PLANNING DESIGN ENVIRONMENT



121-123 Tunstall Road, Knypersley Ecological Assessment (TEP Report Ref: 5523.001)

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121-123 Tunstall Road, Knypersley
Ecological Assessment

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EXECUTIVE SUMMARY

1. TEP was commissioned in December 2015 by Mr and Mrs Critchlow to undertake a preliminary ecological assessment, with a focus on bats, of a property at 123 Tunstall Road, Knypersely, Staffordshire. The survey was required to identify ecological constraints associated with the demolition of the house and associated out buildings to facilitate a new residential development of approximately 7 properties. The proposals for the surrounding open land have not been confirmed, but it is understood they are likely to be subject to landscaping works.

2. The house at 123 Tunstall Road is to be demolished along with its associated garages and out buildings. In addition, the garage only of 121 Tunstall Road will also be demolished. These buildings were subject to an external and internal bat roost assessment by a licensed bat worker. The house at 121 Tunstall Road was not subject to the assessment as it is understood this is to be retained.

3. None of the buildings were found to support evidence of bats however, the main house (Building 1) and small outbuilding (Building 2) were found to have 'low' potential to support roosting bats. As these building will be demolished under the site proposals, and in accordance with Bat Conservation Trust guidelines, a single nocturnal survey is therefore required to confirm whether bats are present and if so, the species and status of roosts. This survey must be carried out between mid-May and the end of August.

4. A number of the trees around the perimeter of the site were found to have potential to support roosting bats. These trees should be subject to a preliminary ground based assessment in order to assign category ratings and define the requirements for further survey in 2016, should this be necessary.

5. The trees and shrub vegetation around the site have some potential to support nesting birds and potentially hedgehog. Any vegetation clearance work should be undertaken outside the bird nesting season (March to August inclusive, but checks may also be needed outside this period for some species). If this is not possible a nesting bird check will be required a maximum of 24 hours in advance of any works.

6. Where trees are to be removed or will be impacted upon by the works, these should be subject to an Arbroicultural Impact Assessment prior to works taking place.

7. Opportunities for biodiversity enhancement within the site have been identified.

1.0 INTRODUCTION

1.1 TEP was commissioned in December 2015 by Mr and Mrs Critchlow , to undertake an ecological assessment, with a focus on bats, of a site at 121-123 Tunstall Road, Knypersley. The survey was required to identify any potential ecological constraints associated with the redevelopment of the site. One of the two properties and its outbuildings, together with the garage from the second property, will be demolished to facilitate a small residential development. The proposals for the surrounding habitats have not been confirmed, but it is understood that there may be some landscaping of these areas.

1.2 An ecological assessment of habitats on site was carried out on 8th December 2015. In conjunction with this survey, a licensed bat worker also completed an external and internal bat roost assessment of the buildings due for demolition.

1.3 This report has the following objectives:

- to describe the existing site and give an overview of the habitats present;
- to identify whether there are any features of conservation value such as legally protected species or habitats of biodiversity importance;
- to advise further surveys or mitigation requirements that may be needed prior to development of the site; and
- to outline opportunities to provide biodiversity enhancement.

2.0 SITE DESCRIPTION

1.4 The site is located within Knypersley, south of the town of Biddulph, Staffordshire at approximate central grid reference SJ 881 568. The boundaries of the site are defined by the A527 to the west, James Bateman (formerly Park Middle School) to the east and residential housing along St Johns Road and Park Lane to the north and south respectively. The church of St John's Knypersley lies immediately south of the site boundary.

1.5 The site comprises two residential properties currently occupied, with associated garages and outlbuildings. One property and its outbuildings are due for demolition. The site is set within private gardens surrounded by trees. An access driveway leads to the property from the A527 and the site is fenced in part with a combination of wooden fencing and brick walls.

1.6 The site location and immediate surrounds are shown on Figure 1 below.



Figure 1: 123 Tunstall Lane and surrounding area

3.0 METHODS

Desktop Study

3.1 Information regarding historic species records and protected sites within a 1km buffer was gathered from the sources listed in Table 1.

Table 1: Ecological information and consultations

CONSULTEE/SOURCE OF INFORMATION	NATURE OF INFORMATION
Multi-Agency Geographic Information for the Countryside (MAGIC) Map	Statutory protected sites and habitat inventory
Google Maps	Satellite imagery
Staffordshire Biodiversity Action Plan	Local BAP habitats and species
S.41 Natural Environment and Rural Communities Act (NERC) Act (2006)	Habitats and Species of Principal Importance for the Conservation of Biodiversity
Staffordshire Moorlands Core Strategy (2014)	Local Planning Policy
Staffordshire Ecological Record	Local Biodiversity Records Centre

Extended Phase 1 Habitat Survey

3.2 The Extended Phase 1 habitat survey was undertaken on 8th December 2015 by Marj Nadouce (MCIEEM, Grade 3 FISC[1]) The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC 2010) and Guidelines for Preliminary Ecological Appraisal (IEEM 2012). It provides an overview of key habitats and identifies any features of ecological value, as well as the presence, or potential presence, of any protected or notable species.

Bat Roost Assessment

Bat Roost Potential of Buildings

3.3 The house due for demolition (Building 1) along with its outbuilding (Building 2) and three garages (Buildings 3, 4 & 5), were subject to the preliminary bat roost assessment. This comprised a full external and where feasible, internal bat roost assessment, carried out on 8th December 2015 by Marjorie Nadouce (Bat Licence Ref: 2015-9736-CLS-CLS). The daytime assessment was undertaken in accordance with Bat Conservation Trust (BCT): Bat Surveys, Good Practice Guidelines (Hundt, 2012).

3.4 The buildings were searched internally and externally for any evidence of use by bats, such as:

- Live or dead bats;
- Bat droppings;
- Feeding remains (e.g. stripped moth wings);
- Urine staining;
- Fur oil staining.

3.5 Following assessment the buildings were categorised as having negligible, low, moderate or high potential to support roosting bats, or confirmed as a bat roost.

Bat Roost Potential of Trees

3.6 As part of the Phase 1 habitat survey, trees within and around the perimeter of the site were subject to an initial assessment as to their potential to support roosting bats. Mature trees and those with any obvious features were noted and an assessment ot the trees' ability to provide foraging or communting habitat was also made.

Limitations to Surveys

3.7 The habitat survey, was undertaken outside of the optimal survey season however, given site's position within a private garden along a main road, this is not considered to be a constraint in this instance. Most species were found to be typical of amenity/ornamental planting and were still readily identifiable. Broad habitats were confidently assessed.

[1] Field Identification Skills Certificate

4.0 RESULTS
Desktop Survey

4.1 There are no statutory sites protected for nature conservation within the 1km search area of the site. The site does lie within a SSSI Impact Zone. These Impact Zones relate to specific development types which Natural England has identified as having the potential to impact on SSSIs, SACs, SPAs and/or Ramsar sites in the surrounding area. However, residential developments are not included within the list of developments likely to have an impact, so the SSSI Impact Zone is not of relevance to the proposals for the redevelopment of the site.

