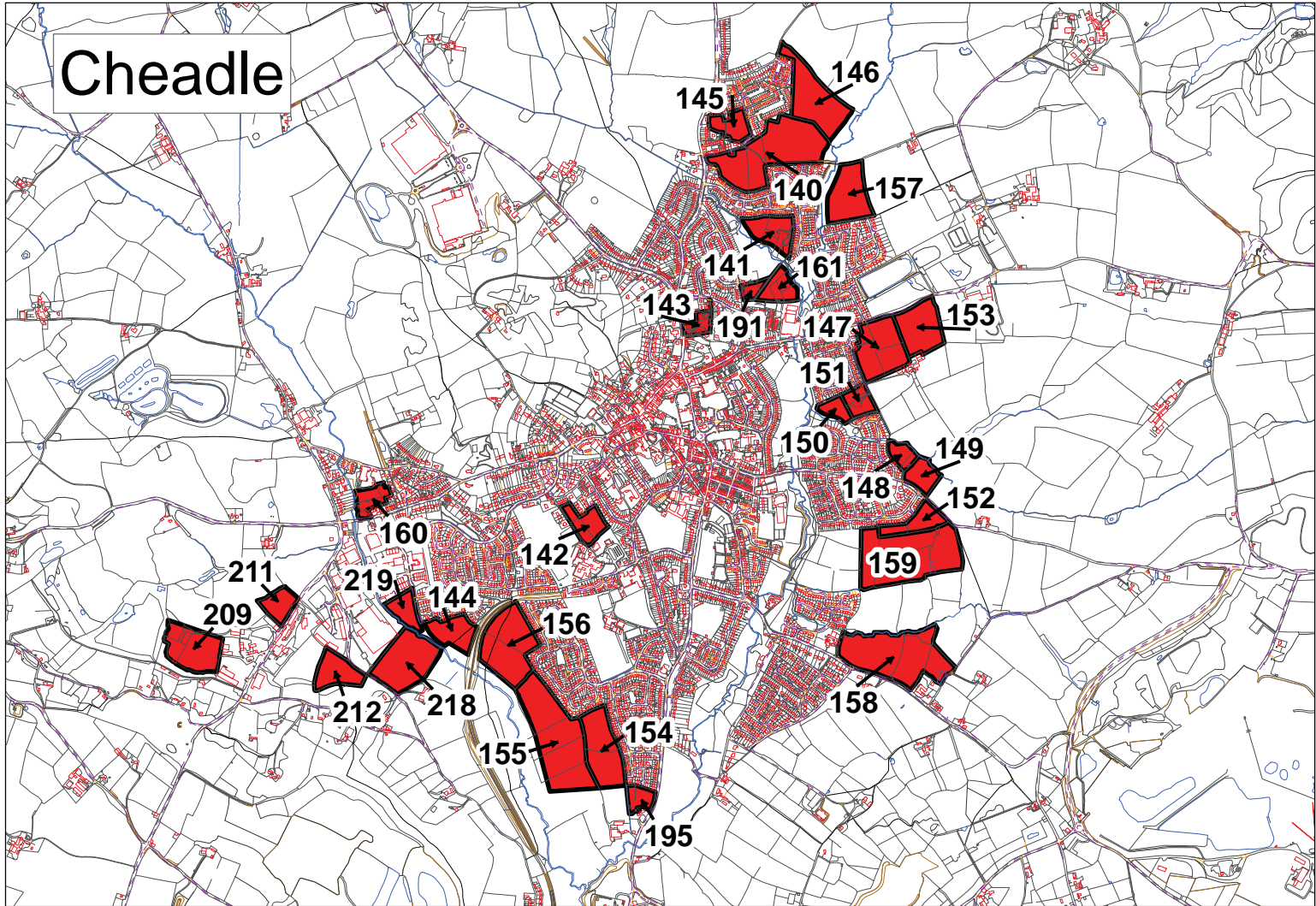


Cheadle



Scale 1: 12800

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



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FID 140



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FID 140

1. Introduction

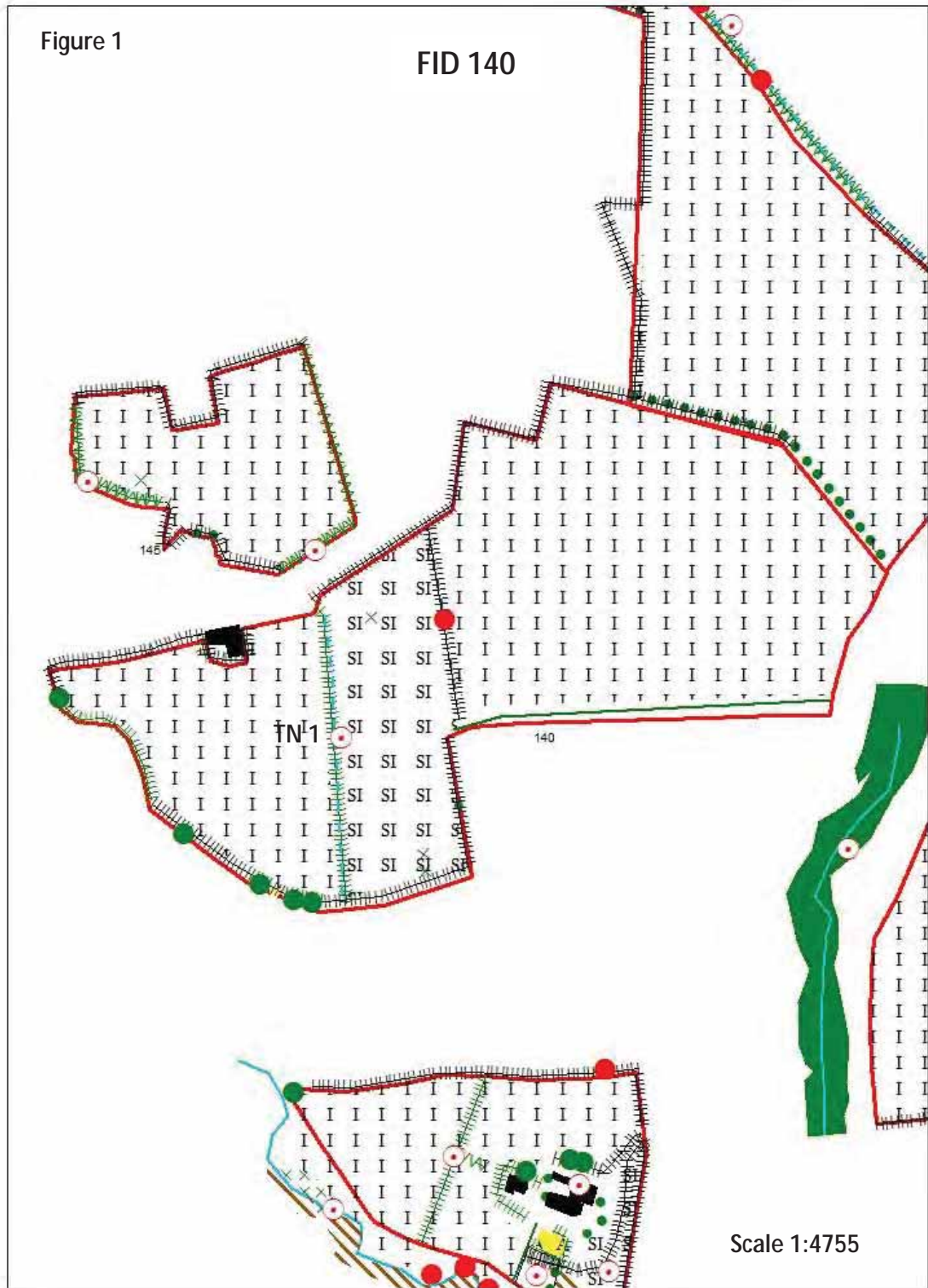
1.1 Background

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 140 O.S grid reference SK 0128644330.

FID 140 is located north of Cheadle 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 140 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Waste Wood
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Highshut Wood
BAS	Gorsey Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Kingsley Holt (east of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

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

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Common Bullfinch
	Common Kestrel



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	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Pipistrelle
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog



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	Wild pansy
INV	American Mink
	Canadian water weed
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Redwing
	Ruddy shelduck
	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 hedgerow
- Scattered trees
- Species poor semi-improved grassland



Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	5.25	73
SI	1.24	17
OTHER	0.69	10
TOTALS	7.18	100

I – Improved grassland, SI – Semi-improved grassland

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , creeping bent <i>Agrostis stolonifera</i> , common nettle <i>Urtica dioica</i> , crested dog's tail <i>Cynosurus cristatus</i> , creeping thistle <i>Cirsium arvense</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

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

Weeds listed under the Weeds Act 1959 including creeping thistle have been recorded within the tall ruderal vegetation.

4.3.4 Fauna

Breeding birds

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

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0121544251	Dry ditch with tall ruderal vegetation



5. Evaluation

Table 6

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

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

The site is surrounded by a number of species poor grasslands, adjacent to FID146 and close to FID 145 to the north and FID157 to the south east.

The site consists mainly of species poor grasslands (90%) which is connected via 2 hedgerows and a stream to the east to the wider countryside. Typical species include perennial rye grass, creeping bent, Yorkshire fog grasses and creeping thistle.

The species poor hedgerows mainly consist of hawthorn, ash and elder.

A number of European and UK protected species have been recorded within 2km; however as the site has poor biodiversity and connectivity the site may only support foraging bats, badger and West European hedgehog (recorded 35m away) therefore is deemed to have a low score within the biodiversity matrix.

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



6. Recommendations

Vegetation removal

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

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

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

7. Conclusion

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

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

- Vegetation removal at the appropriate time of year



FID 141



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FID 141

1. Introduction

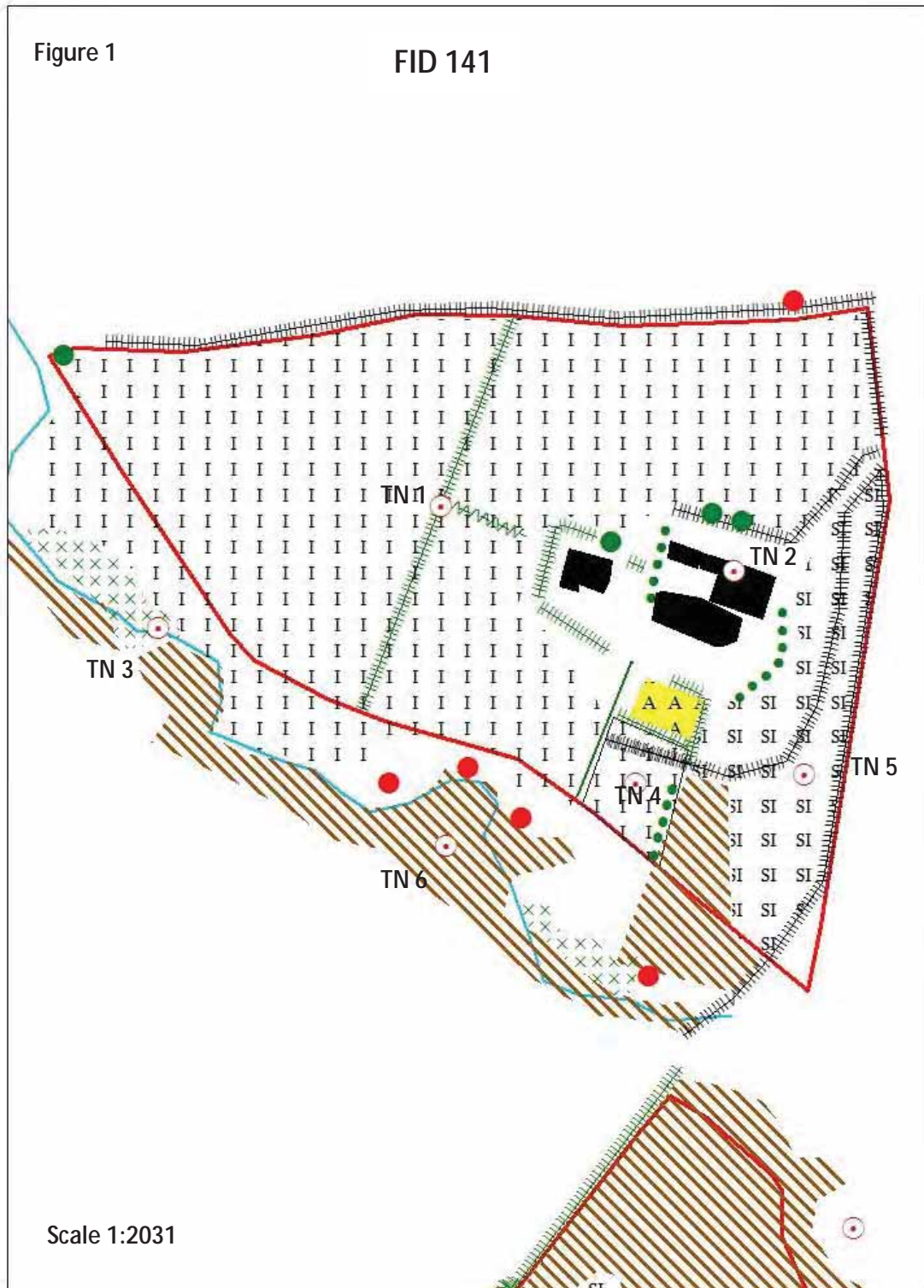
1.1 Background

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 141 O.S grid reference SK0130444006.

FID 141 is located within the north of Cheadle town in the Staffordshire Moorlands District, surrounded by housing and amenity grassland.

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 141 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe



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	Common Starling
	Common Toad
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Pipistrelle
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
INV	American Mink
	Greater Canada goose
	Indian Balsam



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	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Redwing
	Ruddy shelduck
	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
- Species rich hedgerow
- Scattered trees
- Species poor hedgerow
- Species poor grasslands



Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.41	69	
SI	0.26	13	
AM	0.01	1	
TR	0.05	2	
OTHER	0.31	15	
BPT			5
TOTALS	2.04	100	5

SI – Species poor semi-improved grassland, AM – Amenity Grassland, TR- Tall ruderal vegetation, I – Improved grassland, BPT – Bat Potential Trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , red fescue <i>Festuca rubra</i> , cock's foot <i>Dactylis glomerata</i> , red clover <i>Trifolium pratense</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , creeping thistle <i>Cirsium arvense</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , leylandii <i>Cuprocypressus x leylandii</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

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

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* and creeping thistle have been recorded within the tall ruderal vegetation/ grassland.

4.3.4 Fauna

Breeding birds

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



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0128444012	Requires hedgerow survey
2	SK0135943997	Require bat surveys
3	SK0121543984	Large stream and associated riparian vegetation
4	SK0133143942	Grazed by horses
5	SK0137443939	Species poor un-grazed grassland
6	SK0129043931	Large stream and associated riparian vegetation



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings, with a large stream and associated riparian habitat to the south. One lake does exist <500m to the south west, however a large housing estate forms an artificial barrier to any reptile and amphibian populations that might decide to frequent the site from this area of open water.

The site consists mainly of species poor grasslands (82%) that form part of a farm complex consisting of various habitats. The species poor hedgerow consists of hawthorn, ash and elder, with occasional wych elm *Ulmus glabra*. The tall ruderal vegetation supports species such as creeping thistle and curled dock.

The large stream to the south increases the biodiversity of the site, with riparian habitat to potentially help support amphibian and reptile populations.

A number of European and UK protected species have been recorded within 2km, however the site has poor biodiversity but good connectivity, and therefore the site may support roosting and foraging bats and badger as well as reptiles and amphibians and is deemed to have district importance within the biodiversity matrix.

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



6. Recommendations

Buildings with bat potential

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

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

Trees with bat potential

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

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

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 running water, and suitable supporting habitats it is recommended that a full reptile survey is carried out and any refugia present is removed by hand under watching brief of a suitably qualified ecologist.

Vegetation removal

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

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



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protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If trees 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 potential to support protected species although the habitats are species poor but are well connected to other more biodiverse habitats. Therefore the mosaic of habitats and trees with bat potential constitute the site being given at least district ecological importance.

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

- Bat survey of the trees and buildings marked as having bat roosting potential
- Reptile survey
- Vegetation removal at the appropriate time of year



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FID 142



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FID 142

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 142 O.S grid reference SK0058642847.

FID 142 is located within Cheadle town in the Staffordshire Moorlands District, surrounded by housing, and playing fields.

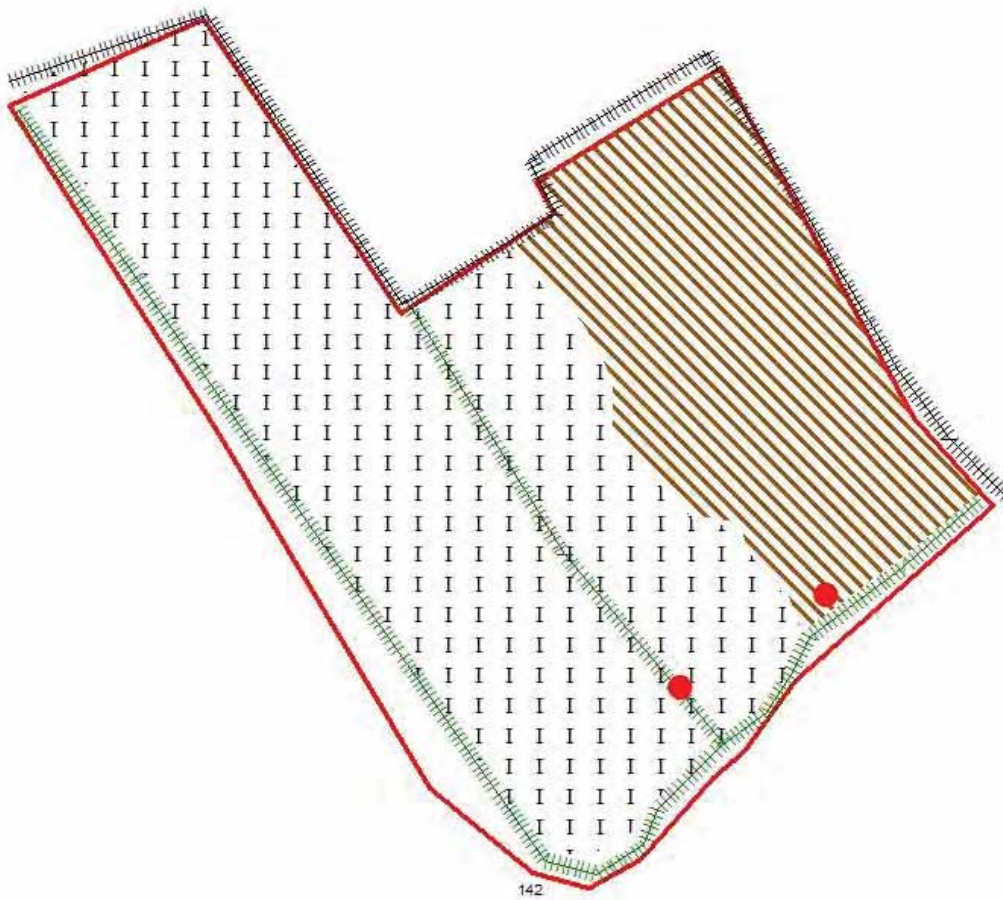
1.2 Survey

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



Figure 1

FID 142



Scale 1:1846



2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 142 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Rakeway
AWI	Freehay Wood
AWI	Monk's Wood
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
RIGS	Huntley Railway Cutting

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

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard



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	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle



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	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite



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	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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
- Tall ruderal vegetation
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	0.95	61	
TR	0.45	29	
OTHER	0.16	10	
BPT			2
TOTAL	1.56	100	2

TR- Tall ruderal vegetation, I – Improved grassland, BPT – Bat Potential Trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , rosebay willowherb <i>Chamerion angustifolium</i> , creeping thistle <i>Cirsium arvense</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus agg.</i> , hazel <i>Corylus avellana</i> , goat willow <i>Salix caprea</i>



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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 curled dock *Rumex crispus*, and creeping thistle 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 scattered trees and hedgerows from March to August when birds in the UK normally breed.



5. Evaluation

Table 5

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

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

The site is surrounded by domestic dwellings and species poor grasslands which are poorly connected to the wider countryside.

The site itself consists of species poor improved grassland (67%), with tall ruderal species such as rosebay willowherb, creeping thistle, curled dock and common nettle.

The site has a low biodiversity value apart from the 2 sycamore trees with bat roosting potential which warrants the site being attributed district ecological importance within the matrix.

Despite a variety of protected species being recorded during the desk study within 2km it is possible that the site may support few of these with the exceptions potentially of 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 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 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 little potential to support protected species apart from roosting bats/ foraging bats and badger, and is fairly poorly connected to the wider countryside. The presence of 2 trees with bat roosting potential has elevated the site's ecological importance to district level.

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

- Bat survey of the 2 trees with bat roosting potential
- Vegetation removal at the appropriate time of year



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FID 143



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FID 143

1. Introduction

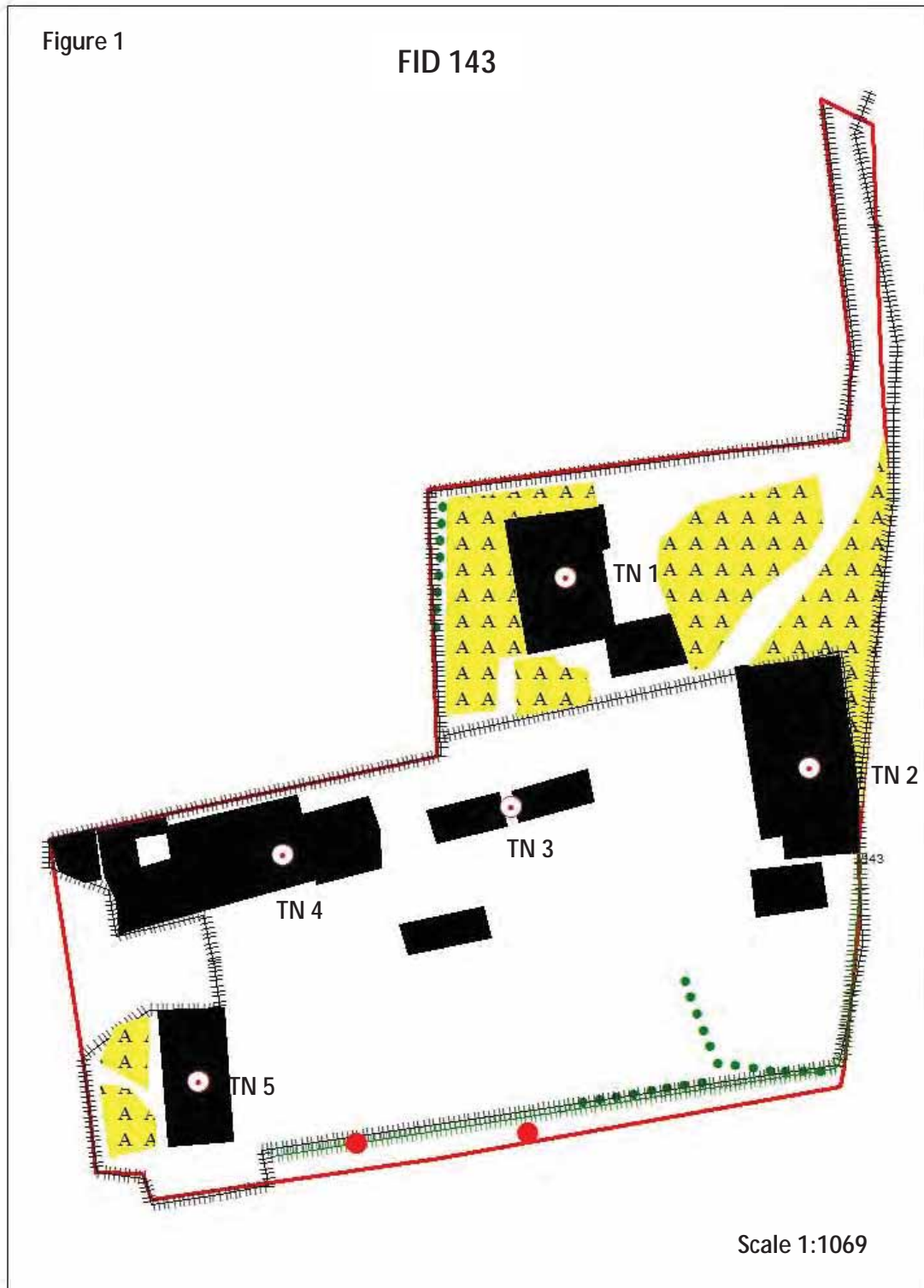
1.1 Background

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 143 O.S grid reference SK 0103743630.

FID 143 is located within Cheadle town in the Staffordshire Moorlands District, surrounded by housing.

