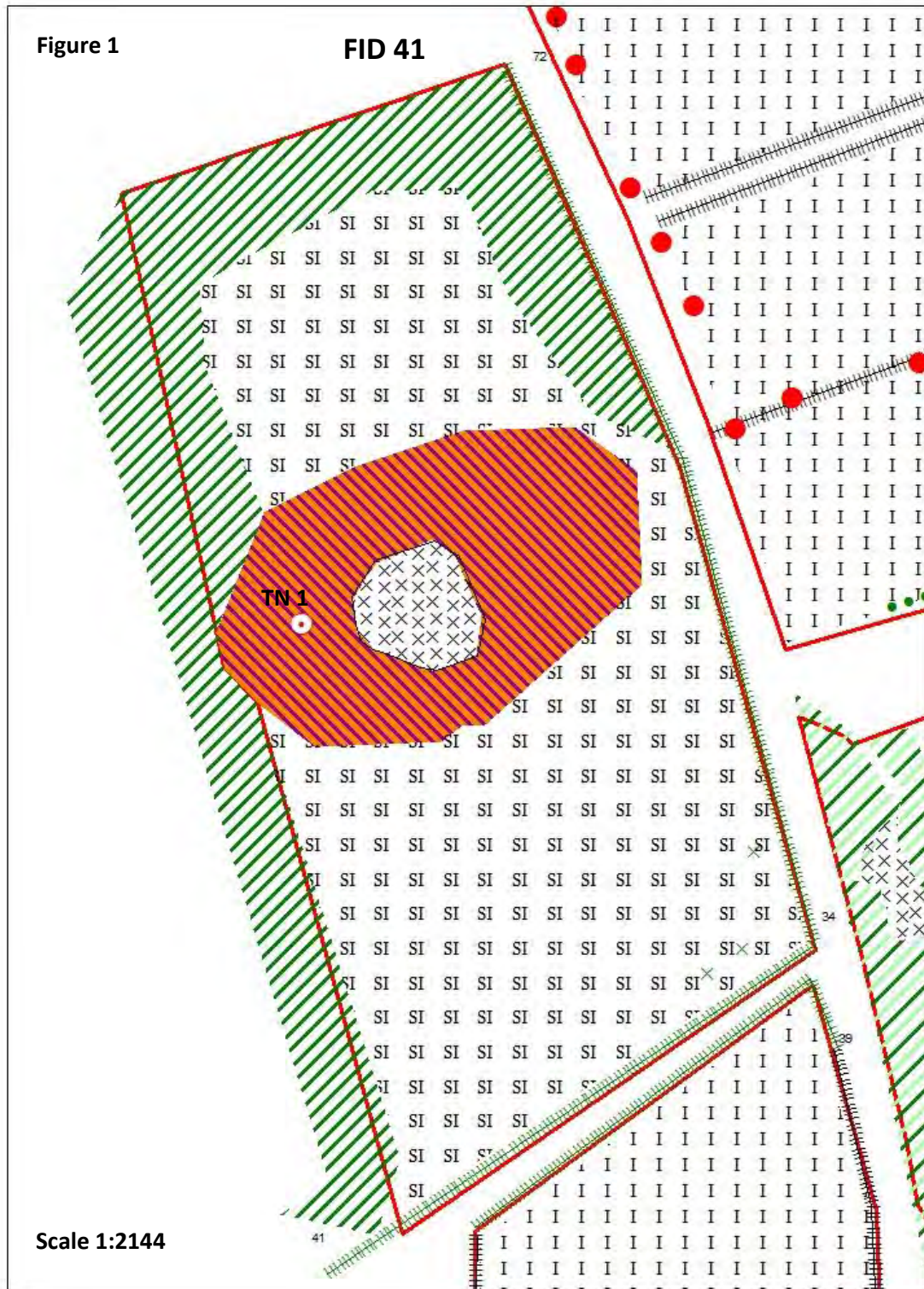
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 41 O.S grid reference SJ9976256649.

FID 41 is located to the east of Leek town in the Staffordshire Moorlands District, 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).







## Lockwood Hall Associates Ltd

### 2. Methodology

#### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 41 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 circle 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Lowe Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl





## Lockwood Hall Associates Ltd

	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	Eurasian oystercatcher
	Four coloured cuckoo bee
	Ghost moth
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Northern lapwing
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat



## Lockwood Hall Associates Ltd

	Powdered quaker
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Japanese rose
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Pipistrelle
	Eurasian Badger
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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

## Lockwood Hall Associates Ltd

### 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.

- Planted broadleaved woodland
- Marshy grassland
- Ephemeral grassland
- Species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	1.90	58
BW	0.60	19
MG	0.58	18
ESP	0.11	3
OTHER	0.06	2
TOTAL	3.25	100

SI – Species poor semi-improved grassland, BW – Broadleaved Woodland, MG – Marshy grassland, ESP – Ephemeral 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	Yorkshire fog <i>Holcus lanatus</i> , soft rush <i>Juncus effusus</i> , common bent, <i>Agrostis stolonifera</i> , great willowherb <i>Epilobium hirsutum</i> , red clover <i>Trifolium pratense</i> , reed canary grass <i>Phalaris arundinacea</i> , red bartsia <i>Odontites vernus</i> , common nettle <i>Urtica dioica</i> , creeping thistle <i>Cirsium arvense</i> , creeping buttercup <i>Ranunculus repens</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , goat willow <i>Salix caprea</i> , sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> , silver birch <i>Betula pendula</i>

#### 4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* is 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.





## Lockwood Hall Associates Ltd

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle and broadleaved dock *Rumex obtusifolius* have all been recorded 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 planted broadleaved woodland, 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*, goldfinch *Carduelis carduelis*, woodpigeon *Columba palumbus*
- Butterflies speckled wood *Pararge aegeria*

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9972156648	Area of higher floral diversity

## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Planted broadleaved woodland					x
Ephemeral grassland					x
Marshy grassland				x	
Semi-improved species poor grassland				x	
Species poor hedgerow					x
<b>Overall site importance</b>				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 domestic dwellings to the north and south west; species poor grasslands to the west, east and south intersected by a road on its eastern boundary, and is poorly connected to the wider countryside.

The site mainly consists of species poor grassland with species such as cock's foot and tufted hair grass prevalent. However the sward is more diverse in terms of floral species with a combination of hard rush *Juncus inflexus*, soft rush *Juncus effusus*, reed canary grass and pendulous sedge *Carex pendula*. Ephemeral species include bird's foot trefoil *Lotus corniculatus*, red bartsia and perforate St.John'swort *Hypericum perforatum*. However the grassland is not deemed as particularly species rich as to qualify for this a more diverse sward would need to be present.

The tall grassland sward is significantly large enough to potentially support ground nesting birds and possibly foraging barn owl *Tyto alba* (recorded <200m away), kestrel *Falco tinnunculus*, green woodpecker *Picus viridis*, foraging badger, bats and West European hedgehog (recorded <30m away). The site is therefore deemed to have district value within the matrix despite the main area of the site being relatively species poor grassland.

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.



## Lockwood Hall Associates Ltd

### 6. Recommendations

#### *Vegetation removal*

If at all possible it is recommended that as many trees can be retained as possible.

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 has a fairly diverse sward of flora and grasses; however there is not enough diversity or rare flora indicative of more unimproved grasslands to warrant recommending it being protected. Certainly the habitat mosaic and fairly well connected habitats would support a fairly diverse range of fauna and therefore the site as a whole is considered to have district 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 42**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 42**

### **1. Introduction**

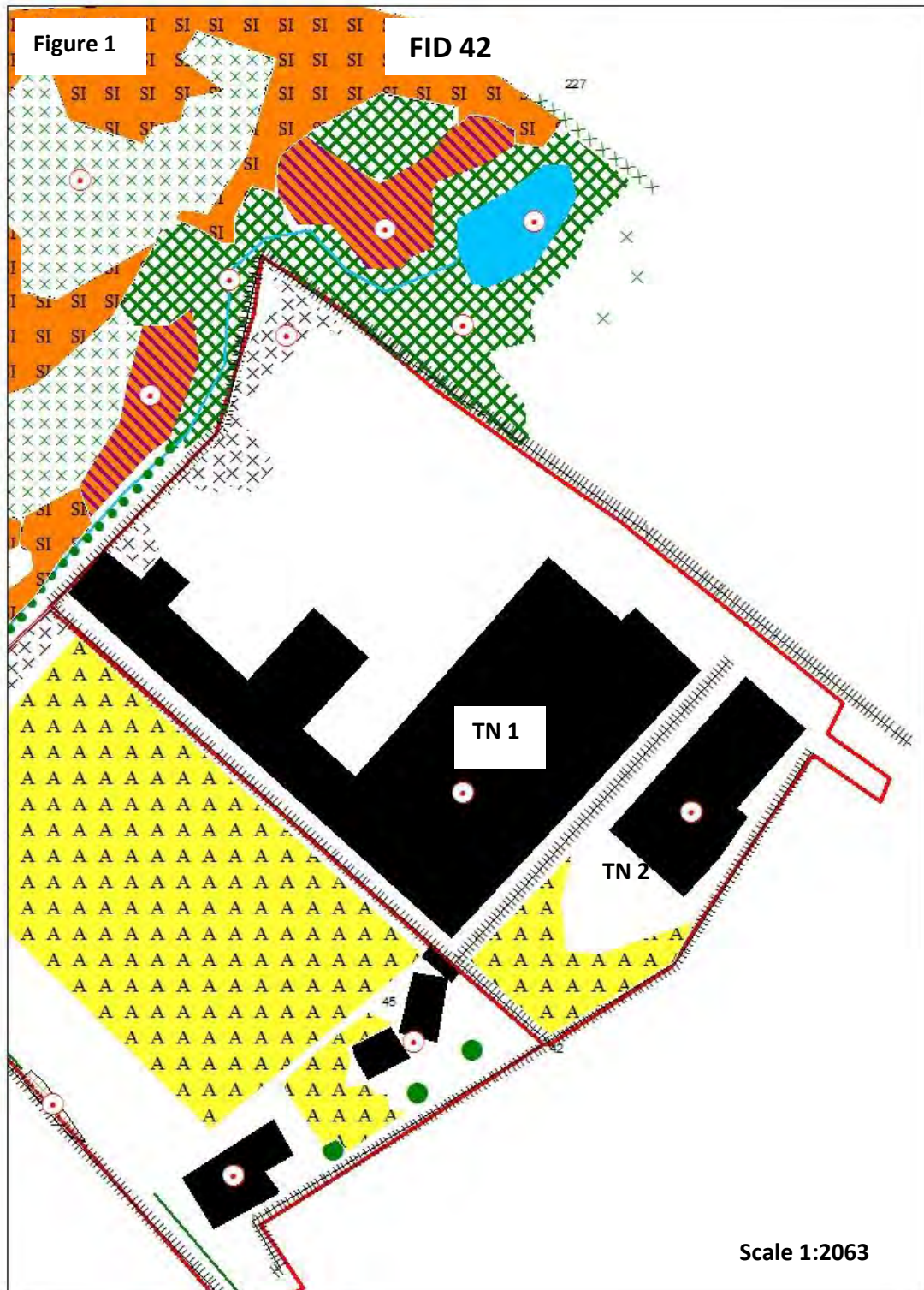
#### **1.1 Background**

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 42 O.S grid reference SJ9899157299.

FID 42 is located to the north of Leek town in the Staffordshire Moorlands District, surrounded by Ball Haye Green SBI (Site of Biological Importance) amenity grassland 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 42 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).





## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Abbey Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
AWI	Hawthorne Wood
AWI	Back Hills Wood
LNR	Brough Park Fields
BAS	Birchall Meadow
BAS	Solomons Hollow
BAS	Low Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Autumnal rustic
	Barn Owl
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Brown trout
	Brown spot pinion
	Brown ant
	Buff tailed bumble bee
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common goldeneye
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Double dart
	Dusky brocade
	Dyer's greenweed
	Early bumble bee
	Eurasian Curlew
	European otter
	Figure of eight
	Flounced chestnut
	Four coloured cuckoo bee
	Good King Henry
	Grass snake
	Great Crested Newt
	Green brindled crescent
	Green Woodpecker



## Lockwood Hall Associates Ltd

	Grizzled skipper
	Hedge rustic
	Honey bee
	House Sparrow
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse moth
	Noctule bat
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Sallow
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Soprano Pipistrelle
	Streak
	Tree bumble bee
	V moth
	West European Hedgehog
	White ermine
	White letter hairstreak
	White tailed bumble bee
	Wild pansy
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	American mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed



## Lockwood Hall Associates Ltd

	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common goldeneye
	Common kingfisher
	Common Pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	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.

- Building
- Ephemeral grassland
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.09	5
OTHER	1.84	90
TOTALS	1.93	100

AM – Amenity grassland



## Lockwood Hall Associates Ltd

### 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> , red fescue <i>Festuca rubra</i> common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Silver birch <i>Betula pendula</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.

### 4.3.4 Fauna

#### Bats

The site is an engineering factory with 1 very large hangar style building with a sloping corrugated roof and 1 smaller building with a similar style.

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9895257367	Requires reptile survey
2	SJ9900057260	No bat survey required
3	SJ9906157254	No bat survey required

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Ephemeral grassland				x	
Species poor amenity grassland					x
<b>Overall site importance</b>					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 Ball Haye Green SBI to the north east/ north/ north west, amenity grassland to the east, domestic dwellings to the south and Ball Haye Green Football Club field to the west.

The site is well connected to the Ball Haye Green SBI habitat mosaic to the north and could supply basking opportunities for reptiles and possible refugia for both reptiles and amphibians in and around the ephemeral grassland area to the north. The ephemeral grassland and amenity grassland present on site are particularly common habitats in the UK, and the locality have low biodiversity value and therefore deemed to have a low value within the matrix, with the former given slightly higher status as it could support basking reptiles and areas of refuge.

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, although grass snake *Natrix natrix* has been recorded on site. Additional exceptions could potentially include terrestrial amphibians that could use on site refuges.

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.





## **Lockwood Hall Associates Ltd**

### **6. Recommendations**

#### *Buildings with bat potential*

The buildings are large warehouse/ hangar style of corrugated metal construction which does not tend to encourage bats to roost.

#### *Reptile/ amphibian survey*

Although a reptile survey is deemed unnecessary for this site it is recommended that if the site is to be developed all potential refugia such as rock piles or any paving slabs, wood piles, old equipment or any other materials that could be used as a refuge should be carefully removed under supervision by a suitably qualified ecologist.

### **7. Conclusion**

The site is considered to have low ecological importance overall, however as the site is adjacent to Ball Haye Green Disused Tip SBI, there is potential to support reptile populations within refugia to the north of the site.

The following action is recommended prior to any potential development works being carried out:

- Removal of potential refugia under a watching brief.



# **FID 43**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 43**

### **1. Introduction**

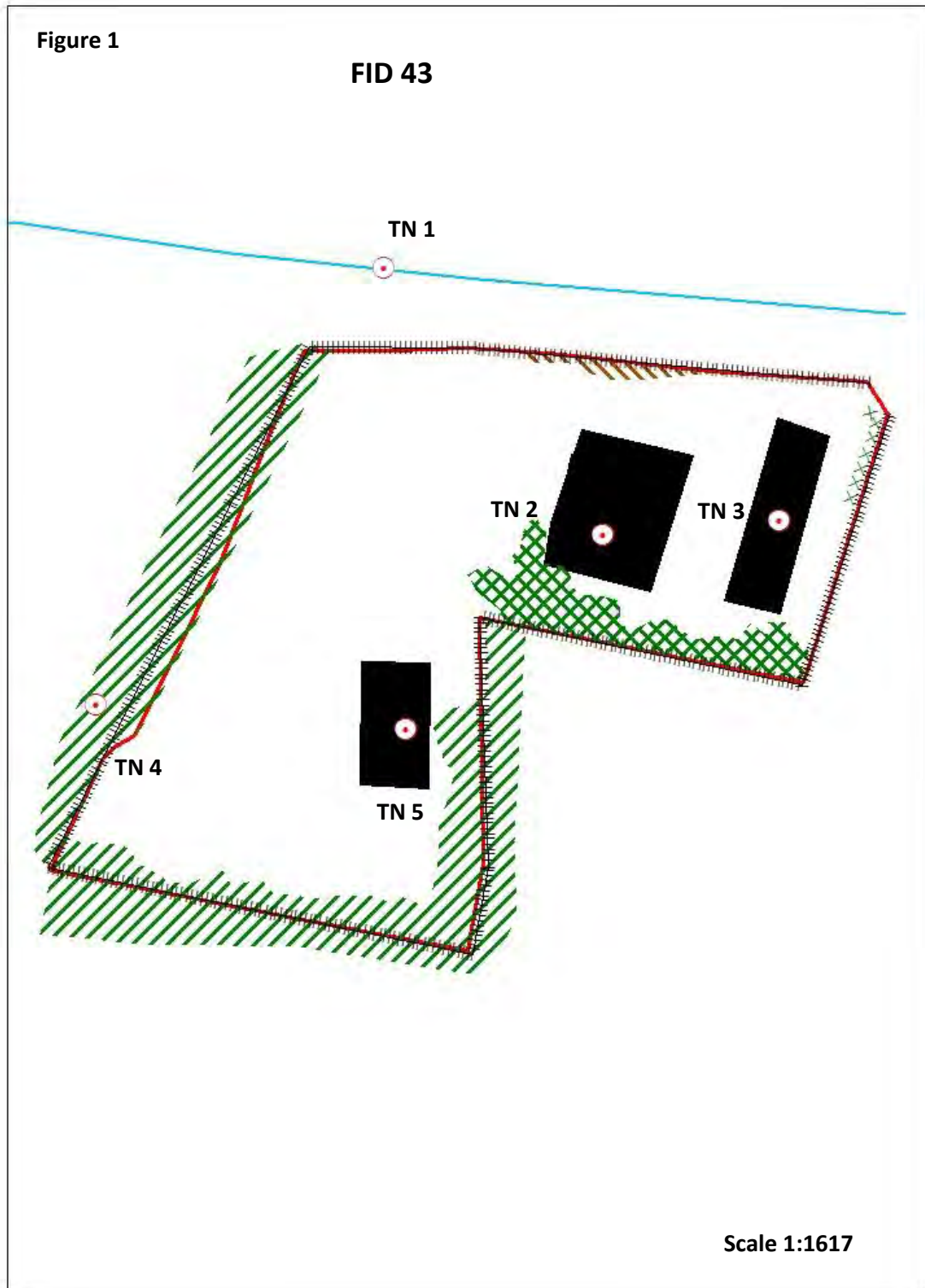
#### 1.1 Background

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 43 O.S grid reference SJ9728555122.

FID 43 is located south west of Leek town in the Staffordshire Moorlands District, surrounded by Ladderedge Country Park (abuts the site), industrial 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 43 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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.