4.2 There are three non-statutory wildlife sites within 1km of the site, these are:

- Newpool - Biodiversity Alert Site
- Knypersley Fishing Pool - Biodiversity Alert Site
- Knypersley Meltwater Channel - Geological Site

4.3 The desk study returned data indicating the presence of a number of protected species within 1km of the site including:

- Common Pipistrelle *Pipistrellus pipistrellus*
- Brown long eared bat *Plecotus auritus*
- Whiskered/Brandts bat *Myotis mystacinus*
- Water vole *Arvicola amphibius*
- Native bluebell *Hyacinthoides non-scripta*

4.4 Following the assessment, it is also considered possible that the habitats present on site could support a number of S.41 species. These are listed below:

- Bat species (including pipistrelle species);
- Hedgehog; and
- S.41 bird species.

4.5 It should be noted that absence of protected species records within the search area may be due lack of data for that area, rather than absence of a particular protected species.

Habitat Survey

4.6 The site comprises buildings, areas of hard standing, amenity (lawned) areas, broadleaf and coniferous trees and ornamental shrub planting. A list of the habitats recorded and summary descriptions for each habitat are given below. The Phase 1 habitat plan, is provided at Figure G5523.001. Buildings referred to in this report are also indicated on the Phase 1 habitat plan.

- Buildings and hard standing;
- Amenity grassland;
- Scattered broadleaf and coniferous trees;
- Ornamental (introduced) planting.

<u>Buildings and hardstanding</u>

4.7 The buildings on site comprise two occupied houses along with their associated garages and outbuildings. The house due for demolition (Building 1) is a two storey brick built structure which is rendered in part with pebbledash over some of the

external walls. The roof is multi-pitched with tiles and has a twin apex above the windows to the southern elevation. Garages and outbuildings are a mixture of flat and pitched tiled roofs. Photographic descriptions of the buildings are provided in the daytime bat roost assessment at Appendix 1.

4.8 There are also two small shed type structures within the rear garden of Building 1.These are single story with pitched and felted roofs.

4.9 Areas of hard standing are located at the driveway leading into the houses from the A527 and patio areas to the rear of the Building 1.

Amenity grassland

4.10 There are two distinct areas of amenity grassland to the west and south of Building 1 which comprise closely mown laned areas largely dominated s which include perennial rye-grass *Lolium perenne* Broadleaf species include white clover *Trifolium repens*, common mouse-ear *Cerastium fontanum* and creeping buttercup *Ranunculus repens.*

Scattered broadleaf and coniferous trees

4.11 Scattered broadleaf and coniferous trees are present around the perimeter of the site and include species such as Cypress *Cupressus sp*., cherry *Prunus sp*., common lime *Tilia* × *europaea* and sycamore *Acer pseudoplatanus.* Some of the trees are of a age, size and condition that may be suitable for roosting bats. Many of these trees are also likely to provide a nesting and foraging resource for birds as well as an appealing visual and boundary feature.

Ornamental planting

4.12 There are numerous small planted shrub areas set within the amenity grassland to the front and side of the library. Species include broom *Cytisus scoparius* and ornamental species such as mahonia *Mahonia* spp and kerria *Kerria japonica*.

Connectivity with the wider landscape

4.13 The site is surrounded to the north and east by housing which limits the amount of connectivity to the wider habitat. A linear tree- lined corridor is located to the west of the A527 and there are areas of woodland to the south east which may provide more favourable habitat for a range of species, including bats. Gardens associated with nearby housing may provide an amount of 'stepping stone' habitat for species such as bats and birds to move along which would permit direct connectivity to this more favourable habitat further afield.

Fauna

Bats

Bat Roost Potential of Buildings

4.14 Buildings 1-5 were assessed for their potential to support roosting bats. Internally, the roof void of Building 1 was inspected and no evidence of bat use was noted. The void being in good condition with no obvious enter/egress points to the exterior visible. Externally, the roof is multi pitched and in good condition with no slipped or misiing tiles, however hanging tiles are present at certain points around the building. Building 1 is considered to have 'low' potential to support roosting bats based on the presence of these features and the opportunities for entry/egress that this may provide.

4.15 Building 2 is a small outbuilding with a pitched and tiled roof which is also in generally good condition however, a number of lifted tiles could provide opportunities for bats to enter. Building 2 is also considered to have 'low' potential to support bats.

4.16 No other features within any of the buildings (including the two small garden 'shed' buildings) were found to be suitable for bats. No evidence of bats e.g droppings, staining, feeding remains etc, was noted either internally or externally during this assessment. Further details are provided in Appendix 1.

4.17 The site was also assessed in terms of its likely value to foraging and commuting bats. The trees around the perimeter of the site could provide foraging opportunities for the local bat population. Linear features such as a wooded corriodor to the east of the site and a large body of open water to the south east may also provide high quality foraging opportunities nearby. Connectivity to these more favourable habitats is most likely to be gained along scattered trees and residential gardens around the site.

Bat Roost Potential of Trees

4.18 Many of the mature trees around the perimeter of the site are likely to provide foraging and potentially roosting opportunities for bats. If any of these trees are to be removed or affected by the works, they should be subject to a preliminary ground based assessment for bats and an Arboricultural Impact assessment, prior to any works taking place.

Breeding Birds

4.19 The buildings on site are not considered to provide nesting opportunities for birds due the lack of suitable features or entry points. The buildings are occupied and in generally good condition with intact roofs and windows. No evidence of bird breeding was noted in any of the buildings.

4.20 The trees and shrubs on site also provide suitable nesting habitat. The mowed lawn is considered too short and exposed to be suitable for ground nesting birds.

Section 41 Species

4.21 The habitats within the site also have the potential to support a number of S.41 species, with good quality foraging, refuge and hibernation habitat in particular, for hedgehogs.

5.0 DISCUSSION AND CONCLUSIONS

Designated Sites

5.1 There are no statutory sites designated for nature conservation within the 1km search area of 121-123 Tunstall Road.

5.2 None of the non-statutory sites will be affected by the proposed development and no pathways have been identified via which the development could affect these sites.

Habitats

5.3 All the habitats within the site are common and widespread and typical of residential gardens within an urban setting. No protected nor invasive plant species were recorded during the survey.

5.4 The removal of any trees may have an impact on bats both in terms of roost opportunities and as a foraging and communting resource. Clearance of trees and shrub vegetation may also constitue a reduction in available nesting habitat for birds.

5.5 With the exception of some of the mature trees around the perimeter, the main value of the habitats within the site lie in their suitability to support species such as bats, birds, hedgehogs and invertebrates, rather than having an intrinsic value themselves.

Bats

5.6 One property and four associated garages/outbuildings will be demolished. In accordance with BCT Guidelines, all buildings with low roost potential will require one dusk or dawn survey. Buildings 1 and 2 have been assigned 'low' potential to support roosting bats and as such, demolition of these buildings should not take place until the status of roosting bats has been confirmed.

5.7 The remaining garages (Buildings 3, 4 & 5) are classed as having 'negligible bat potential and will not require further survey.