1.2 Survey

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





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 143 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Gibridging Wood
AWI	Monk's Wood
SBI	Cheadle Fish Ponds
SBI	Rakeway House Farm (south of)
SBI	Gibridging Wood
SBI	Gibridging Wood (south of)

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade



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	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy



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	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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 x8
- Scattered trees
- Species poor hedgerows
- Amenity grassland



Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
AM	0.09	12	
OTHER	0.66	88	
BPT			2
TOTALS	0.75	100	2

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	Annual meadow grass <i>Poa annua</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , groundsel <i>Senecio vulgare</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>

4.3.3 Invasive weeds

No invasive weed 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

There are 5 buildings on site of which 4 require bat surveys and 2 trees present that also require bat surveys.

Breeding birds

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



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0103043671	New build house requires bat survey
2	SK0106043650	Large metal garage for buses, no bat survey required
3	SK0102143641	Requires bat survey
4	SK0099443635	Requires bat survey
5	SK0097943606	Requires bat survey



5. Evaluation

Table 6

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

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

The site mainly consists of buildings and hard standing (88%), with the southern half consisting of industrial buildings and a car park. The northern half is cut off by a palisade fence and consists of a domestic dwelling and associated gardens. The species poor hedgerow consists mainly of hawthorn, holly *Ilex aquifolium*, elder *Sambucus nigra* and 2 sycamore trees with bat roosting potential.

4 Buildings and 2 trees are present on or adjacent to the site that could potentially support roosting bats has elevated the site’s status to at least district importance.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support any of the species apart from roosting/ foraging bats

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



6. Recommendations

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 highlighted should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Trees with bat potential

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

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

Vegetation removal

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

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

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



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7. Conclusion

The site itself has 2 trees and 4 buildings which are considered to have bat roosting potential, and species poor hedgerows which are fairly isolated from other habitats. The site has therefore been deemed to have at least district ecological importance

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

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



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FID 144



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FID 144

1. Introduction

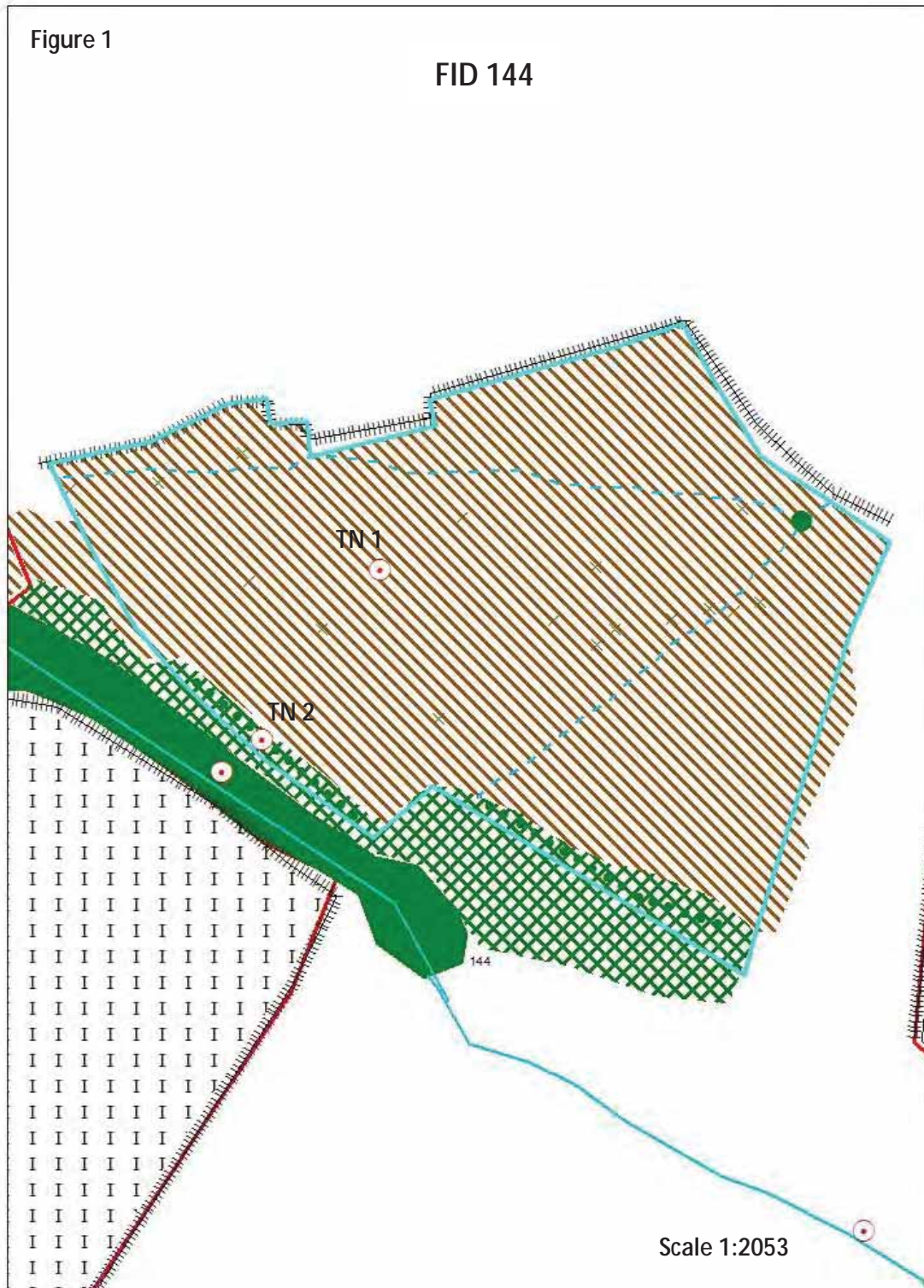
1.1 Background

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 144 O.S grid reference SK0004142424.

FID 144 is located west of Cheadle town in the Staffordshire Moorlands District, surrounded by housing, disused land 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 144 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



4. Results

4.1 Desk study - Habitats

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

Table 1

SITE DESIGNATION	NAME
LNR	Hales Hall Pool
LNR	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
RIGS	Huntley Railway Cutting

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

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard



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	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp



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	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey



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	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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 scrub
- Dense scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	1.82	95
DS	0.10	5
OTHER	0.00	0
TOTALS	1.92	100

TR – Tall ruderal vegetation, DS – Dense scrub

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Tufted hair grass <i>Deschampsia cespitosa</i> , false oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , rosebay willowherb <i>Chamerion angustifolium</i> , creeping thistle <i>Cirsium arvense</i> , Himalayan balsam <i>Impatiens glandulifera</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Bramble <i>Rubus fruticosus</i> agg, alder <i>Alnus glutinosa</i> , Hawthorn <i>Crataegus monogyna</i> , goat willow <i>Salix caprea</i>



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4.3.3 Invasive weeds

Himalayan balsam 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 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, broadleaved woodland and semi-improved species poor grassland 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	SK0001042427	Requires reptile survey
2	SJ9995542392	Good riparian/ woodland edge habitat



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Tall ruderal vegetation				x	
Dense scrub				x	
Scattered scrub				x	
Overall site importance			x		
I=International, N=National, R=Regional, D=District, L=Local					

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

The site is surrounded by domestic dwellings to the north, tall ruderal vegetation and a network of other habitats such as running water and its riparian habitat and broadleaved woodland, disused railway embankment and species poor grassland. The site is also in close proximity to FID156, FID218, and FID219.

The tall ruderal vegetation (95%) is species poor with tufted hair grass *Deschampsia cespitosa* creeping thistle, rosebay willowherb, common nettle, curled dock, Himalayan balsam and bramble.

The dense and scattered scrub (5%) consists of a mixture of goat willow, and hawthorn with locally abundant bramble.

The site itself consists of a potentially biodiverse scrub/ tall ruderal habitat mosaic. The sward could potentially support foraging bats, ground nesting birds, reptiles and terrestrial habitat for amphibians and provide hunting opportunities for owls and raptors. Additionally the importance of this site is notable as it is a large derelict site connected to other biodiverse habitats and is therefore attributed regional ecological importance.

There are a number of European and UK protected species recorded within 2km according to the desk study of which the site could potentially support a number of them.

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

As reptiles could potentially be present on site due to the presence of running water and suitable terrestrial habitat so it is 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 *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Vegetation removal

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

As Himalayan balsam is present on site it is recommended a regime of eradication either through spraying glyphosate, mowing or hand pulling over 2 years according to 'Information Sheet 3: Himalayan Balsam' (Centre for Ecology and Hydrology, 2004).

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

7. Conclusion

The site has potential for protected species to be present due to the mosaic of habitats and habitat structure present, especially as the site is well connected to the wider countryside, combined with the complex nature and size of the site warrants the site to be attributed regional ecological importance

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

- Reptile survey
- Adoption of Himalayan balsam removal regime
- Vegetation removal at the appropriate time of year



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FID 145



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FID 145

1. Introduction

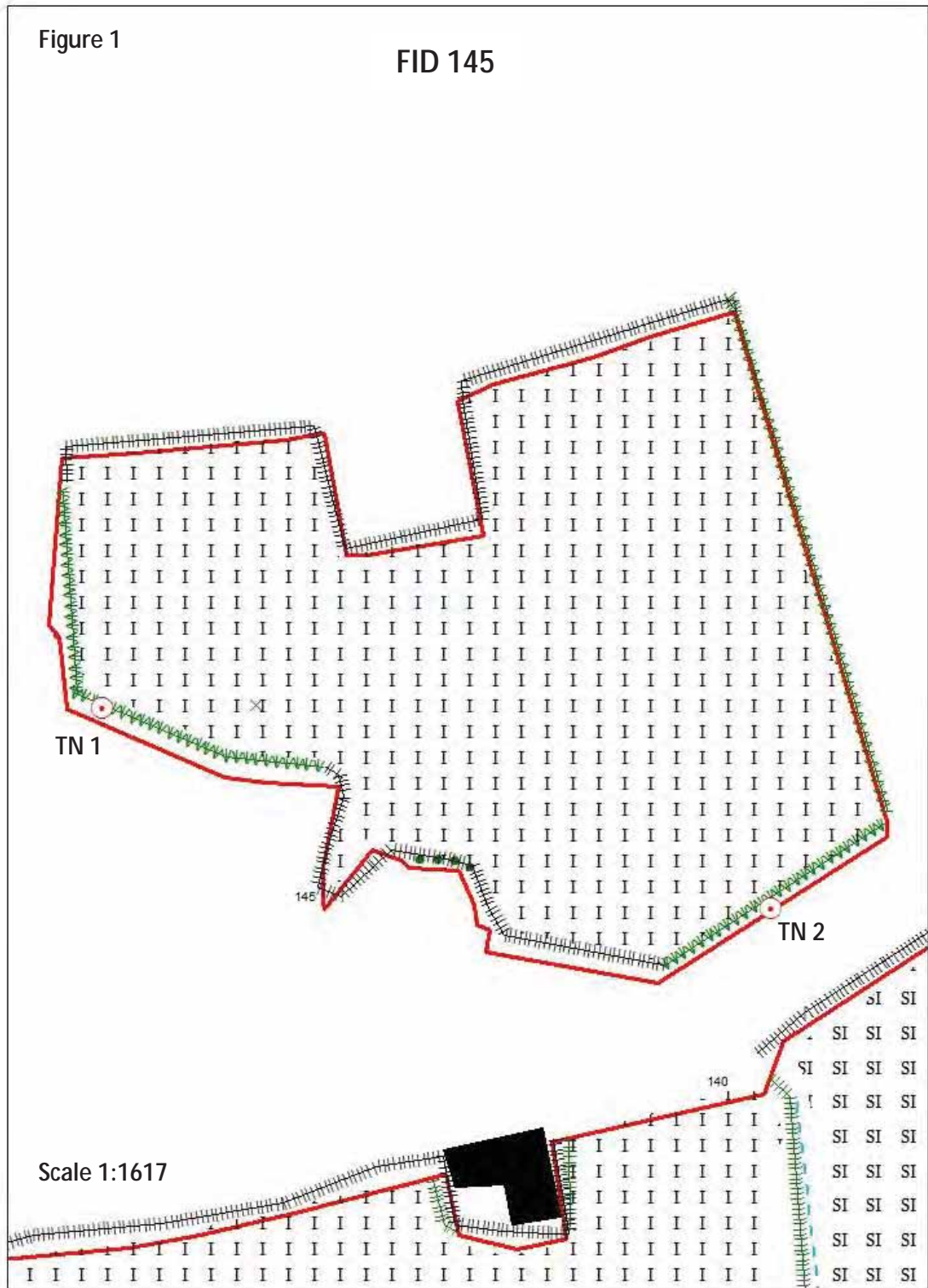
1.1 Background

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 145 O.S grid reference SK0115644425.

FID 145 is located within the north of Cheadle town in the Staffordshire Moorlands District, surrounded by housing, play/games area.

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 145 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Waste Wood
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Highshut Wood
AWI/ SBI	Ashbourne Hey
AWI	Hag Wood
BAS	Gorsey Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Little Eaves Farm (south west of)
SBI	Tank Wood
SBI	Kingsley Holt (east of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Blood vein
	Brown birch bolette
	Brown hare



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	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common Toad
	Dunnock
	Dusky brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	House Sparrow
	Insect - beetle
	Mallard
	Noctule bat
	Northern lapwing
	Pipistrelle
	Reed bunting
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
	Yellowhammer
INV	American Mink
	Canadian water weed
	Chinese muntjac
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	Bluebell



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	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Great crested newt
	Noctule bat
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Redwing
	Ruddy shelduck
	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 rich hedgerow
- Species poor hedgerows
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	1.23	91
OTHER	0.12	9
TOTALS	1.35	100

I – Improved grassland

4.3.2 Floral assemblage

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



Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , dandelion <i>Taraxacum officinale</i> agg, white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were recorded 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 potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0107344412	Requires hedgerow survey
2	SK0120344378	Requires hedgerow survey



5. Evaluation

Table 6

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

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

The site is completely surrounded by domestic dwellings and has very poor connectivity to the wider countryside

The site itself consists mainly of species poor grasslands (91%), with a species rich hedgerow consisting mainly of hawthorn and occasional elder, blackthorn, hazel *Corylus avellana* and ash with occasional climbing honeysuckle *Lonicera species*.

The site has species poor habitats present, poorly connected to the wider countryside, so is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species apart from foraging bats, badger and West European hedgehog (recorded within 20m). However the presence of species rich hedgerows elevates the site’s status to district ecological importance.

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



6. Recommendations

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 especially the species rich hedgerows and scattered trees are retained if the site is to be developed.

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

7. Conclusion

The site has low potential to support protected species as the habitats are species poor and poorly connected to other more biodiverse habitats, though as species rich hedgerows are present the site is considered as having district ecological importance.

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

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



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FID 146



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FID 146

1. Introduction

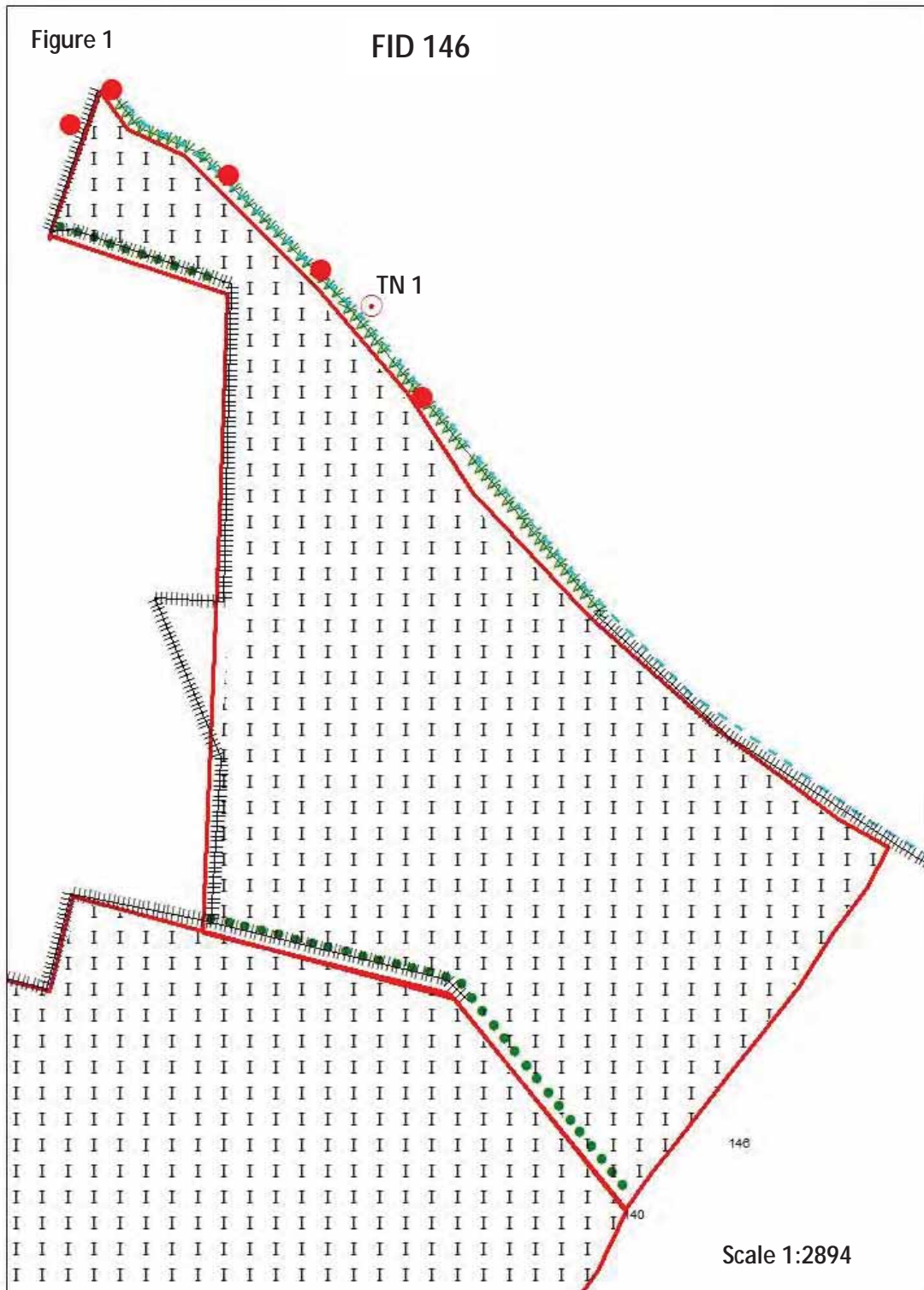
1.1 Background

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 146 O.S grid reference SK0148744520.

FID 146 is located north east of Cheadle 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 146 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



4. Results

4.1 Desk study - Habitats

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

Table 1

SITE DESIGNATION	NAME
LNR	Hales Hall Pool
LNR	Cecilly Brook
AWI	Waste Wood
AWI	Newhay Wood, Hazel Wood, Shore Wood, Hayes Wood
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Hag Wood
AWI	Gibridging Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Highshut Wood
AWI/ SBI	Ashbourne Hey
BAS	Gorse Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Little Eaves Farm (south west of)
SBI	Tank Wood
SBI	Kingsley Holt (east of)
SBI	Hawksmoor Nature Reserve
SBI	Gibridging Wood
SBI	Gibridging Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Blood vein
	Brown birch bolette



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	Brown hare
	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common Toad
	Dunnock
	Dusky brocade
	Eurasian Curlew
	European otter
	European Water Vole
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	House Sparrow
	Insect - beetle
	Mallard
	Noctule bat
	Pipistrelle
	Reed bunting
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
	Yellowhammer
INV	American Mink
	Canadian water weed
	Chinese muntjac
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	Bluebell



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	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European otter
	European Water Vole
	Great crested newt
	Noctule bat
	Pipistrelle
	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.

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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	4.29	99	
OTHER	0.00	1	
BPT			5
TOTALS	4.3	100	5

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

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



Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , timothy <i>Phleum pratense</i> , creeping buttercup <i>Ranunculus repens</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</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 potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0145644655	Requires hedgerow survey

5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, with a stream close to the south east boundary, adjacent to FID140 and in close proximity to FID157 so has moderate connectivity to the wider countryside

The site itself consists mainly of species poor grasslands (100%), with a species rich hedgerow consisting mainly of hawthorn and occasional elder, blackthorn, hazel, sycamore and wild cherry *Prunus avium*. The trees with bat roosting potential to the north of the site consist of sycamore, pedunculate oak *Quercus robur* and ash.

The site has species poor habitats present, and moderately connected to the wider countryside, so is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species apart from roosting and foraging bats, and foraging badger. However the presence of bat potential trees and the species rich hedgerow constitutes the site being warranted at least district ecological importance.

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



6. Recommendations

Trees with bat potential

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

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

Species rich hedgerows

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

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

Vegetation removal

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 especially the species rich hedgerows and scattered trees are retained if the site is to be developed.

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



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7. Conclusion

The site mainly has low potential to support protected species as the habitats are species poor and poorly connected to other more biodiverse habitats. Nevertheless the species rich hedgerow and trees that have potential to support roosting bats gives the site district ecological importance.

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

- Bat surveys of the 5 trees with roosting potential
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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FID 147



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FID 147

1. Introduction

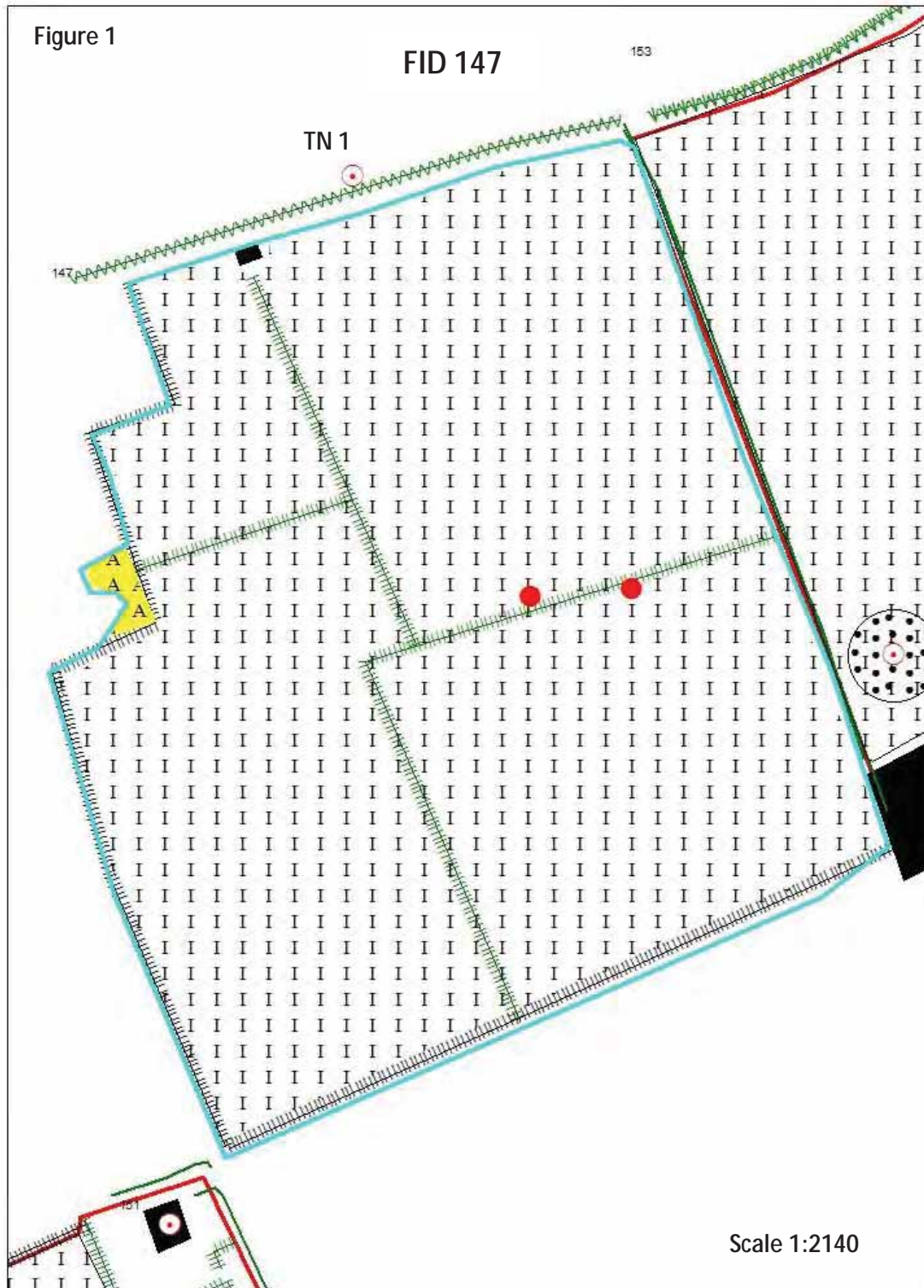
1.1 Background

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 147 O.S grid reference SK0174243578.