## Lockwood Hall Associates Ltd

### 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	Ladderedge Country Park (abuts FID 43)
AWI	Soils Wood
AWI	Cowhay Wood
AWI	Birchall Wood
AWI	UNK
AWI	Ballington Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Hollinhay Wood
BAS	Leek Brook Meadow
BAS	Stanlowe grassland
BAS	Horse Bridge (east of)
BAS	Horse Bridge
BAS	Birchall Meadow
SBI	Cheddleton Marsh
SBI	Cheddleton Heath (dismantled railway)
SBI	Ladydale
SBI	Longsdon Mill Pond
SBI	Cheddleton Heath
SBI	Park Lane Farm (north and east of), caldon Canal
SBI	Ballington Wood
SBI	Caldon Canal
SBI	Ladydale Wood Pasture
SBI	Beech Close (SW of), Longsdon
SBI	Longsdon Wood & Cowhay Wood
SBI	Soils Wood
SBI	Caldon Canal (south of Hollinhay Wood)

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



## Lockwood Hall Associates Ltd

### 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
	Adder
	Autumnal rustic
	Barn Owl
	Black headed cardinal bee
	Broom moth
	Brown spot pinion
	Brown ant
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common redstart
	Common Snipe
	Common Toad
	Dot moth
	Double dart
	Dunnock
	Dusky brocade
	European otter
	Figure of eight
	Flounced chestnut
	Four coloured cuckoo bee
	Freshwater white clawed crayfish
	Good King Henry
	Grass snake
	Great Crested Newt
	Greater butterfly orchid
	Green brindled crescent
	Green Woodpecker



## Lockwood Hall Associates Ltd

	Greylag goose
	Heath dog violet
	Hedge rustic
	Honey bee
	House Sparrow
	Insect-beetle
	Large flowered hemp nettle
	Little kneeling eyebright
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse moth
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Rosy minor
	Rosy rustic
	Sallow
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Soprano Pipistrelle
	Streak
	Tree bumble bee
	V moth
	Wall
	West European Hedgehog
	White ermine
	White letter hairstreak
	White tailed bumble bee
	Wild pansy
	Willow Warbler
	Yellowhammer
INV	American mink
	Canadian waterweed
	Chinese muntjac

	Greater Canada goose
	Indian balsam
	Japanese knotweed
	Japanese rose
	Montbretia
	New Zealand Pigmyweed
	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
	Floating water plantain
	Freshwater white clawed crayfish
	Grass snake
	Great Crested Newt
	Greylag goose
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	Polecat
	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.

- Building
- Dense scrub
- Planted broadleaved woodland
- Tall ruderal vegetation

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
PBW	0.09	9
DS	0.06	5
TR	0.01	1
OTHER	0.93	85
TOTALS	1.09	100

PBW – Planted broadleaved woodland, DS – Dense scrub, 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.

#### 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

##### *Bats*

The site has 4 buildings with sloped roofs which are of metal construction in a warehouse/hangar style of which are deemed to have low potential to support roosting bats.

#### 4.3.5 Target notes

Table 4

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9727755163	Caldon canal
2	SJ9734855118	Does not require bat survey
3	SJ9731155111	Does not require bat survey
4	SJ9721355076	Planted broadleaved woodland with edges needing reptile survey
5	SJ9727255074	Does not require bat survey

**5. Evaluation**

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Planted broadleaved woodland					x
Dense scrub					x
Tall ruderal vegetation					x
<b>Overall site importance</b>				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 Ladderedge Country Park to the west and south, golf course and a stream to the north with connective scrub and scattered trees, intersected by the A53 to the east which has domestic dwellings and species poor grasslands connected to the stream that forms the source to the Caldon Canal, also with the River Churnet running alongside.

However the site itself consists mainly of buildings and hard standing with a small area of planted broadleaved woodland, scrub and tall ruderal vegetation forming 15% of the total area. The site is very well connected to Ladderedge Country Park which forms 30 hectares of broadleaved woodland/ marshland/ stream/ pond mosaic.

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. 9 great crested newts have been recorded adjacent to the site. Exceptions could definitely potentially include terrestrial amphibians, as well as reptiles (grass snake recorded <300m away), foraging bats and badger. Therefore the site is considered to have district ecological importance focussed on these edge habitats.

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 east 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 planted broadleaved woodland and scrub edge habitats..

It is also recommended that if the site is to be developed all potential refugia such as rock piles or any paving slabs, wood piles, old equipment or any other materials that could be used as a refuge should be carefully removed under supervision by 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 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 has very low biodiversity value overall, however as the site is adjacent to Ladderedge Country Park the site's edge habitats and hence the site as a whole are considered to have district ecological importance.

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

- Reptile survey and removal of potential refugia under a watching brief.
- Vegetation removal at an appropriate time of year



# **FID 44**





## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.2 Field survey	
4.2.1 Habitats	
4.2.2 Flora	
4.2.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>10</b>
<b>6. Recommendations</b> .....	<b>11</b>
<b>7. Conclusions</b> .....	<b>11</b>



## **FID 44**

### **1. Introduction**

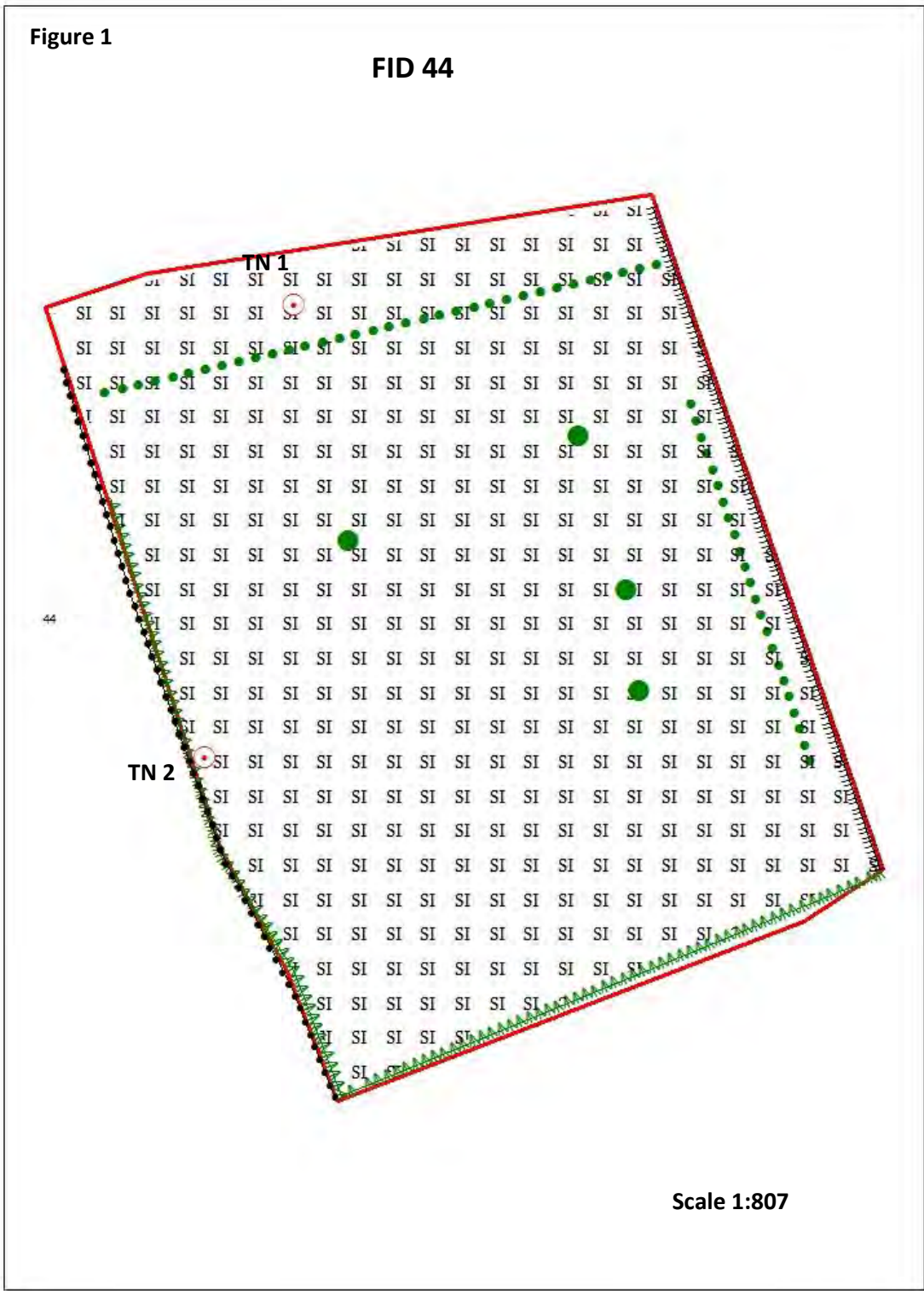
#### **1.1 Background**

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 44 O.S grid reference SJ9878654441.

FID 44 is located east of Leek Golf Course 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 44 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Ladderedge Country Park
AWI	Birchall Wood
AWI	Ballington Wood
AWI	Soils Wood
AWI	Longsdon Wood
AWI	UNK
AWI	Hollinhay Wood
BAS	Leek brook Meadow
BAS	Lowe Hill
BAS	Birchall Meadow
SBI	Cheddleton Heath (dismantled railway)
SBI	Ferny hill
SBI	Twinney Woodland and Grassland
SBI	Revedge Farm (north of)
SBI	Ringehay Grassland
SBI	Beech close (SW of), Longsdon
SBI	Longsdon Wood and Cowhay Wood
SBI	Cheddleton heath
SBI	Soils Wood
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Ladydale
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 true fly
	Barn Owl



## Lockwood Hall Associates Ltd

	Brown hare
	Brown Long-eared Bat
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kingfisher
	Common Pipistrelle
	Common redstart
	Common Toad
	Common wasp
	Dunnock
	Eurasian Curlew
	Eurasian woodcock
	European otter
	Freshwater white clawed crayfish
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Greylag goose
	Heath dog violet
	Honey bee
	House Sparrow
	Insect-hymenopteran
	Little kneeling eyebright
	Mallard
	Noctule bat
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Sky Lark
	Small Heath
	Song thrush
	Soprano Pipistrelle
	Tall hawkweed
	Tree wasp
	Tubular water dropwort
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow Warbler
	Yellowhammer



INV	American mink
	Chinese muntjac
	Greater Canada goose
	Indian balsam
	Japanese knotweed
	Japanese rose
	New Zealand Pigmyweed
	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
	Freshwater white clawed crayfish
	Grass snake
	Great Crested Newt
	Greylag goose
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	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.

- Species poor hedgerows
- Scattered trees
- Species poor grassland
- Tall ruderal vegetation

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	0.36	76
BW	0.10	22
OTHER	0.01	2
TOTALS	0.47	100

SI – Semi-improved species poor grassland, 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> , creeping buttercup <i>Ranunculus repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , Lombardy poplar <i>Populus nigra 'Italica'</i> , lime <i>Tilia sp</i> , apple <i>Malus sp.</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.

#### *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 and possibly 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	SJ9877554468	Scattered Lombardy poplars with species poor grassland
2	SJ9876154426	Requires hedgerow survey

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerows				x	
Scattered trees					x
Species poor grassland					x
<b>Overall site importance</b>				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 habitats of low biodiversity value, with domestic dwellings and improved grassland immediately adjacent and very poor connectivity to the wider countryside.

The site forms part of a garden for the property to the north of the site. The species rich hedgerow hence the whole site is attributed as having district ecological importance. The scattered trees consist of a line of Lombardy poplar and planted fruit trees, and the remaining 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 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 and is unlikely to support many European and UK protected species. The species rich hedgerow elevates the site's ecological importance to a district value.

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 45**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 45**

### **1. Introduction**

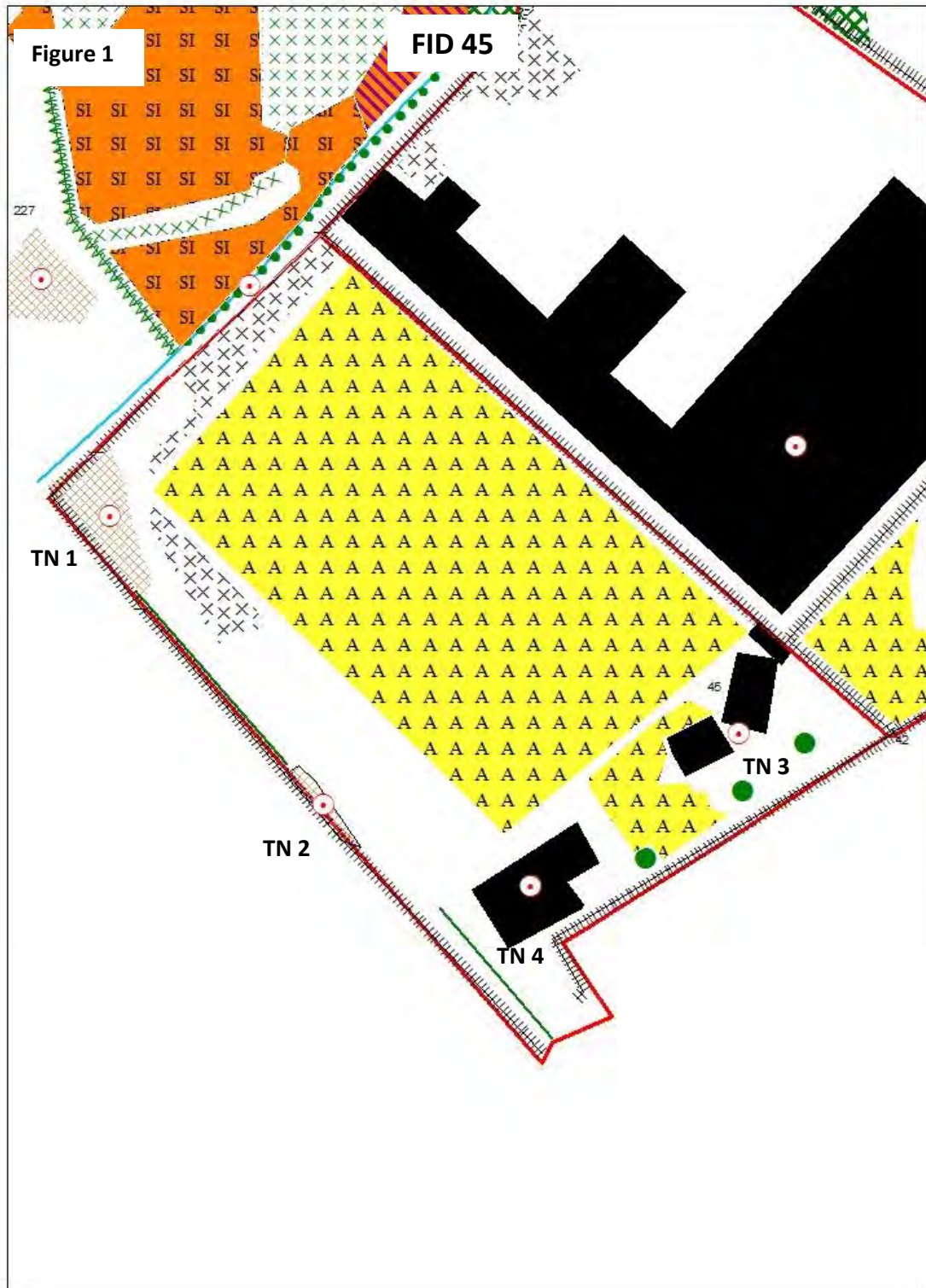
#### 1.1 Background

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 45 O.S grid reference SJ9891657223.

FID 45 is located to the north of Leek town in the Staffordshire Moorlands District, surrounded by Ball Haye Green SBI, industrial 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).







## Lockwood Hall Associates Ltd

## 2. Methodology

### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 45 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Abbey Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
AWI	Hawthorne Wood
AWI	Back Hills Wood
LNR	Brough Park Fields
BAS	Birchall Meadow
BAS	Solomons Hollow
BAS	Lowe Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Autumnal rustic
	Barn Owl
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Brown trout
	Brown spot pinion
	Brown ant
	Buff tailed bumble bee
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common goldeneye
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Double dart
	Dusky brocade
	Dyer's greenweed
	Early bumble bee
	Eurasian Curlew
	European otter
	Figure of eight
	Flounced chestnut
	Four coloured cuckoo bee
	Good King Henry
	Grass snake
	Great Crested Newt
	Green brindled crescent
	Green Woodpecker



## Lockwood Hall Associates Ltd

	Grizzled skipper
	Hedge rustic
	Honey bee
	House Sparrow
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse moth
	Noctule bat
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Sallow
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Soprano Pipistrelle
	Streak
	Tree bumble bee
	V moth
	West European Hedgehog
	White ermine
	White letter hairstreak
	White tailed bumble bee
	Wild pansy
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	American mink
	Japanese knotweed
	Montbretia
	New Zealand Pygmyweed



## Lockwood Hall Associates Ltd

	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common goldeneye
	Common kingfisher
	Common Pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	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.

- Buildings x 3
- Scattered trees
- Ephemeral grassland
- Introduced shrub/ noxious weeds
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.82	55
ESP	0.07	5
IS	0.36	24
OTHER	0.23	16
TOTALS	1.48	100

AM – Amenity grassland, ESP – Ephemeral grassland, IS – Introduced shrub



## Lockwood Hall Associates Ltd

### 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.

### 4.3.3 Invasive weeds

Japanese knotweed *Fallopia japonica* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was found during the walkover survey in one area to the north-east of the site.

### 4.3.4 Fauna

#### *Bats*

There are 4 buildings on site of which 3 are deemed suitable to support roosting bats as they are of brick and roof tile construction with occasional loose tiles 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 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	SJ9884457242	Japanese knotweed
2	SJ9890557158	Japanese knotweed
3	SJ9900857267	Does not require bat survey
4	SJ9898457188	Requires bat surveys



**5. Evaluation**

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Introduced shrub	n/a				
Ephemeral grassland					x
Species poor amenity grassland					x
<b>Overall site importance</b>					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 completely surrounded by domestic dwellings and industrial units/ warehouses apart from the north/ north-east where this is directly adjacent to Site FID223 (Ball Haye Green Disused Tip SBI) and a farm house with garden.

Although the site is very well connected to more biodiverse habitat to the north, the habitats contained within the site are species poor and have a low biodiversity value.

The site also contains 2 areas of Japanese knotweed which 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 as the habitats have low biodiversity value. However, the site is attributed district ecological importance as 3 buildings present on site have potential to support roosting bats and could also support reptile populations on the boundaries to the north and west (grass snake has been recorded <80m 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**

### *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 3 buildings highlighted as being able to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

### *Noxious weed removal*

It is extremely important that a regime of Japanese knotweed eradication is applied to the large area present on site following guidelines set out in 'Managing Japanese knotweed on development sites' (Environment Agency, 2013).

### *Vegetation removal*

If at all possible it is recommended that as many trees are retained during development works.

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 the species poor 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 itself has noxious weeds and species poor habitats present on site. However, as 3 buildings are considered to have bat roosting potential the site is considered to have district ecological importance.