5.8 A bat dusk emergence / dawn re-entry survey will be required on Buildings 1 and 2 building to confirm whether they are currently used by roosting bats. The bat survey can only be undertaken between mid-May and the end of August in order to be within the appropriate survey window.

5.9 The survey at Building 1 will be concentrated on the southern double apex of where there were found to be hanging tiles which may provide a possible entry/egress point for bats. The results of this survey will be required to determine the level of impact likely to result from the proposed redevelopment of the site and inform any mitigation requirements. If bats are confirmed roosting, an application will need to be made to Natural England for a European Protected Species Licence (EPSL) to allow any works to these buildings.

5.10 There are numerous mature trees around the perimeter of the site. Should any of these trees require removal/pruning works, a preliminary ground based assessment for bats should be undertaken. The results of this will indentify the the need for further survey, should this be required.

5.11 Even if no bat roosts are confirmed during the emergence survey, demolition and renovation of these buildings will still result in the loss of potential roosting space. Therefore replacement roosting opportunities will need to be provided to compensate for this loss. It is likely that these could be provided within the new buildings, but a detailed bat mitigation strategy will need to be prepared once the surveys are complete and the full impacts have been assessed.

5.12 A bat friendly lighting plan, both during the construction and post-development stages, will be needed to ensure no impacts on foraging and/or commuting bats.

However, again, the specific requirements will be confirmed following completion of the bat surveys.

Birds

5.13 All nesting birds are protected under the WCA during the nesting season and it is an offence to take, damage or destroy the nest of any wild bird whilst it is in use or being built. Vegetation clearance should be undertaken outside the nesting bird season, which is usually accepted as running from early March to the end of August. If this is not possible for any reason, a nesting bird check will be required by a suitably qualified ecologist a maximum of 24 hours in advance of works. If evidence of nesting is observed, a buffer zone will need to be set up around the nest, the size of which is dependent upon the species nesting, and the ecologist will monitor the nest to confirm when any young have fledged and demolition or clearance works can proceed.

5.14 Vegetation clearance will result in the loss of nesting habitat for some of these species, so replacement nesting habitat will be required. As with bats, nesting features could be incorporated within or on the renovated buildings. Boxes could also be installed on suitable retained trees around the site.

S.41 species

5.15 Areas of terrestrial habitats, particularly the dense scrub vegetation, provides good quality refuge and hibernation opportunities for hedgehog. Hedgehogs are listed under S.41 of the NERC Act so impacts on this species are a material consideration in determining planning applications.

6.0 RECOMMENDATIONS

6.1 Buildings 1 and 2 have been assigned 'low' potential to support roosting bats based on the presence of gaps beneath hanging tiles on Building 1 and some lifted tiles on Building 2. Demolition of these building should therefore not take place until the status of roosting bats has been confirmed.

6.2 Prior to any roof removal, hanging tile removal or demolition works, a single dusk emergence survey will need to be undertaken on these buildings to confirm the status of roosting bats. This survey will also inform the mitigation strategy and European Protected Species Licence application should this be neccesary. The survey will focus on features of the building which may provide entry/egress points for bats.

6.3 Should tree removal/priuning works be required, a preliminary ground based assessment of all trees due for removal or within influencing distance of the development should be undertaken by a licenced bat ecologist. This will enable trees to be categorised in accordance with BCT guidelines and will inform the scope of any nocturnal or aerial surveys that may be required. This survey can be conducted at any time of year however, during the winter period when trees are not in leaf often enables a better view.

6.4 An arboricultural impact assessment should also be carried out on trees due to be affected by the proposed development.

6.5 The lighting scheme for the redevelopment of the site, both during construction and post-construction will need to be designed to avoid any impacts on roosting,

foraging or commuting bats. Specific recommendations for this would be provided following completion of the bat surveys.

6.6 To compensate for the loss of potential bat roosting sites, replacement roosts will need to be provided. These could be designed into the fabric of the new buildings themselves or placed on the exterior. Additional bat boxes could also be provided on suitable retained trees around the site.

6.7 Any vegetation clearance should be undertaken outside the nesting bird season. If this is not possible a nesting bird check will be required by a suitably qualified ecologist a maximum of 24 hours in advance of works.

6.8 To compensate for the loss of existing nesting sites, replacement nesting opportunities (nest boxes) will need to be provided. As with the bats, there is the potential to design these into the fabric of the renovated buildings or onto the exterior. Where possible, some areas of scrub should be retained and landscape planting should include species to attract invertebrates and berry bearing native species which will provide an additional food resource for birds.

6.9 Precautionary working methods will also need to be developed to avoid impacts on hedgehogs, which may be present within the site.

6.10 There are good opportunities to provide further enhancement measures for biodiversity through the redevelopment of the site. These include:

- Planting wildflower beds incorporating scented plants to attract flying insects and improve foraging habitats for bats;
- Including native nectar and berry bearing species within any landscaping scheme to increase foraging opportunities;
- Providing additional bat roost and bird boxes to increase roosting and nesting opportunities;
- Provide hedgehog boxes and where feasible, retain some areas of suitable areas of cover to ensure that refuge/hibernation features remain within the site;

7.0 REFERENCES & FURTHER READING

Hundt L. (2012) Bat surveys: Good Practice Guidelines, 2nd Edition, Bat Conservation Trust.

Institute of Ecology and Environmental Management (IEEM) (2012) *Guidelines for Preliminary Ecological* Appraisal.

Joint Nature Conservation Committee (2010) Phase 1 Habitat Survey. JNCC. Peterborough

APPENDIX 1:
Bat Roost Assessment

Tunstall Road, Knypersley
Daytime Bat Survey Appendix

Site Name	Tunstall Road		
Job Number	5523	**Doc. Ref**	5523.002
Site Location	Tunstall Road, Knypersley, Staffordshire	**Client**	Mr & Mrs Critchlow

	Written	**Checked**	**Authorised**
Initial	MN	AP	AP

1.0 DAYTIME INSPECTION OF BUILDINGS

1.1 Methods

Reason for Survey	Internal/ external inspections of all buildings to confirm bat roosting potential and the scope of further bat survey requirements. This is needed to inform a planning proposal to redevelop the site which will require the demolition of these buildings.				
Date(s)	Daytime Assessment: 8th December 2015				
Surveyor(s)	Marj Nadouce, Bat licence reference: 2015-9736-CLS-CLS				
Weather	**Date**	**Temperature (˚C)**	**Rain**	**Cloud Cover (Oktas)**	**Wind (Beaufort scale)**
	8/12/2015	15 (˚C)	NO	1	0-1
Methods	The daytime assessment was undertaken in accordance with Bat Conservation Trust (BCT): Bat Surveys, Good Practice Guidelines (Hundt, 2012). The building was searched internally and externally for any evidence of use by bats, such as: • Live or dead bats; • Bat droppings; • Feeding remains (e.g. stripped moth wings); • Urine staining; • Fur oil staining. Buildings are categorised as having negligible, low, moderate or high potential to support roosting bats, or confirmed as a roost. The purpose of this is to inform subsequent survey effort of nocturnal surveys. A variety of factors were assessed, including the structure, age and condition of the building in conjunction with the surrounding landscape value. Table 8.2 of the BCT guidelines lists features of buildings and built structures that are correlated with their use by bats in summer.				