FID 147 is located east of Cheadle 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 147 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Highshutt Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown birch bolette
	Brown hare
	Brown/ sea trout
	Buff tailed bumble bee



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	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	Honey bee
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush



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	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy
	Willow warbler
	Yellowhammer
INV	American Mink
	Canadian waterweed
	Chinese muntjac
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle



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	Whiskered bat
	White stork

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

4.3 Field survey

4.3.1 Habitats

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

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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	3.63	95	
AM	0.01	1	
OTHER	0.16	4	
BPT			2
TOTALS	3.81	100	2

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

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , ash <i>Fraxinus excelsior</i> , English elm <i>Ulmus procera</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus agg.</i>

4.3.3 Invasive weeds

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



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4.3.4 Fauna

Breeding birds

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

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0171143660	Requires hedgerow survey



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, adjacent to FID151 and FID153 with fairly poor connectivity to the wider countryside

The site itself consists mainly of species poor grasslands (96%), with a species rich hedgerow consisting mainly of hawthorn and occasional elder *Sambucus nigra*, blackthorn, English elm and sycamore. The 2 trees with bat roosting potential to the north of the site are both ash.

The site is located 150m south of a 4 ha lake, however it is unlikely that the site would provide adequate terrestrial habitat to support European protected great crested newts *Triturus cristatus* or UK protected amphibians and reptiles. Species would also have to cross species poor grassland and a main road of which they are deemed fairly unlikely to do.

The site has species poor habitats present, and fairly poorly connected to the wider countryside, so is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species apart from roosting/ foraging bats, badger and West European hedgehog (recorded within 10m). However the presence of bat potential trees and species rich hedgerow elevates the site's status to district ecological importance.

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



6. Recommendations

Trees with bat potential

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

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

Species rich hedgerows

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

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

Vegetation removal

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 especially the species rich hedgerows and scattered trees are retained if the site is to be developed.

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



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7. Conclusion

The site mainly has low potential to support protected species as the habitats are species poor and poorly connected to other more biodiverse habitats. However, the presence of species rich hedgerows and bat potential trees warrants the site being attributed district ecological importance.

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

- Bat surveys of the 2 trees with roosting potential
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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FID 148



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FID 148

1. Introduction

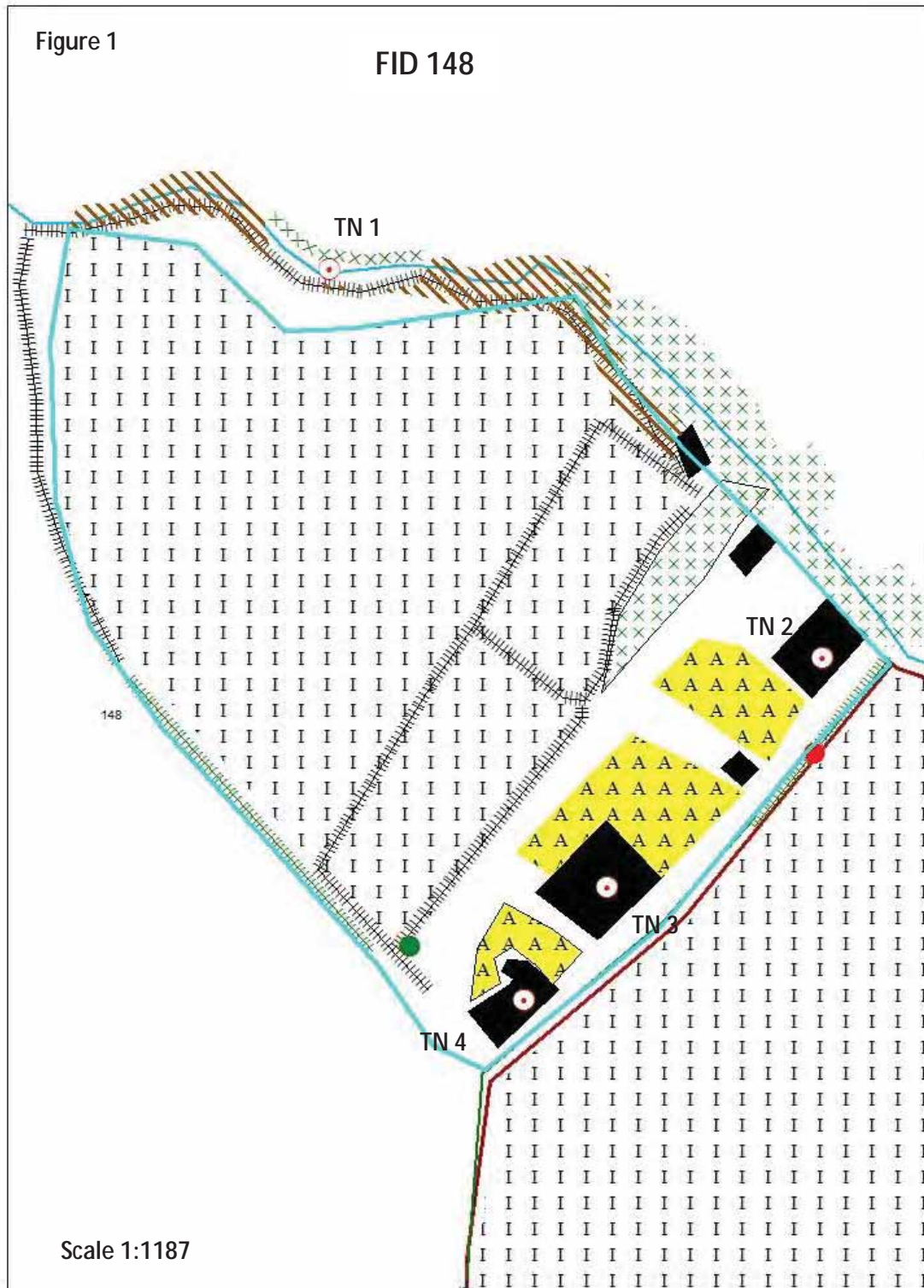
1.1 Background

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 148 O.S grid reference SK0183143121.

FID 148 is located east of Cheadle town in the Staffordshire Moorlands District, surrounded by housing, farm buildings and agricultural land.

1.2 Survey

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





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 148 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Highshutt Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch



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	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush



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	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Willow warbler
INV	American Mink
	Canadian waterweed
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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



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4.3 Field survey

4.3.1 Habitats

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

- Buildings
- Scattered trees
- Scattered scrub
- Tall ruderal vegetation
- Species poor hedgerow
- Species poor grasslands

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.58	67
AM	0.03	3
SS	0.02	2
TR	0.01	1
OTHER	0.23	27
TOTALS	0.87	100

AM – Amenity Grassland, TR- Tall ruderal vegetation, 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 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> , Himalayan balsam <i>Impatiens glandulifera</i> , common nettle <i>Urtica dioica</i> , great willowherb <i>Epilobium hirsutum</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , hazel <i>Corylus avellana</i> , goat willow <i>Salix caprea</i> , bramble <i>Rubus fruticosus agg</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded along the stream at the time of survey.



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4.3.4 Fauna

Bats

There are 5 buildings on site of which 2 are brick and roof tile construction with occasional loose tiles and holes in the brick work and are deemed to be 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, buildings and hedgerows from March to August when birds in the UK normally breed.

Incidental records

- Birds including sparrowhawk *Accipiter nisus*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0181443177	Small stream with species poor tall ruderal vegetation
2	SK0188143115	Requires bat survey
3	SK0185043084	Requires bat survey
4	SK0183943066	Does not require bat survey



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, with a stream and associated riparian habitat to the north. The site is also adjacent to FID149.

The site consists mainly of species poor grasslands (70%), scrub including bramble and hawthorn, and a species poor hedgerow consisting of mainly of hawthorn.

The stream to the north increases the biodiversity of the site, with riparian/ tall ruderal vegetation habitat to potentially help support amphibian and reptile populations.

A number of European and UK protected species have been recorded within 2km; however the site has poor biodiversity but good connectivity with the stream that connects to small woodland copses. The site may support roosting and foraging bats, badger and West European hedgehog (recorded 75m away) as well as reptiles and amphibians and is therefore deemed to have a district value within the biodiversity matrix.

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



6. Recommendations

Buildings with bat potential

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

It is therefore recommended that the 2 highlighted buildings should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004).

Trees with bat potential

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

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

Reptiles and amphibians

Reptiles could potentially be present on site due to the small stream to the north, especially as it is well connected to other habitats, therefore it is recommended that a full reptile survey is carried out and any refugia present on site is removed by hand under watching brief of a suitably qualified ecologist.

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

Vegetation removal

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

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000), which makes it an offence to intentionally kill,



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injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If 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 potential to support protected species although the habitats are fairly species poor but are well connected to other more biodiverse habitats. Therefore the presence of 2 buildings and trees with potential to support roosting bats and areas of tall ruderal vegetation which could support reptiles warrants the site being attributed district ecological importance.

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

- Bat survey of the trees and buildings marked as having bat roosting potential
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 149



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FID 149

1. Introduction

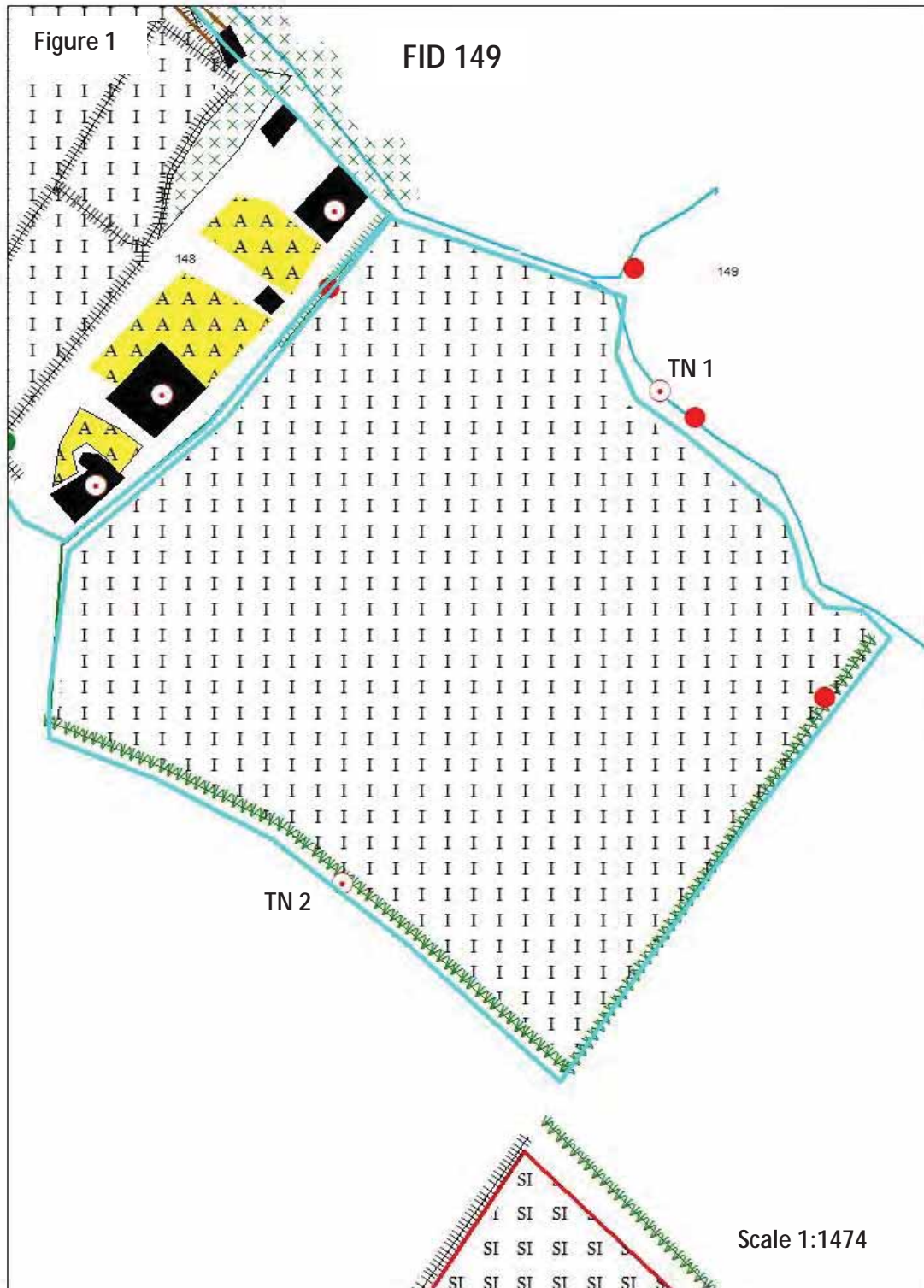
1.1 Background

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 149 O.S grid reference SK 0190743045.

FID 149 is located east of Cheadle town in the Staffordshire Moorlands District, surrounded by housing, farm buildings and agricultural land.

1.2 Survey

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





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 149 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Highshutt Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch
	Common Kestrel
	Common Kingfisher



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	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle



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	Spotted flycatcher
	Stock dove
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Willow warbler
INV	American Mink
	Canadian waterweed
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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



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4.3 Field survey

4.3.1 Habitats

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

- Scattered trees
- Species rich hedgerow
- Species poor hedgerow
- Species poor grasslands

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.23	95	
OTHER	0.07	5	
BPT			4
TOTALS	1.30	100	4

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , curled dock <i>Rumex crispus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , pedunculate oak <i>Quercus robur</i>

4.3.3 Invasive weeds

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

Weeds listed under the Weeds Act 1959 including curled dock have been recorded within the grassland/ 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



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potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0193943086	Stream with species poor tall ruderal vegetation
2	SK0188042995	Requires hedgerow survey



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, with a stream and associated riparian habitat to the north. The site is also adjacent to FID148.

The site consists mainly of species poor grasslands (95%), scrub including bramble and hawthorn and a species rich hedgerow consisting of hawthorn, elder, sycamore, dog rose *Rosa canina*, ash and pedunculate oak.

The stream to the north increases the biodiversity of the site, with fairly sparse riparian habitat to potentially help support amphibian and reptile populations.

A number of European and UK protected species have been recorded within 2km; however the site has poor biodiversity but good connectivity with the stream that connects to small woodland copses. The site may support roosting and foraging bats, badger and West European hedgehog (recorded within 50m) as well as reptiles, and is therefore deemed to have a district value within the biodiversity matrix.

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



6. Recommendations

Trees with bat potential

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

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

Reptiles and amphibians

Reptiles could potentially be present on site due to the small stream to the north, especially as it is well connected to other habitats, therefore it is recommended that a full reptile survey is carried out and any refugia present on site is removed by hand under watching brief of a suitably qualified ecologist.

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

Vegetation removal

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

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

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



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7. Conclusion

The site has potential to support some protected species although the habitats are fairly species poor but are well connected to other more biodiverse habitats. The presence of a species rich hedgerow and 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:

- Bat survey of the trees and buildings marked as having bat roosting potential
- Reptile survey
- Vegetation removal at the appropriate time of year



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FID 150



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FID 150

1. Introduction

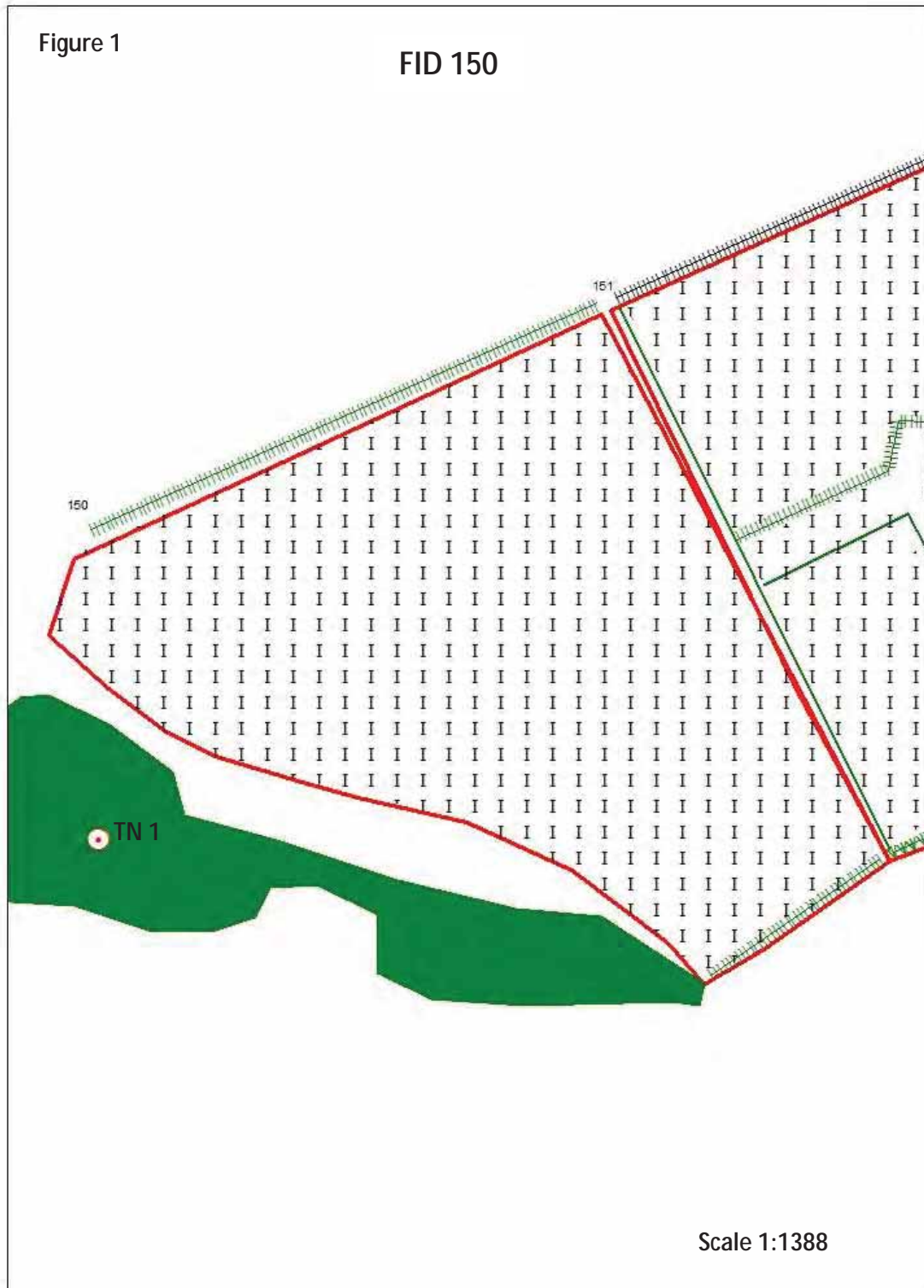
1.1 Background

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 150 O.S grid reference SK0156343297.

FID 150 is located east of Cheadle surrounded by agricultural land, housing with Cecily Brook Local Nature Reserve to the west.

1.2 Survey

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





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 150 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook (FID150 abuts this LNR)
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Highshutt Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard



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	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian Teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush



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	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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



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4.3 Field survey

4.3.1 Habitats

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

- Scattered trees
- Species poor hedgerow
- Species poor grasslands

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.83	100
OTHER	0.00	0
TOTALS	0.83	100

I – Improved grassland

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , goat willow <i>Salix caprea</i> , bramble <i>Rubus fruticosus agg</i> , ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

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

4.3.4 Fauna

Breeding birds

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



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0149543270	Cecily Brook LNR - Semi-natural broadleaved woodland and running water



5. Evaluation

Table 6

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

Table 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 and species poor grassland, broadleaved woodland with a stream and associated riparian habitat to the south west (Cecily Brook Local Nature Reserve). The site is also adjacent to FID151.

The site consists mainly of species poor grassland, and a species poor hedgerow consisting of hawthorn, goat willow and ash.

The stream and broadleaved woodland to the south west increases the biodiversity of the site, with some riparian habitat to potentially help support amphibian and reptile populations.

A number of European and UK protected species have been recorded within 2km; however the site has poor biodiversity but good connectivity with the stream that connects to small woodland copses and scrub habitats. The site may support foraging bats and badger as well as reptiles, so is therefore deemed to have a district value within the biodiversity matrix.

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

Buffering

It is recommended that as Cecily Brook Local Nature Reserve abuts this site that a buffer zone is created to limit the impact of any potential future development. This could be woodland planting, scrub creation, possibly left as tall ruderal vegetation or a line of fencing to help minimise any impacts.

Reptiles and amphibians

Reptiles could potentially be present on site due to the small stream/ broadleaved woodland and scattered scrub mosaic to the south west, especially as it is well connected to other habitats, therefore it is recommended that a full reptile survey is carried out and any refugia present on site is removed by hand under watching brief of a suitably qualified ecologist.

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

Vegetation removal

If at all possible it is recommended that the hedgerows be retained as they provide a wildlife corridor to the wider countryside and to preserve some biodiversity within the locality.

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

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

7. Conclusion

The site has potential to support protected species although the habitats are fairly species poor but are well connected to other more biodiverse habitats, especially the abutting Cecily Brook Local Nature Reserve. As the site is bordering the LNR the site's status has been elevated to district ecological importance.

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

- Creation of a buffer zone between the site and the LNR
- Reptile survey
- Vegetation removal at the appropriate time of year



FID 151



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FID 151

1. Introduction

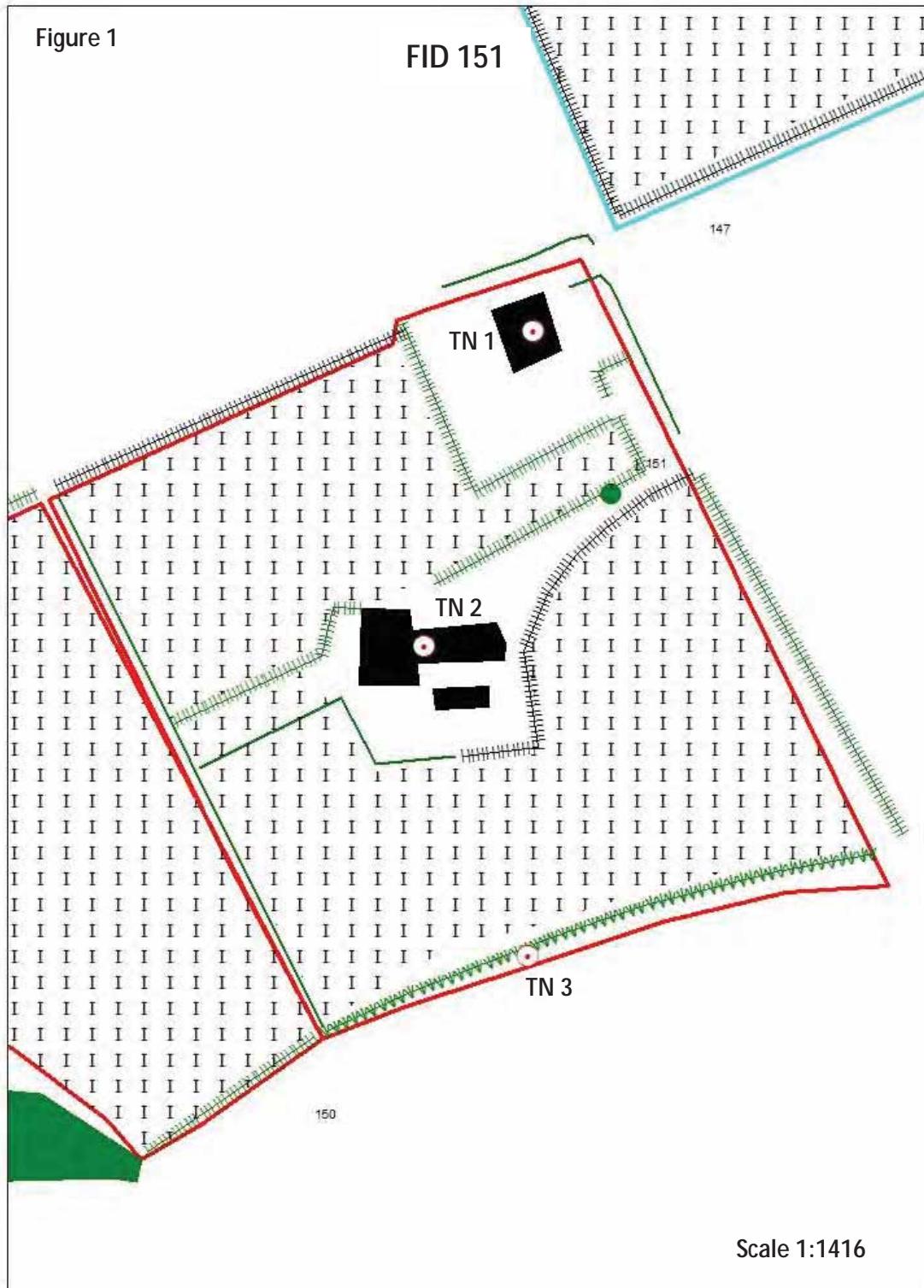
1.1 Background

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 151 O.S grid reference SK0166243335.

FID 151 is located east of Cheadle 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 151 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Highshutt Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard



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	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian Teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush



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	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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



4.3 Field survey

4.3.1 Habitats

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

- Scattered trees
- Species rich hedgerow
- Species poor hedgerow
- Species poor grasslands

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	0.76	69
OTHER	0.35	31
TOTALS	1.11	100

I – Improved grassland

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , dandelion <i>Taraxacum officinale</i> agg
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , damson <i>Prunus domestica</i> <i>institia</i> , blackthorn <i>Prunus spinosa</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

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

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

4.3.4 Fauna

Breeding birds

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



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4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0166843387	Requires bat survey
2	SK0165043331	Requires bat survey
3	SK0166243278	Requires hedgerow survey



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland. The site is also adjacent to FID 150.