If the whole site is to be developed 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
- Japanese knotweed removal
- Vegetation removal at the appropriate time of year



# **FID 72**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>12</b>



## **FID 72**

### **1. Introduction**

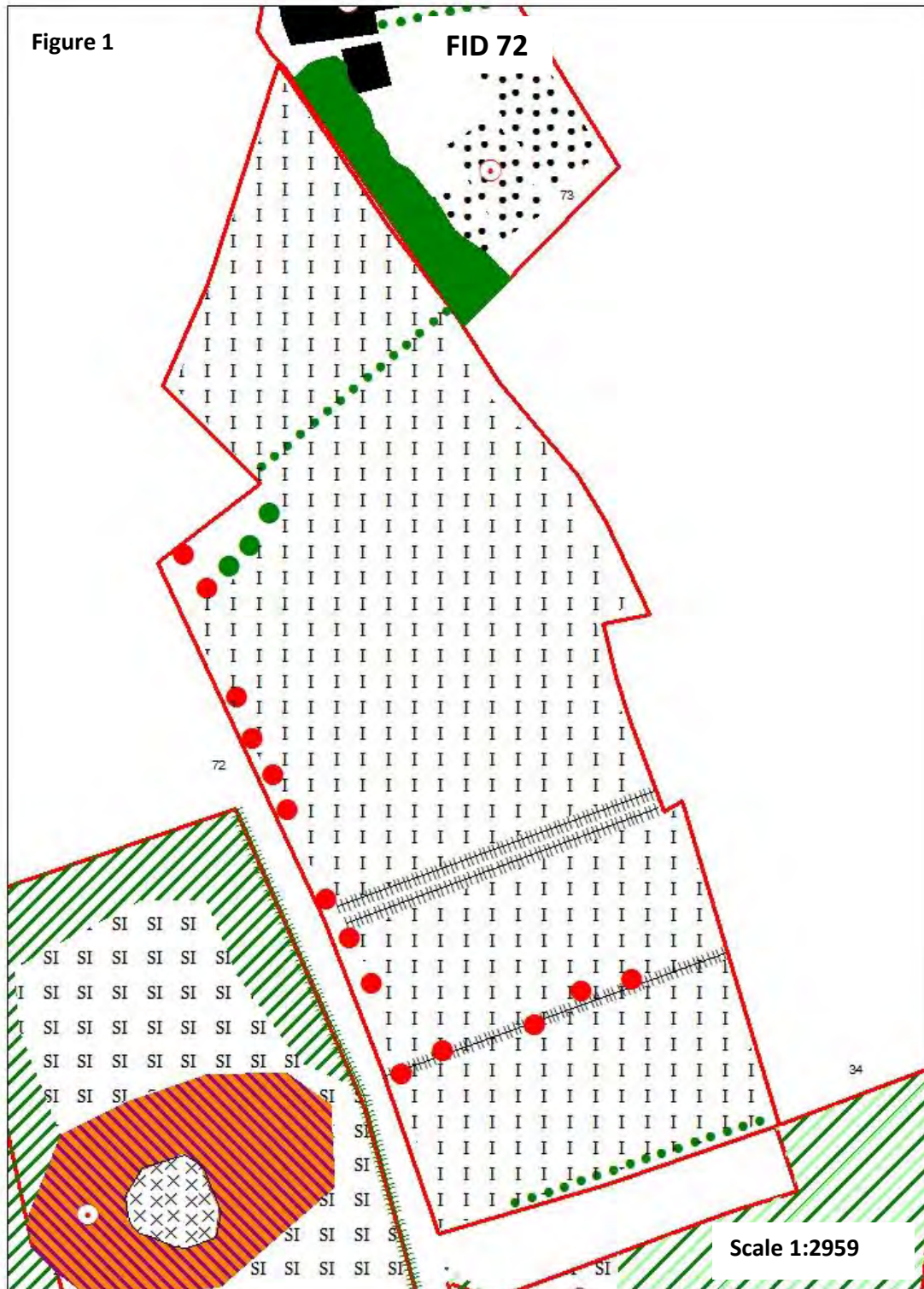
#### 1.1 Background

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 72 O.S grid reference SJ9985356817.

FID 72 is located east of Leek town, 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 72 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).





## Lockwood Hall Associates Ltd

### 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.





## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
LNR	Brough Park Fields
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Low Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

AWI – listed in Ancient Woodland Inventory, 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 bumble bee
	Autumnal rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Brindled beauty
	Brindled ochre
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Dunnock
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	Eurasian oystercatcher
	Four coloured cuckoo bee
	Ghost moth
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Heath rustic
	Honey bee
	House Sparrow
	Knot grass
	Latticed heath
	Mallard
	Mottled rustic
	Mouse moth
	Northern lapwing
	Oak hook tip
	Pink Waxcap
	Pipistrelle
	Polecat



## Lockwood Hall Associates Ltd

	Powdered quaker
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Rustic
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Song thrush
	Soprano Pipistrelle
	Wall
	West European Hedgehog
	White ermine
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Japanese rose
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common Pipistrelle
	Eurasian Badger
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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

## Lockwood Hall Associates Ltd

### 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 improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	4.33	89	
OTHER	0.52	11	
BPT			14
TOTALS	4.85	100	14

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> , creeping thistle <i>Cirsium arvense</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Beech <i>Fagus sylvatica</i> , sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</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 creeping thistle and curled dock *Rumex* were recorded within the grassland.



## Lockwood Hall Associates Ltd

### 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 from March to August when birds in the UK normally breed.

#### *Incidental records*

- Birds including carrion crow *Corvus corone* and woodpigeon *Columba palumbus*



## 5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Species poor grassland					x
<b>Overall site importance</b>				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 mainly consists of species poor improved grassland (89%) grazed by cows which is a very common habitat within the local area and the UK as a whole.

The 12 trees present on site could potentially support roosting bats and therefore the large quantity of potential mature trees warrants the site being deemed to have at least 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 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 12 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 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 itself has 12 trees with bat potential and is given district ecological importance as a result, though the site and its species poor grassland is poorly connected to other more biodiverse habitats.

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 73**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 73**

### **1. Introduction**

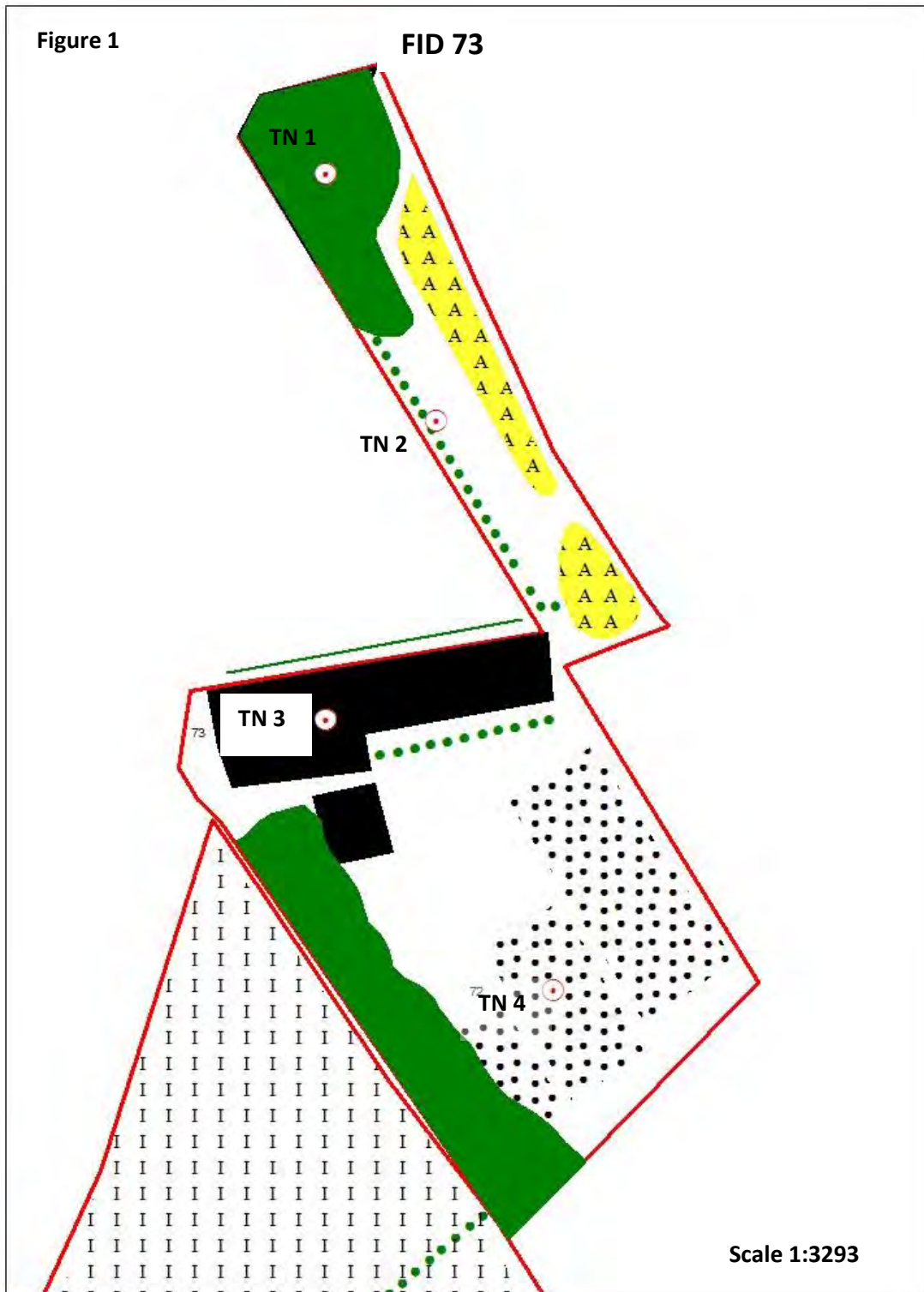
#### **1.1 Background**

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 73 O.S grid reference SJ9984757059.

FID 73 is located east of Leek town, 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 73 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Oaks Plantation
AWI	Hind's Clough Wood
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
LNR	Brough Park Fields
BAS	Solomon's Hollow
BAS	Bradnop (north of)
BAS	Birchall meadow
BAS	Lowe Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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





## Lockwood Hall Associates Ltd

### 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
	Barn Owl
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Common bullfinch
	Common carder bee
	Common goldeneye
	Common kestrel
	Common kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	Eurasian oystercatcher
	European water vole
	Four coloured cuckoo bee
	Ghost moth
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Great crested newt
	Grey dagger
	Grizzled skipper
	Honey bee
	House Sparrow
	Insect - hymenopteran
	lichen



## Lockwood Hall Associates Ltd

	Mallard
	Noctule bat
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed bunting
	Sky Lark
	Small Heath
	Soprano Pipistrelle
	West European Hedgehog
	White tailed bumble bee
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common goldeneye
	Common kingfisher
	Common Pipistrelle
	Daubenton's bat
	Eurasian Badger
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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



## Lockwood Hall Associates Ltd

### 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
- Broadleaved woodland
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
BW	0.25	18
AM	0.09	7
OTHER	1.04	75
TOTALS	1.39	100

BW – Broadleaved woodland, 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> , common nettle <i>Urtica dioica</i> , groundsel <i>Senecio vulgaris</i> , great willowherb <i>Epilobium hirsutum</i>
Hedgerows/ trees/ scrub	Sycamore <i>Acer pseudoplatanus</i> , lime <i>Tilia sp</i> , beech <i>Fagus sylvatica</i> , poplar <i>Populus sp</i> , leylandii <i>Cuprocypressus x leylandii</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 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.



## Lockwood Hall Associates Ltd

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9980957218	Young mature broadleaved woodland
2	SJ9983657161	Young broadleaved scattered trees
3	SJ9981057145	Stables
4	SJ9986657023	Equine display area



**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Broadleaved woodland					x
Scattered trees					x
Species poor amenity grassland					x
<b>Overall site importance</b>				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 livery complex and small caravan park. It mainly consists of young broadleaved woodland, scattered trees and species poor amenity grassland with fairly poor connectivity to other more 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 would potentially include redwing (recorded 70m away) foraging bats, badger and have sufficient farm buildings and surrounding habitat for polecat.

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**

### *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 is poorly connected to other more biodiverse habitats. However as polecat are recorded within 2km and the site has potential to support their populations the site is deemed as having district ecological importance.

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

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



# **FID 192**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	13





## **FID 192**

### **1. Introduction**

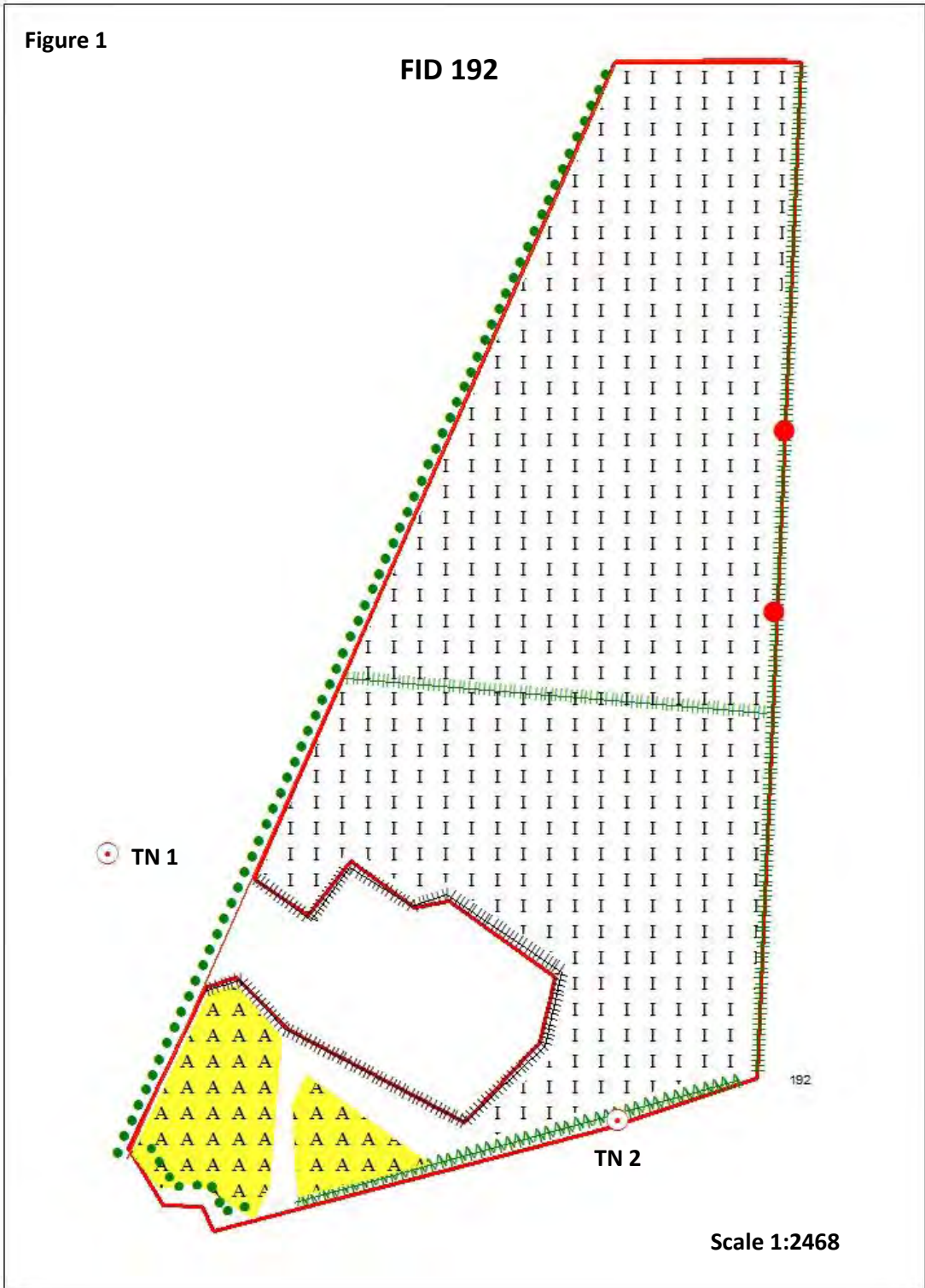
#### **1.1 Background**

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 192 O.S grid reference SJ9998157475.

FID 192 is located north-east of Leek town, surrounded by 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 192 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Thornccliffe Moor
LNR	Brough Park Fields
AWI	Birchall Wood
AWI	Hawthorne Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Oaks Plantation
AWI	Hind's Clough Wood
AWI	Edge End Wood, Solomon's Wood
AWI	UNK
LNR	Brough Park Fields
BAS	Solomon's Hollow
BAS	Bradnop (north of)
BAS	Lowe Hill
SBI	Old Mixon Hay (north west of)
SBI	Anzio Training Camp
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Easing Farm (east of)
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (south east of)
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Barn Owl
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Common bullfinch
	Common carder bee
	Common goldeneye
	Common kestrel
	Common kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dusky brocade
	Dusky thorn
	Dyer's greenweed
	Eurasian Curlew
	Eurasian oystercatcher
	European water vole
	Four coloured cuckoo bee
	Good King Henry
	Grass snake
	Great Crested Newt
	Green Woodpecker
	Great crested newt
	Grey dagger
	Grizzled skipper
	Honey bee
	House Sparrow
	Insect - hymenopteran
	lichen
	Mallard



## Lockwood Hall Associates Ltd

	Noctule bat
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed bunting
	Sky Lark
	Small Heath
	Soprano Pipistrelle
	West European Hedgehog
	White tailed bumble bee
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common goldeneye
	Common kingfisher
	Common Pipistrelle
	Daubenton's bat
	Eurasian Badger
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	Polecat
	Redwing
	Soprano Pipistrelle

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



## Lockwood Hall Associates Ltd

### 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
- Species rich hedgerow
- Species poor hedgerow
- Scattered trees
- Scattered scrub
- Tall ruderal vegetation
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	3.86	84	
AM	0.41	9	
OTHER	0.33	7	
BPT			2
TOTALS	4.6	100	2

I – Improved grassland, 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.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , 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> , creeping bent <i>Agrostis stolonifera</i> , hogweed <i>Heracleum sphondylium</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , lime <i>Tilia sp</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus agg</i> , beech <i>Fagus sylvatica</i> , ash <i>Fraxinus excelsior</i> , hazel <i>Corylus avellana</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.



## Lockwood Hall Associates Ltd

Weeds listed under the Weeds Act 1959 including broadleaved dock *Rumex obtusifolius*, creeping thistle *Cirsium arvense*, ragwort *Senecio jacobea* and spear thistle *Cirsium vulgare* have been recorded within the site.