Table 1: Bat Potential Building Categories (based on Table 8.2 of BCT Guidelines)

Potential Roost Value	Criteria	
High	*Several of the following features:*	Pre – 20th century buildings. Agricultural buildings of traditional brick, stone or timber construction. Large unobstructed flying spaces. Roof warmed by sun, in particular south facing roofs without shade. Large roof timbers with gaps at joints (e.g. mortice joints), cracks and holes. Numerous access points for bats for bats to fly into. Buildings near woodland and/or water. Low levels of disturbance. Buildings are generally poorly maintained providing access points for bats into roof structures or crevices in bridges, but at the same time not too draughty, wet or cool.
Moderate	*Some of the following features:*	
Low	Modern/intact buildings with few potential access points for bats. Brick buildings often with pitched slate or tile roofs but may have small or cluttered roof space. Flat roofed buildings with weatherboards or similar feature at the eaves with potential bat access behind or into building. Cooler, shaded, light or draughty voids. Buildings often lacking connectivity to woodland or areas of water.	
Negligible	Flat roof structures lacking weatherboards, hanging slates or cladding. Modern/intact buildings with no bat access points. Lacking connectivity to any woodland or areas of water. High levels of regular disturbance. High levels of internal/external lighting. Buildings in very poor condition such that internal spaces are not weatherproof, being exposed to high levels of light, wind and/or rain.	

The location and building references are shown on the Phase 1 habitat plan (G5523.001).

Constraints	There were no seasonal constraints to the preliminary bat roost assessment of the buildings nor were there any significant constraints to the visual inspection of the building. Access to all areas of the buildings was permitted. Bat droppings are one of the field signs which provide evidence of bat activity. Droppings on external surfaces can be washed or blown away by weather; therefore, lack of evidence during external surveys is therefore not conclusive of absence of bats. The above limitations are not considered significant constraints to the survey, and a nocturnal survey will need to be undertaken during the appropriate survey season to supplement the daytime assessment.
Conclusion	No evidence of bats was found during the internal and external inspection of the buildings. There are a small number external features on Buildings 1 and 2 which could be used by roosting bats, such as gaps behind hanging tiles and raised tiles. Internally, roof voids were found to be well insulated and in good condition with no obvious entry/egress points for bats. No evidence of bats e.g. droppings, feeding remains etc. was found. No other suitable roosting features were identified. Buildings 1 and 2 have ***low*** potential to support roosting bats (in accordance with the BCT Guidelines). A single dusk emergence survey should be undertaken on these buildings in order to confirm that bats are not roosting within, prior to any demolition. Whilst there was no evidence of bats roosting in the buildings, this survey is required due to the ephemeral nature of bat roosting and the fact that the buildings do have some potential to support roosting bats. The emergence survey should be carried out at the appropriate time of year (May-September) and results will remain valid for one year from the date of survey.

1.2 Findings

Description	Photographs
Building 1 Two storey brick building with double pitched, tiled roof. Rendered with pebbledash from approximately 1 metre. Roof in good condition with no missing/slipped tiles. A small proch with a pitced roof is located to the front of the house however this is intact with a panelled wooden base with no suitable features. Hanging tiles were present above the twin apex to the south west elevation (see arrow). These features may provide access behind as transient roost space for bats. Internally the loft void is well sealed and insulated with no evidence of use by bats and no gaps to the exterior were visible. This building is classed as having low potential to support bats. No bat or evidence of bats were observed suring the assessment.	

Description	Photographs
Building 2 Small outbuilding immediately adjacent to Building 1. Brick built with a pitched , tiled roof. Windows within were well sealsed with intact frames and no other features that could permit entry for bats. A number of tiles appeared to be lifted which may provide entry point for bats. This building is classed as having low potential to support bats. No bat or evidence of bats were observed suring the assessment.	
Building 3	

Description	Photographs
Garage/workshop building adjacent to Building 2 with flat roof lined with felt. A wooded weatherboard is present around the exterior however, this was flush to the wall with no gaps behind. No roosting space present internally and no voids. No bats or evidence of bat use were visible or heard during the assessment. This building is classed as having negligible bat potential and will not require further survey.	

Description	Photographs
Building 4 Brick built garage building with a tiled, pitched roof. Internally, the roof void was accessed via a hatch and the void was found to be in good condition with no visible entry/egress points to the exterior. Well insulated and with no evidence of use by bats. A weather board follows the line of the roof to the apex however, this was flush to the brickwork with no gaps behind. No bats or evidence of bat use were visible or heard during the assessment. This building is classed as having negligible bat potential and will not require further survey.	

Description	Photographs
Building 5 Another brick built garage building associated with 121 Tunstall Road. This building has a tiled, pitched roof and found to be very similar in construction to Building 4. The roof structure was found to be in good condition and is well insulated throughout. Tiles were found to be intact with none missing/slipped and with no visible entry/egress points that could be used by bats. A wooden weather board follows the line of the roof to the apex however, this was flush to the brickwork with no gaps behind. No other features that could potentially be used by bats were found within this building. No bats or evidence of bat use were visible or heard during the assessment. This building is classed as having negligible bat potential and will not require further survey.	