The site consists mainly of species poor grasslands (69%) and buildings with species rich hedgerow consisting of hawthorn, crack willow *Salix fragilis*, blackthorn, damson, dog rose *Rosa canina* and ash.

The site is connected via the species rich hedgerow to the south to a stream and broadleaved woodland to the south west (Cecily Brook LNR) which increases the biodiversity of the site, with some riparian habitat to potentially help support amphibian and reptile populations.

A number of European and UK protected species have been recorded within 2km; however the site has poor biodiversity but good connectivity with the stream that connects to small woodland copses and scrub habitats. The site may support foraging bats, badger and West European hedgehog (recorded within 50m) as well as reptiles and is therefore deemed to have a district value within the biodiversity matrix.

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).

Reptiles and amphibians

Reptiles could potentially be present on site due to the small stream/ woodland and scrub mosaic approximately 250m to the west, especially as it is well connected to other habitats. Therefore it is recommended that a full reptile survey is carried out and any refugia present on site are removed by hand under watching brief of a suitably qualified ecologist.

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

Species rich hedgerows

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

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

Vegetation removal

If at all possible it is recommended that the hedgerows be retained as they provide a wildlife corridor to the wider countryside and 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.



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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 potential to support protected species although the habitats are fairly species poor but are well connected to other more biodiverse habitats. As the site has buildings with potential to support roosting bats and a species rich hedgerow the site has been attributed at least district ecological importance.

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

- Bat survey of the buildings with potential to support roosting bats
- Reptile survey
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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FID 152



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FID 152

1. Introduction

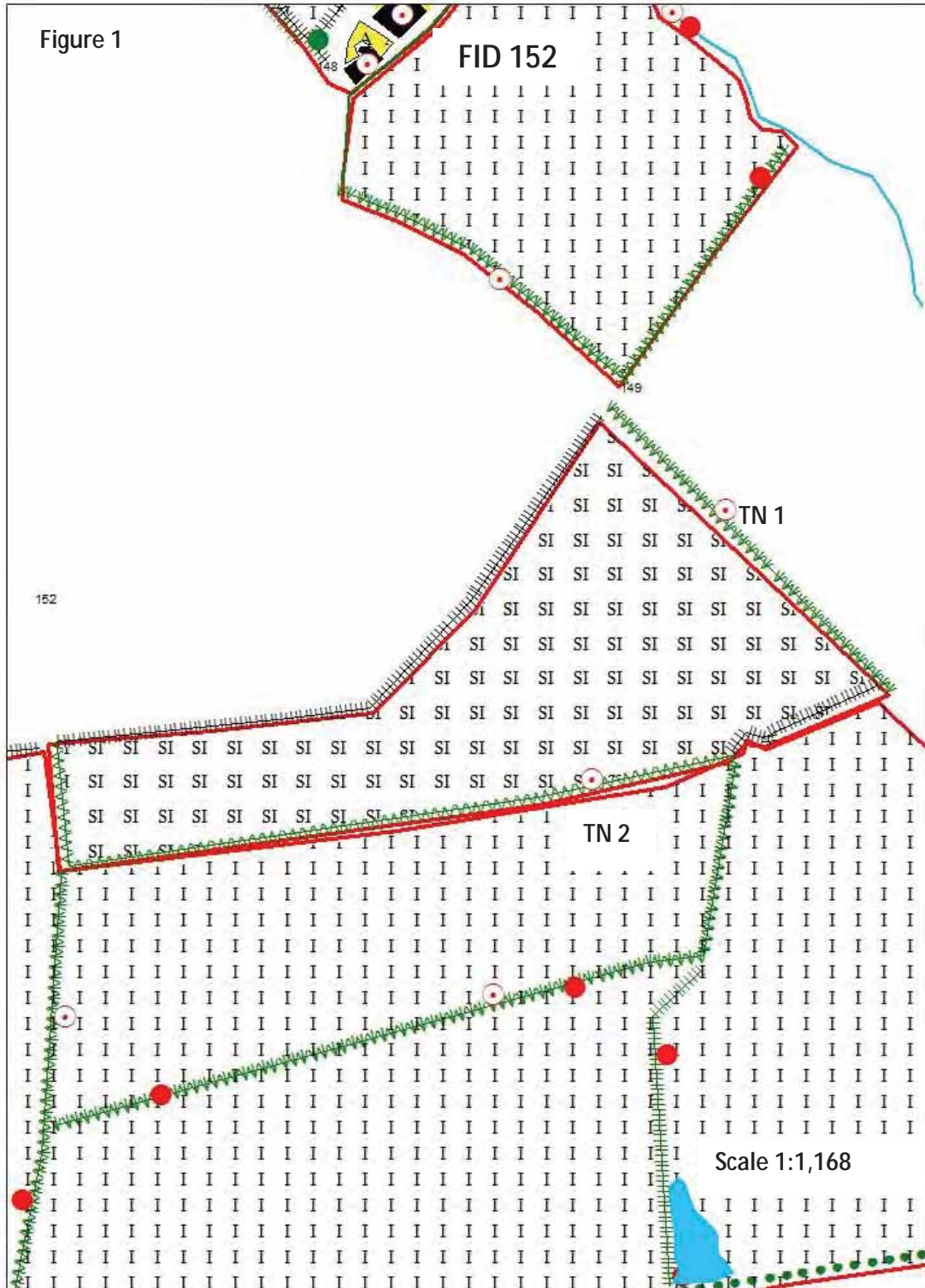
1.1 Background

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 152 O.S grid reference SK0191042870.

SFID 152 is located south-east of Cheadle 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 152 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



4. Results

4.1 Desk study - Habitats

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

Table 1

SITE DESIGNATION	NAME
LNR	Hales Hall Pool
LNR	Cecilly Brook
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Threap Wood
AWI	Highshutt Wood
SBI	Huntley Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Huntley Railway Cutting
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee



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	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath



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	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Willow warbler
INV	American Mink
	Canadian waterweed
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat



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

4.3 Field survey

4.3.1 Habitats

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

- Scattered trees
- Species rich hedgerow
- Species poor hedgerow
- Species poor grasslands

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
SI	1.46	89
OTHER	0.18	11
TOTALS	1.64	100

SI – Semi-improved species poor 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> , creeping bent <i>Agrostis stolonifera</i> , sweet vernal grass <i>Anthoxanthum odoratum</i> , cock's foot <i>Dactylis glomerata</i> , common knapweed <i>Centaurea nigra</i> , yarrow <i>Achillea millefolium</i> , crested dog's tail <i>Cynosurus cristatus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , crab apple <i>malus sylvestris</i> , ash <i>Fraxinus excelsior</i> , elder <i>Sambucus nigra</i>

4.3.3 Invasive weeds

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

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense*, and ragwort *Senecio jacobea* have been recorded within the sward.



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4.3.4 Fauna

Breeding birds

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

Incidental records

- Birds including pheasant *Phasianus colchicus*
- Butterflies including small tortoiseshell *Aglais urticae*

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0195242915	Requires hedgerow survey
2	SK0190742759	Requires hedgerow survey



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Species poor hedgerows					x
Semi-improved species poor grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

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

The site is surrounded by domestic dwellings and species poor grassland. The site is also adjacent to FID159 to the south and fairly poorly connected to the wider countryside.

The site consists mainly of species poor semi-improved grassland (95%) consisting of some diversity with common grasses such as red fescue, creeping bent and crested dog's tail, with herbs including common knapweed, yarrow and ragwort. Although there is some floral diversity it is not enough to warrant this as having district ecological importance.

The species rich hedgerow consists of hawthorn, blackthorn, hazel *Corylus avellana*, crab apple and elder and elevates the sites overall value to district ecological importance.

A number of European and UK protected species have been recorded within 2km; the site has poor biodiversity and connectivity, although the site may support 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

Species rich hedgerows

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

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

Vegetation removal

If at all possible it is recommended that the hedgerows be retained as they provide a wildlife corridor to the wider countryside and to preserve some biodiversity within the locality.

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

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

7. Conclusion

The site has fairly poor biodiversity and is poorly connected to other more biodiverse habitats. However, the site has a species rich hedgerow so therefore is afforded district ecological importance.

If the whole site is to be developed the following surveys are recommended to avoid contravention of pertaining wildlife laws to satisfy planning policy:

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



FID 153



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FID 153

1. Introduction

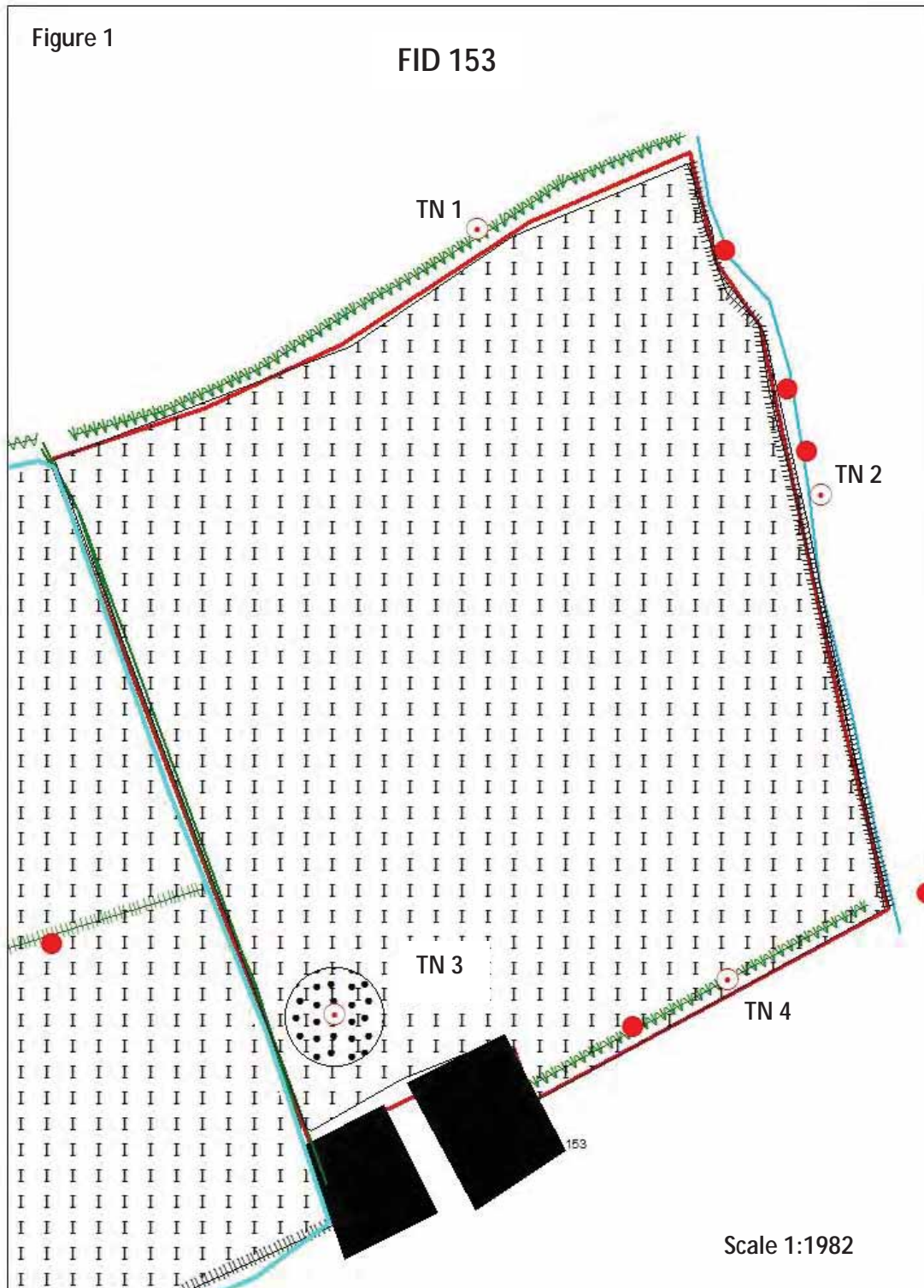
1.1 Background

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 153 O.S grid reference SK 0190243626.

FID 153 is located north-east of Cheadle 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 153 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Highshutt Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown birch bolette
	Brown hare
	Brown/ sea trout
	Buff tailed bumble bee



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	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	Honey bee
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush



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	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy
	Willow warbler
	Yellowhammer
INV	American Mink
	Canadian waterweed
	Chinese muntjac
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle



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	Whiskered bat
	White stork

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

4.3 Field survey

4.3.1 Habitats

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

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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	2.92	97	
BG	0.05	2	
OTHER	0.04	1	
BPT			6
TOTALS	3.01	100	6

I – Improved grassland, BPT – Bat Potential Trees, BG – Bare ground

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , wych elm <i>Ulmus glabra</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> , pedunculate oak <i>Quercus robur</i>

4.3.3 Invasive weeds

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



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4.3.4 Fauna

Breeding birds

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

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0190543735	Requires hedgerow survey
2	SK0197343669	Stream with species poor tall ruderal vegetation
3	SK0194843545	Requires hedgerow survey
4	SK0185943533	Bare ground



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, adjacent to FID151 and FID153 with some connectivity to the wider countryside

The site itself consists mainly of species poor grasslands (97%) with a species rich hedgerow consisting mainly of hawthorn and occasional elder *Sambucus nigra*, wych elm, hazel, ash. The 6 trees with bat roosting potential consist of ash and oak.

The site is located approximately 180m south of Hales Hall Pool LNR, consisting of approximately 4 hectares of ponds and riparian habitat, however it is unlikely that the site would be accessible to great crested newts *Triturus cristatus* or UK protected amphibians and reptiles. Species would also have to cross species poor grassland and a main road of which they are deemed fairly unlikely to do.

The site has fairly biodiverse habitats present on the boundaries and is connected to the wider countryside through hedgerows and a shallow wet ditch, so is deemed to have a low score within the biodiversity matrix as it is unlikely that the site would support many protected species apart from roosting and foraging bats, and foraging badger. The species rich hedgerow and trees with bat potential elevates the site’s ecological importance to at least district level.

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

Species rich hedgerows

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

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

Vegetation removal

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 especially the species rich hedgerows and scattered trees are retained if the site is to be developed.

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



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7. Conclusion

Despite ponds being located in close proximity there have been no European protected species recorded within 2km. The site has low potential to support protected species as the habitats are species poor but not connected to Hales Hall Pool LNR. However, the site is connected to other habitats by the species rich hedgerow and trees with bat potential which enables the site to be attributed district ecological importance.

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

- Bat surveys of the 6 trees with roosting potential
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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FID 154



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FID 154

1. Introduction

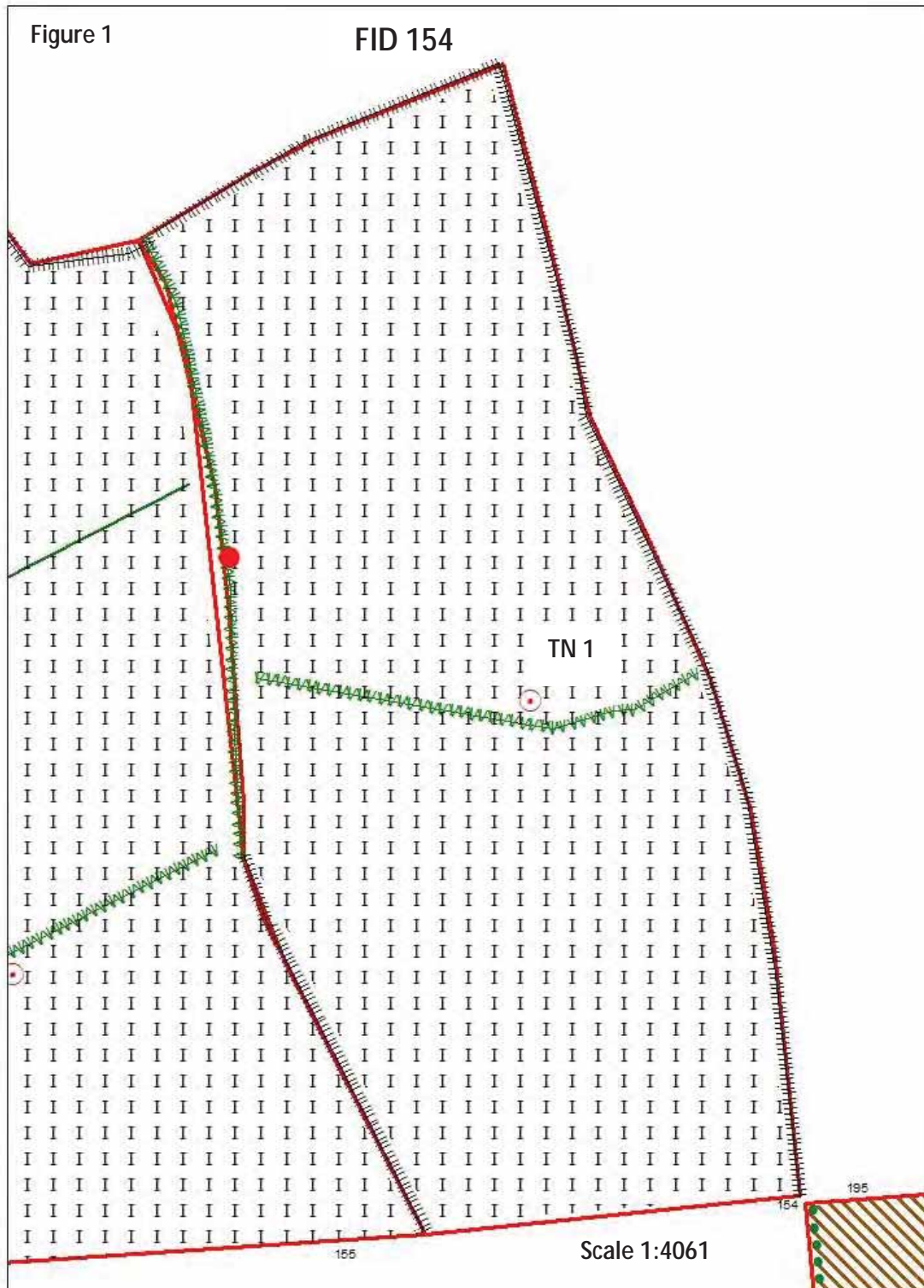
1.1 Background

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 154 O.S grid reference SK0065241934.

FID 154 is located south of Cheadle 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 154 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
AWI	Rakeway
AWI	Monk's Wood
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Huntley Wood
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle



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	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp



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	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon



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	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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

4.3 Field survey

4.3.1 Habitats

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

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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	3.78	100	
BPT			1
TOTALS	3.78	100	1

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , soft rush <i>Juncus effusus</i> , creeping buttercup <i>Ranunculus repens</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , elder <i>Sambucus nigra</i> , dog rose <i>Rosa canina</i>



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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 potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0065741948	Requires hedgerow survey



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland and adjacent to FID155 with moderate connectivity to the wider countryside with hedgerows and also adjacent to FID195 to the south east.

The site itself consists mainly of species poor grasslands (100%), with a species rich hedgerow consisting of 7 woody species, mainly of hawthorn and occasional elder, pedunculate oak *Quercus robur*, field maple *Acer campestre*, dog rose, ash and sycamore *Acer pseudoplatanus*. 1 oak tree is present on site that has potential to support roosting bats.

The site has fairly poor biodiversity but moderately connected to the wider countryside so is deemed to have a fairly low score within the biodiversity matrix as it is unlikely that the site would support many protected species apart from roosting and foraging bats, badger and West European hedgehog (recorded within 20m). Numerous BAP bird species also have been recorded from a residential garden at Aynsley Close on the site’s boundary, however the site is not considered to have specific intrinsic value to support these species. The species rich hedgerow and tree with bat potential elevates the site’s status to district ecological importance.

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



6. Recommendations

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.

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 especially the species rich hedgerows and scattered trees are retained if the site is to be developed.

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



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7. Conclusion

The site has fairly low potential to support protected species as the habitats are mainly species poor and moderately connected to other more biodiverse habitats. However the species rich hedgerow and tree with bat potential warrants the site being attributed district ecological importance.

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

- Bat surveys of the tree with roosting potential
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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FID 155



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FID 155

1. Introduction

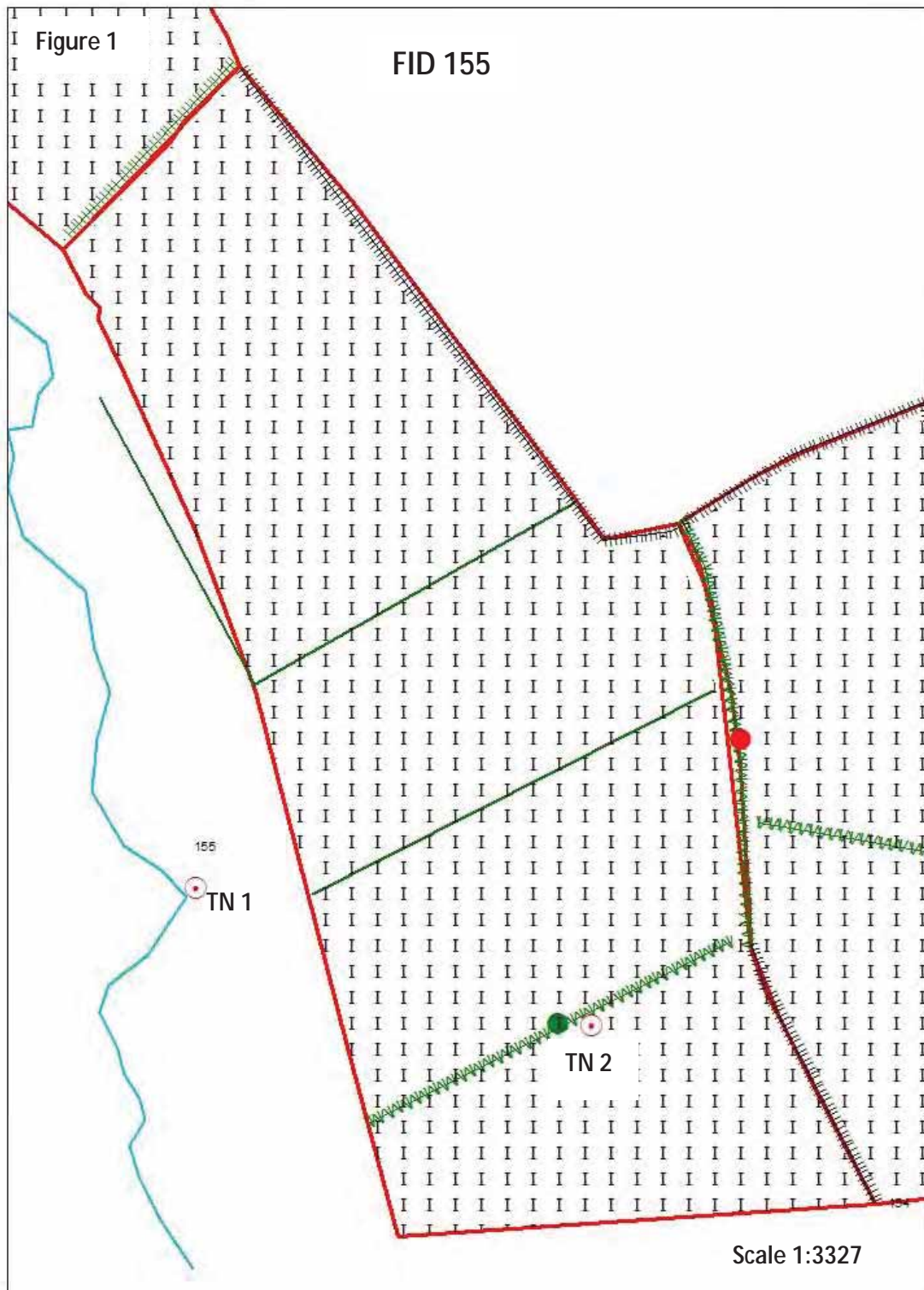
1.1 Background

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 155 O.S grid reference SK0046042010.

FID 155 is located south-west of Cheadle 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 155 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



4. Results

4.1 Desk study - Habitats

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

Table 1

SITE DESIGNATION	NAME
LNR	Hales Hall Pool
LNR	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
AWI	Rakeway
AWI	Monk's Wood
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Huntley Wood
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle



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	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp



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	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon



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	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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

4.3 Field survey

4.3.1 Habitats

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

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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	7.55	100
OTHER	0.00	0
TOTALS	7.55	100

I – Improved grassland

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , dandelion <i>Taraxacum officinale</i> agg, white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , blackthorn <i>Rubus fruticosus</i> agg



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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 potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0033341823	Medium size stream with species poor riparian habitat within 50m
2	SK0050641870	Requires hedgerow survey



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, adjacent to FID154 with moderate connectivity to the wider countryside by hedgerows and close to FID195 to the south east.