### 4.3.4 Fauna

#### *Bats*

The site has 2 buildings that appear to have some loose roof tiles and potential entrances that could allow bats to roost. There is also 2 trees recorded in the walkover survey that could potentially 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 are likely to nest in areas of scattered trees, hedgerows and possibly 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	SJ9982157383	Mixed woodland within 20m of the site
2	SK0001557307	Requires hedgerow survey

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Scattered trees				x	
Species poor hedgerow					x
Dense scrub					x
Tall ruderal vegetation					x
Species poor amenity grassland					x
<b>Overall site importance</b>				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, bare ground, main road and FID161 to the east and is connected to other habitats through the hedgerow that runs along the southern boundary.

The site mainly consists of improved and amenity grassland (97%), with typical species including perennial rye grass, red fescue, annual meadow grass, creeping buttercup *Ranunculus repens*, common nettle and creeping thistle.

The hedgerows mainly consist of hawthorn, ash, holly, elder, silver birch *Betula pendula* and beech and sycamore, with 2 ash trees being deemed potentially suitable to support roosting bats.

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. However, the presence of a species rich hedgerow and 2 trees with potential to support roosting bats elevates the site’s status to 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 (recorded on site) 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 1 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.

### *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 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.



## **Lockwood Hall Associates Ltd**

### **7. Conclusion**

The site has fairly low biodiversity value overall but some connectivity to the wider countryside through hedgerows. Overall the site is attributed district importance as there are 2 trees with potential to support roosting bats and a species rich hedgerow.

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



# **FID 197**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 197**

### **1. Introduction**

#### 1.1 Background

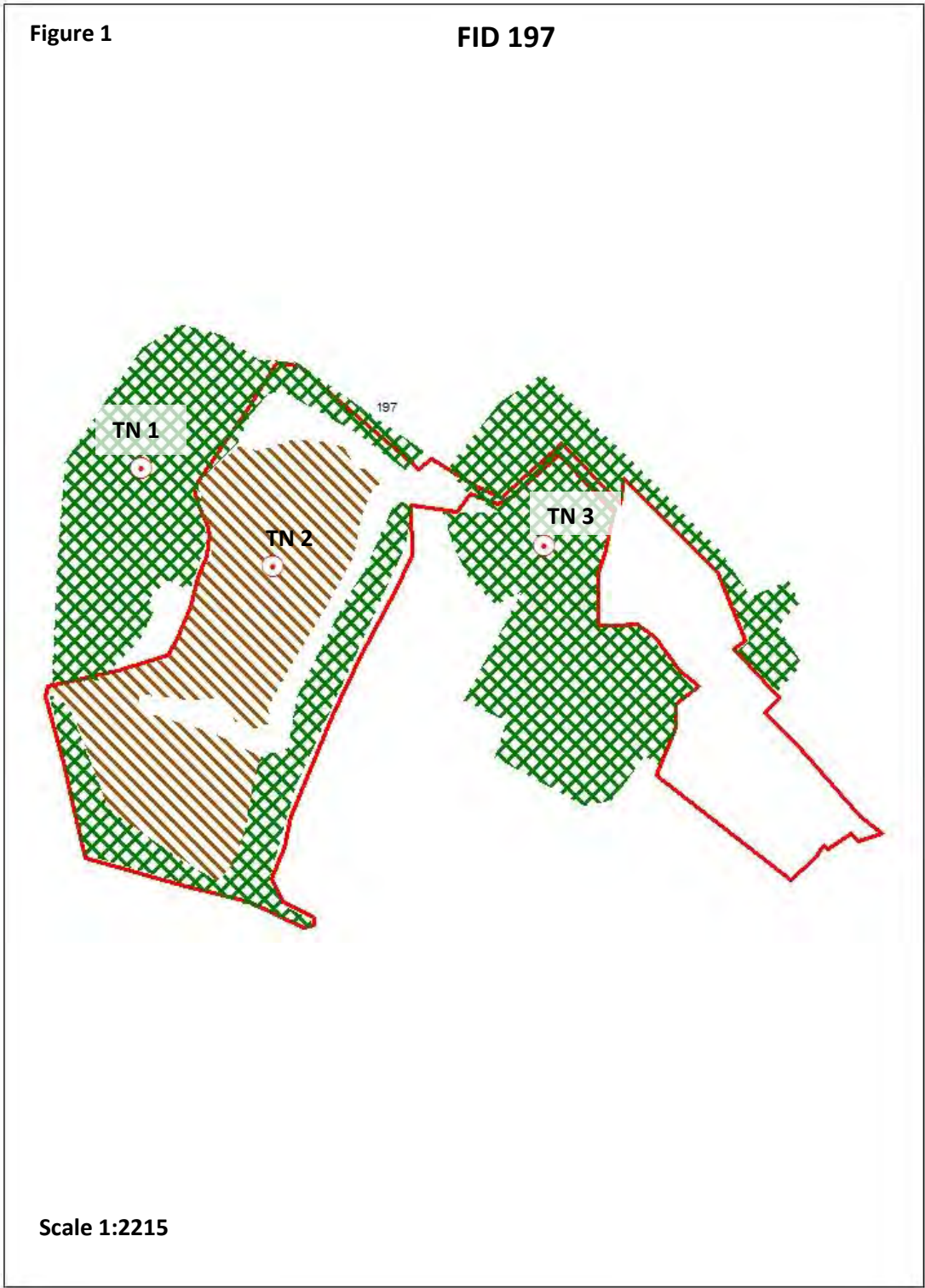
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 197 O.S grid reference SJ9773456035.

FID 197 is located in south-west Leek town surrounded by woodland, open space, allotments and commercial/industrial premises.

#### 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 197 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	Cowhay Wood
AWI/ SBI	Soils Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Birchall Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Hollinhay Wood
AWI	Ballington Wood
BAS	Birchall Meadow
BAS	Foker Grange
BAS	Leek Brook Meadow
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Ball Haye Green Disused Tip
SBI	Beech Close (SW of), Longsdon
SBI	Longsdon Wood and Cowhay Wood
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	A flowering plant



## Lockwood Hall Associates Ltd

	Autumnal Rustic
	Barn Owl
	Black headed cardinal bee
	Broom Moth
	Brown-spot Pinion
	Brown Ant
	Brown hare
	Brown Trout
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Greylag goose
	Heath dog violet
	Hedge Rustic
	Honey Bee
	House martin
	House Sparrow



## Lockwood Hall Associates Ltd

	Insect - beetle
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree Bumble Bee
	Tree wasp
	Tufted duck
	V-moth
	Wall
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
INV	American Mink
	Canadian waterweed
	Curly waterweed
	Indian balsam
	Japanese rose
	Montbretia

	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Greylag goose
	Natterer's Bat
	Polecat
	Redwing
	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.

- Tall ruderal vegetation
- Dense scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.44	39
DS	0.35	31
OTHER	0.34	30
TOTALS	1.13	100

TR- Tall ruderal vegetation, DS – Dense scrub



## Lockwood Hall Associates Ltd

### 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> , creeping bent <i>Agrostis stolonifera</i> cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , rosebay willowherb <i>Chamerion angustifolium</i> , ribwort plantain <i>Plantago lanceolata</i> , Canadian goldenrod <i>Solidago canadensis</i>
Hedgerows/ trees/ scrub	Goat willow <i>Salix caprea</i> , hawthorn <i>Crataegus monogyna</i> , silver birch <i>Betula pendula</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> ,

### 4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in various locations around the site.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* and spear thistle *Cirsium vulgare* 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 nest in areas of scrub and tall ruderal vegetation 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	SJ9766256040	Dense scrub with occasional open patches of tall ruderal vegetation
2	SJ9769056005	Tall ruderal vegetation with occasional scrub
3	SJ9776556014	Dense scrub with occasional open patches of tall ruderal vegetation

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Tall ruderal vegetation					x
Dense scrub					x
<b>Overall site importance</b>				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 industrial buildings and warehouses as part of the Tower Yard Industrial estate, allotments to the north and a scrub/ tall ruderal mosaic to the west. The site is completely isolated from the wider countryside.

The site itself appears to be a 'brownfield' site that has evolved into a scrub/ tall ruderal habitat mosaic that consists of a mixture of young goat willow, silver birch, ash, sycamore and hawthorn scrub/ developing broadleaved woodland (39%).

The tall ruderal vegetation (31%) consists of creeping thistle, rosebay willowherb, common nettle, curled dock, bramble, common knapweed *Centaurea nigra* mixed with ephemeral species such as perforate St. John's wort *Hypericum perforatum* and stonecrop *Sedum species*. The remaining habitats consists of hard standing

The sward could potentially support ground nesting birds, reptiles and terrestrial habitat for amphibians and provide hunting opportunities for owls and raptors as well as foraging bats. Therefore the site has been attributed district ecological importance due to the size of the site, very good connective habitat to the west and its potential to support some 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*

Although the site and surrounding habitat is completely isolated from the wider countryside it does have adequate habitat for slow-worm *Anguis fragilis* and common lizard *Zootoca vivipara*. As the surrounding scrub, tall ruderal vegetation is an extensive area it could have sustained relict reptile populations so it is therefore recommended that a full reptile survey is carried out by a suitably qualified ecologist.

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard, 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 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**

Although habitats on site are fairly species poor, there is a range of vegetation structure which could support reptile populations and provide habitat for foraging bats and owls and breeding birds. Biodiversity is likely to be accentuated by the adjacent similar habitat to the west and connective 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:

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



# **FID 198**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>13</b>



## **FID 198**

### **1. Introduction**

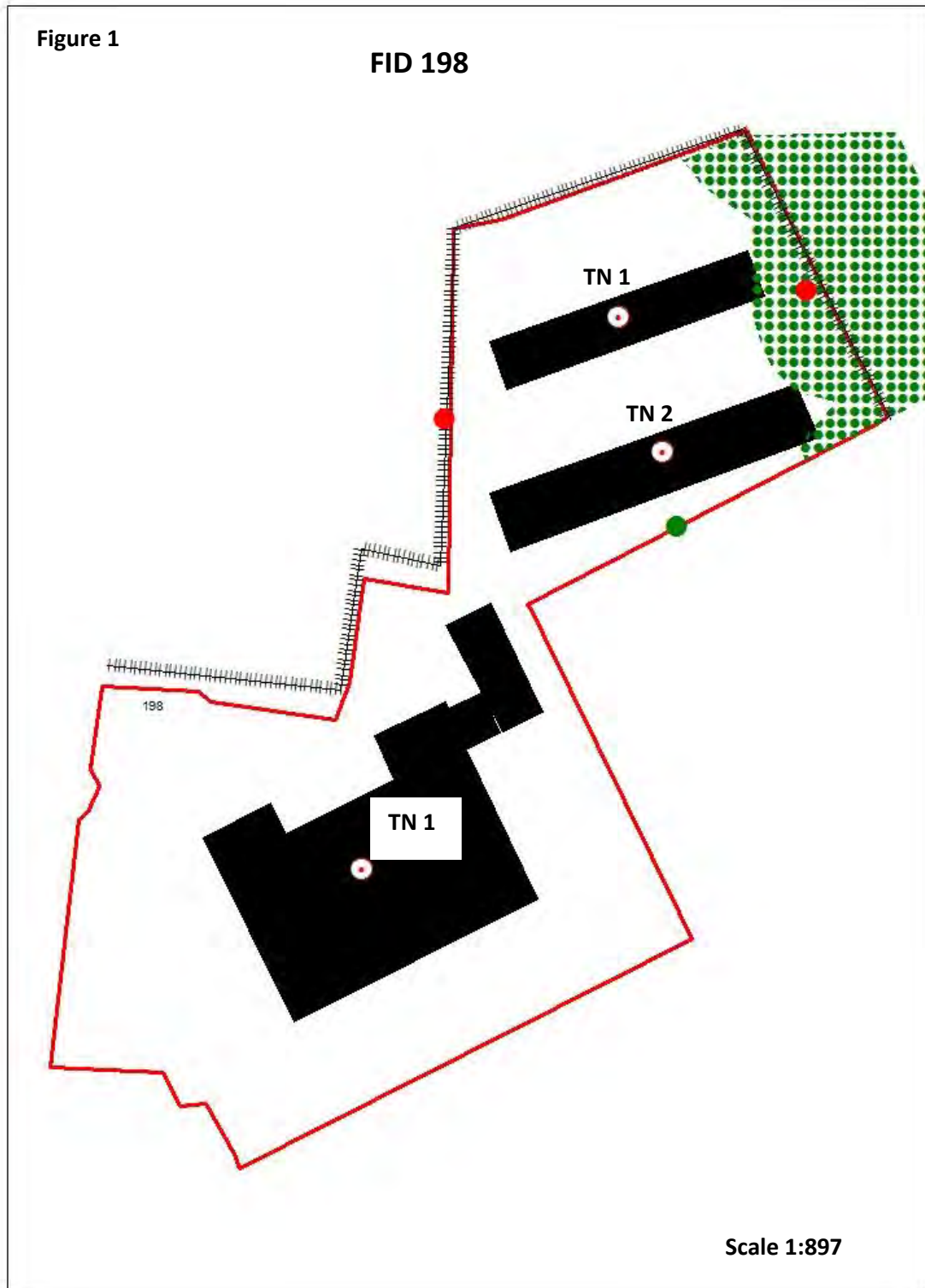
#### 1.1 Background

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 198 O.S grid reference SJ9820256278.

FID 198 is located central to Leek town surrounded by housing and commercial 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).





## **2. Methodology**

### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 198 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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 restricted and the 2 buildings to the north could not be fully surveyed.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Abbey Wood
AWI	Birchall Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Ballington Wood
BAS	Birchall Meadow
BAS	Foker Grange
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Beech Close (SW of), Longsdon
SBI	Stare Wood
SBI	Longsdon Wood and Cowhay Wood
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	A flowering plant
	Autumnal Rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Broom Moth
	Brown-spot Pinion
	Brown Ant
	Brown Trout
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Northern lapwing



## Lockwood Hall Associates Ltd

	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree Bumble Bee
	Tree wasp
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
INV	American Mink
	Canadian waterweed
	Indian balsam
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher
	Daubenton's bat
	Eurasian Badger
	European otter

	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Myotis bat species
	Natterer's Bat
	Noctule bat
	Polecat
	Redwing
	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.

- Buildings
- Scattered trees

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
SBW	0.03	6	
OTHER	0.42	94	
BPT			2
TOTALS	0.45	100	2

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	Common nettle <i>Urtica dioica</i> , mugwort <i>Artemisia vulgaris</i> , rosebay willowherb <i>Chamerion angustifolium</i> , annual meadow grass <i>Poa annua</i> , groundsel <i>Senecio vulgaris</i>
Hedgerows/ trees/ scrub	Sycamore <i>Acer pseudoplatanus</i> , hawthorn <i>Crataegus monogyna</i> ,



## Lockwood Hall Associates Ltd

### 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

#### *Bats*

The site has 2 trees and 3 buildings of which 2 have low potential to support roosting bats. The large building to the south is a fairly new car showroom of metal and corrugated roof construction. The remaining buildings are brick and corrugated roof garages that could not be accessed.

#### *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 and possibly 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	SJ9821956309	Requires bat survey
2	SJ9822356292	Requires bat survey
3	SJ9819156248	No bat survey required

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				X	
<b>Overall site importance</b>				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 completely surrounded by domestic dwellings/ offices with very poor connectivity to the wider countryside.

The habitats present on site include hard standing, scattered sycamore trees and buildings of which 2 are deemed suitable 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 though this is fairly unlikely due to the lack of connective habitat to provide flight lines as the site is set within an urban environment.





## **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 building should be scoped prior to any potential survey. However the buildings may need to 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.

### *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*

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 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.



## **Lockwood Hall Associates Ltd**

### **7. Conclusion**

The site has mostly low biodiversity value overall and is set within an urban environment which only has scattered trees as a habitat with no connectivity to the wider countryside which lowers the biodiversity potential of the area considerably. However, the presence of 2 buildings and 2 trees with potential to support roosting bats warrants the site being 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 buildings and trees
- Vegetation removal at the appropriate time of year



# **FID 199**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 199**

### **1. Introduction**

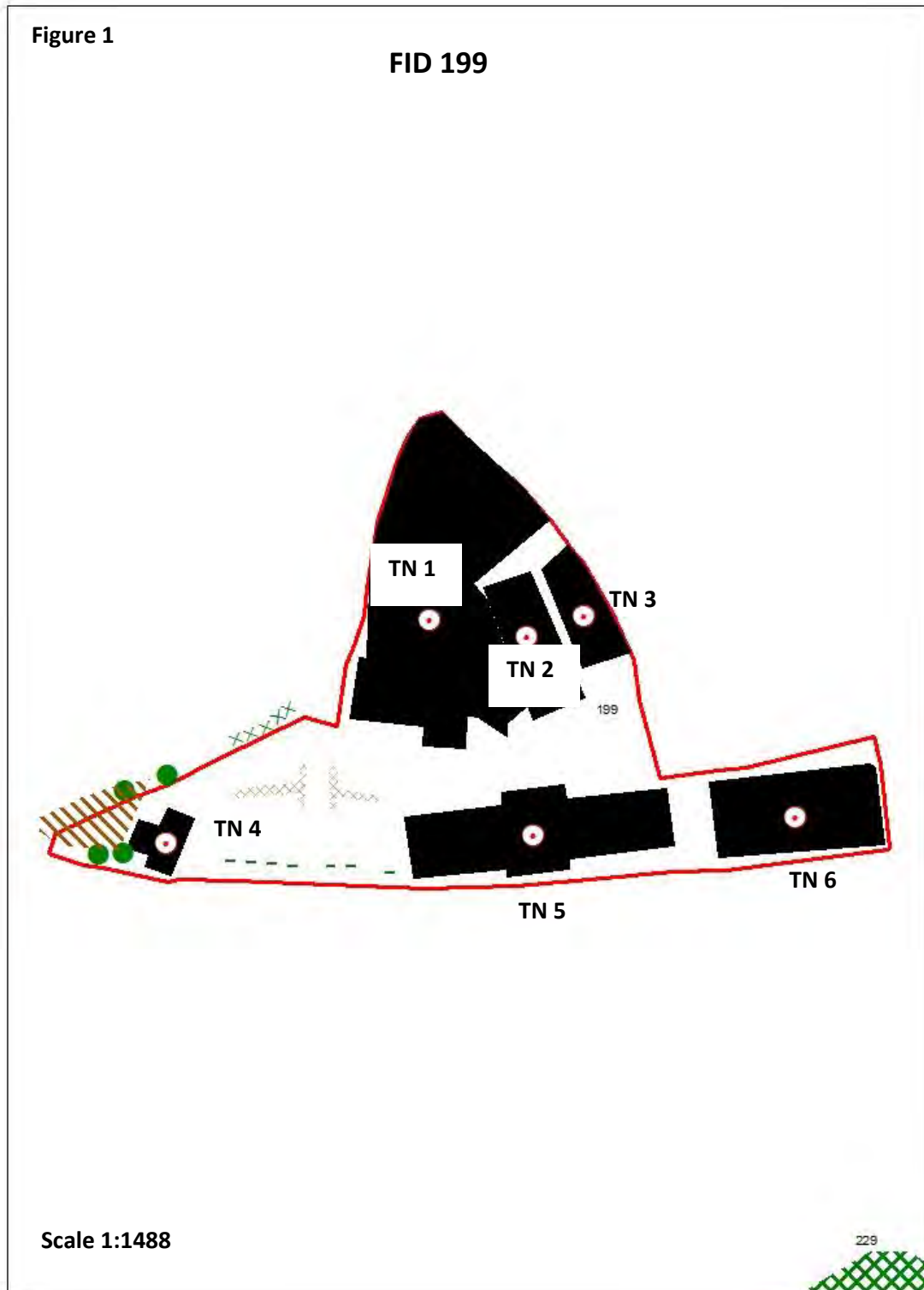
#### **1.1 Background**

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 199 O.S grid reference SJ9891256450.