APPENDIX 2:
Desk Study

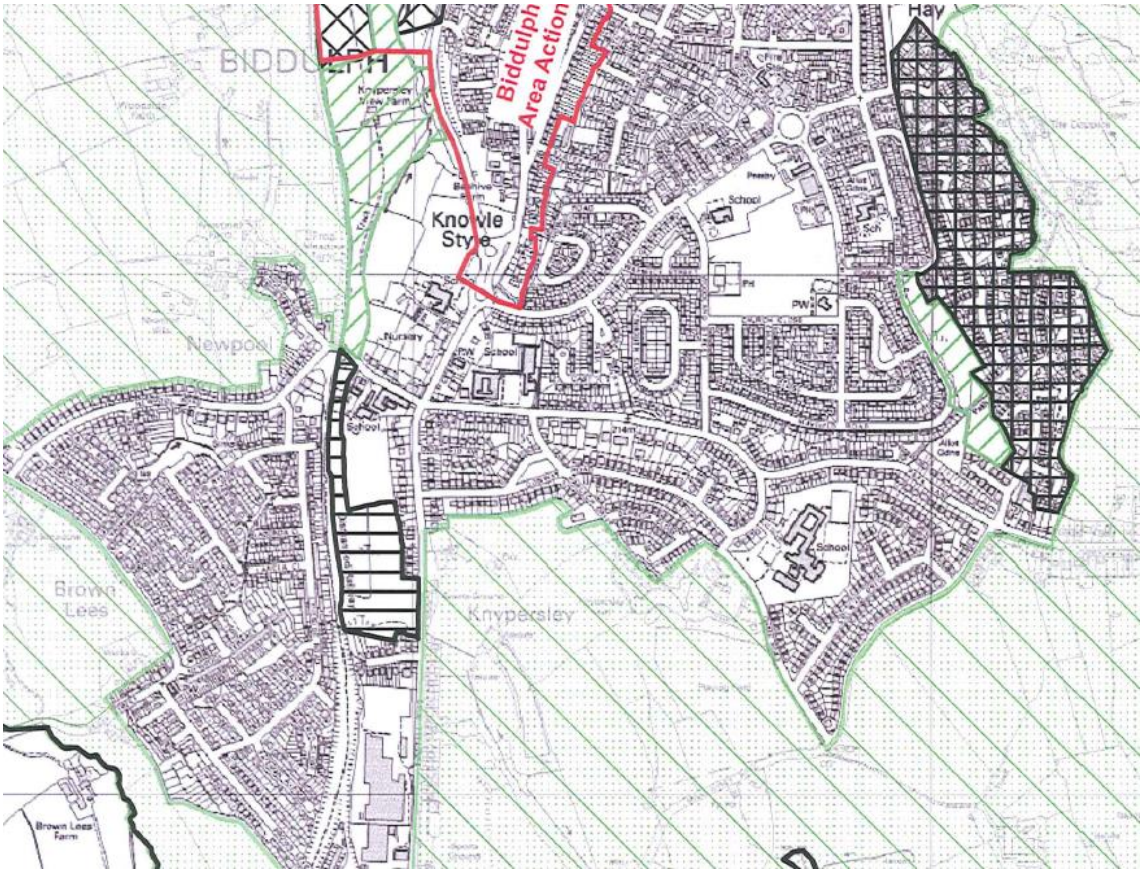
Desk Based Ecology Assessment

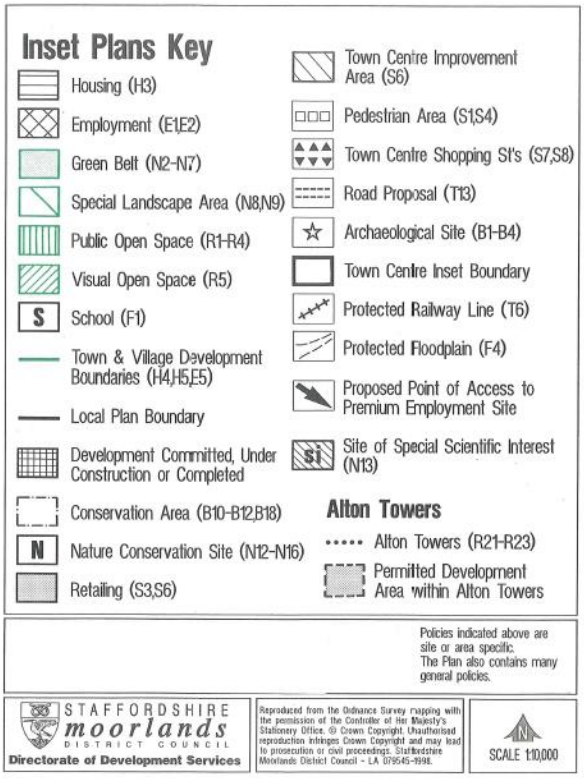
Tunstall Road
Knypersley
Approximate Central Grid Reference: SJ 88117 56872

Contents

- **Extract from local plan**
- **Extracts of relevant planning policies**
- **Local site designations**
- **Local species records**
- **National site designations**
- **Habitat inventory records**
- **Wildlife site citations**

Extract of Staffordshire Moorlands District Council Core Strategy (adopted Mar 2014) and supporting key