The site itself consists mainly of species poor grasslands (100%), with a species rich hedgerow consisting of hawthorn, blackthorn, elder, dog rose *Rosa canina* and ash. As the species rich hedgerow does not connect to any other habitat it is given low ecological importance.

A stream also exists to the west <50m away but there is no connectivity to it, only species poor grazed grassland. Numerous BAP bird species also have been recorded from a residential garden at Aynsley Close on the site's boundary, however the site is not considered to have specific intrinsic value to support these species. The site is deemed to have a fairly low score within the biodiversity matrix as it is unlikely that the site would support many protected species apart potentially from foraging bats, badger and West European hedgehog (recorded within 20m).

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 at least some of the hedgerows and scattered trees are retained if the site is to be developed.

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

7. Conclusion

The site has fairly low potential to support protected species as the habitats are species poor and moderately connected to other more biodiverse habitats. The site is therefore given low ecological importance as the species rich hedgerow is defunct.

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



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FID 156

1. Introduction

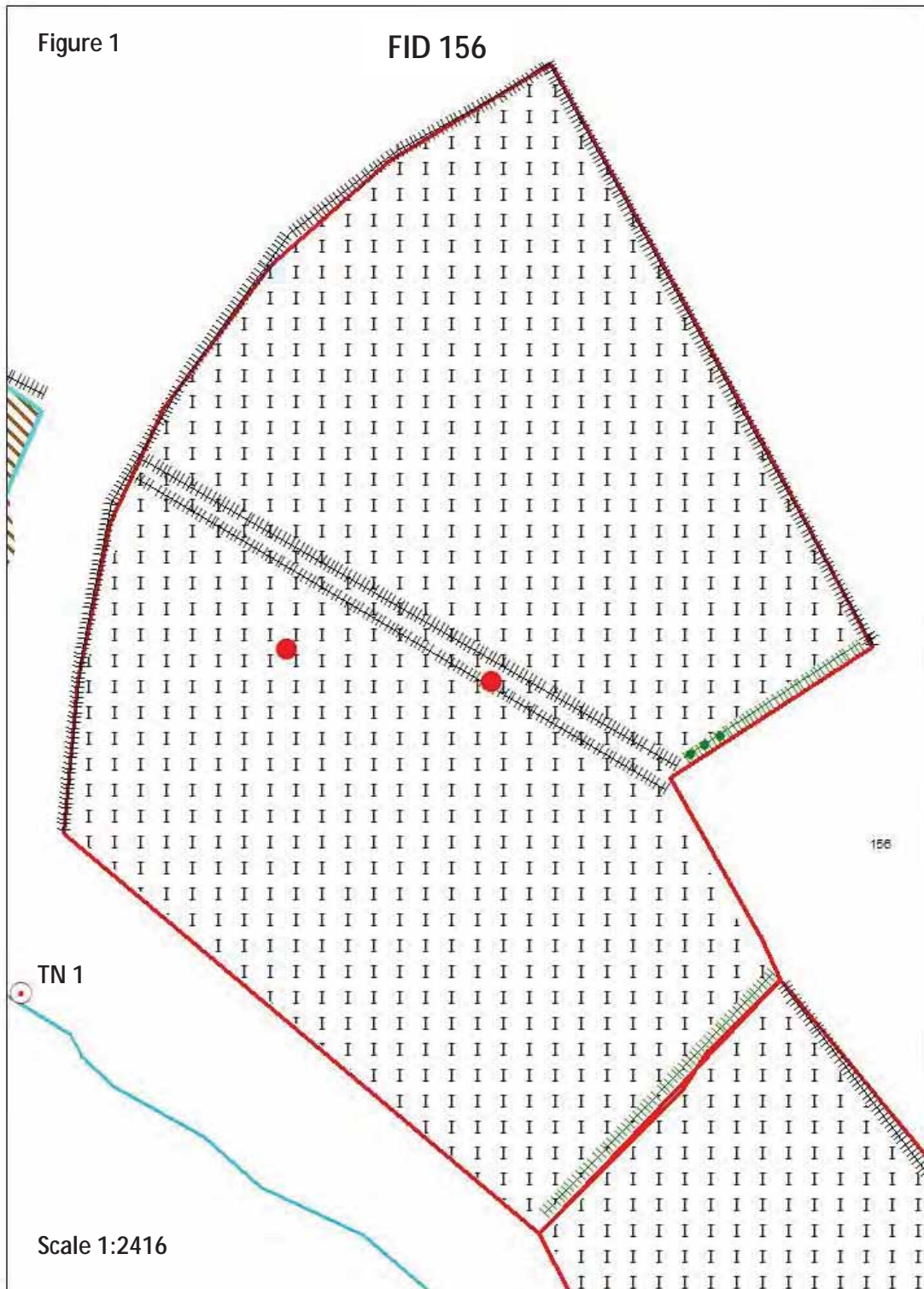
1.1 Background

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 156 O.S grid reference SK0025742365.

FID 156 is located south-west of Cheadle 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 156 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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



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

2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a



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derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.

2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



4. Results

4.1 Desk study - Habitats

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

Table 1

SITE DESIGNATION	NAME
LNR	Hales Hall Pool
LNR	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe



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	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey



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	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon



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	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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

4.3 Field survey

4.3.1 Habitats

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

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

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	4.9	100	
OTHER	0.00	0	
BPT			2
TOTAL	4.9	100	2

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , annual meadow grass <i>Poa annua</i> , cock's foot <i>Dactylis glomerata</i> , rosebay willowherb <i>Chamerion angustifolium</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , elder <i>Sambucus nigra</i> , goat willow <i>Salix caprea</i> , bramble <i>Rubus fruticosus agg</i> , ash <i>Fraxinus excelsior</i> , leylandii <i>Cuprocypressus x leylandii</i>



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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 potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0015042248	Stream within 50m



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, adjacent to FID 155 with moderate connectivity to the wider countryside by hedgerows and close to FID 144 to the north-west.

The site itself consists mainly of species poor grasslands (100%), with species poor hedgerows consisting mainly of hawthorn, blackthorn, elder, and ash and sycamore *Acer pseudoplatanus*.

The site has mostly poor biodiversity on the whole with only 2 mature oak *Quercus species* and sycamore present. Although the site is adjacent to a tall ruderal scrub and stream/ riparian habitat the site itself only supports species poor grazed grassland, which would not likely support any protected species that are associated with this habitat mosaic.

It is also unlikely that the site would support many protected species apart from roosting/ foraging bats and badger. The site is therefore afforded district ecological importance due to the presence of 2 trees that have potential to support roosting bats.

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



6. Recommendations

Trees with bat potential

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

It is therefore recommended that the 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 at least some of the hedgerows and scattered trees are retained if the site is to be developed.

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

7. Conclusion

The site has low potential to support protected species as the habitats present on site are species poor and have poor boundary habitat and connections to other more biodiverse habitats. However, the site is attributed district ecological importance due to the 2 trees present on site that have been deemed capable of supporting roosting bats.

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

- Bat surveys of the 2 trees deemed to have potential to support roosting bats
- Vegetation removal at the appropriate time of year



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FID 157



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FID 157

1. Introduction

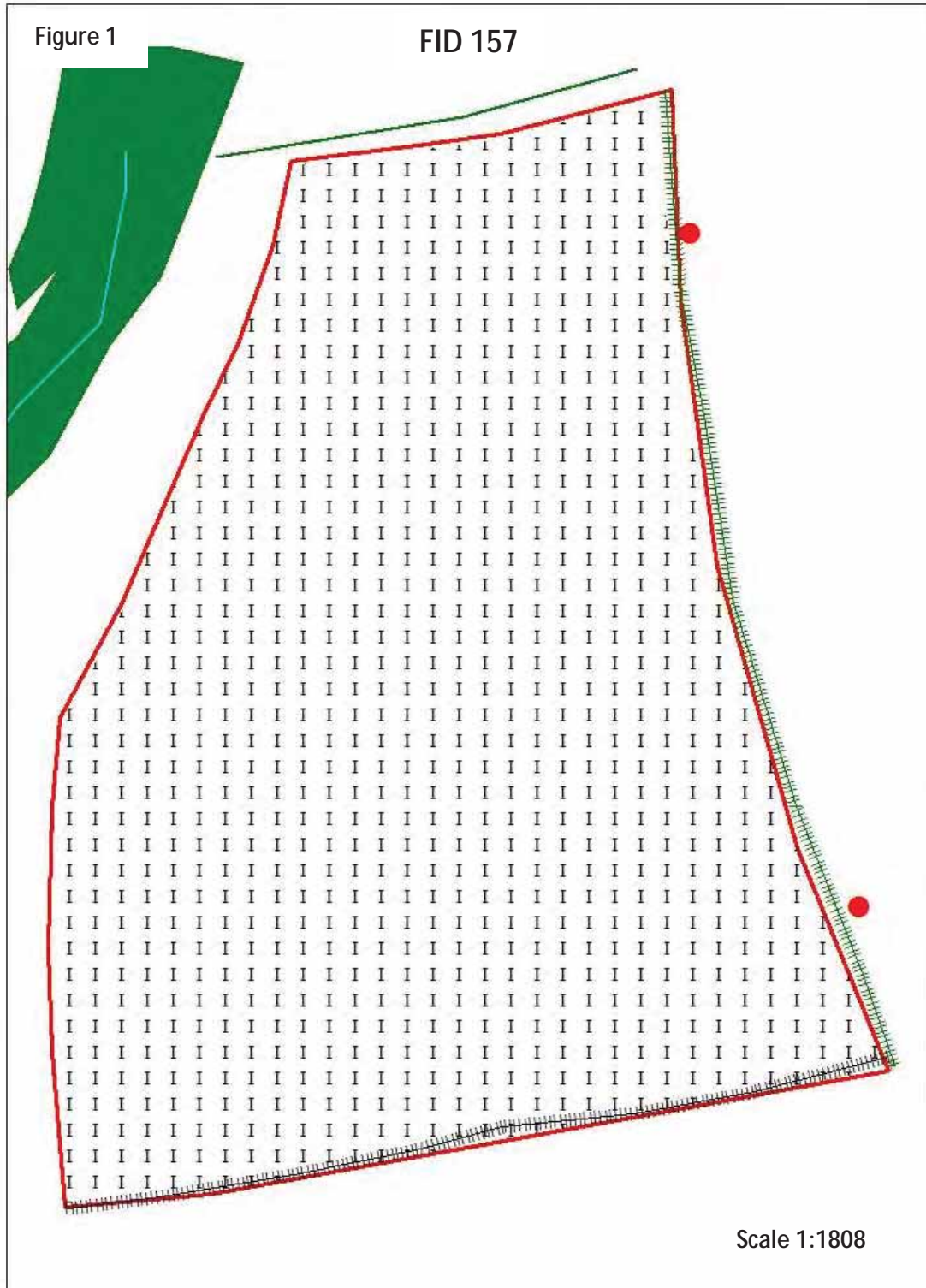
1.1 Background

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 157 O.S grid reference SK0160844159.

FID 157 is located north-east Cheadle 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 157 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Waste Wood
AWI	Murrel's Wood
AWI	Newhay Wood, Hazel Wood, Shore Wood, Hayes Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibridging Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Highshut Wood
BAS	Gorsey Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Kingsley Holt (east of)
SBI	Hawksmoor Nature Reserve
SBI	Gibridging Wood
SBI	Gibridging Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A true fly
	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown birch bolette



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	Brown hare
	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Grey wagtail
	House Sparrow
	Insect - beetle
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Pipistrelle
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck



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	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
	Yellowhammer
INV	American Mink
	Canadian water weed
	Chinese muntjac
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Common Kingfisher
	Common lizard
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Redwing
	Ruddy shelduck
	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 hedgerow
- Species poor improved grassland



Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	3.1	100	
BPT			2
TOTALS	3.1		2

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , dandelion <i>Taraxacum officinale agg</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , bramble <i>Rubus fruticosus agg</i> , alder <i>Alnus glutinosa</i> , ash <i>Fraxinus excelsior</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were 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 potentially nest in areas of hedgerows and scattered trees on site from March to August when birds in the UK normally breed.

Incidental records

- Birds including blackbird *Turdus merula*



5. Evaluation

Table 5

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

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

The site is surrounded by domestic dwellings, stream <50m away and species poor grassland with fairly poor connectivity to the wider countryside with hedgerows and close to FID140 and FID 146 to the North West.

The site itself consists mainly of species poor grasslands (100%), with species poor hedgerows consisting mainly of hawthorn, blackthorn *Prunus spinosa*, elder, and ash and sycamore.

The site has poor biodiversity on the whole with only 2 mature ash and sycamore present that have potential to support roosting bats. Although the site is connected to a broadleaved woodland and stream/ riparian habitat via a hedgerow to the north the site itself only supports species poor grazed grassland, which would not likely support any protected species that are associated with this habitat mosaic.

It is also unlikely that the site would support many protected species apart from roosting/ foraging bats and badger. Therefore the site is considered to have district ecological importance.

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



6. Recommendations

Trees 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 at least some of the hedgerows and scattered trees are retained if the site is to be developed.

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

7. Conclusion

The site has low potential to support protected species as the habitats present on site are species poor and have fairly poor boundary habitat and connections to other more biodiverse habitats. Nevertheless the site is attributed district ecological importance as 2 trees on site are deemed to have potential to support roosting bats.

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

- Bat surveys of the 2 trees deemed to have potential to support roosting bats
- Vegetation removal at the appropriate time of year



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FID 158



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FID 158

1. Introduction

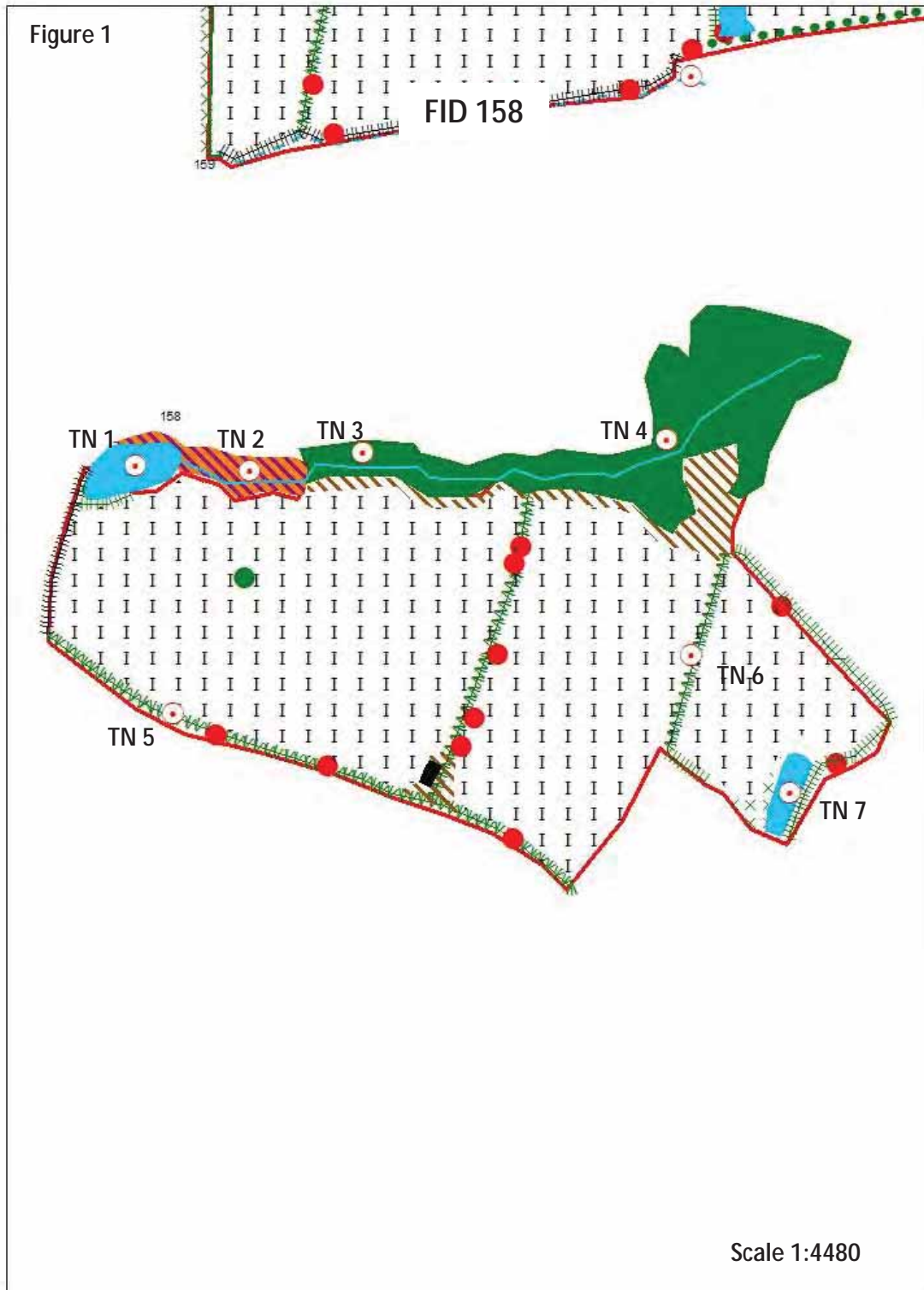
1.1 Background

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 158 O.S grid reference SK0182742323.

FID 158 is located south-east of Cheadle 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 158 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
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Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Gibridging Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Threap Wood
AWI	Highshutt Wood
SBI	Huntley Wood
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibridging Wood
SBI	Gibridging Wood (south of)
RIGS	Huntley Railway Cutting
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch



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	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath



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	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat



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	White stork
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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
- Open water – 2 ponds
- Marshy grassland
- Running water
- Species rich hedgerows
- Scattered trees
- Scattered scrub
- Species poor hedgerows
- Tall ruderal vegetation

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	5.75	82	
TR	0.37	5	
OW	0.06	1	
SS	0.04	1	
OTHER	0.78	11	
BPT			10
TOTALS	7	100	10

TR- Tall ruderal vegetation, I – Improved grassland, OW – Open water
SS – Scattered scrub, BPT – Bat Potential Trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation/ aquatic vegetation	Soft rush <i>Juncus effusus</i> , 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> , great willowherb <i>Epilobium hirsutum</i> , common nettle <i>Urtica dioica</i> , tufted hair grass <i>Deschampsia cespitosa</i> , reed canary grass <i>Phalaris arundinacea</i> , common reedmace <i>Typha latifolia</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , alder <i>Alnus glutinosa</i> , oak <i>Quercus species</i> , hazel <i>Corylus avellana</i> , goat willow <i>Salix caprea</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in various locations adjacent to the stream at the time of survey.

4.3.4 Fauna

Bats

There are 10 oak and ash trees that are 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 nest in areas of broadleaved woodland and riparian habitat from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0161542419	Requires great crested newt survey
2	SK0167942415	Requires reptile survey
3	SK0174442423	Semi-natural broadleaved woodland
4	SK00190842432	Stream/ woodland edge next to tall ruderal vegetation
5	SK0162342295	Requires hedgerow survey
6	SK0192242294	Requires hedgerow survey
7	SK0198042241	Requires great crested newt survey



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Open water			x		
Broadleaved woodland			x		
Running water			x		
Marshy grassland			x		
Species rich hedgerows			x		
Scattered trees			x		
Scattered scrub				x	
Species poor hedgerows				x	
Tall ruderal vegetation				x	
Improved grassland					x
Overall site importance			x		
I=International, N=National, R=Regional, D=District, L=Local					

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

The site itself mainly consists of species poor grassland (83%). However, the remaining 17% of habitats incorporate a biodiverse mosaic of wetland/ woodland and hedgerow habitats on the very northerly edge of the site.

The semi-natural broadleaved woodland consists mainly of ash, alder, hazel, hawthorn and elder that broadly represents a W7 *Alnus glutinosa Fraxinus excelsior* woodland.

The large stream runs along the broadleaved woodland which becomes replaced by marshy grassland consists of common reedmace, reed canary grass *a*, great willowherb and soft rush. This forms the pond to the North West which is lined by alder and goat willow. The tall ruderal vegetation to the north forms an integral part of the mosaic with mainly great willowherb and common nettle.

The species rich hedgerow runs through the centre of the site. It consists of ash and oak *Quercus species* of which 5 trees are deemed to have bat potential, as well as hazel, elder and wych elm *Ulmus glabra* and is connected to the habitat mosaic to the north and the tall ruderal vegetation and species rich hedgerow, which has similar species, to the southern boundary. The southern hedgerow supports 3 trees that are considered to have potential to support roosting bats.

The pond located to the east of the site is well connected by hedgerows to the mosaic to the north and species rich hedgerows. The pond itself was very low at the time of survey but contains aquatic broadleaved pondweed *Potamogeton natans* and lined with goat willow *Salix caprea* and alder with occasional hard rush *Juncus inflexus* and spearmint *Mentha spicata*.



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The site has a number of biodiverse habitats on site that are well connected to each other and to the wider countryside. The site could support a number of European and UK protected species including roosting and foraging bats and badger, amphibians, reptiles, birds and invertebrate populations, therefore the site is deemed as having regional ecological importance.

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



6. Recommendations

It is recommended that the habitat mosaic site and connecting species rich hedgerows are not considered for development due to the potential for supporting a number of protected species. Additionally, the site should be considered for SBI status due to its complex nature of habitats and potential to support protected species.

Great crested newt survey

As great crested newts could potentially be present within the 2 ponds and associated terrestrial habitat, a great crested newt survey is recommended according to the 'Great crested newt conservation handbook' (Froglife, 2001). It is also recommended that any refugia if present is removed by hand under watching brief of a suitably qualified great crested newt licensed ecologist.

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

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

Reptiles

Reptiles could potentially be present on site due to the presence of ponds and good terrestrial habitat, so it is recommended that a full reptile survey is carried out and any refugia present is removed by hand under watching brief of a suitably qualified ecologist.

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

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 10 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



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these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Water vole survey

A number of water vole have been recorded within 200m of the site to the west and the site itself has suitable riparian habitat to support the species, therefore a full water vole survey is recommended.

Water voles received habitat protection in 1998 through inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of section 9(4) only. This section of the Act protects the water vole's place of shelter or protection e.g. their burrows, but does not protect the voles themselves. Under the legislation, it is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or to disturb water voles whilst they are using such a place.

Otter

Otter have been recorded within 2km of the site and could potentially feed within the site, along Cecily Brook and the ponds located on site. Therefore an otter survey is recommended to search for holts and field signs such as feeding remains, footprints and spraints.

Otters are fully protected through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 2010 as European protected species. Under the legislation, it is an offence to intentionally kill, injure or take an otter as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by an otter. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of otter to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

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



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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, hedgerows, 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 very good potential for protected species to be present due to the habitat mosaic and good connectivity to other habitats, therefore is attributed regional ecological importance. The site should be considered for being classed as an SBI.

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

- Resurvey for potential classification as SBI
- Great crested newt survey
- Bat survey of the 10 trees present on site.
- Reptile survey
- Hedgerow survey
- Removal of any refugia by hand under watching brief of a suitably qualified and licensed ecologist.
- Vegetation removal at the appropriate time of year



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FID 159



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FID 159

1. Introduction

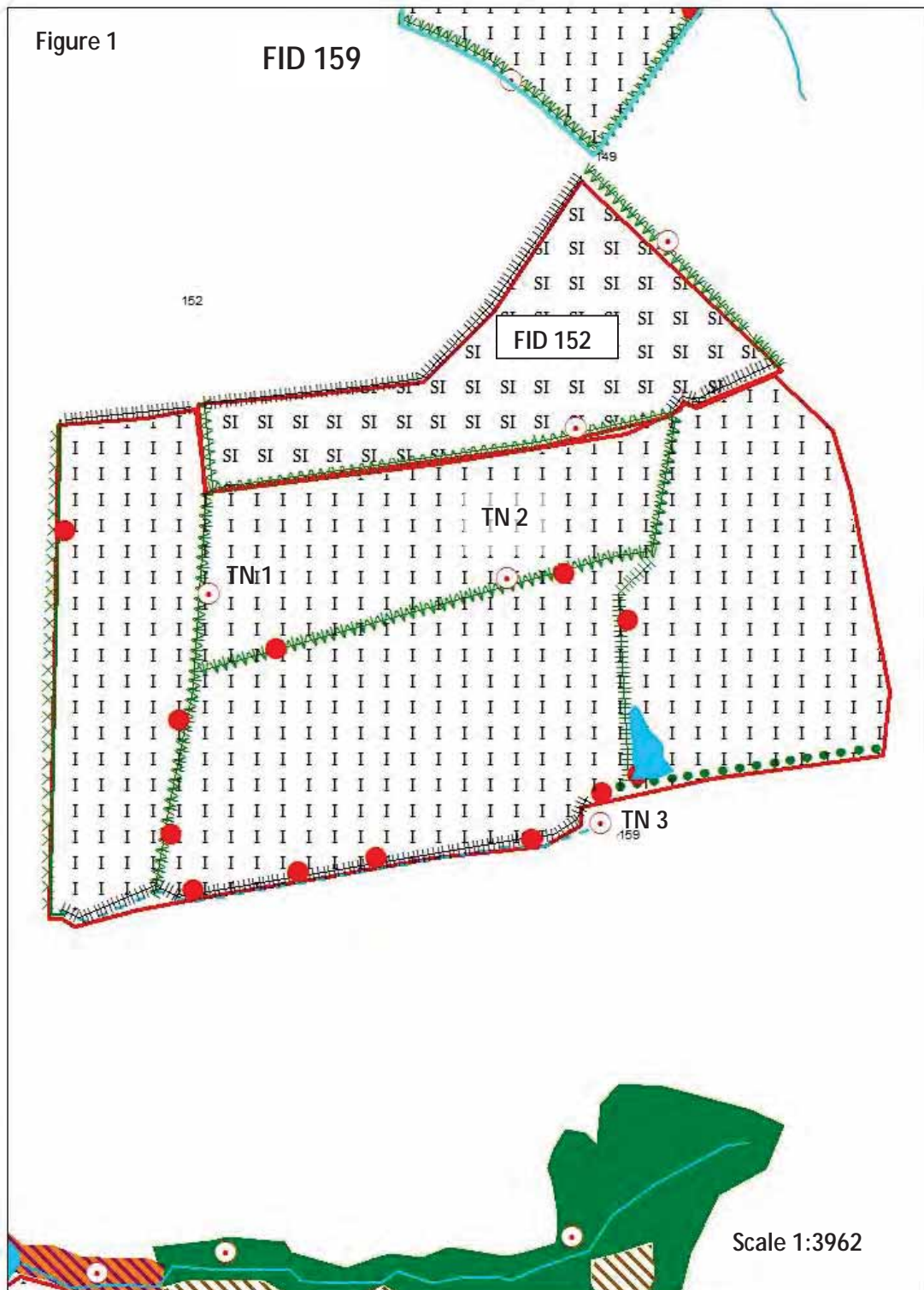
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FID 159 is located east of Cheadle surrounded by agricultural land and housing.