FID 199 is located central to Leek town surrounded by commercial and office 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 199 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.





## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Birchall Wood
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Ball Haye Green Disused Tip
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale (adjacent to)
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee



## Lockwood Hall Associates Ltd

	A flowering plant
	Autumnal Rustic
	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown ant
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow



## Lockwood Hall Associates Ltd

	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree bumble bee
	Tree wasp
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
INV	American Mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle

	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Pipistrelle
	Polecat
	Redwing
	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.

- Buildings
- Scattered trees

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.01	3
IS	0.00	1.5
OTHER	0.55	95.5
TOTALS	0.56	100

TR – Tall ruderal vegetation, 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> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Silver birch <i>Betula pendula</i> , dandelion <i>Taraxacum officinale</i> agg, bramble <i>Rubus fruticosus</i> agg, Ornamental shrubs

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

*Bats*

The site has 6 buildings of which are brick and roof tile construction of varying ages and are all deemed potentially suitable 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 potentially nest in areas of scattered trees, hedgerows and possibly 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	SJ9889756462	Requires bat survey
2	SJ9891656458	Requires bat survey
3	SJ9892856465	Requires bat survey
4	SJ9884956422	Requires bat survey
5	SJ9891856421	Requires bat survey
6	SJ9896556426	Requires bat survey

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Buildings				x	
Scattered trees					x
<b>Overall site importance</b>				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 completely surrounded by domestic dwellings/ offices with very poor connectivity to the wider countryside.

The habitats present on site include scattered silver birch *Betula pendulat* trees, ornamental shrubs, species poor tall ruderal vegetation consisting of cock’s foot and mugwort *Artemisia vulgaris*, hard standing and buildings (95.5%).

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 bats within the 6 buildings deemed to have potential to support them, therefore the site is considered to have district ecological importance.



## **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 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 with the main interest focussed on the potential for the 6 buildings to support roosting bats, therefore the site is given 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 is therefore recommended to ascertain whether bats roost in the 6 buildings
- Vegetation removal at the appropriate time of year





# **FID 200**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 200**

### **1. Introduction**

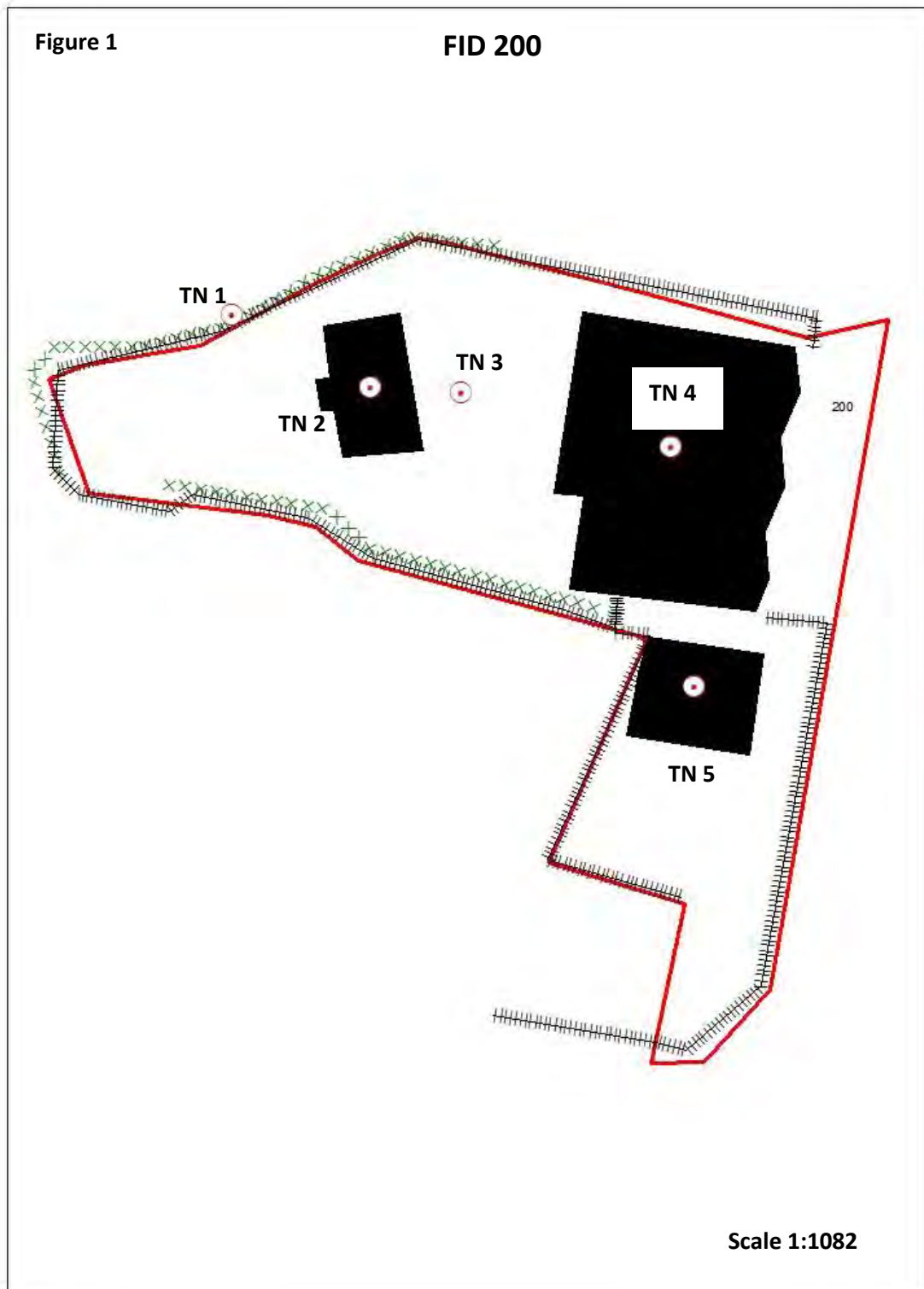
#### 1.1 Background

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 200 O.S grid reference SJ9924656572.

FID 200 is located in the east of Leek town surrounded by industrial/commercial 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 200 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Birchall Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
BAS	Bradnop (north of)
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Ball Haye Green Disused Tip
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale (adjacent to)
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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





## Lockwood Hall Associates Ltd

### 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
	Autumnal Rustic
	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Good-King-Henry
	Grass Snake
	Great Crested Newt



## Lockwood Hall Associates Ltd

	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Willow Warbler
	Yellow meadow ant
	Yellow wagtail
INV	American Mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl

	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Polecat
	Redwing
	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.

- Buildings
- Scattered trees
- Scattered scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
OTHER	0.51	100
TOTALS	0.51	100

##### 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> , daisy <i>Bellis perennis</i> , mugwort <i>Artemisia vulgaris</i> , rosebay willowherb <i>Chamerion angustifolium</i>
Hedgerows/ trees/ scrub	Ash <i>Fraxinus excelsior</i> , hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus agg</i> , leylandii <i>Cuprocypressus x leylandii</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.

#### 4.3.4 Fauna

##### *Bats*

The site has 5 buildings of which 1 has potential to support roosting bats. The building to the west is of brick and roof tile construction that is used as an outbuilding and has occasional loose roof tiles and holes in the brick work. The remaining buildings are of corrugated roof construction with 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 potentially nest in areas of scattered scrub, 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	SJ9919556598	Area of broadleaved woodland
2	SJ9921656586	Requires bat survey
3	SJ9922556588	Bat survey not required
4	SJ9925656578	Bat survey not required
5	SJ9925856548	Bat survey not required

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees					x
Scattered scrub					x
<b>Overall site importance</b>				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 completely surrounded by domestic dwellings/ offices/ industrial buildings with very poor connectivity to the wider countryside.

The habitats present on site include scattered scrub and hedgerows consisting of hawthorn, ash and elder. Some very small patches of species poor tall ruderal vegetation also exist adjacent to the boundaries consisting of species such as common nettle and rosebay willowherb.

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 bats, therefore 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**

### *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 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, though as there is 1 building present on site that could potentially support roosting bats the site is afforded 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 building
- Vegetation removal at the appropriate time of year



# **FID 201**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	13





## **FID 201**

### **1. Introduction**

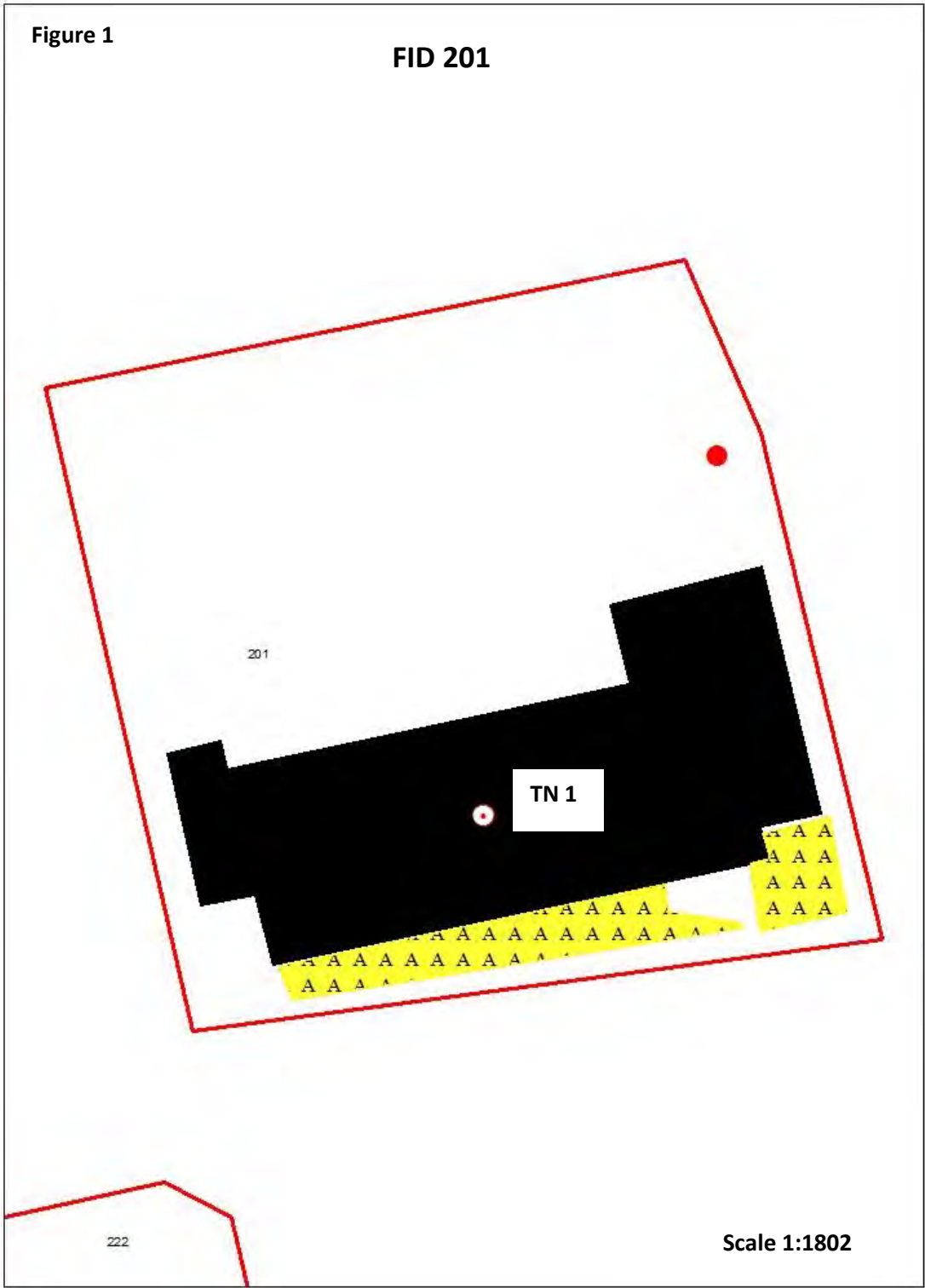
#### **1.1 Background**

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 201 O.S grid reference SJ9898656763.

FID 201 is located in north-east Leek surrounded by industrial/commercial buildings and parkland.

#### **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 201 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Birchall Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Hays Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Ball Hays Green Disused Tip
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Autumnal Rustic
	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent



## Lockwood Hall Associates Ltd

	Green Woodpecker
	Grizzled skipper
	Hedge Rustic
	Honey Bee
	House Sparrow
	Insect - Hymenopteran
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree bumble bee
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White tailed bumble bee
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
	Yellow wagtail
INV	American Mink
	Japanese knotweed





## Lockwood Hall Associates Ltd

	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Polecat
	Redwing
	Soprano pipistrelle
	Whiskered Bat

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

### 4.3.2 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 tree
- Amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE	NUMBER
AM	0.03	6	
OTHER	0.43	94	
BPT			1
TOTAL	0.46	100	1

AM – Amenity grassland, BPT – Bat potential trees



## Lockwood Hall Associates Ltd

### 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> , groundsel <i>Senecio vulgaris</i> , dandelion <i>Taraxacum officinale agg</i>
Hedgerows/ trees/ scrub	Beech <i>Fagus sylvatica</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

#### *Bats*

The site has 1 building present on site of brick and flat pitched roof construction. There were no obvious entrance point observed at the time of survey and is deemed to have fairly low potential to support roosting bats. Additionally 1 tree is highlighted for its 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 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	SJ9899556739	Requires bat survey



**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered tree				X	
<b>Overall site importance</b>				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 completely surrounded by domestic dwellings/ offices/ industrial buildings with a small public park to the east.

The habitats present on site include a single beech tree with potential to support roosting bats and the remaining area comprising a building/ hard standing (94%) with species poor amenity grassland to the south.

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 exception could potentially include roosting bats within the tree and building, therefore the site is 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 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.

### *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*

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 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.



## **Lockwood Hall Associates Ltd**

### **7. Conclusion**

The site has very low biodiversity value overall with extremely poor connectivity to the wider countryside, is set within an urban environment and only has one tree and species poor amenity grassland with no connectivity to the wider countryside. However, the tree and building have some potential to support roosting bats 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 tree and building
- Vegetation removal at the appropriate time of year



# **FID 202**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 202**

### **1. Introduction**

#### 1.1 Background

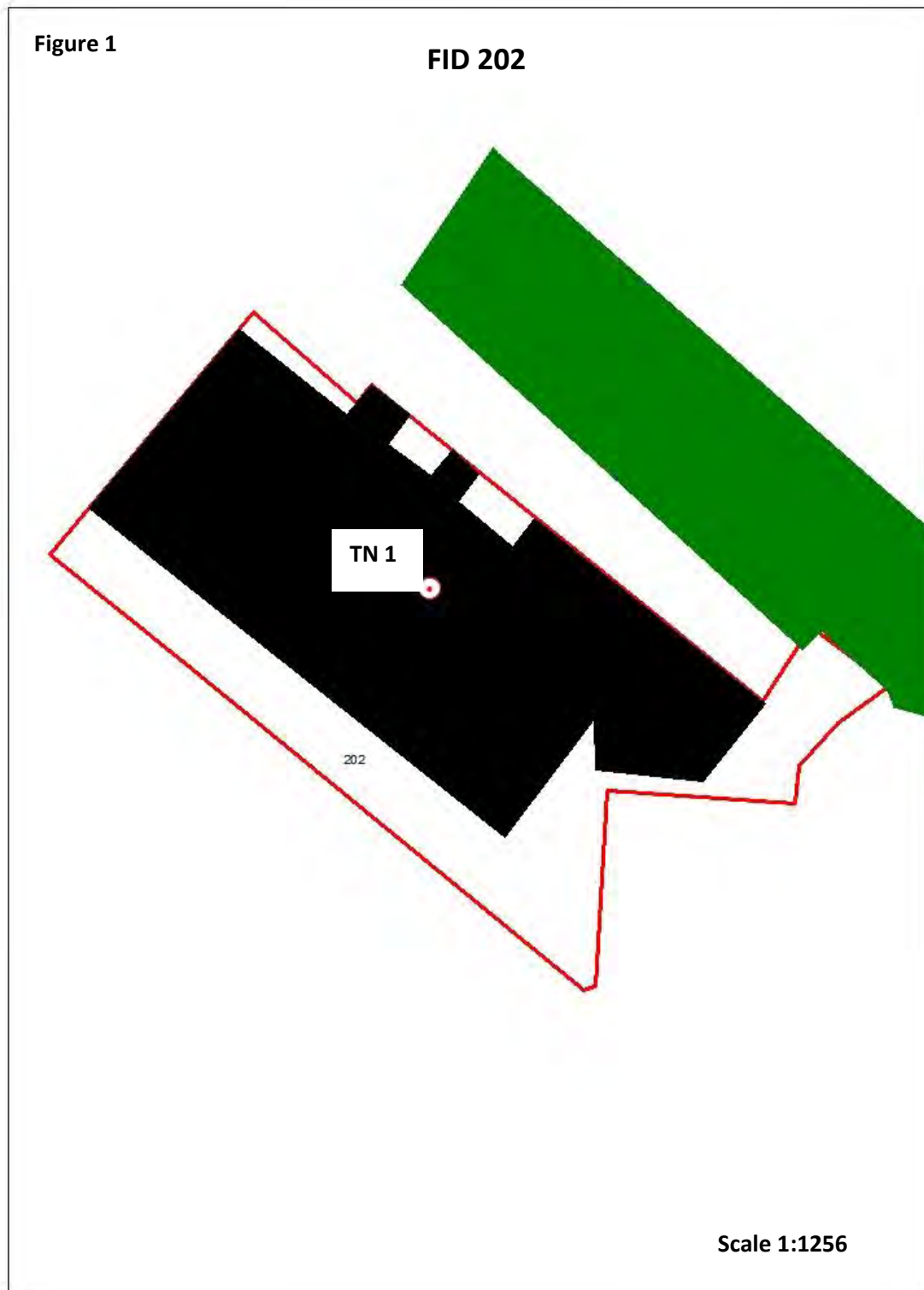
The Staffordshire Moorlands District Council has commissioned Lockwood Hall Associates to carry out an Extended Phase 1 Habitat Survey according to JNCC (2007) guidelines for FID 202 O.S grid reference SJ9799056671.