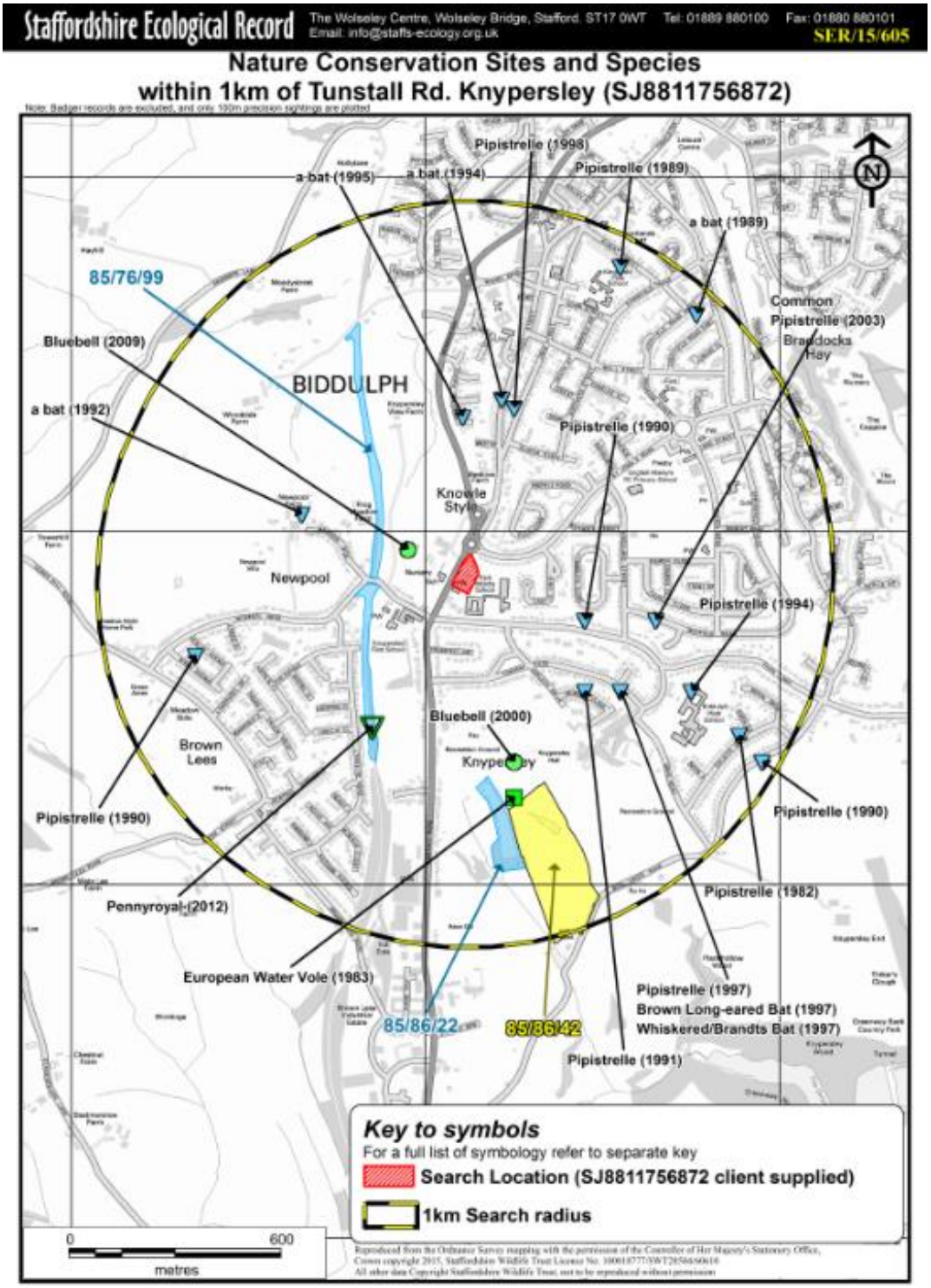


Extracts of relevant planning policies and supplementary planning guidance

NE1 - Biodiversity and Geological Resources

The biodiversity and geological resources of the District and neighbouring areas will be conserved and enhanced by positive management and strict control of development by:
1. Resisting any proposed development that could have an adverse effect on the integrity of a European site alone or in combination with other plans or projects unless it can be demonstrated that the legislative provisions to protect such sites can be fully met.
2. Conserving and enhancing any Sites of Special Scientific Interest. The Council will not permit any development proposal which would directly or indirectly (either individually or in combination with other developments) have an adverse effect on a Site of Special Scientific Interest.
3. Conserving, and enhancing regional and locally designated sites. The Council will not permit any development proposal which would directly or indirectly result in significant harm to geological and biodiversity conservation interests including ancient woodland, unless it can be demonstrated that:
there is no appropriate alternative site available; and
all statutory and regulatory requirements relating to any such proposal have been satisfied; and appropriate conservation and mitigation measures are provided; or if it is demonstrated that this is not possible the need for, and benefit of, the development is demonstrated to clearly outweigh the need to safeguard the intrinsic nature conservation value of the site and compensatory measures are implemented.
4. Supporting opportunities to improve site management and increase public access to wildlife sites including supporting the objectives of the Staffordshire County Council Rights of Way Improvement Plan.
5. Ensuring development where appropriate produces a net gain in biodiversity, and ensuring that any unavoidable impacts are appropriately mitigated for.
6. Ensuring development promotes the appropriate maintenance, enhancement, restoration and/or re-creation of biodiversity through its proposed nature, scale, location and design. The Staffordshire Moorlands Biodiversity Opportunity Map, in conjunction with the Staffordshire Biodiversity Action Plan, will be used to guide biodiversity enhancement measures to be included in development proposals as appropriate to the nature and scale of development proposed and other environmental interest, in particular supporting opportunities to increase grassland and heathland habitats including supporting targets in the UK and Staffordshire Biodiversity Action Plan.
7. Protecting and enhancing habitats and species of principal importance for the conservation of biodiversity as identified in legislation, and recognising and implementing appropriate measures, including landscape-scale conservation management, to take account of the fact that the distribution of habitats and species will be affected by climate change.
8. Recognising the value of the natural environment for sport and leisure activities and the need to manage such activities to ensure there is no conflict.
9. Ensuring the provision and protection of green infrastructure networks in line with Policy C3.

Map provided by Staffordshire Environmental Records of site designations and species records within 1km



Staffordshire Ecological Record
The Wolseley Centre, Wolseley Bridge,
Stafford. ST17 0WT
Tel: 01889 880100 Fax: 01889 880101
Email: info@staffs-ecology.org.uk

A legend to the map showing Nature Conservation Sites and Species

Introduction

These colours are used on the site alert mapping within the SWT GIS, but SER cannot guarantee the same colours are used in any other mapping system, particularly those based on ArcView.

Statutory Designations from Natural England's web-site

- National Nature Reserves — NNR (boundary not available owing to OS restrictions)
- Sites of Special Scientific Interest — SSSI (boundary not available owing to OS restrictions)
- Local Nature Reserves — LNR (boundary not available owing to OS restrictions)

Non-statutory Designations from the Staffordshire Grading System (1995 onwards)

- Site of Biological Importance (ex Grade 1 SBI) equivalent to "Local Wildlife Site"
- Biodiversity Alert Site (ex Grade 2 SBI)
- Proposed/potential Site of Biological Importance

Geological Sites

- Regionally Important Geological/geomorphological Site (= Local Geological Site)

Staffordshire Wildlife Trust Sites

- SWT Nature Reserves

Other Nature Reserves

- Royal Society for the Protection of Birds

Ancient Woodland Inventory

- Ancient & Semi-natural Woodland
- Ancient Replanted Woodland

Species Information

- Mammals excluding those listed below
- Otter (Lutra lutra)
- Badger (Meles meles) - not normally supplied
- Water Vole (Arvicola terrestris)
- All bat species
- All bird species
- Any other protected species (precise to 100m)
- All Protected Species Records (precise to 1km)
- Amphibians and reptiles excluding those below
- Great Crested Newt (Triturus cristatus)
- Native Crayfish (Austropotamobius pallipes)
- Flowering plants except those below
- Bluebell (Hyacinthoides non-scripta)
- Butterflies and Moths
- BAP Species Records (precise to 100m)
- BAP Species Records (precise to 1km)

Notes:

The Local Nature Reserve and other nature reserve boundaries can overlay the current grading when both layers are actively visible

Where there are multiple species records for the same grid reference the dot for one species may obscure the dots for other species - all species records will be displayed in the accompanying spreadsheet