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).





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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.

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Gibridging Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
AWI	Rakeway
AWI	Counslow Plantation
AWI	Threap Wood
AWI	Highshutt Wood
SBI	Huntley Wood
SBI	Cheadle Fish Ponds
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibridging Wood
SBI	Gibridging Wood (south of)
RIGS	Huntley Railway Cutting
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	Barn owl
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee



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	Common Bullfinch
	Common Kestrel
	Common Kingfisher
	Common lizard
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey wagtail
	Honey bee
	House Sparrow
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath



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	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Willow warbler
INV	American Mink
	Canadian waterweed
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Barn owl
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Noctule bat
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat



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

4.3 Field survey

4.3.1 Habitats

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

- Scattered trees
- Species rich hedgerow
- Species poor hedgerow
- Scattered scrub
- Dry ditch
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	7.42	97	
OW	0.20	3	
BPT			12
TOTALS	7.62	100	12

I – Improved grassland, OW – Open water, 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> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , soft rush <i>Juncus effusus</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i> , goat willow <i>Salix caprea</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , hazel <i>Corylus avellana</i>

4.3.3 Invasive weeds

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



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

4.3.4 Fauna

Breeding birds

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

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0173642757	Requires hedgerow survey
2	SK0188842749	Requires hedgerow survey
3	SK0193742637	Dry ditch with species poor tall ruderal vegetation



5. Evaluation

Table 6

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

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

The site is surrounded by domestic dwellings and species poor grassland, adjacent to FID 152 with good connectivity to the wider countryside.

The site itself consists mainly of species poor grasslands (97%) with species rich hedgerows consisting mainly of hawthorn, elder, hazel, blackthorn, guelder rose *Viburnum opulus* and ash sycamore. There are also 12 pedunculate oak and ash trees present on site that have potential to support roosting bats.

The small pond on site is fairly shallow and heavily poached by livestock but contains aquatic broadleaved pondweed *Potamogeton natans* and marginal soft rush *Juncus effusus*.

The site has fairly poor biodiversity apart from the mature trees and species rich hedgerows but is well connected to the wider countryside so is deemed to have a regional value within the biodiversity matrix due to the whole sites assemblage and large quantity of trees with potential to support roosting bats. The site could potentially support protected species including roosting and foraging bats, and foraging badger, amphibians and reptiles.

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



6. Recommendations

Trees with bat potential

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

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

Great crested newt survey

A great crested newt survey is recommended according to the 'Great crested newt conservation handbook' (Froglife, 2001) for the pond present on site.

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.

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.

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



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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 south of the site and presence of open water, a reptile survey is recommended according to guidelines set out in the Herpetofauna workers manual (Gent and Gibson 1998).

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, 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 especially the species rich hedgerows and scattered trees are retained if the site is to be developed.

If the hedgerows and 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 district potential to support protected species despite the majority of the area being species poor habitats. However, the site is connected to other more biodiverse habitats, has a small pond and a large quantity of trees with potential to support roosting bats and therefore as a whole is attributed regional ecological importance.

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

- Bat surveys of the trees with roosting potential
- Great crested newt survey
- Reptile survey
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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FID 160



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FID 160

1. Introduction

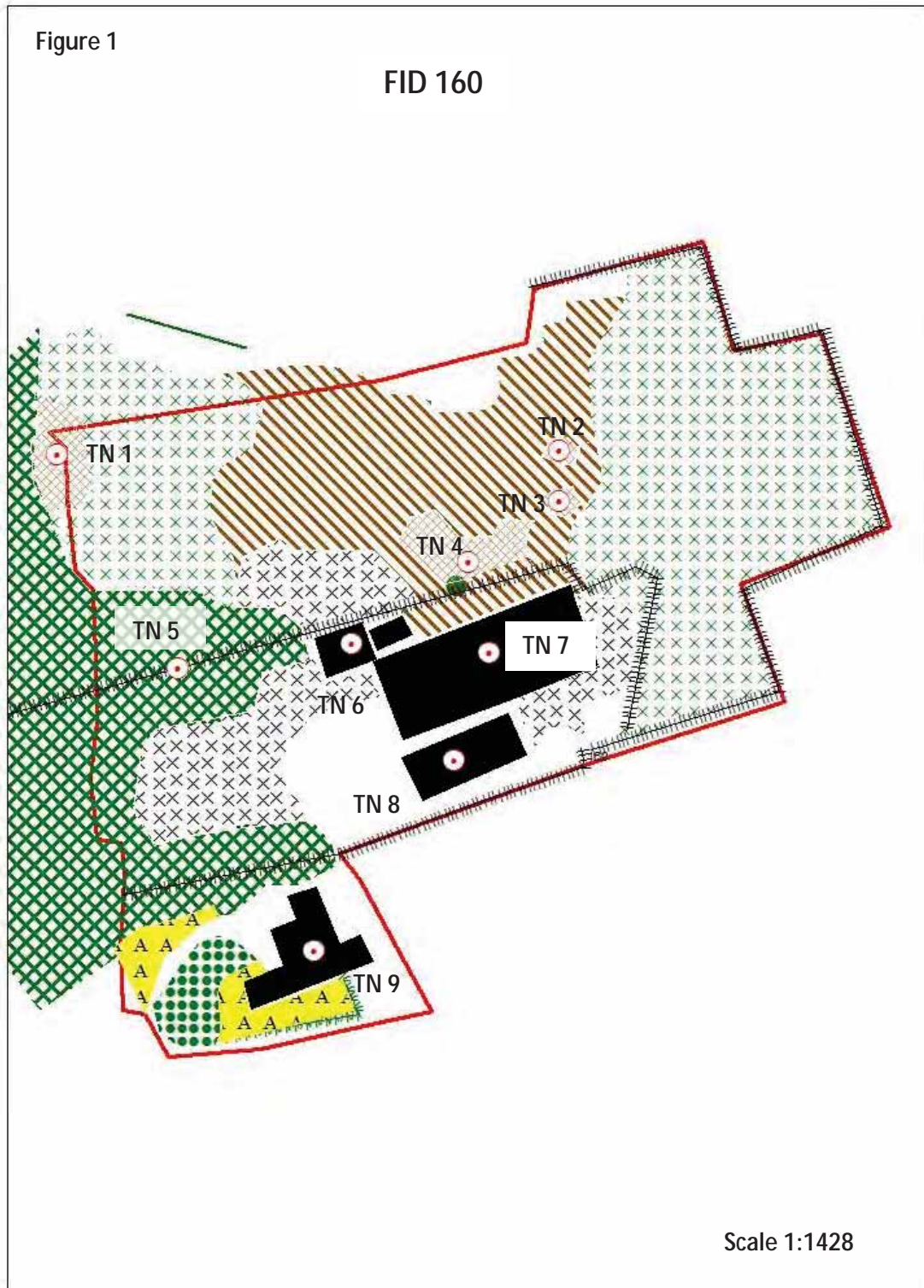
1.1 Background

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 160 O.S grid reference SJ9972042948.

FID 160 is located within western Cheadle surrounded by industrial and 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 160 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI/ SBI	Huntley Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
RIGS	Huntley Railway Cutting

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

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp



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	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting



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	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat



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	White stork
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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 5
- Scattered trees
- Dense scrub
- Scattered scrub
- Ephemeral grassland
- Tall ruderal vegetation
- Introduced shrub/ noxious weeds
- Species poor amenity grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.21	18
ESP	0.13	11
SS	0.36	31
IS	0.03	2
DS	0.13	11
SBW	0.02	2
AM	0.03	2
OTHER	0.27	23
TOTALS	1.17	100

AM – Amenity Grassland, TR- Tall ruderal vegetation, DS – Dense scrub, I – Improved grassland, SBW – Scattered broadleaved woodland, SS – Scattered scrub, 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> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , rosebay willowherb <i>Chamerion angustifolium</i> , great willowherb <i>Epilobium hirsutum</i> , common nettle <i>Urtica dioica</i> , daisy <i>Bellis perennis</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , goat willow <i>Salix caprea</i> , bramble <i>Rubus fruticosus agg</i> , ash <i>Fraxinus excelsior</i> , crack willow <i>Salix fragilis, leylandii Cuprocypressus x leylandii</i> , silver birch <i>Betula pendula</i>

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 a number of areas to the north-east of the site.

4.3.4 Fauna

Bats

There are 4 buildings on site, 1 of which is a brick and roof tile construction house with potential to support roosting bats. The remaining 3 buildings are warehouse style and of metal construction that are usually unsuitable 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 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	SJ9965142969	Japanese knotweed
2	SJ9975242969	Japanese knotweed
3	SJ9975242962	Japanese knotweed
4	SJ9973242955	Japanese knotweed
5	SJ9967542934	Palisade fence
6	SJ9971042938	Does not require bat survey
7	SJ9973742938	Does not require bat survey
8	SJ9973142921	Does not require bat survey
9	SJ9970642887	Requires bat survey

5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Scattered trees				x	
Dense scrub				x	
Scattered scrub				x	
Tall ruderal vegetation				x	
Introduced shrub	n/a				
Ephemeral grassland					x
Species poor amenity grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

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

The site is completely surrounded by domestic dwellings and industrial units/ warehouses apart, and consists of ‘brownfield land’ derelict land, derelict buildings and working buildings. However, it is fairly close to farmland over the minor Dilhorne road to the north which is connected to more biodiverse habitats. The site is split into two halves by a large palisade fence.

Although the site is ‘brownfield land’ in style it offers a range of habitats that could support a fairly diverse ecology. The main habitats are dense/ scattered scrub and tall ruderal vegetation (60%) that has evidently evolved from ephemeral grassland that forms the general nature of the site. Typical species include a mix of rosebay willowherb, bramble, common nettle, buddleia *Buddleia davidii*, goat willow, alder *Alnus glutinosa* and *Betula pendula* regeneration.

The ephemeral grassland has often formed over hard standing and offers a more biodiverse range of flora including mosses, and herbs typically including daisy *Bellis perennis*, dandelion *Taraxacum officinale agg*, orange hawkweed *Pilosella aurantiacum*, hop trefoil *Trifolium campestre*, cock’s foot and false oat grass.

The site also contains large areas of Japanese knotweed (2%) which could potentially spread even further around the site if not managed correctly.

Despite a number of European protected and UKBAP species being recorded within 2km it is unlikely that the site would support most of the species, although West European hedgehog has been recorded within 75m to the north. However, ‘brownfield’ sites like these can support a range of invertebrate species, possibly populations of common lizard *Zootoca vivipara* and a range of birds including owls and raptors such as kestrel *Falco tinnunculus*.

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



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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 highlighted 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

Reptiles could potentially be present on site due to the presence of adequate range of habitats and basking areas, particularly suitable for species such as common lizard. Therefore it is recommended that a full reptile survey is carried out and any refugia present are removed by hand under watching brief of a suitably qualified ecologist.

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

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.



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If trees 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 itself has 1 building that is deemed to have potential to support roosting bats, noxious weeds and a range of 'brownfield' habitats albeit fairly species poor in terms of floral diversity. However the fairly large size of the site and the potential to support protected species warrants being attributed district 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
- Reptile survey
- Japanese knotweed removal
- Vegetation removal at the appropriate time of year



FID 161



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FID 161

1. Introduction

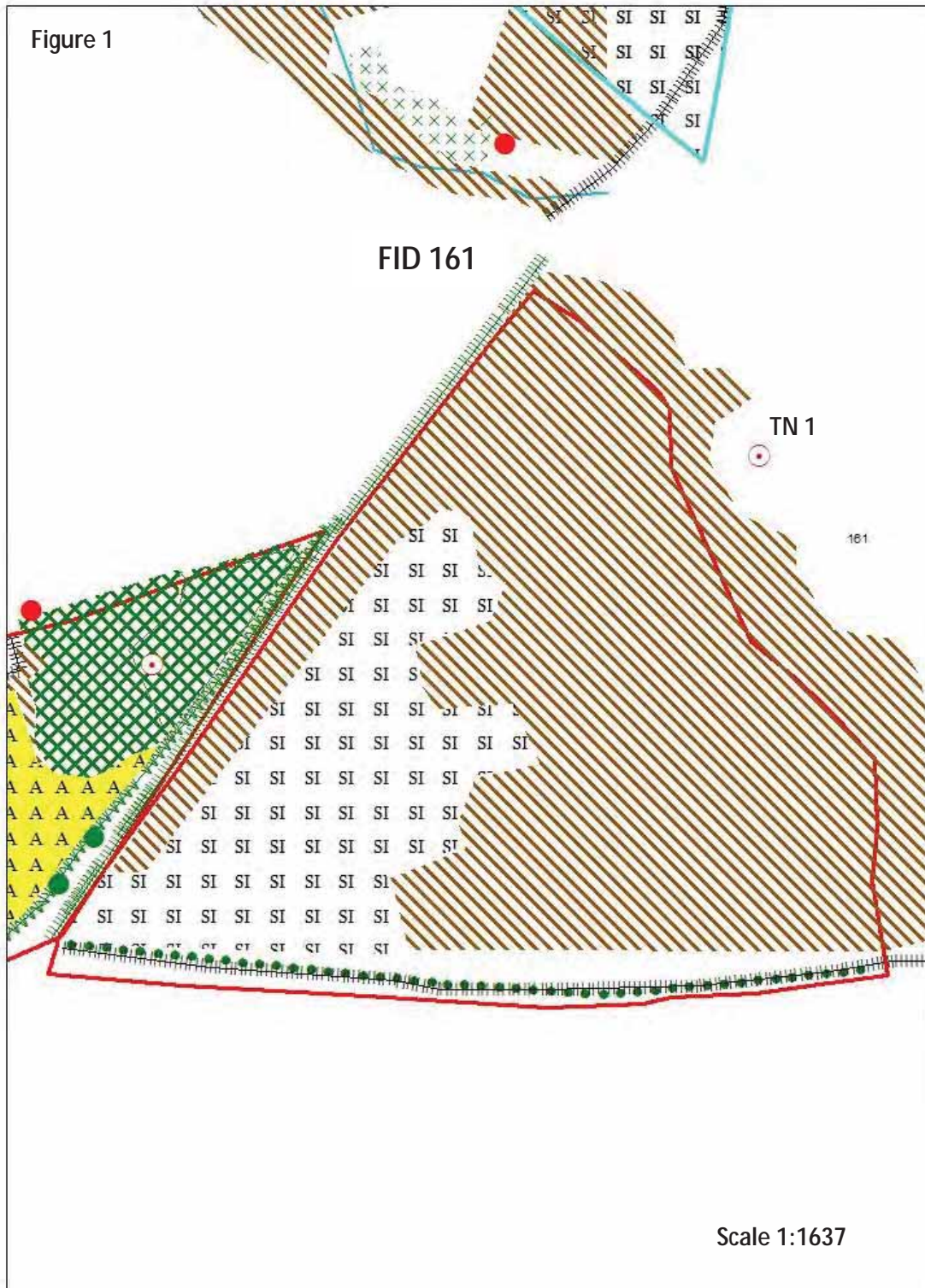
1.1 Background

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 161 O.S grid reference SK0135043795.

FID 161 is located within north Cheadle surrounded by a recreation ground, industrial buildings, housing with Cecily Brook to the east.

1.2 Survey

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





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID 161 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

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

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch
	Common carder bee
	Common Kestrel



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	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Honey bee
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath



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	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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



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4.3 Field survey

4.3.1 Habitats

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

- Tall ruderal vegetation
- Semi-improved species poor grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.86	61
SI	0.37	27
OTHER	0.17	12
TOTAL	1.40	100

TR – Tall ruderal vegetation, SI – Semi-improved species poor 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> , cock's foot <i>Dactylis glomerata</i> , tufted hair grass <i>Deschampsia cespitosa</i> , common nettle <i>Urtica dioica</i> , rosebay willowherb <i>Chamerion angustifolium</i> , ribwort plantain <i>Plantago lanceolata</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> , raspberry <i>Rubus idaeus</i>

4.3.3 Invasive weeds

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

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* 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



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in areas of scrub, broadleaved woodland and semi-improved species poor grassland 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	SK0139543833	Stream with broadleaved woodland and species poor riparian habitat



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Tall ruderal vegetation				x	
Species poor hedgerow				x	
Scattered trees					x
Species poor semi-improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

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

The site is surrounded by domestic dwellings and a network of other habitats such as running water and its riparian habitat, with broadleaved woodland as part of Cecily Brook Local Nature Reserve and is adjacent to FID 191 to the west.

The site itself consists of tall ruderal vegetation (61%) with common species present including rosebay willowherb, common nettle and curled dock. The semi-improved species poor grassland consists of typical species including false oat grass, tufted hair grass, cock's foot and dandelion *Taraxacum officinale agg.*

The tall ruderal vegetation could potentially support ground nesting birds and reptiles and provide hunting opportunities for owls and raptors.

There have been a number of European and UK protected species recorded within 2km according to the desk study. The site could potentially support foraging bats and badger but has been attributed district ecological importance due to the proximity and connectivity to other more biodiverse habitats. Species such as reptiles and amphibians could disperse into the species poor hedgerows and tall ruderal vegetation.

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

As reptiles could potentially be present on site due to the presence of running water <50 away and suitable terrestrial habitat so it is 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 *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Vegetation removal

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

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

7. Conclusion

The site has potential for protected species to be present mainly due to the close proximity of the mosaic of stream habitats and good connectivity Cecily Brook Local Nature Reserve and the wider countryside, therefore is given 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 191



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FID 191

1. Introduction

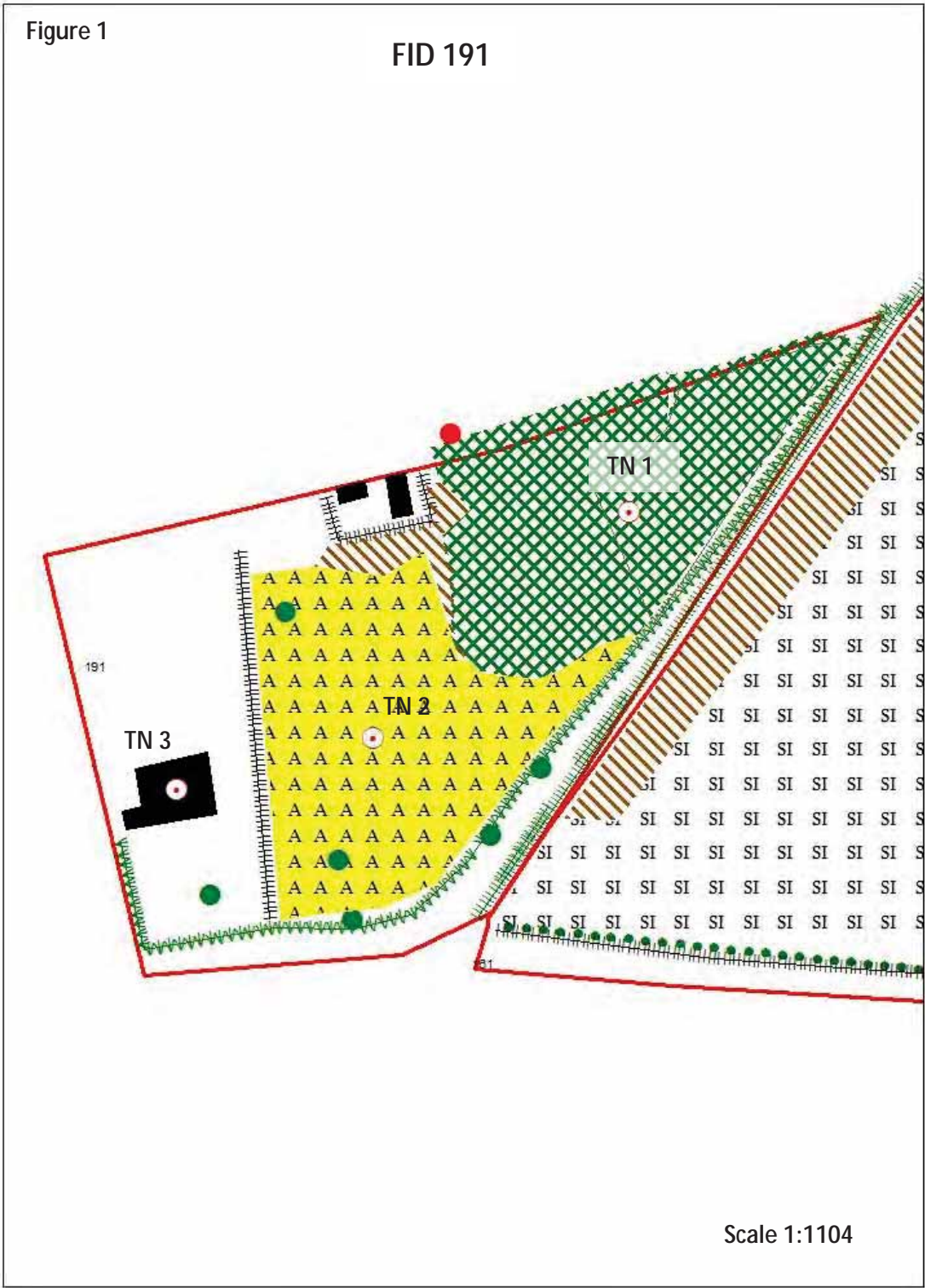
1.1 Background

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 191 O.S grid reference SK0123843783.

FID 191 is located in north of Cheadle town surrounded by commercial parking, recreation ground 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 191 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

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



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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	Hales Hall Pool
LNR	Cecilly Brook
AWI	Murrel's Wood
AWI	Lock Wood/ Lockwood Waste
AWI	Gibriding Wood
AWI	Hawksmoor Wood
AWI	Monk's Wood
BAS	Adams Hollow
SBI	Cheadle Fish Ponds
SBI	Lockwood Pasture
SBI	Rakeway House Farm (south of)
SBI	Hawksmoor Nature Reserve
SBI	Gibriding Wood
SBI	Gibriding Wood (south of)
RIGS	Highshutt Quarry, Hawksmoor

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn Swallow
	Black headed gull
	Blood vein
	Brown hare
	Brown/ sea trout
	Buff tailed bumble bee
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher



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	Common Pipistrelle
	Common pochard
	Common Snipe
	Common Starling
	Common Toad
	Common wasp
	Dark leaved hawkweed
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European Water Vole
	Fieldfare
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Honey bee
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Noctule bat
	Northern lapwing
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot



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	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	West European Hedgehog
	White tailed bumble bee
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Daubenton's bat
	Eurasian Badger
	Eurasian hobby
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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



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4.3 Field survey

4.3.1 Habitats

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

- 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
AM	0.17	33	
DS	0.13	26	
TR	0.01	2	
OTHER	0.19	39	
BPT			1
TOTALS	0.5	100	1

AM – Amenity Grassland, TR- Tall ruderal vegetation, DS – Dense scrub, BPT – Bat Potential Trees

4.3.2 Floral assemblage

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

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Annual meadow grass <i>Poa annua</i> , red fescue <i>Festuca rubra</i> , false oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , mugwort <i>Artemisia vulgaris</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> agg, ash <i>Fraxinus excelsior</i> , goat willow <i>Salix caprea</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.