FID 202 is located north-west of Leek town surrounded by industrial 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 202 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Cowhay Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Birchall Wood
AWI	Longsdon Wood
AWI	West Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
BAS	Birchall Meadow
BAS	Foker Grange
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Stare Wood
SBI	Longsdon Wood and Cowhay Wood
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	Autumnal Rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Black headed cardinal bee
	Broom Moth
	Brown-spot Pinion
	Brown Ant
	Brown Trout
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Common wasp
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic



## Lockwood Hall Associates Ltd

	Mouse Moth
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small garden bumble bee
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree Bumble Bee
	Tree wasp
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
INV	American Mink
	Canadian waterweed
	Indian balsam
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher

	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Myotis bat species
	Noctule bat
	Polecat
	Redwing
	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.

- Buildings

Table 3

HABITAT	AREA (HECTARES to 2 d.p)	PERCENTAGE (%)
OTHER	0.53	100
TOTALS	0.53	100

##### 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.

The site consists of buildings and hard standing only so there was no dominant vegetation present at the time of survey.

##### 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.





## Lockwood Hall Associates Ltd

### 4.3.4 Fauna

#### *Bats*

The site has 1 building large that appears to have occasional loose roof tiles and potential entrance holes that could allow bats to roost.

### 4.3.5 Target notes

Table 4

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9798656678	Requires bat survey

**5. Evaluation**

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Building				X	
<b>Overall site importance</b>				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 completely surrounded by domestic dwellings/ offices/ industrial buildings with a small public park to the east. The habitats present on site include 1 large building and hard standing.

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 exception could potentially include roosting bats and therefore the site is given a district ecological value.



## **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.

## **7. Conclusion**

The site has very low biodiversity value overall with extremely poor connectivity to the wider countryside and is set within an urban environment with no vegetative habitats present on site. The site is however afforded district ecological importance due to potential for the building to support roosting bats.

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 building



# **FID 207**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>13</b>



## **FID 207**

### **1. Introduction**

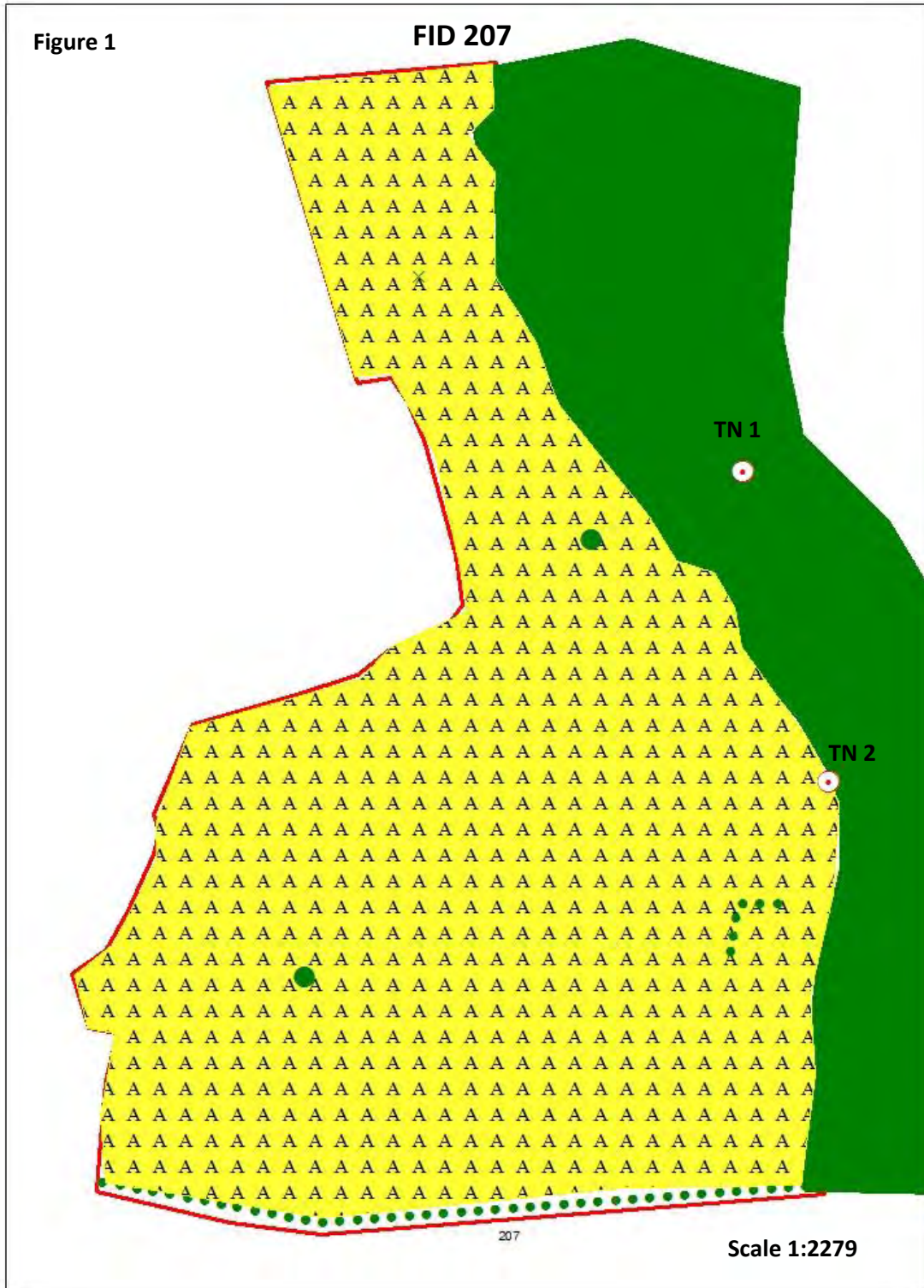
#### **1.1 Background**

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 207 O.S grid reference SJ9882855363.

FID 207 is located within the south east of Leek town surrounded by agricultural land, allotments, abuts woodland (Ballington Wood AWI (listed on Ancient Woodland Inventory) and part of Ladydale Site of Biological Importance), housing and industrial 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).





## **2. Methodology**

### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 207 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).





## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Ladderedge Country Park
LNR	Brough Park Fields
AWI	Birchall Wood
AWI	Ballington Wood (adjacent to FID207)
AWI	Soils Wood
AWI	Longsdon Wood
AWI	Hollinhay Wood
BAS	Leek brook Meadow
BAS	Lowe Hill
BAS	Birchall Meadow
SBI	Cheddleton Heath (dismantled railway)
SBI	Ball Haye Green Disused Tip
SBI	Twinney Woodland and Grassland
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Beech close (SW of), Longsdon
SBI	Longsdon Wood and Cowhay Wood
SBI	Cheddleton heath
SBI	Soils Wood
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Ladydale
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 TYPES	COMMON NAME
BAP	A bumble bee
	Autumnal rustic



## Lockwood Hall Associates Ltd

	Barn Owl
	Broom moth
	Brown spot pinion
	Brown hare
	Brown Long-eared Bat
	Buff tailed bumble bee
	Buff ermine
	Centre barred sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common kestrel
	Common Kingfisher
	Common Pipistrelle
	Common Toad
	Common Wasp
	Dot moth
	Double dart
	Dunnock
	Dusky brocade
	Eurasian Curlew
	European Otter
	European water vole
	Figure of eight
	Flounced chestnut
	Four Coloured Cuckoo Bee
	Freshwater White-clawed Crayfish
	Good King Henry
	Grass Snake
	Great Crested Newt
	Green brindled crescent
	Green Woodpecker
	Greylag goose
	Heath dog violet
	Hedge rustic
	Honey Bee
	House Sparrow
	Insect – beetle
	Little kneeling eyebright
	Mallard
	Minor shoulder knot
	Mottled rustic



## Lockwood Hall Associates Ltd

	Mouse moth
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Reed bunting
	Rosy minor
	Rosy rustic
	Sallow
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Small Garden Bumble Bee
	Small Heath
	Small phoenix
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tall hawkweed
	Tree Wasp
	Tufted duck
	V-moth
	Wall
	West European Hedgehog
	White letter hairstreak
	White ermine
	Willow Warbler
	Yellow meadow ant
	Yellowhammer
INV	American Mink
	Canadian waterweed
	Chinese muntjac
	Greater Canada goose
	Indian balsam
	Japanese rose
	Montbretia
	New Zealand pigmyweed
	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
	Freshwater White-clawed Crayfish
	Grass Snake
	Great Crested Newt
	Greylag goose
	Natterer's Bat
	Noctule bat
	Pipistrelle
	Polecat
	Redwing
	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.

- Semi-natural broadleaved woodland
- Scattered trees
- Improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	3.71	89
BW	0.38	9
OTHER	0.06	2
TOTALS	4.15	100

AM – Amenity 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	Annual meadow grass <i>Poa annua</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , red fescue <i>Festuca rubra</i> , self- heal <i>Prunella vulgaris</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, leylandii <i>Cuprocypressus x leylandii</i> , holly <i>Ilex aquifolium</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

##### *Badger survey*

The broadleaved woodland to the east was surveyed for badger setts within approximately 50m of the site boundary, but none were found at the time of survey. However, a number of snuffle holes and a latrine was found (Target note 2).

##### *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	SJ9887755473	Very well established semi-natural broadleaved woodland
2	SJ9890955355	Badger latrine and snuffle holes

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Semi-natural 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 is surrounded by domestic dwellings, office buildings, rough grassland and semi-natural broadleaved woodland (Ballington Wood AWI) as well as Ladydale SBI. There is also a large pond within 200m to the west.

The site itself belongs to the Co-Op group with their regional office adjacent to the west of the site and consists of species poor mown amenity grassland (91%), with scattered hawthorn, and trees including holly, hazel *Corylus avellana*, ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus* silver birch *Betula pendula*, rowan *Sorbus aucuparia* and lime *Tilia species*.

The semi-natural broadleaved woodland consists of pedunculate oak *Quercus robur*, silver birch, holly and occasional aspen *Populus tremula* that broadly represents a W10 *Quercus robur – Pteridium aquilinum- Rubus fruticosus* woodland. The trees are not within the site boundary, only the canopy but are still given 9% of the site’s total area.

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 and possibly reptiles along the woodland edge habitat.

A badger latrine and a number of snuffle holes were recorded adjacent to the broadleaved woodland and although no setts were recorded at the time of survey they could be present further into the woodland.

Although there is an ornamental pond present within 200m it is surrounded by unsuitable terrestrial habitat for great crested newt *Triturus cristatus* and is fairly unlikely to use it for breeding. There is also amenity grassland and 2 small roads that potential populations would have to cross in order to get to the site which is also unlikely as there is relatively little cover from potential predators.

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. However,





## Lockwood Hall Associates Ltd

the presence of badger field signs, woodland edge habitat that could support reptile populations and the close proximity to Ladydale SBI constitutes the site being 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

If the site is put forward for development it is suggested that a buffer is created between the site and Ballington Wood/ Ladydale SBI, possibly as an area of fenced off vegetation or newly planted broadleaved trees.

#### *Badger survey*

A badger survey was carried out as part of the walkover survey and found no setts within the recommended 30m disturbance criteria distance. A latrine and snuffle holes were however found, therefore immediately prior to any development works it is recommended that another badger survey is carried out to make sure setts have not been recently excavated.

#### *Reptiles and amphibians*

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Viperaberus* 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 along the semi-natural broadleaved woodland edge habitat it is recommended that a full reptile survey is carried out by a suitably experienced 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 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.



## Lockwood Hall Associates Ltd

### 7. Conclusion

The site has mostly low biodiversity value overall in terms of area but has had badger field signs recorded in one area, and is adjacent to a large area of semi-natural broadleaved woodland, Ladydale SBI and rough grassland to the south. Therefore the site is given district ecological value as the site abuts Ladydale SBI/ Ballington Wood.

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

- Badger survey
- Reptile survey
- Creation of a buffer zone between the development and Ladydale SBI/ Ballington Wood.
- Vegetation removal at the appropriate time of year



# **FID 222**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	12



## **FID 222**

### **1. Introduction**

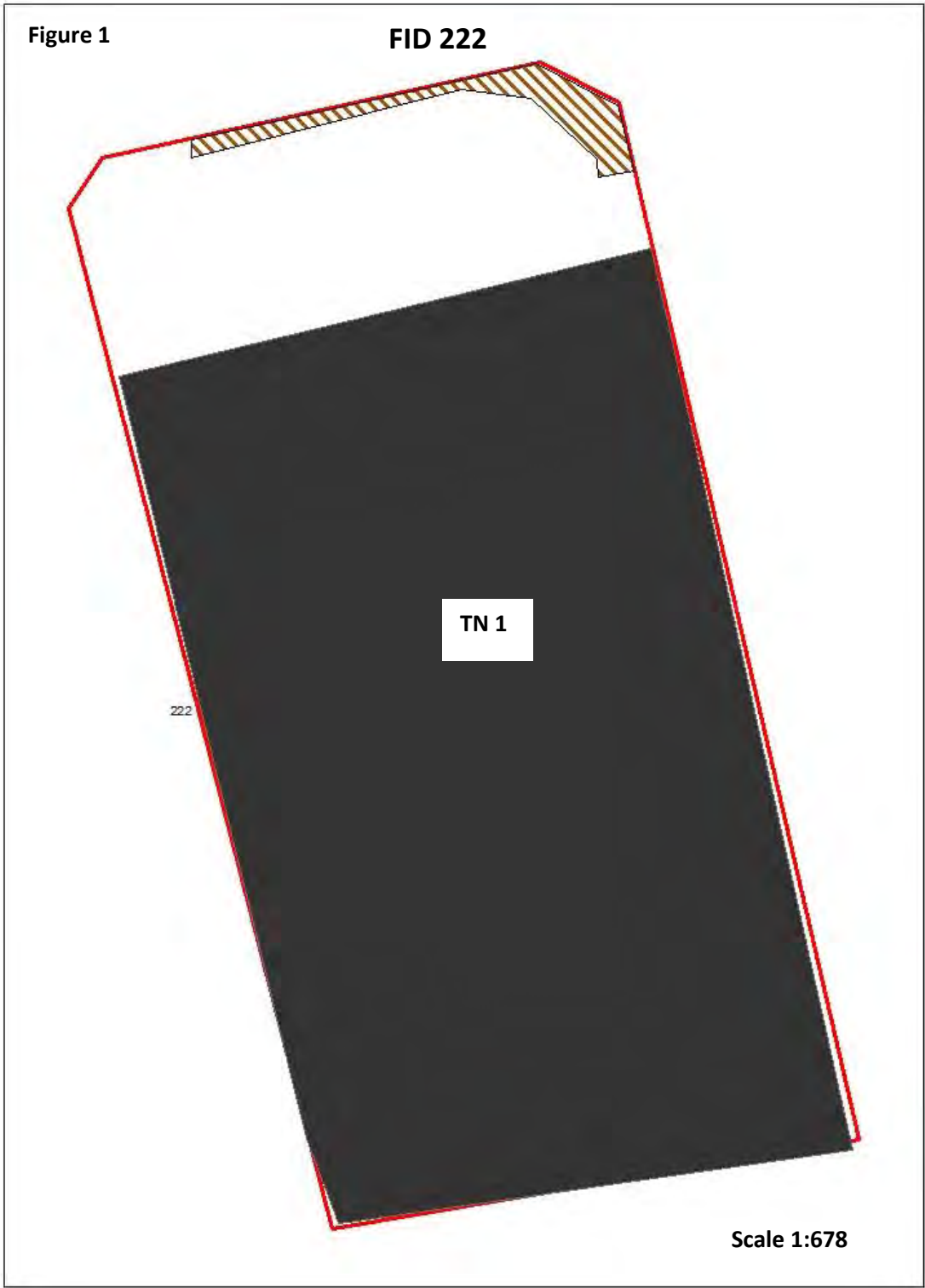
#### **1.1 Background**

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 222 O.S grid reference SJ9895956654.

FID 222 is located central to Leek town surrounded by industrial/commercial 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 222 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.





## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Birchall Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Ball Haye Green Disused Tip
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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



## Lockwood Hall Associates Ltd

### 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
	Autumnal Rustic
	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown ant
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish



## Lockwood Hall Associates Ltd

	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Insect - Hymenopteran
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree bumble bee
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White tailed bumble bee
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant

	Yellow wagtail
INV	American Mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Grass Snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Polecat
	Redwing
	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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.02	1.69
OTHER	0.43	98.31
TOTALS	0.45	100



## Lockwood Hall Associates Ltd

### 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> , mugwort <i>Artemisia vulgaris</i> , dandelion <i>Taraxacum officinale agg</i>
Hedgerows/ trees/ scrub	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.

### 4.3.4 Fauna

#### *Bats*

The site has 1 large 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. However, a range of common birds are likely to nest in areas of scattered trees, hedgerows and possibly 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	SJ9896856654	Bat survey required

## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Tall ruderal vegetation					x
<b>Overall site importance</b>				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 habitats present on site are very sparse (0.02%) particularly common in the UK, have low biodiversity value and therefore are deemed to have a low value within the matrix.

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.

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 exception could potentially include roosting bats within the building and West European hedgehog (recorded within 100m), therefore the site is deemed to have district ecological value.

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.