Not all the above categories may be present on the accompanying map

Version 2.0 July 2011

M:\Workspc\SER\EnquiryLegend.wor

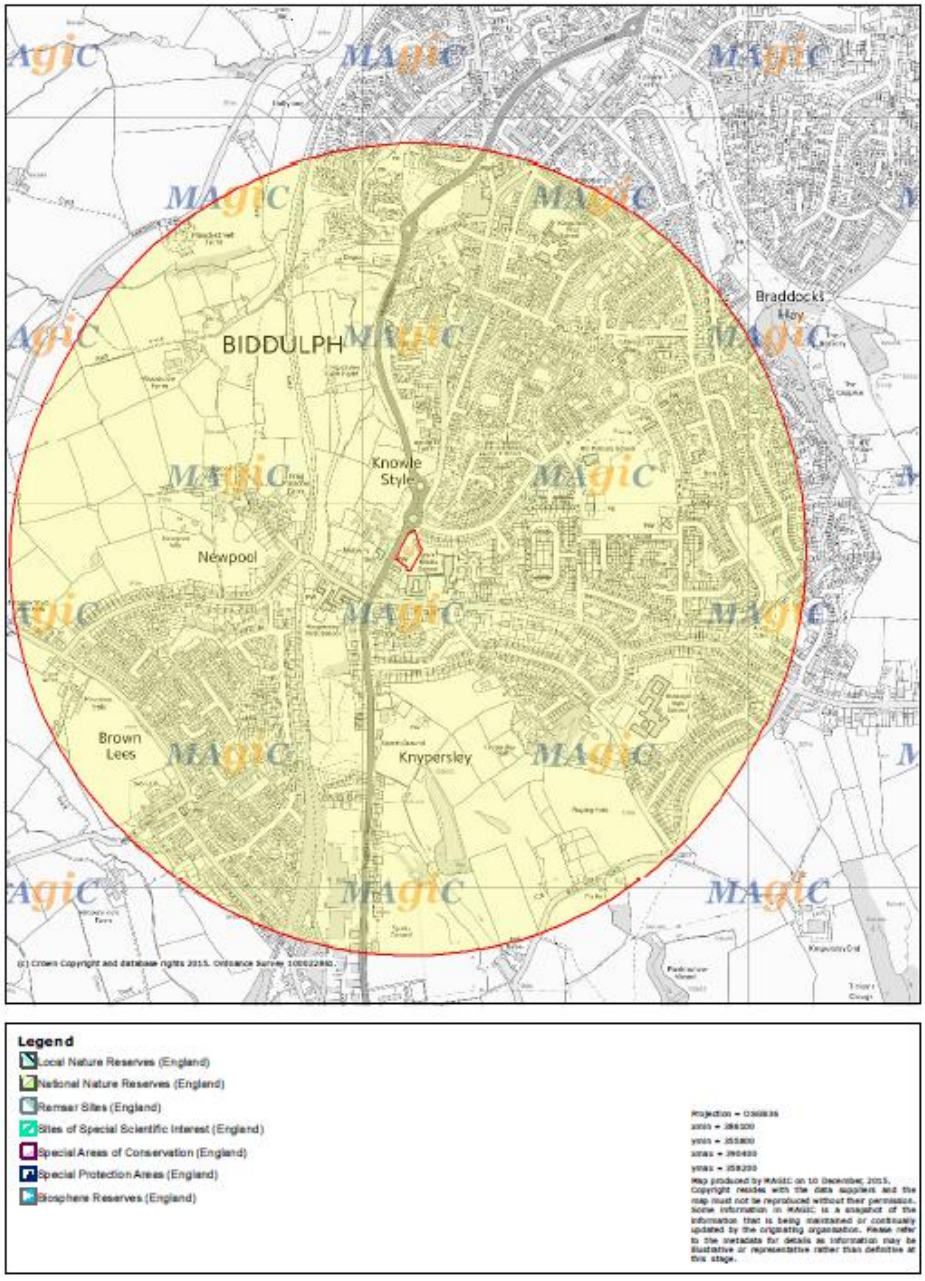
Extract of species data provided by Staffordshire Ecological Record

European and UK Protected Species

Scientific Name	Common Name	Informal Group	Grid Ref.	Date	Dist. from Site (m)	European Protection	UK Protection
Alcedo atthis	Common Kingfisher	bird	SJ8855	02/02/2013	1429	Yes	Yes
Anser anser	Greylag Goose	bird	SJ8756	21/01/2014	717	No	Yes
Anser anser	Greylag Goose	bird	SJ8855	20/04/2013	1429	No	Yes
Falco peregrinus	Peregrine Falcon	bird	SJ8856	08/07/2010	540	Yes	Yes
Falco peregrinus	Peregrine Falcon	bird	SJ8857	06/01/2013	732	Yes	Yes
Falco subbuteo	Eurasian Hobby	bird	SJ8855	08/06/2013	1429	No	Yes
Falco subbuteo	Eurasian Hobby	bird	SJ8855	15/06/2013	1429	No	Yes
Falco subbuteo	Eurasian Hobby	bird	SJ8855	25/05/2013	1429	No	Yes
Falco subbuteo	Eurasian Hobby	bird	SJ8857	08/08/2011	732	No	Yes
Fringilla montifringilla	Brambling	bird	SJ8756	01/01/2011	717	No	Yes
Fringilla montifringilla	Brambling	bird	SJ8756	02/01/2011	717	No	Yes
Fringilla montifringilla	Brambling	bird	SJ8756	08/02/2009	717	No	Yes
Fringilla montifringilla	Brambling	bird	SJ8756	12/03/2006	717	No	Yes
Fringilla montifringilla	Brambling	bird	SJ8756	20/01/2010	717	No	Yes
Pernis apivorus	European Honey-buzzard	bird	SJ8856	04/09/1998	540	Yes	Yes
Tringa ochropus	Green Sandpiper	bird	SJ8856	24/03/2014	540	No	Yes
Turdus iliacus	Redwing	bird	SJ8755	04/03/2014	1505	No	Yes
Turdus iliacus	Redwing	bird	SJ8755	20/01/2014	1505	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	01/01/2007	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	01/01/2008	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	01/01/2009	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	02/03/2007	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	04/01/2007	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	06/02/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	07/01/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	08/02/2009	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	09/01/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	09/12/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	10/12/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	13/01/2007	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	13/02/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	16/12/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	17/02/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	17/12/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	18/01/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	21/01/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	22/01/2007	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	23/11/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	24/10/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	25/01/2014	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	26/10/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	26/11/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	27/10/2006	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8756	30/10/2013	717	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	02/02/2014	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	03/01/2005	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	04/01/2014	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	08/02/2005	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	08/02/2005	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	15/01/2005	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	15/01/2005	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	16/12/2012	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	17/01/2008	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	21/12/2006	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	22/02/2014	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	23/12/2004	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8757	23/12/2004	871	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	02/11/2013	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	07/03/2014	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	11/01/2014	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	14/12/2013	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	16/11/2013	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	20/01/2014	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	25/01/2014	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	25/02/2014	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8855	26/10/2013	1429	No	Yes
Turdus iliacus	Redwing	bird	SJ8856	20/12/2010	540	No	Yes

Turdus iliacus	Redwing	bird	SJ8856	21/02/1990	540	No	Yes
Turdus iliacus	Redwing	bird	SJ8856	24/12/1990	540	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8755	04/03/2014	1505	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8755	11/04/2007	1505	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8755	18/02/2014	1505	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8755	20/03/2014	1505	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8755	26/02/2014	1505	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	01/01/2009	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	02/03/2007	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	04/01/2007	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	04/02/2007	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	07/01/2014	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	08/02/2009	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	09/12/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	10/12/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	16/12/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	21/01/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	23/11/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	26/10/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8756	30/10/2013	717	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8855	02/02/2013	1429	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8855	13/04/2013	1429	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8855	14/12/2013	1429	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8855	16/11/2013	1429	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8855	21/02/2014	1429	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8855	25/02/2014	1429	No	Yes
Turdus pilaris	Fieldfare	bird	SJ8856	21/02/1990	540	No	Yes
Tyto alba	Barn Owl	bird	SJ8855	04/01/2014	1429	No	Yes
Hyacinthoides non-scripta	Bluebell	flowering plant	SJ879569	01/06/2009	177	No	Yes
Hyacinthoides non-scripta	Bluebell	flowering plant	SJ882563	03/05/2000	544	No	Yes
Mentha pulegium	Pennyroyal	flowering plant	SJ878564	17/09/2012	500	No	Yes
Arvicola amphibius	European Water Vole	mammal	SJ882562	28/09/1983	641	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8755	2010	1505	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8856	2006	904	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8856	2013	360	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8857	1995	305	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8857	1996	675	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8857	2002	476	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8857	2003	675	No	Yes
Meles meles	Eurasian Badger	mammal	SJ8857	2009	732	No	Yes
Chiroptera	a bat	mammal - bat	SJ876570	26/08/1992	492	Yes	Yes
Chiroptera	a bat	mammal - bat	SJ88105732	01/08/1995	447	Yes	Yes
Chiroptera	a bat	mammal - bat	SJ88215737	02/07/1994	508	Yes	Yes
Chiroptera	a bat	mammal - bat	SJ88765761	Summer 198	983	Yes	Yes
Myotis mystacinus/brandtii	Whiskered/Brandt's Bat	mammal - bat	SJ885565	23/07/1997	545	Yes	Yes
Pipistrellus pipistrellus	Common Pipistrelle	mammal - bat	SJ886567	07/07/2003	551	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ873566	24/10/1990	793	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ882573	23/07/1998	492	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ884565	22/06/1991	469	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ884565	30/05/1991	469	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ884567	03/08/1990	360	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ884567	08/08/1990	360	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ885565	23/07/1997	545	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ885577	15/09/1989	975	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ885577	28/10/1987	975	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ887565	15/09/1993	715	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ887565	21/07/1994	715	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ88885642	August 1982	893	Yes	Yes
Pipistrellus pipistrellus s.l.	Pipistrelle	mammal - bat	SJ889563	28/09/1990	987	Yes	Yes
Plecotus auritus	Brown Long-eared Bat	mammal - bat	SJ8755	25/09/1996	1505	Yes	Yes
Plecotus auritus	Brown Long-eared Bat	mammal - bat	SJ885565	23/07/1997	545	Yes	Yes