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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 1 tree recorded in the walkover survey that that is deemed to 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	SK0126443779	Dense scrub encroaching
2	SK0121243780	Amenity grassland with scattered debris
3	SK0120643757	Requires bat survey



5. Evaluation

Table 6

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

Table 6 illustrates the ecological importance of 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 buildings and hard standing (39%), with amenity grassland (33%). The scrub and tall ruderal vegetation comprises goat willow, bramble, silver birch *Betula pendula* and blackthorn *Prunus spinosa*, with common nettle, cock's foot, red fescue and occasional mugwort.

The hedgerows mainly consist of hawthorn, ash, holly, elder, silver birch and goat willow, with 1 ash tree 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 buildings and a tree with bat roosting potential warrants the site attributed district ecological importance.

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

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



6. Recommendations

Buildings with bat potential

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

It is therefore recommended that the 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 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



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protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

If 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 fairly low biodiversity value overall and is set within a mainly urban environment with some connectivity to the wider countryside through a species rich hedgerow. The combination of the species rich hedgerow and buildings/ tree with bat potential constitutes the site as having district ecological importance.

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

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



FID 195



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FID 195

1. Introduction

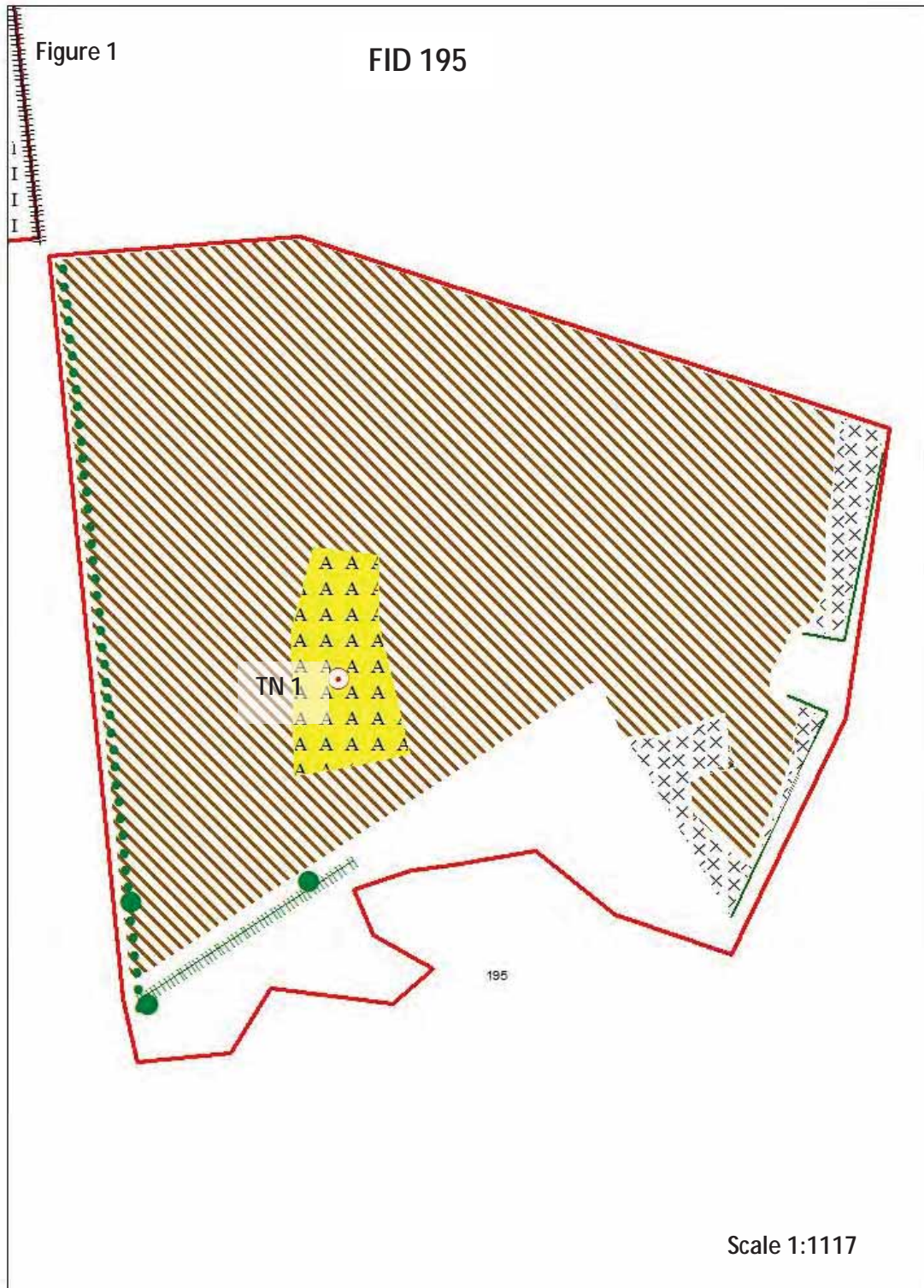
1.1 Background

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 195 O.S grid reference SK0078841759.

FID 195 is located south of Cheadle town surrounded by agricultural land, 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 195 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

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

2.6.1 Bats

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

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



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2.6.2 Badger

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

2.6.3 Reptiles and amphibians

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

2.6.4 Birds

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

2.6.5 Incidental records

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

3. Limitations

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

There 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	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
AWI	Rakeway
AWI	Monk's Wood
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Freehay
SBI	Rakeway House Farm (south of)
SBI	Huntley Wood
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

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

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard



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	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Cornflower
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey



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	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle



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	Pipistrelle bat species
	Red kite
	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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 scrub
- Ephemeral grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	0.70	90
AM	0.04	5
ESP	0.03	5
OTHER	0.13	
TOTALS	0.91	100

TR – Tall ruderal vegetation, AM – Amenity 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	False oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , rosebay willowherb <i>Chamerion angustifolium</i> , red fescue <i>Festuca rubra</i> , ground elder <i>Aegopodium podagraria</i> , nipplewort <i>Lapsana communis</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> ,



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4.3.3 Invasive weeds

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

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* and 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 tall ruderal vegetation and scrub within the site from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SK0079041778	Amenity grassland with poly tunnel



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Tall ruderal vegetation					x
Scattered scrub					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

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

The site is surrounded by domestic dwellings to the north, species poor grassland, a main road and a veterinary clinic which is poorly connected to the wider countryside.

The site itself mainly consists of an area of broadleaved woodland felled approximately within the last 2 or 3 years which has evolved into a species poor tall ruderal/ scrub and ephemeral grassland habitat mosaic, with a small area of amenity grassland and a small poly tunnel.

Species within the site include rosebay willowherb, common nettle, bramble, ash, goat willow *Salix caprea* and sycamore regeneration.

The species poor hedgerow is fairly newly planted whips, consisting of hazel *Corylus avellana*, hawthorn, holly and ash.

The sward could potentially support ground nesting birds and provide hunting opportunities for owls and raptors.

There are a number of European and UK protected species recorded within 2km according to the desk study but could potentially support foraging bats and is unlikely to support many other species, therefore the site is deemed to have low overall ecological importance.

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



6. Recommendations

Vegetation removal

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

If 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 is large enough to potentially support small mammals that could provide food for owls and raptors as well as supporting ground nesting birds. However, this former woodland site has species poor habitats and floral diversity and therefore is considered to have low ecological importance.

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

- Vegetation removal at the appropriate time of year



FID 209



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FID 209

1. Introduction

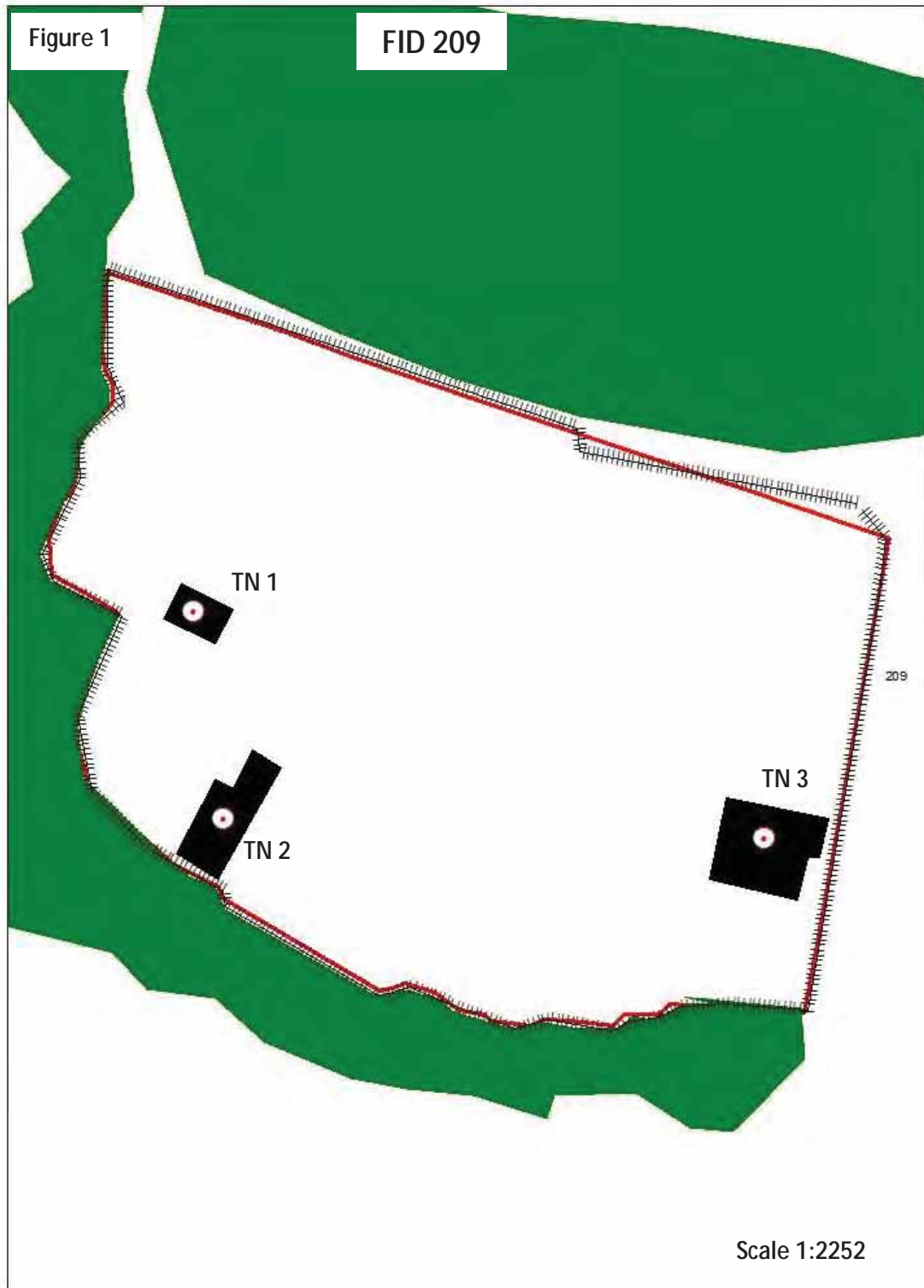
1.1 Background

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 209 O.S grid reference SJ9901842344.

FID 209 is located south-west of Cheadle town surrounded by industrial premises, woodland 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 209 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

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

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

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

2.3 Mapping

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

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

2.4 Desk study

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

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

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

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



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2.5 Aerial photography

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

2.6 Field Survey

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

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

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

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

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis sp.*

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.



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4. Results

4.1 Desk study - Habitats

The following statutory and non-statutory protected sites designated for nature conservation were located within 2km of the site.

Table 1

SITE DESIGNATION	NAME
AWI/ SBI	Huntley Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
BAS	St. Thomas's Trees
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock



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	Early mining bee
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser redpoll
	Lichen
	Native black poplar
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Sand martin
	Shrubby cinquefoil
	Small Heath
	Spotted flycatcher
	Tall hawkweed
	Tree bumble bee
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler



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INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Red kite
	Redwing
	Whiskered bat
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Building
- Scattered trees
- Scattered scrub
- Species poor amenity grassland



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Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
OTHER	3.34	100
TOTALS	3.34	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.

Very little vegetation was present on site; only occasional species such as groundsel *Senecio vulgare*, common nettle *Urtica dioica*, and dandelion *Taraxacum officinale* agg were 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.

4.3.4 Fauna

Bats

The site has 3 large buildings of which are corrugated metal construction that are deemed to have very low potential to support roosting bats.

4.3.5 Target notes

Table 4

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9894642368	Does not require bat survey
2	SJ9895342313	Does not require bat survey
3	SJ9910542307	Does not require bat survey



5. Evaluation

Table 5

Habitat	Ecological Importance				
	I	N	R	D	L
Buildings					x
Overall site importance					x
I=International, N=National, R=Regional, D=District, L=Local					

Table 5 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

There are no recognised habitats present on site as the site comprises mainly hard standing and indicative of industrial sites have low biodiversity value and therefore are deemed to have a low value within the matrix. The buildings also have very low potential to support roosting bats.

The site is however surrounded by the remaining part of the industrial estate, broadleaved woodland, a pond within 250m to the west and very good connectivity to the wider countryside.

Despite a number of European protected and UKBAP species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include terrestrial amphibians and reptiles, using debris around the site as refugia and as potential basking areas.



6. Recommendations

Great crested newt survey

As great crested newts could potentially be present on site under refugia, due to the presence of the pond to the west, a great crested newt survey is recommended of the pond according to the 'Great crested newt conservation handbook' (Froglife, 2001). It is also recommended that any refugia present on site are removed by hand under watching brief of a suitably qualified great crested newt licensed ecologist.

The great crested newt is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 as a European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a great crested newt as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of great crested newts to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species. The legislation applies to great crested newts in both aquatic and terrestrial habitats and to all life stages.

Reptiles and amphibians

All common reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

As reptiles could potentially be present on site due to the presence of the pond to the west and broadleaved woodland, with numerous areas of refuge and basking present on site it is recommended that all refugia present is removed by hand under watching brief of a suitably qualified ecologist.

7. Conclusion

The site has very low biodiversity value overall, however due to the high quality of the surrounding broadleaved woodland and the pond within 250m this industrial site could be utilised by amphibians and reptiles. Nonetheless the site is still deemed to have low ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Great crested newt survey and removal of refugia by hand
- Removal of refugia by hand for reptiles



FID 211



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FID 211

1. Introduction

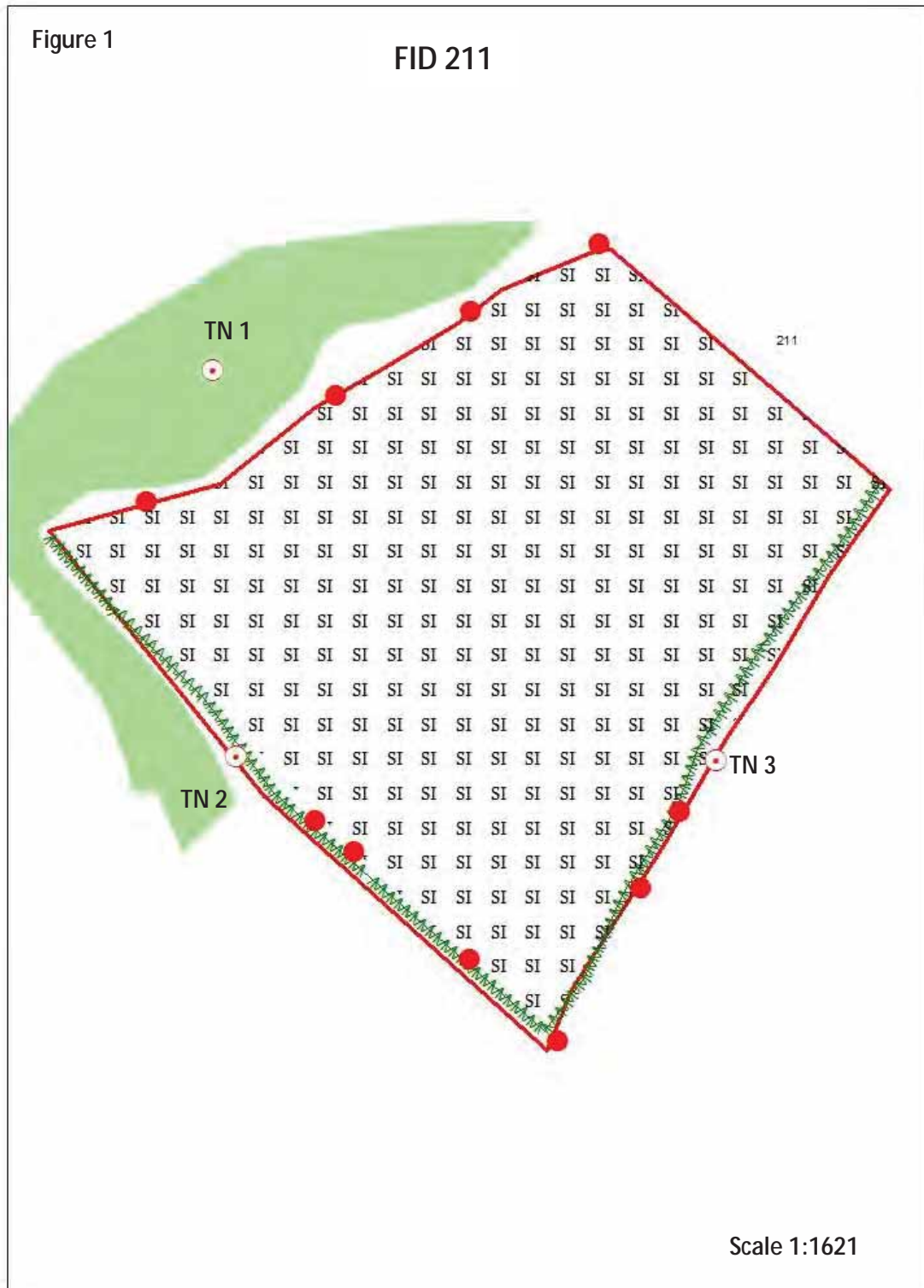
1.1 Background

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 211 O.S grid reference SJ9936142531.

FID 211 is located south-west of Cheadle town surrounded by agricultural land, woodland 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 211 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).



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2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis sp.*

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.



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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	Cecily Brook
AWI/ SBI	Huntley Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
BAS	St. Thomas's Trees
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Barn swallow
	Black headed gull
	Brown long eared bat
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp
	Corn spurrey



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	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Early mining bee
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Lichen
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil



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	Small Heath
	Song thrush
	Spotted flycatcher
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Bluebell
	Brown long eared bat
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Red kite
	Redwing
	Ruddy shelduck
	Whiskered bat
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species



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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Scattered trees
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.24	96	
OTHER	0.05	4	
BPT			10
TOTALS	1.29	100	10

I – Improved grassland, BPT – Bat potential trees

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , common nettle <i>Urtica dioica</i> , creeping bent <i>Agrostis stolonifera</i> , tufted hair grass <i>Deschampsia cespitosa</i> , creeping buttercup <i>Ranunculus repens</i> , soft rush <i>Juncus effusus</i> , crested dog's tail <i>Cynosurus cristatus</i> , white clover <i>Trifolium repens</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i> , bramble <i>Rubus fruticosus agg</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.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* have been recorded within the site.



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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9932042582	Sitka spruce plantation >20 years old
2	SJ9930042496	Requires hedgerow survey
3	SJ9939142483	Requires hedgerow survey



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Scattered trees				x	
Species poor semi-improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by an industrial estate to the south, coniferous plantation, species poor grassland and a road to the east bordering more industrial buildings.

The site mainly consists of species poor semi-improved grassland (96%) with species including creeping bent, crested dog’s tail and perennial rye grass with herbs such as creeping buttercup and white clover. The hedgerows consist of hawthorn, hazel, oak *Quercus robur*, elder, holly, blackthorn *Prunus spinosa* and dog rose *Rosa canina*.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions would potentially include roosting/ foraging bats and foraging badger. The site has been evaluated as being of district ecological importance due to the presence of 10 trees with bat roosting potential and the species rich hedgerows.

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 10 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as a species rich hedgerow according to hedgerow qualification criteria applicable to the Staffordshire Moorlands area.

7. Conclusion

The site has mostly low biodiversity value overall, apart from the diverse boundary habitats. However, these boundary habitats consist of species rich hedgerows and trees with bat potential that constitute the site being given 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 10 trees deemed potentially suitable to support roosting bats
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 212



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FID 212

1. Introduction

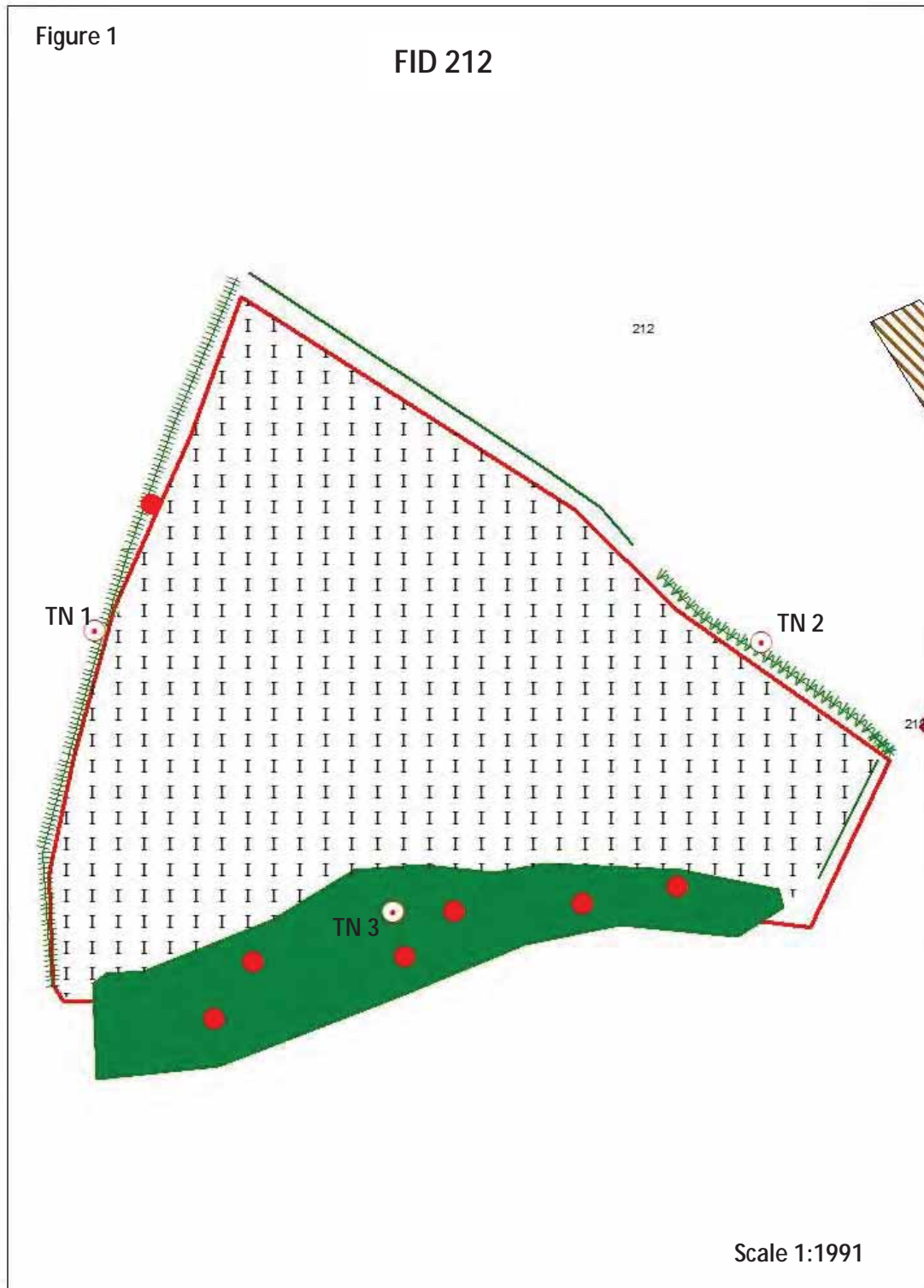
1.1 Background

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 212 O.S grid reference SJ995974281.

FID 212 is located south west of Cheadle town surrounded by agricultural land 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 212 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).



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2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis sp.*

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.



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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	Cecily Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling
	Common Toad
	Common wasp



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	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Early mining bee
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle
	Red kite
	Redwing
	Reed bunting
	Ruddy shelduck



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	Sand martin
	Shrubby cinquefoil
	Small Heath
	Song thrush
	Spotted flycatcher
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Red kite
	Redwing
	Ruddy shelduck
	Whiskered bat
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species



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4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Species rich hedgerow
- Scattered trees
- Species poor improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)	NUMBER
I	1.84	95	
BW	0.10	5	
BPT			8
TOTALS	1.94	100	8

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> , crested dog's tail <i>Cynosurus cristatus</i> , creeping buttercup <i>Ranunculus repens</i> , ribwort plantain <i>Plantago lanceolata</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , pedunculate oak <i>Quercus robur</i> , bramble <i>Rubus fruticosus agg</i> , silver birch <i>Betula pendula</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.

Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus* have been recorded within the site.