## **7. Conclusion**

The site has low biodiversity value overall and is set within an urban environment with little connectivity to the wider countryside. Although the site's lack of connectivity is less likely to encourage bats to roost within the building it does nonetheless have potential to support roosting bats and 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 is therefore recommended to ascertain whether bats roost in the buildings





# **FID 227**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>12</b>
<b>6. Recommendations</b> .....	<b>13</b>
<b>7. Conclusions</b> .....	<b>14</b>



## **FID 227**

### **1. Introduction**

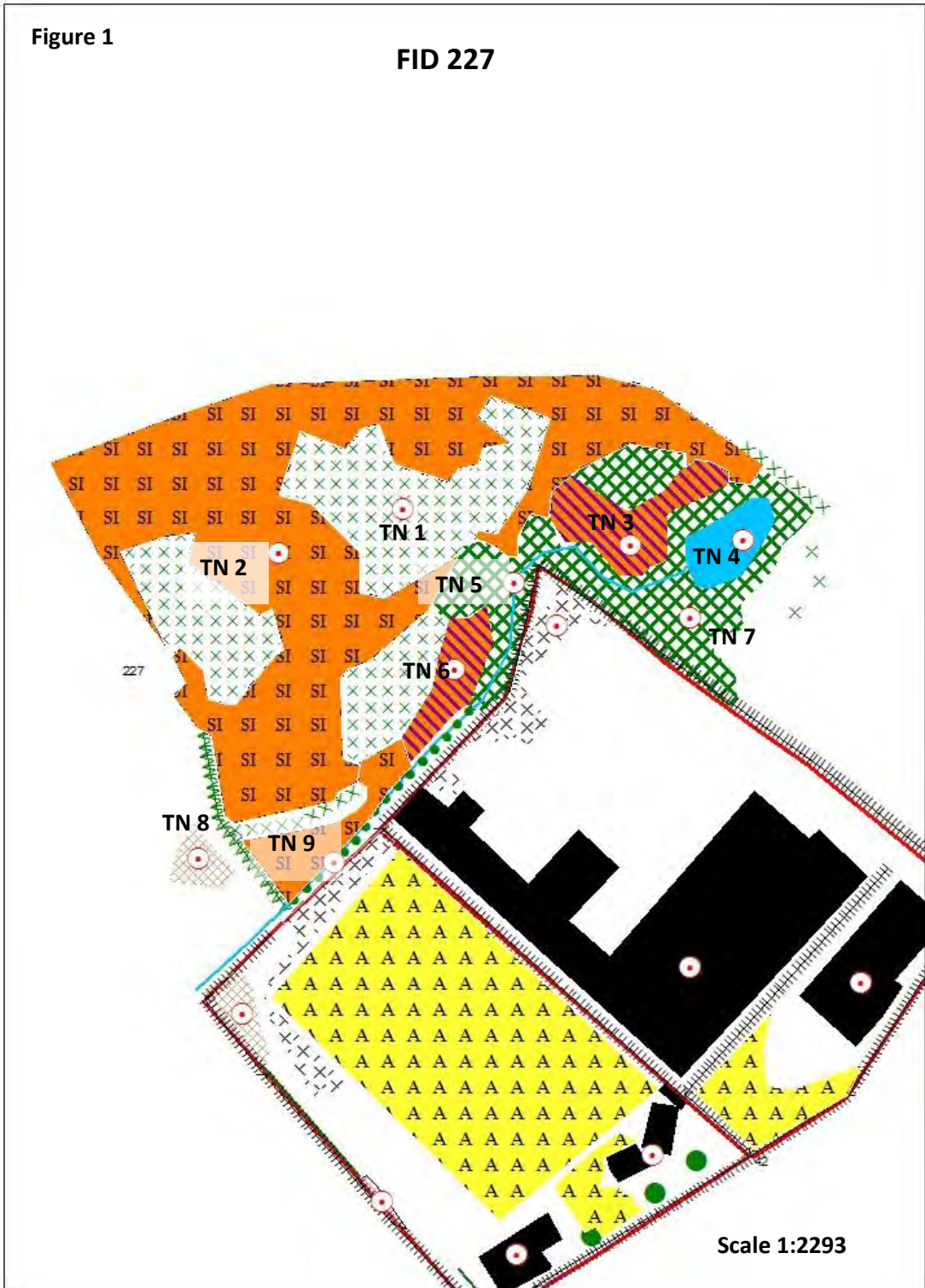
#### **1.1 Background**

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 227 O.S grid reference SJ9890357395.

FID 227 encompasses part of Ball Haye Green Disused Tip Site of Biological Importance (SBI) and is located north of Leek town surrounded by open land, playing fields, sports fields, housing, farm buildings and industrial premises.

#### **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 227 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Birchall Wood
AWI	Ballington Wood
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Abbey Wood
AWI	Hind's Clough Wood
AWI	Oaks Plantation
AWI	Hawthorne Wood
AWI	Back Hills Wood
LNR	Brough Park Fields
BAS	Birchall Meadow
BAS	Solomons Hollow
BAS	Lowe Hill
SBI	Kniveden Hall (east of)
SBI	Edge End Farm (north of)
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Brough Park Fields Country Park
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Thornccliffe (west of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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





## Lockwood Hall Associates Ltd

### 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
	Autumnal rustic
	Barn Owl
	Broom moth
	Brown hare
	Brown Long-eared Bat
	Brown trout
	Brown spot pinion
	Brown ant
	Buff tailed bumble bee
	Centre barred sallow
	Cinnabar
	Common bullfinch
	Common carder bee
	Common kestrel
	Common goldeneye
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Toad
	Dot moth
	Double dart
	Dusky brocade
	Dyer's greenweed
	Early bumble bee
	Eurasian Curlew
	European otter
	Figure of eight
	Flounced chestnut
	Four coloured cuckoo bee
	Good King Henry
	Grass snake
	Great Crested Newt
	Green brindled crescent
	Green Woodpecker



## Lockwood Hall Associates Ltd

	Grizzled skipper
	Hedge rustic
	Honey bee
	House Sparrow
	Mallard
	Minor shoulder knot
	Mottled rustic
	Mouse moth
	Noctule bat
	Northern lapwing
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed bunting
	Rosy minor
	Rosy rustic
	Sallow
	September thorn
	Shaded broad bar
	Shoulder striped wainscot
	Sky Lark
	Small Heath
	Small phoenix
	Small square spot
	Soprano Pipistrelle
	Streak
	Tree bumble bee
	V moth
	West European Hedgehog
	White ermine
	White letter hairstreak
	White tailed bumble bee
	Wild pansy
	Willow Warbler
	Yellow Meadow Ant
	Yellow wagtail
INV	American mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed



## Lockwood Hall Associates Ltd

	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown Long-eared Bat
	Common goldeneye
	Common kingfisher
	Common Pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European water vole
	Grass snake
	Great Crested Newt
	Natterer's Bat
	Noctule bat
	Pipistrelle Bat Species
	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.

- Open water
- Running water
- Species rich hedgerow
- Marshy grassland
- Dense scrub
- Scattered trees
- Scattered scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SNG	0.80	29
DS	0.40	15
SS	0.56	21
MG	0.18	7
OW	0.06	2
OTHER	0.72	26
TOTALS	2.72	100

SNG – Semi-improved species rich neutral grassland, TR- Tall ruderal vegetation, DS – Dense scrub, SS – Scattered 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	Creeping bent <i>Agrostis stolonifera</i> , crested dog's tail <i>Cynosurus cristatus</i> , tufted hair grass <i>Deschampsia cespitosa</i> , meadow foxtail <i>Alopecurus pratensis</i> , great willowherb <i>Epilobium hirsutum</i> , red clover <i>Trifolium pratense</i> , bird's foot trefoil <i>Lotus corniculatus</i> , meadow vetchling <i>Lathyrus pratensis</i> , soft rush <i>Juncus effusus</i> , common reedmace <i>Typha latifolia</i>
Hedgerows/ trees/ scrub	Alder <i>Alnus glutinosa</i> , goat willow <i>Salix caprea</i> , crack willow <i>Salix fragilis</i> , willow species <i>Salix sp</i> , bramble <i>Rubus fruticosus agg</i> , ash <i>Fraxinus excelsior</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 on 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 scrub, riparian habitat, grassland, hedgerow and scattered trees from March to August when birds in the UK normally breed.



## Lockwood Hall Associates Ltd

### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9888557405	Patchy scattered scrub
2	SJ9884457388	Requires botanical survey
3	SJ9897657397	Wet flush
4	SJ9902657385	Requires great crested newt survey
5	SJ9894857375	Small stream
6	SJ9898857370	Reptile survey
7	SJ9891657345	Mainly willow and alder scrub
8	SJ9883057257	Japanese knotweed
9	SJ9887257283	Scattered trees bordering stream

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Open water			x		
Semi-improved species rich grassland			x		
Running water			x		
Marshy grassland			x		
Species rich hedgerow			x		
Dense scrub				x	
Scattered scrub				x	
<b>Overall site importance</b>			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 part of Ball Haye Green Disused Tip SBI, and mainly consists of species rich/ species poor semi-improved neutral grassland. Species include creeping bent, rough meadow grass *Poa trivialis*, crested dog's tail, tufted hair grass and meadow foxtail grasses. Herbs include red clover, ribwort plantain *Plantago lanceolata*, bird's foot trefoil, meadow vetchling, red bartsia and hop trefoil. Amongst the sward silver birch, alder, goat willow, hawthorn *Crataegus monogyna* and ash regeneration can be found locally frequently.

The species rich hedgerow in the south west of the site consists of hawthorn, guelder rose *Viburnum opulus*, holly *Ilex aquifolium*, elder *Sambucus nigra*, ash and sycamore *Acer pseudoplatanus*.

Marshy grassland and riparian vegetation includes soft rush, great willowherb, common reedmace, imperforate St.John'swort *Hypericum maculatum*, pendulous sedge *Carex pendula*, bramble, alder, crack willow and goat willow.

The site could support numerous European and UK protected species that have been identified through the 2km radius desk study including barn owl *Tito alba*, great crested newt *Triturus cristatus*, grass snake *Natrix natrix* (recorded 10m away), badger *Meles meles* and foraging bats. The site could also support raptors, other owl species and populations of other species of amphibians. Overall the site is considered to have regional ecological importance.



## **6. Recommendations**

Given the current SBI status of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

### *Great crested newt survey*

As great crested newts could potentially be present on site under refugia, due to the presence of the pond, a great crested newt survey is recommended 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.

As grass snake has been recorded on site it is recommended that a full reptile survey is carried out by 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.

The site is suffering from scrub encroachment throughout the site, which will succeed the present grassland sward over time. Therefore a mowing regime once a year is recommended throughout, possibly leaving small patches of scrub to retain some structural diversity. Similarly the pond should have scrub cleared to keep the willow/ alder scrub encroachment in check to promote pond biodiversity.



## **Lockwood Hall Associates Ltd**

If at all possible it is also recommended that as much habitat and connectivity to the wider countryside is retained if the site is to be developed.

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 numerous protected species to be present due to the intricate habitat mosaic present on site. The site is also well connected to more biodiverse habitats and the wider countryside. Moreover the site is part of Ball Haye Green Disused Tip SBI and therefore is attributed regional ecological importance.

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

However, if the site is considered for development 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 228**



## Table of Contents

<b>1. Introduction</b> .....	<b>1</b>
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	<b>2</b>
<b>2. Methodology</b> .....	<b>3</b>
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	<b>5</b>
<b>4. Results</b> .....	<b>6</b>
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	<b>11</b>
<b>6. Recommendations</b> .....	<b>12</b>
<b>7. Conclusions</b> .....	<b>13</b>



## **FID 228**

### **1. Introduction**

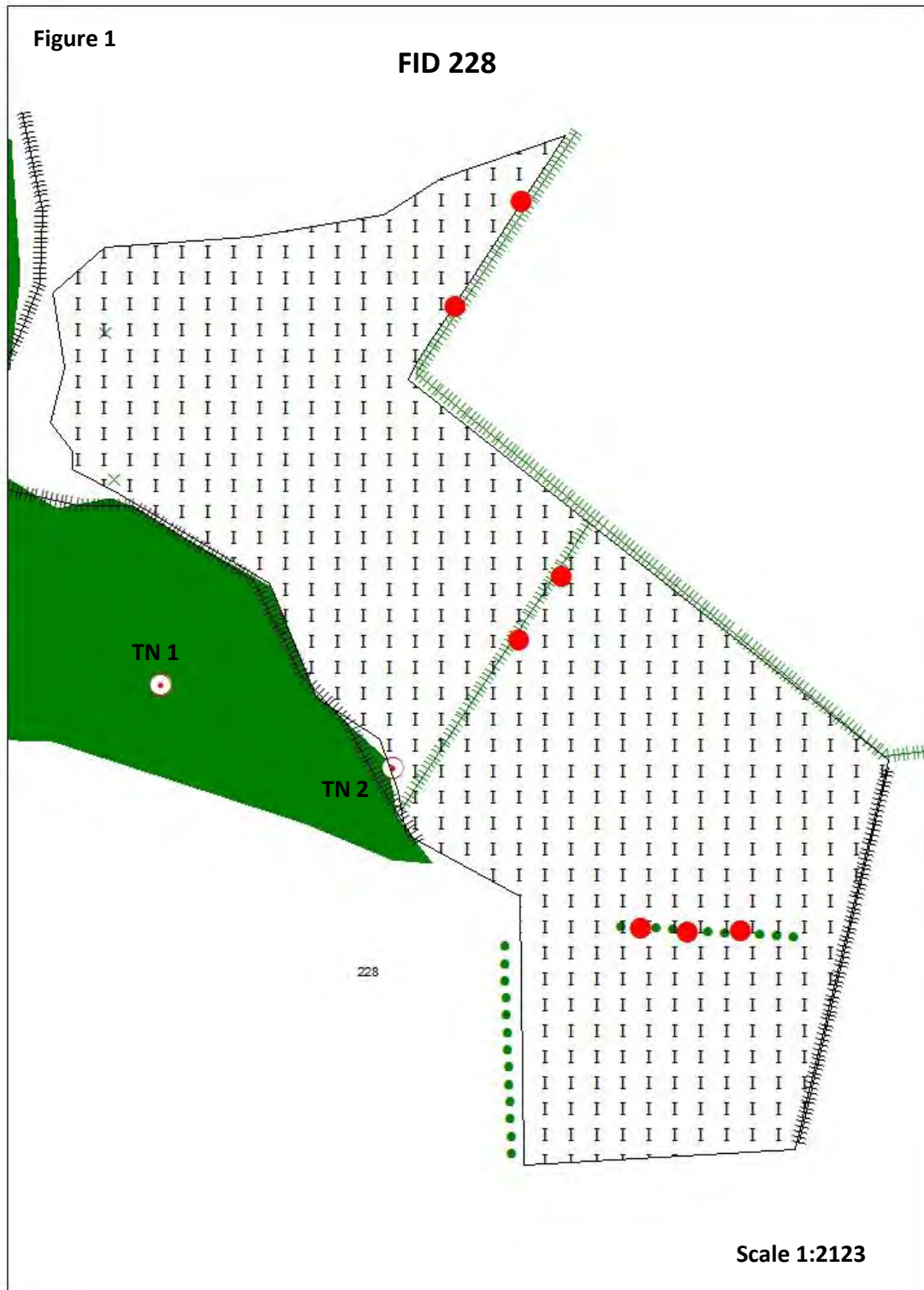
#### **1.1 Background**

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 228 O.S grid reference SJ9899256048.

FID 228 is located south of Leek town surrounded by agricultural land, a recreation ground, semi-natural broadleaved woodland (forms part of Ladydale SBI (Site of Biological Importance)) 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).





## Lockwood Hall Associates Ltd

### 2. Methodology

#### 2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 228 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Birchall Wood
BAS	Bradnop (north of)
BAS	Birchall Meadow
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Ball Haye Green Disused Tip
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee





## Lockwood Hall Associates Ltd

	A flowering plant
	Autumnal Rustic
	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown ant
	Brown hare
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Common wasp
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Greylag goose
	Hedge Rustic
	Honey Bee



## Lockwood Hall Associates Ltd

	House Sparrow
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tree bumble bee
	Tree wasp
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
INV	American Mink
	Japanese knotweed
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat

	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Greylag goose
	Natterer's Bat
	Pipistrelle
	Polecat
	Redwing
	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 grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE	NUMBER
I	2.52	100	
BPT			7
TOTALS	2.52	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	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , creeping bent <i>Agrostis stolonifera</i> , creeping buttercup <i>Ranunculus repens</i> , meadow foxtail <i>Alopecurus pratensis</i> , soft rush <i>Juncus effusus</i> , red clover <i>Trifolium pratense</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> , elder <i>Sambucus nigra</i> , hazel <i>Corylus avellana</i> , holly <i>Ilex aquifolium</i>

#### 4.3.3 Invasive weeds

Rhododendron *Rhododendron Ponticum spp* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and was found in 1 area at the time of survey.

#### 4.3.4 Fauna

##### *Badger*

A badger latrine and a number of snuffle holes were recorded adjacent to the broadleaved woodland to the south west of the site.

##### *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, woodland 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	SJ9900155998	Badger latrine and snuffle holes

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Semi-natural broadleaved woodland				x	
Species poor hedgerow					x
Species poor grassland					x
<b>Overall site importance</b>			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, domestic dwellings and semi-natural broadleaved woodland. The ecological importance of the site as a whole is increased to regional as it forms part the Ladydale SBI habitat mosaic.

The site consists mainly of species poor grazed grassland (99%) and a species poor hedgerow consisting of hawthorn, holly and elder, ash and hazel.

The small area of semi-natural broadleaved woodland consists of oak *Quercus robur*, ash, sycamore *Acer pseudoplatanus*, hazel and holly, with locally frequent Rhodedendron.

The 7 scattered trees on site with bat potential consist of ash, oak and sycamore.

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, West European hedgehog (recorded 130m away) and badger with the latter confirmed with a latrine/ snuffle holes.

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**

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

### *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.

### *Badger survey*

Although a badger survey was carried out as part of the walkover survey and found no setts within the recommended 30m disturbance criteria distance. A latrine and snuffle holes were however found, therefore immediately prior to any development works it is recommended that another badger survey is carried out to make sure setts have not been recently excavated.

### *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.



## Lockwood Hall Associates Ltd

### 7. Conclusion

The site has fairly low biodiversity value overall with potential for supporting breeding birds, foraging bats and badger, but does form an important part of Ladydale SBI and therefore is attributed regional ecological importance.

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

However, if the site is put forward the following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the trees recorded as having bat roosting potential
- Badger survey
- Vegetation removal at the appropriate time of year



# **FID 229**





## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	11
<b>6. Recommendations</b> .....	12
<b>7. Conclusions</b> .....	13



## **FID 229**

### **1. Introduction**

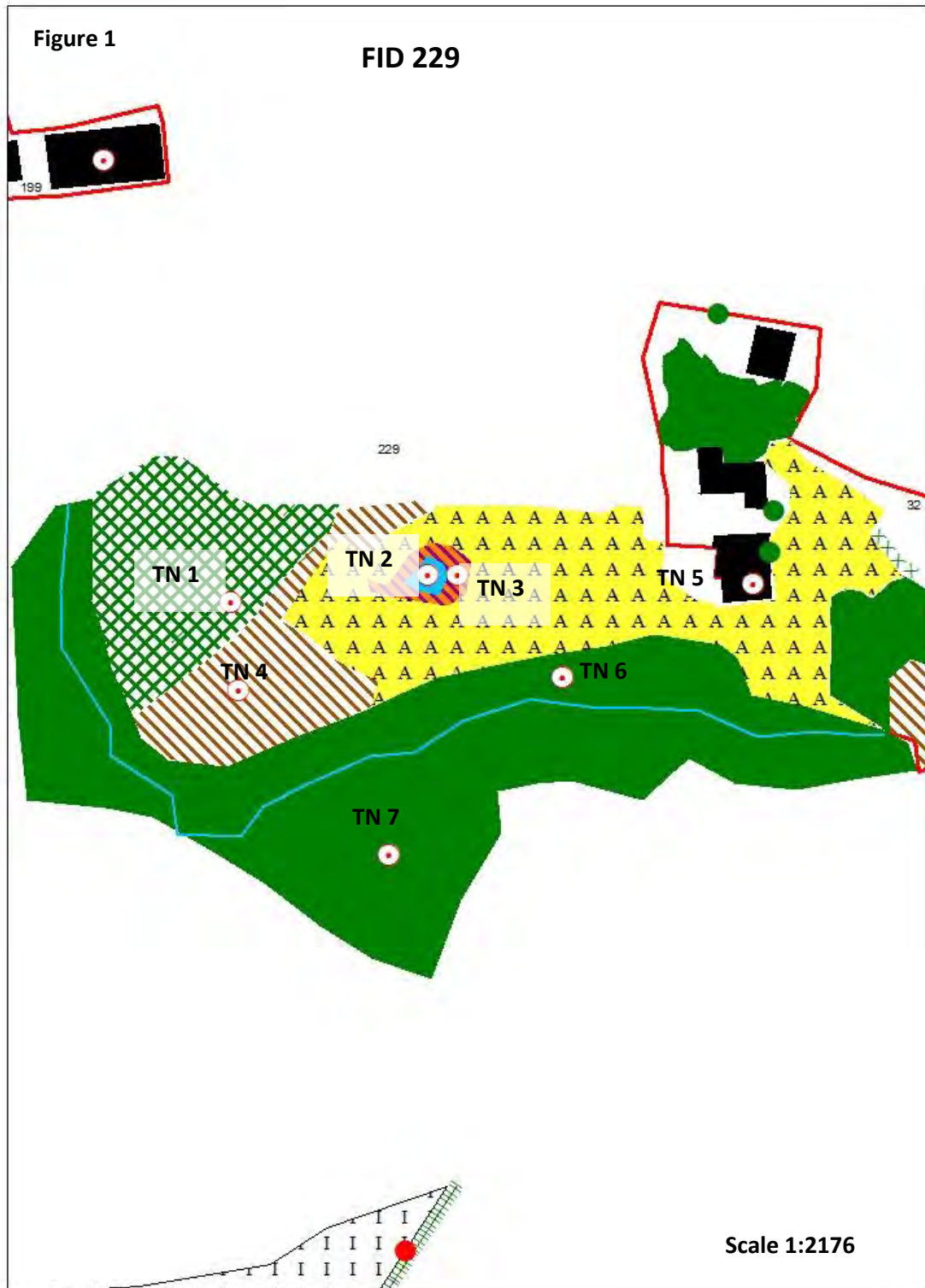
#### **1.1 Background**

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 229 O.S grid reference SJ9907156311.

FID 229 is located south-east of Leek town surrounded by agricultural land, farm buildings, woodland and housing. A large section of the site forms part of Ladydale SBI (Site of Biological Interest).

#### **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 229 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
AWI	South Hills Wood
AWI	Haregate Wood
AWI	Abbey Wood
AWI	Edge End Wood, Solomon's Wood
AWI	Ballington Wood
AWI	Oaks Plantation
BAS	Bradnop (north of)
BAS	Birchall Meadow
BAS	Solomon's Hollow
BAS	Lowe Hill
SBI	Ball Hays Green Disused Tip
SBI	Thornccliffe (west of)
SBI	Edge End Farm (north of)
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Stare Wood
SBI	Wormlow (north west of)
SBI	Ladydale (FID229 is part of this SBI)
SBI	Brough Park Fields Country Park
SBI	Kniveden Hall (east of)
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	Autumnal Rustic



## Lockwood Hall Associates Ltd

	Barn Owl
	Broom Moth
	Brown-spot Pinion
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common goldeneye
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Dyer's greenweed
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Hedge Rustic
	Honey Bee
	House Sparrow
	Mallard
	Minor Shoulder-knot
	Mottled Rustic
	Mouse Moth
	Pink Waxcap





## Lockwood Hall Associates Ltd

	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	V-moth
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
	Yellow wagtail
INV	American Mink
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl
	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common Goldeneye
	Common kingfisher
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake



## Lockwood Hall Associates Ltd

	Great Crested Newt
	Natterer's Bat
	Polecat
	Redwing
	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.

- Building
- Broadleaved woodland
- Running water
- Scattered trees
- Tall ruderal vegetation
- Marshy grassland
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
AM	0.46	40
TR	0.18	15
DS	0.26	23
MG	0.02	2
OW	0.01	1
BW	0.22	19
OTHER	0.00	0
TOTALS	1.15	100

AM – Amenity Grassland, TR- Tall ruderal vegetation, DS – Dense scrub,  
BW – Broadleaved Woodland, OW – Open water (seasonally dry),  
MG – Marshy grassland

#### 4.3.1 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> , great willowherb <i>Epilobium hirsutum</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 agg</i> , ash <i>Fraxinus excelsior</i> , leylandii <i>Cuprocypressus x leylandii</i> , holly <i>Ilex aquifolium</i> , elder <i>Sambucus nigra</i> , horse chestnut <i>Aesculus hippocastanum</i>

#### 4.3.3 Invasive weeds

Rhododendron *Rhododendron Ponticum spp* is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and was found in 1 area and no other invasive weed species were found at the time of survey.

#### 4.3.4 Fauna

##### Bats

The building on site is fairly old and was deemed suitable to support roosting bats as occasional holes were observed within the brick work and a few of the roof tiles appeared loose.

##### 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 scattered trees, hedgerows, dense scrub and tall ruderal vegetation from March to August when birds in the UK normally breed.

Incidental records relate to records within the site.

- Birds including blue tit *Cyanistes cyanistes*

#### 4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9898956316	Dense bramble scrub
2	SJ9904956316	Wet depression
3	SJ9905956314	Associated marshy grassland
4	SJ9900256296	Potential reptiles
5	SJ9913556311	Requires bat survey
6	SJ9910856285	Large stream
7	SJ9906656225	Well established broadleaved woodland

## 5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Semi-natural broadleaved woodland			x		
Scattered trees				x	
Running water			x		
Tall ruderal vegetation				x	
Dense scrub				x	
Species poor amenity grassland					x
<b>Overall site importance</b>			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 mosaic of habitats contained within the extensive Ladydale SBI surrounded by domestic dwellings to the north, directly adjacent to site FID 32 to the east and is given fairly high importance as it is adjacent to semi-natural broadleaved woodland to the south and west which connects to a further patchwork of broadleaved woodlands and hedgerows. Therefore the site is attributed regional ecological importance.

Habitats on site mainly include amenity grassland (40%), species poor tall ruderal vegetation consisting of creeping thistle, curled dock, great willowherb, with dense bramble scrub. The broadleaved woodland consists of ash, sycamore, horse chestnut, holly and elder.

The small pond, which was almost dry at the time of survey, has riparian vegetation including common reedmace *Typha latifolia*, soft rush *Juncus effusus*, great willowherb and compact rush *Juncus articulatus*.

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 grass snake, foraging badger, bats and West European hedgehog (recorded 130m 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**

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

### *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 deemed suitable to support bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

### *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 and good connectivity to more biodiverse habitat 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 as many trees are retained during development works.

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, tall ruderal vegetation and dense scrub 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.



## Lockwood Hall Associates Ltd

### 7. Conclusion

The site itself has broadleaved woodland, dense scrub and tall ruderal vegetation which are connected to semi-natural broadleaved woodland and running water habitats, which form an important potentially biodiverse mosaic as part of Ladydale SBI and therefore has been deemed to have regional ecological importance.

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

However, if the site is put forward the following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the building
- Reptile survey
- Vegetation removal at the appropriate time of year



# **FID 230**



## Table of Contents

<b>1. Introduction</b> .....	1
1.1 Background	
1.2 Survey	
<b>Figure 1 Extended Phase 1 Habitat Survey map</b> .....	2
<b>2. Methodology</b> .....	3
2.1 Introduction	
2.2 Aims	
2.3 Mapping	
2.4 Desk study	
2.5 Aerial photography	
2.6 Field survey	
2.6.1 Bats	
2.6.2 Badger	
2.6.3 Reptiles and amphibians	
2.6.4 Birds	
2.6.5 Incidental records	
<b>3. Limitations</b> .....	5
<b>4. Results</b> .....	6
4.1 Desk study - Habitats	
4.2 Desk study - Species	
4.3 Field survey	
4.3.1 Habitats	
4.3.2 Flora	
4.3.3 Invasive weeds	
4.3.4 Fauna	
4.3.5 Target notes	
<b>5. Evaluation</b> .....	12
<b>6. Recommendations</b> .....	13
<b>7. Conclusions</b> .....	14





## **FID 230**

### **1. Introduction**

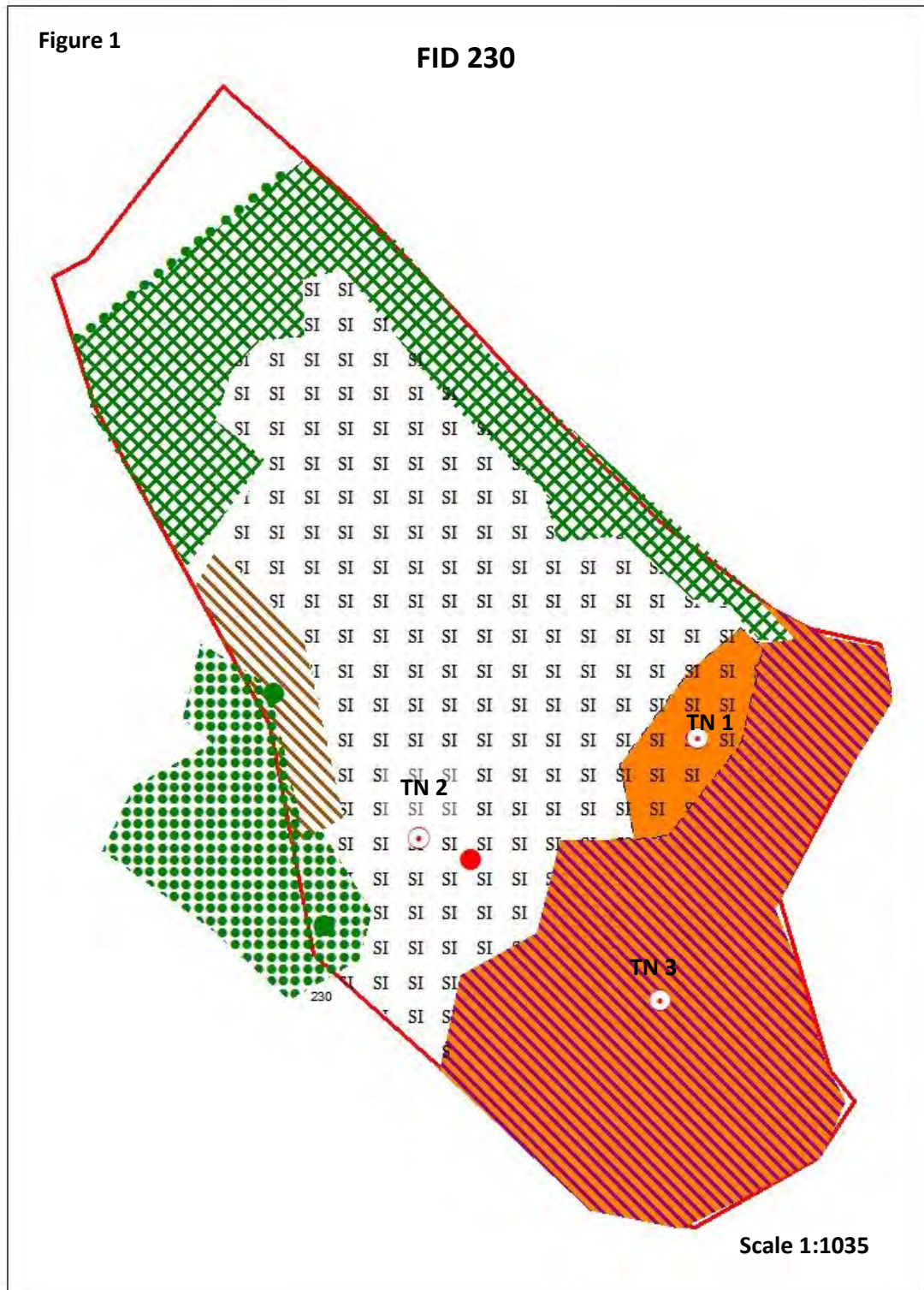
#### 1.1 Background

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 230 O.S grid reference SJ9865756020.

FID 230 is located south east of Leek Town surrounded by agricultural land, woodland, and housing which forms part of the Ladydale SBI (Site of Biological Importance).

#### 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 230 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](http://www.magic.gov.uk)) and on the National Biodiversity Network website ([www.searchnbn.net](http://www.searchnbn.net)).



## Lockwood Hall Associates Ltd

### 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.



## **Lockwood Hall Associates Ltd**

### **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.



## Lockwood Hall Associates Ltd

### 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	Brough Park Fields
LNR	Ladderedge Country Park
AWI	South Hills Wood
AWI/ SBI	Soils Wood
AWI	Birchall Wood
AWI	Longsdon Wood
AWI/ SBI	Ballington Wood
BAS	Birchall Meadow
BAS	Lowe Hill
SBI	Ball Haye Green Disused Tip
SBI	Back Hills and Abbey Woods
SBI	Edge End Wood
SBI	Caldon Canal (south of Hollinhay Wood)
SBI	Beech Close (SW of), Longsdon
SBI	Stare Wood
SBI	Longsdon Wood and Cowhay Wood
SBI	Kniveden Hall (east of)
SBI	Ladydale
SBI	Brough Park Fields Country Park
SBI	Ballington Wood
SBI	Ladydale Wood Pasture

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 Bumble Bee
	A flowering plant
	Autumnal Rustic
	Barn Owl



## Lockwood Hall Associates Ltd

	Broom Moth
	Brown-spot Pinion
	Brown Ant
	Brown Trout
	Brown long eared bat
	Brown trout
	Buff-tailed Bumble Bee
	Buff Ermine
	Centre-barred Sallow
	Cinnabar
	Common Bullfinch
	Common Carder-bee
	Common Kestrel
	Common kingfisher
	Common Pipistrelle
	Common Snipe
	Common Toad
	Common wasp
	Dot Moth
	Double Dart
	Dunnock
	Dusky Brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Figure Of Eight
	Flounced Chestnut
	Four Coloured Cuckoo Bee
	Freshwater white clawed crayfish
	Good-King-Henry
	Grass Snake
	Great Crested Newt
	Green-brindled Crescent
	Green Woodpecker
	Greylag goose
	Hedge Rustic
	Honey Bee
	House Sparrow
	Little kneeling eyebright
	Mallard
	Minor Shoulder-knot
	Mottled Rustic





## Lockwood Hall Associates Ltd

	Mouse Moth
	Noctule bat
	Pink Waxcap
	Pipistrelle
	Polecat
	Redwing
	Reed Bunting
	Rosy Minor
	Rosy Rustic
	Sallow
	September Thorn
	Shaded Broad-bar
	Shoulder-striped Wainscot
	Sky Lark
	Small bumble bee
	Small Heath
	Small Phoenix
	Small Square-spot
	Song Thrush
	Soprano pipistrelle
	Streak
	Tall hawkweed
	Tree Bumble Bee
	Tree wasp
	V-moth
	Wall
	West European Hedgehog
	White Letter Hairstreak
	White Ermine
	Wild Pansy
	Willow Warbler
	Yellow meadow ant
	Yellowhammer
INV	American Mink
	Greater Canada goose
	Indian balsam
	Montbretia
	New Zealand Pigmyweed
	Rhododendron
E/ UK PS	A Bat
	Barn Owl





## Lockwood Hall Associates Ltd

	Bluebell
	Brown long eared bat
	Common Pipistrelle
	Common kingfisher
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Freshwater white clawed crayfish
	Grass Snake
	Great Crested Newt
	Greylag goose
	Myotis bat species
	Natterer's Bat
	Noctule bat
	Pipistrelle
	Pipistrelle bat species
	Polecat
	Redwing
	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.

- Semi-improved species rich grassland
- Marshy grassland
- Semi-improved species poor grassland
- Dense scrub
- Scattered trees

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
SI	0.31	41	
DS	0.12	16	
TR	0.03	4	
SNG	0.02	3	
MG	0.23	30	
SBW	0.01	1	
OTHER	0.04	5	
BPT			1
TOTALS	0.76	100	1

SI – Species poor semi-improved grassland, TR- Tall ruderal vegetation, SNG – Semi-Improved Neutral Grassland, DS – Dense scrub, SBW – Scattered broadleaved Woodland, 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	Red fescue <i>Festuca rubra</i> , Yorkshire fog <i>Holcus lanatus</i> , common bent <i>Agrostis capillaris</i> , soft rush <i>Juncus effusus</i> , great willowherb <i>Epilobium hirsutum</i> , creeping buttercup <i>Ranunculus repens</i> , common knapweed <i>Centaurea nigra</i> , small scabious <i>Scabiosa columbaria</i> , marsh thistle <i>Cirsium palustre</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> , oak <i>Quercus sp</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.

Weeds listed under the Weeds Act 1959 including common ragwort *Senecio jacobea* have been recorded within the site.



## Lockwood Hall Associates Ltd

### 4.3.4 Fauna

#### *Badger*

A badger latrine and numerous snuffle holes were recorded in one area of the site.

#### *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, marshy grassland 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	SJ9870155996	Requires botanical survey
2	SJ9866055988	Badger latrine and snuffle holes
3	SJ9869255961	Requires reptile survey

**5. Evaluation**

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Semi-improved species rich grassland				x	
Marshy grassland				x	
Dense scrub				x	
Species poor semi-improved grassland					x
<b>Overall site importance</b>			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.

FID 230 forms a small part of the Ladydale SBI habitat mosaic which enhances the overall assessment to being valued as regionally important. The site is surrounded by domestic dwellings and a network of broadleaved woodland/ scrub to the east.

This small site consists of mainly species poor semi-improved grassland comprising red fescue, Yorkshire fog, common bent, red clover, ribwort plantain *Plantago lanceolata* and ragwort, with dense bramble scrub.

The small patches of more species rich grassland has very locally frequent small scabious, common knapweed and sweet vernal grass *Anthoxanthum odoratum*.

Marshy grassland and riparian vegetation includes soft rush, great willowherb marsh thistle and wild angelica *Angelica sylvestris*.

The scattered trees include horse chestnut *Aesculus hippocastaneum*, ornamental oak *Quercus species* and lime *Tilia species*.

The site could support some of the European and UK protected species that have been identified through the 2km radius desk study including grass snake *Natrix natrix*, badger *Meles meles* (confirmed through field signs) and foraging bats as well as terrestrial populations of great crested newt (recorded 78m away).

The site could also potentially support raptors, owls and populations of other species of amphibians.

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**

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

### *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.

### *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 wet and woodland edge habitat it is recommended that a full reptile survey is carried out by 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 also recommended that as much habitat and connectivity to the wider countryside is retained if the site is to be developed.

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.



## **Lockwood Hall Associates Ltd**

### **7. Conclusion**

The site is not recommended to be allocated for potential development as it very significantly and completely within Ladydale SBI. It has potential protected species present due to the intricate habitat mosaic present on the site and it is well connected to more biodiverse habitats and the wider countryside.

Given the current SBI status of most of the site, and owing to the ecological importance of the site as set out within this site record, it is recommended that any future development of this site is considered in line with paras 7, 9, 17, 109, 114 and 117 NPPF; and also in relation to the Council's own Core Strategy Policy NE1.

However if the site is put forward the following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Bat survey of the tree deemed to have potential to support roosting bats
- Reptile survey
- Badger survey
- Vegetation removal at the appropriate time of year