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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerows from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9951942286	Fairly new hedge
2	SJ9966042281	Requires hedgerow survey
3	SJ9956842200	Broadleaved woodland copse



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Scattered trees				x	
Species poor hedgerow					x
Species poor improved grassland					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by an industrial estate and species poor grasslands connected to a number of hedgerows to areas of broadleaved woodland, and adjacent to the south west corner of FID 218.

The site mainly consists of species poor semi-improved grassland (95%). The hedgerows consist of hawthorn, hazel, oak, elder and holly with occasional Scot's pine *Pinus sylvestris* and goat willow *Salix caprea*. The small area of broadleaved woodland to the south consists of oak, ash, elder, hawthorn and silver birch.

Despite a number of European protected and UKBAP species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include roosting/ foraging bats and foraging badger and is attributed district ecological importance for this roosting potential and the species rich hedgerow.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Trees with bat potential

All species of bat and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000) and The Conservation of Habitats and Species Regulations 2010. Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat. It is also an offence to deliberately disturb the species in such a way as to be likely significant to affect: i) the ability of a significant group of bats to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species.

It is therefore recommended that the 8 trees recorded as having potential to support roosting bats should be surveyed by a suitably qualified ecologist under criteria outlined in the bat mitigation guidelines Mitchell-Jones (2004). It is also additionally recommended that these trees are checked for the presence of breeding birds at the same time as the bat surveys.

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.

7. Conclusion

The site has mostly low biodiversity value overall, apart from the diverse boundary habitats. Within these boundary habitats contain species rich hedgerows and trees with bat potential that warrant the site being given 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 highlighted trees
- Hedgerow survey
- Vegetation removal at the appropriate time of year



FID 218



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FID 218

1. Introduction

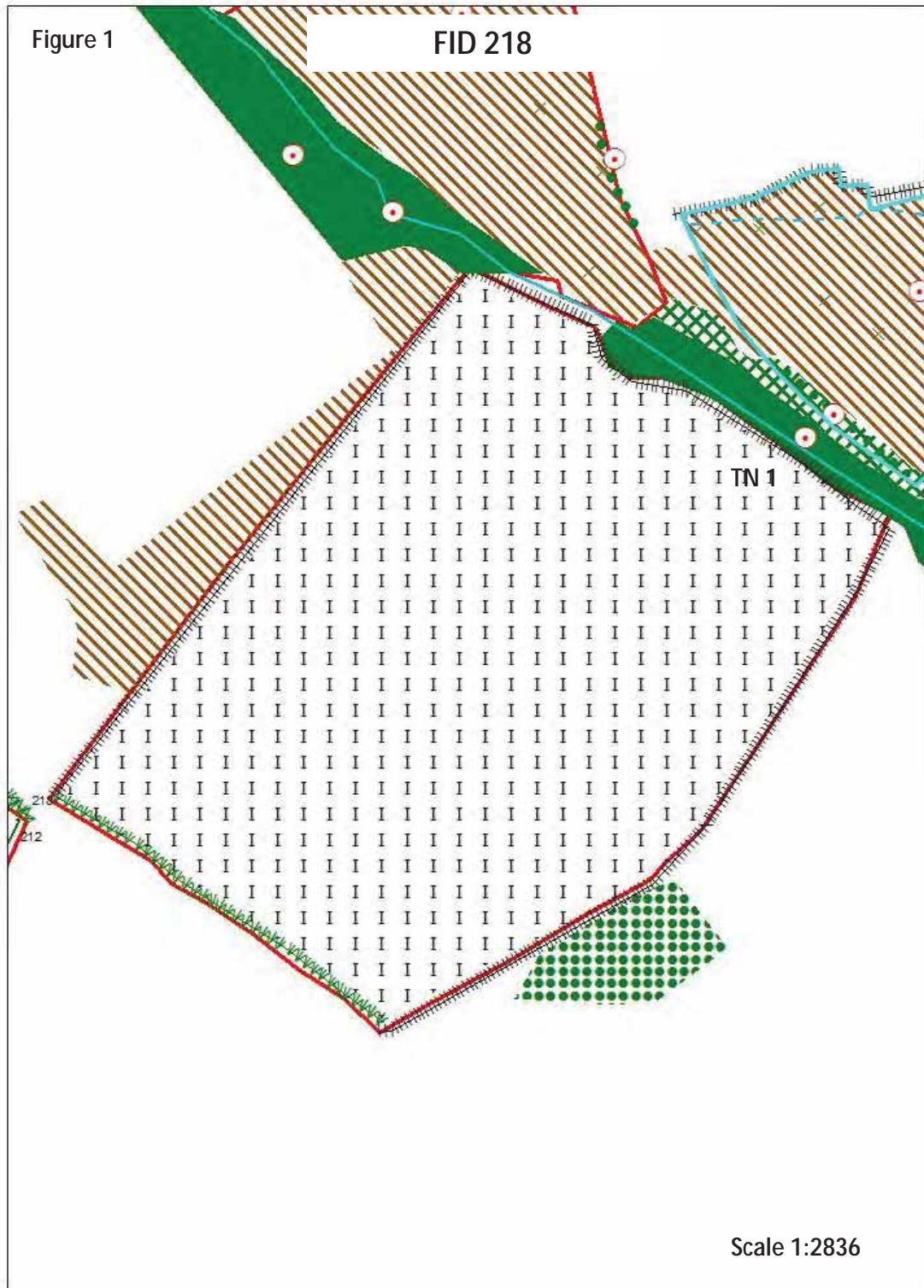
1.1 Background

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 218 O.S grid reference SK9986342299.

FID 218 is located south-west of Cheadle surrounded by agricultural land and farm buildings.

1.2 Survey

This baseline report has also been committed in taking into consideration the standard for ecological surveys set out in Guidelines for Ecological Impact Assessment in the United Kingdom (2006) and guidelines for Preliminary Ecological Appraisal (April 2013), published by the Chartered Institute of Ecology and Environmental Management (CIEEM).





2. Methodology

2.1 Introduction

Trevor Hall BSc (hons), MSc, MCIEEM carried out a walkover survey for FID218 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).



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2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis sp.*

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.



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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	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Freehay
SBI	Rakeway House Farm (south of)
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling



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	Common Toad
	Common wasp
	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle
	Red kite



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	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite



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	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

BAP – Biodiversity Action Plan Species, INV – Invasive weed species, E/ UK PS – European/ UK Protected Species

4.3 Field survey

4.3.1 Habitats

The following habitats were recorded during the walkover survey and their individual areas measured through ArcGIS version 10.2.2.

- Scattered trees
- Species poor hedgerow
- Species poor semi-improved grassland

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
I	4.17	100
TOTALS	4.17	100

I – Improved grassland

4.3.2 Floral assemblage

No rare or endangered floral species were recorded at the time of survey. The floral assemblage present on site is consistent with typical common floral species encountered within these common habitats.

Table 4

HABITAT	DOMINANT SPECIES
Grassland/ tall ruderal vegetation	Perennial rye grass <i>Lolium perenne</i> , Yorkshire fog <i>Holcus lanatus</i> , cock's foot <i>Dactylis glomerata</i> , common nettle <i>Urtica dioica</i> , dandelion <i>Taraxacum officinale agg</i>
Hedgerows/ trees/ scrub	Hawthorn <i>Crataegus monogyna</i> , sycamore <i>Acer pseudoplatanus</i> , ash <i>Fraxinus excelsior</i> , lime <i>Tilia sp</i> , elder <i>Sambucus nigra</i> , hazel <i>Corylus avellana</i>

4.3.3 Invasive weeds

No species listed in Schedule 9 of the Wildlife and Countryside Act 1981 were found within the site at the time of survey.

Weeds listed under the Weeds Act 1959 including creeping thistle *Cirsium arvense*, curled dock *Rumex crispus* and broadleaved dock *Rumex obtusifolius* have been recorded within the site.



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4.3.4 Fauna

Breeding birds

No breeding birds were observed during the walkover survey and birds do not usually breed between September and February in the UK. However, a range of common birds could potentially nest in areas of scattered trees and hedgerow from March to August when birds in the UK normally breed.

4.3.5 Target notes

Table 5

TARGET NOTE	OS GRID REFERENCE	COMMENT
1	SJ9995442383	Broadleaved woodland/ scrub/ riparian habitat



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Species rich hedgerow				x	
Scattered trees					x
Species poor grasslands					x
Overall site importance				x	
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by species poor grasslands, industrial buildings, farm buildings, FID144 to the north east and FID 212 to the south west connected by a stream/ riparian habitat to the north and hedgerows to the surrounding countryside.

The habitats present on site include mainly of species poor improved grassland (100%) with hedgerows on the borders.

The species rich hedgerows consists of hawthorn, ash, lime, hazel and dog rose *Rosa canina* and their presence with good connectivity to the wider countryside warrants the site being attributed district ecological importance.

The site mainly has low biodiversity value overall, therefore it is unlikely that the site would support many European and UK protected species that have been recorded within 2km, but could potentially include foraging bats and badger, and reptiles along the woodland edge to the north.

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 stream and riparian habitat to the north it is recommended that a full reptile survey is carried out by a suitably qualified ecologist.

Species rich hedgerows

The Hedgerows Regulations 1997 were made under section 97 of the Environment Act 1995 and came into force on 1 June 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

Therefore it is recommended that a hedgerow survey be carried out on the hedgerow by an appropriately qualified ecologist to determine whether they qualify as 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 the trees and hedgerow are to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.



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7. Conclusion

The site has species poor habitats present on site; however the surrounding habitats are potentially biodiverse and reptiles could be found along the sites boundaries, especially to the north and west. Therefore the site is given district ecological importance due to its species rich hedgerow and potential to support reptile populations.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Reptile survey
- Hedgerow survey
- Vegetation removal at the appropriate time of year



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Site FID 219

1. Introduction

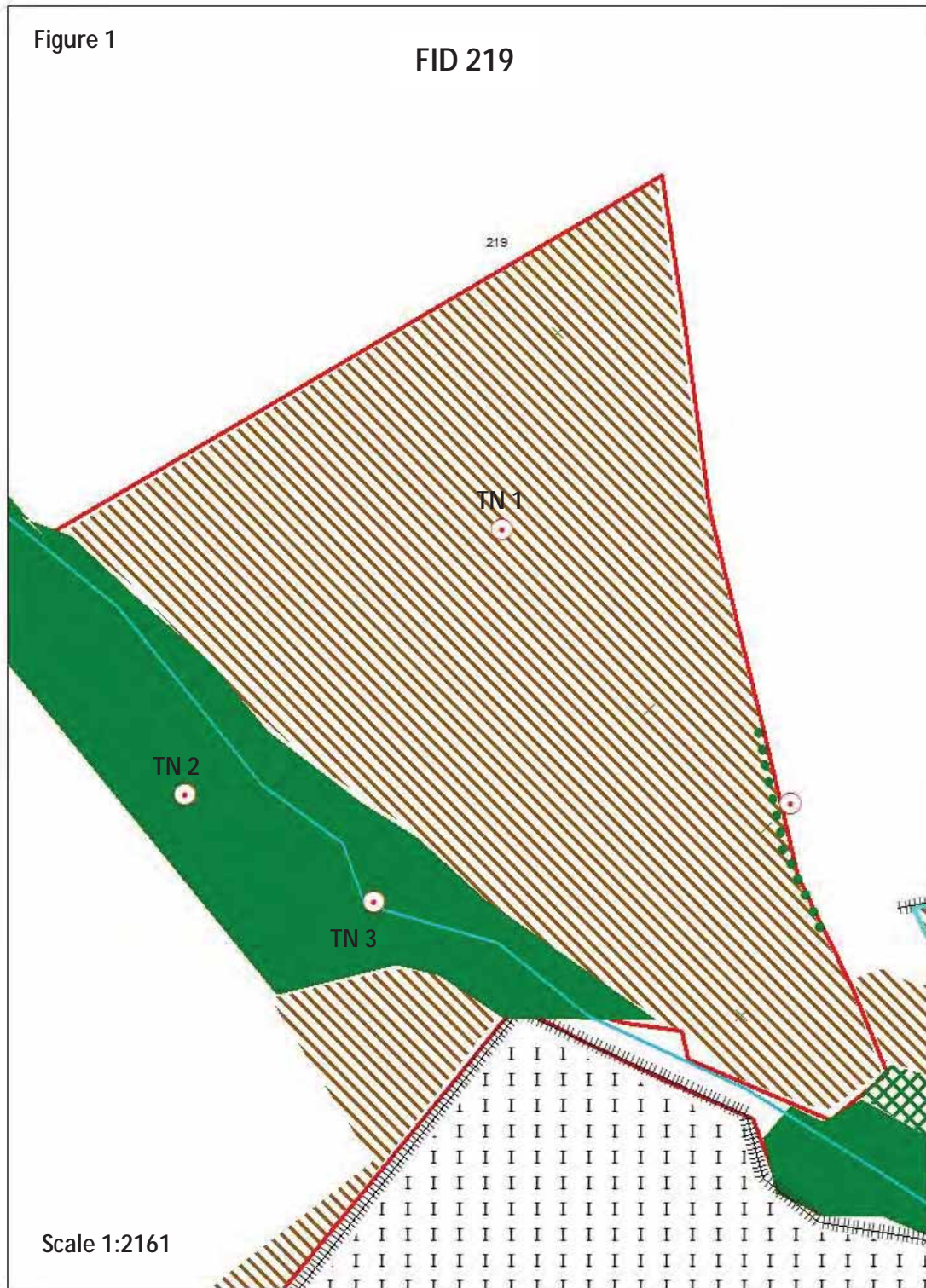
1.1 Background

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 219 O.S grid reference SJ9986042510.

FID 219 is located south-west of Cheadle town surrounded by agricultural land, 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 219 during September and October 2014 according to JNCC (2007) guidelines.

2.2 Aims

The aim of this survey is to ascertain in particular the presence of European, UK and UKBAP protected species/ habitats and common species inside the site, immediately surrounding and within 2km of the site, in accordance with CIEEM (2006), methodologies and the contract brief.

A desk study was instigated from available ecological records sources to determine the presence of all European, UK and UKBAP protected species, and European and UK sites designated for nature conservation within 2km of the site.

Therefore, both the desk study and walkover survey when used together culminate in an assessment into the value of importance for each ecological receptor found on site. The intention of these surveys being to determine the ecological value of the site as a prerequisite to potential development.

2.3 Mapping

The following Extended Phase 1 Habitat Survey map has been created using ArcGIS version 10.2.2 (2014).

All maps have been annotated according to the brief guidelines in accordance with the JNCC (2014) colour palette for ArcGIS, apart from one subjective annotation highlighting all trees with bat potential as a red spot instead of the usual green (see legend Appendix 1).

2.4 Desk study

The following statutory and non-statutory organisations were contacted with respect to the identification of existing ecological information in the vicinity, i.e. the survey area plus surrounding area within a minimum of 2 km from the site, following guidelines set out in the contract brief.

- Staffordshire Ecological Record
- RSPB
- British Trust for Ornithology (BTO)

Staffordshire Ecological Record is the primary archive for all ecological records in the Staffordshire Moorlands District area. Most records are up to date to the present day; however some groups such as BTO, local Lepidoptera groups and individual recorders submit their records annually or sporadically. Therefore all records are up to date to at least to December 2013.

In addition, a search for relevant nature conservation information was made on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and on the National Biodiversity Network website (www.searchnbn.net).



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2.5 Aerial photography

Remote sensing through aerial photography obtained from ArcGIS version 10.2.2 and Google Earth have also been studied to help identify local features that would not necessarily be seen or encountered during the walkover, as well as the potential connectivity of various habitats and geographical features that might influence the potential biodiversity of the site.

2.6 Field Survey

An Extended Phase 1 Habitat Survey was carried out in September/ October 2014 and covered the survey area shown in Figure 1. Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2007) with target notes made to describe features of interest.

In conjunction with the Extended Phase 1 Habitat Survey, the potential for the site to support any legally protected flora or faunal species and/or floral or faunal species of nature conservation importance, e.g. European, UK and Biodiversity Action Plan (BAP) species was assessed.

Detailed surveys for other faunal species were not undertaken at this time, rather the potential for the site to support each species / species group was assessed based on the known range of each species / species group and the suitability of the habitats within the site. Particular protected species identified within the desk study were not necessarily discussed within this report if the site was deemed unable to support the species in any way.

All Latin names for species are contained within this report apart from species listed within the desk study, which are detailed in Appendix 2.

All references for the guidelines and methodologies that are needed to carry out all relevant potential protected species surveys are listed in Appendix 3.

2.6.1 Bats

Mature trees can develop features such as rot holes, cavities, peeling bark, split limbs, woodpecker holes and climbing ivy which can allow bats to roost. Trees that had at least one of these features were deemed to have potential to support roosting bats and have been recorded during the walkover survey as such. Any remaining trees on site were either deemed too young or were observed to appear to have no features that would encourage bats to roost, but are considered within this report as being useful for foraging as part of a flight line and possibly for gleaning of invertebrates from species such as brown long eared bats and some *Myotis sp.*

Comprehensive building inspections were not carried out during the walkover survey. Buildings that were recorded on site were preliminarily assessed, often with binoculars where buildings were inaccessible, for bat roosting potential. Potential assessment was usually determined according to building structure, for example a warehouse or shed with corrugated roof and steel design is relatively unlikely to support roosting bats, whereas a derelict building made from bricks with missing roof tiles is recognised to have much more potential. All obvious or potential entrance points were however noted whenever observed.



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2.6.2 Badger

The site was examined for field signs of badger and all habitats within the site and at least 30m from the site were searched for setts, especially if adjacent to semi-natural broadleaved woodland or similarly suitable habitat.

2.6.3 Reptiles and amphibians

The site was searched for ponds and standing water, ditches, rubble/ log piles and wet areas or any habitat that could help support amphibian and reptile populations.

2.6.4 Birds

The site was assessed for the potential to support breeding birds and opportunities to support European, UK and UK BAP protected as well as common bird species.

2.6.5 Incidental records

In addition any field signs or incidental sightings of all species were recorded as seen.

3. Limitations

The walkover survey as part of the Extended Phase 1 Habitat Survey was carried out at an appropriate time of year according to CIEEM guidelines (2006). The only limitations to the survey were that specific flora and fauna might have been missed due to their phenology.

There were no access or other issues at the time of survey that limited the scope of this survey.



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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	Cecilly Brook
AWI/ SBI	Huntley Wood
AWI	Freehay Wood
BAS	Fair View (north of)
BAS	Commonside Quarry
BAS	Draycott Common Wood
SBI	Freehay
SBI	Rakeway House Farm (south of)
RIGS	Huntley Railway Cutting

LNR – Local Nature Reserve, AWI – listed in Ancient Woodland Inventory, SBI – Site of Biological Importance, RIGS - Regionally Important Geological Site

4.2 Desk study - Species

The following table illustrates all UKBAP, invasive species and European/ UK protected species found within 2km of the site.

Table 2

SPECIES TYPE	COMMON NAME
BAP	A flowering plant
	Adder
	Barn Swallow
	Black headed gull
	Blood vein
	Brown/ sea trout
	Buff tailed bumble bee
	Cinnabar
	Common Bullfinch
	Common carder bee
	Common Kestrel
	Common Kingfisher
	Common Pipistrelle
	Common pochard
	Common Snipe
	Common spiny digger wasp
	Common Starling



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	Common Toad
	Common wasp
	Corn spurrey
	Dark leaved hawkweed
	Dingy skipper
	Dunnock
	Dusky brocade
	Eurasian Curlew
	Eurasian teal
	Eurasian tree sparrow
	Eurasian woodcock
	European otter
	European Water Vole
	Fieldfare
	Four coloured cuckoo bee
	Galingale
	Ghost moth
	Great crested newt
	Green woodpecker
	Grey mining bee
	Grey wagtail
	Gwynne's mining bee
	Honey bee
	Hornet
	House Sparrow
	Insect - hymenopteran
	Jacob's ladder
	Large red tailed bumble bee
	Leaden spider wasp
	Lesser black backed gull
	Lesser redpoll
	Little grebe
	Mallard
	Meadow pipit
	Native black poplar
	Noctule bat
	Northern lapwing
	Northern wheatear
	Ornate tailed digger wasp
	Osprey
	Pipistrelle
	Red kite



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	Redwing
	Reed bunting
	Ruddy shelduck
	Sand martin
	Shrubby cinquefoil
	Skylark
	Small Heath
	Small square spot
	Song Thrush
	Soprano pipistrelle
	Spotted flycatcher
	Stock dove
	Tall hawkweed
	Tree bumble bee
	Tufted duck
	Wall
	West European Hedgehog
	Wild pansy
	Willow warbler
INV	American Mink
	Greater Canada goose
	Indian Balsam
	Japanese rose
	Rhododendron
	Signal crayfish
E/ UK PS	A bat
	Adder
	Bluebell
	Common Kingfisher
	Common pipistrelle
	Eurasian Badger
	Eurasian hobby
	European otter
	European Water Vole
	Fieldfare
	Great crested newt
	Osprey
	Peregrine falcon
	Pipistrelle
	Pipistrelle bat species
	Red kite



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	Redwing
	Ruddy shelduck
	Soprano pipistrelle
	Whiskered bat
	White stork

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
- Tall ruderal vegetation/ scattered scrub

Table 3

HABITAT	AREA (HECTARES to 2 d.p.)	PERCENTAGE (%)
TR	1.15	94
BW	0.08	6
TOTALS	1.23	100

TR – Tall ruderal vegetation, 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	Tufted hair grass <i>Deschampsia cespitosa</i> , false oat grass <i>Arrhenatherum elatius</i> , cock's foot <i>Dactylis glomerata</i> , rosebay willowherb <i>Chamerion angustifolium</i> , creeping thistle <i>Cirsium arvense</i> , Himalayan balsam <i>Impatiens glandulifera</i> , common nettle <i>Urtica dioica</i>
Hedgerows/ trees/ scrub	Bramble <i>Rubus fruticosus agg</i> , alder <i>Alnus glutinosa</i> , Hawthorn <i>Crataegus monogyna</i> , goat willow <i>Salix caprea</i>

4.3.3 Invasive weeds

Himalayan balsam *Impatiens glandulifera* listed in Schedule 9 of the Wildlife and Countryside Act 1981 was recorded in various locations around the site.



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Weeds listed under the Weeds Act 1959 including curled dock *Rumex crispus*, creeping thistle 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, broadleaved woodland and semi-improved species poor grassland 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	SJ9986142541	Reptile survey required
2	SJ9979742484	Riparian broadleaved woodland
3	SJ9989942514	Landscaped planting
4	SJ9982942465	Stream approximately 6ft wide and 15cm deep



5. Evaluation

Table 6

Habitat	Ecological Importance				
	I	N	R	D	L
Semi-natural broadleaved woodland			x		
Tall ruderal vegetation			x		
Overall site importance			x		
I=International, N=National, R=Regional, D=District, L=Local					

Table 6 illustrates the ecological importance of the site and each habitat in terms of their potential loss to the wider countryside.

The site is surrounded by domestic dwellings to the east, tall ruderal vegetation and a network of other habitats such as running water and its associated riparian habitat and broadleaved woodland. The site is also in close proximity to FID144 and FID218.

The site itself consists of a potentially biodiverse scrub/ tall ruderal habitat mosaic. The importance of this site is notable as it consists of a derelict site connected to other biodiverse habitats which warrants the site being considered to have regional ecological importance.

The tall ruderal vegetation (94%) is species poor with tufted hair grass, creeping thistle, rosebay willowherb, common nettle, curled dock, Himalayan balsam and bramble.

The broadleaved woodland consists of a mixture of goat willow, alder and hawthorn concentrated along the stream.

The sward could potentially support ground nesting birds, reptiles and terrestrial habitat for amphibians and provide hunting opportunities for owls and raptors.

Despite a number of European and UK protected species being recorded within 2km it is unlikely that the site would support most of the species. The exceptions could potentially include foraging bats.

Additionally, species of flora could have been missed due to seasonal constraints such as vegetative die back, grazing or mowing and similarly fauna could have been missed due to migration or specific seasonal life cycles in which they might have been recorded at another time of the year.



6. Recommendations

Reptiles and amphibians

As reptiles could potentially be present on site due to the presence of running water and a suitably large area of terrestrial habitat it is 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 *Lacerta vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5) which makes it an offence to intentionally kill, injure or sell the animals.

Vegetation removal

All species of wild bird and their nests are protected under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act 2000), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

As Himalayan balsam is present on site it is recommended a regime of eradication either through spraying glyphosate, mowing or hand pulling over 2 years according to 'Information Sheet 3: Himalayan Balsam' (Centre for Ecology and Hydrology, 2004).

If scrub and vegetation is to be removed it is recommended that this is completed according to BTO guidelines (September to February) to avoid the breeding bird season and contravention of the aforementioned Act.

7. Conclusion

The site has potential for protected species to be present due to the mosaic of habitats and habitat structure present, especially as the site is well connected to the wider countryside. Therefore the site is considered to have regional ecological importance.

The following surveys/ actions are therefore recommended prior to any potential development works being carried out:

- Reptile survey
- Adoption of Himalayan balsam removal regime
- Vegetation removal at the appropriate time of year