Magic Map 1km search zone for designated wildlife sites - Map



Magic Map 1km search zone for designated wildlife sites - Report

No designated sites within area.

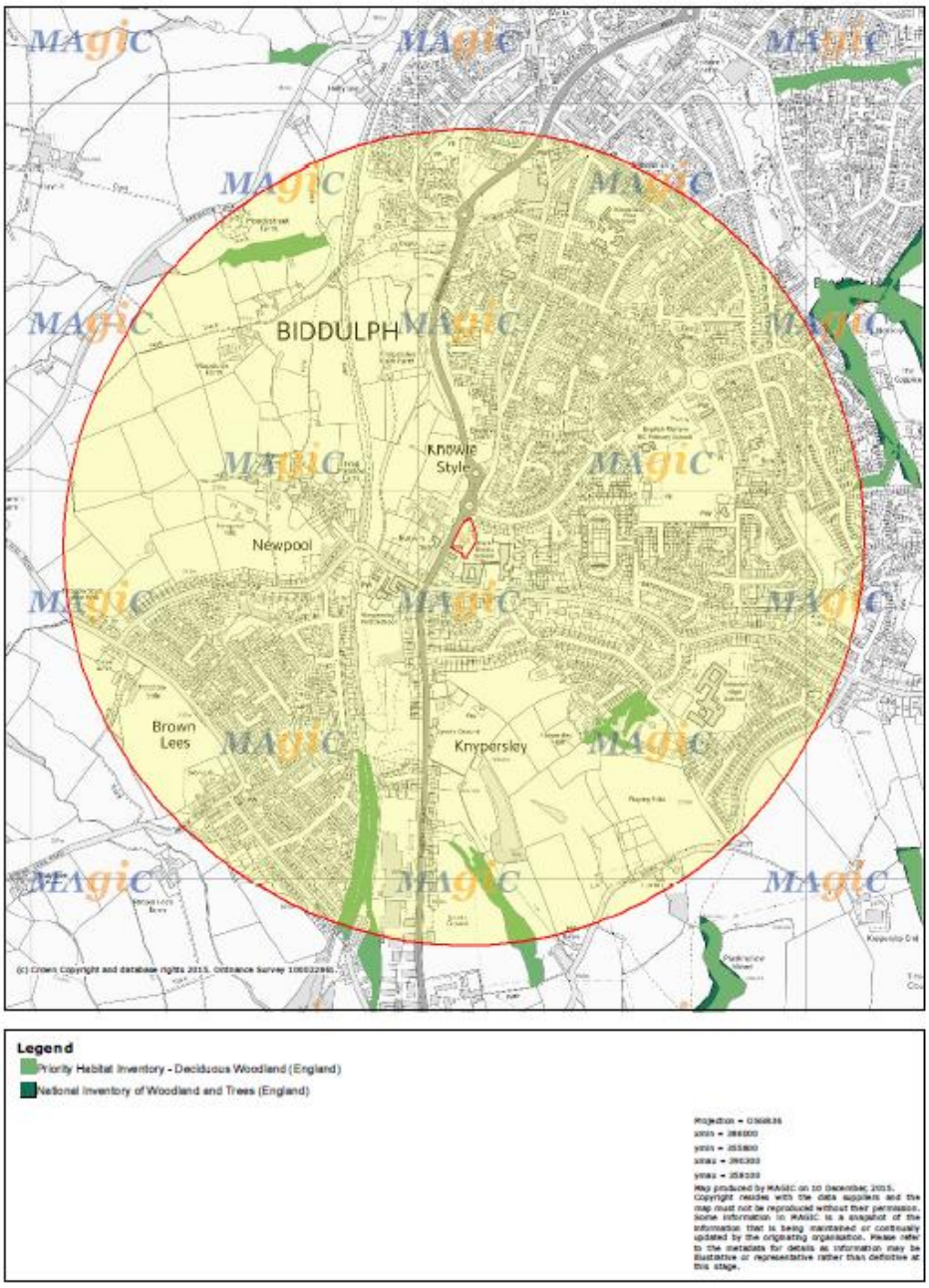
Magic Map search for SSSI Impact Risk Zones for site only

SSSI Impact Risk Zones – to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

GUIDANCE – How to use the Impact Risk Zones
/Metadata_for_magic/SSSI IRZ User Guidance v2.3 MAGIC 14Aug2015.pdf
1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications
Infrastructure
Airports, helipads and other aviation proposals.
Wind & Solar Energy
Quarry
Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc.
Rural Non Residential
Residential
Rural Residential
Air Pollution
Pig & Poultry Units.
Combustion
Waste
Composting
Discharges
Any discharge of water or liquid waste that is more than 20m³/day. The water needs to either be discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Discharges to mains sewer are excluded.
Water Supply

●OK ●Cancel

Magic Map 1km search zone for habitat inventory data



Wildlife Site Citations

a)	Newpool (east of)	Biodiversity Alert Site
b)	Knypersley Fishing Pool	Biodiversity Alert Site
c)	Knypersley Meltwater	Regionally Important
	Channel	Geological Site

Staffordshire Ecological Record

Ecological Site Report

Staffordshire Ecological Record

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Site Key: 85/76/99

Site Type: Lowland mixed deciduous woodland {P}
Neutral grassland {B}

Site Name: **Newpool (east of)**

Grid Ref: SJ879569 (centred on)

Civil Parish: Biddulph, Staffordshire Moorlands, Staffordshire, England

GB Vice-County: Staffordshire,

Keywords

Keyword	Details	Date
Local Site Status		
Biodiversity Alert Site		8/7/09
Historical BAS (ex-Grade 2 SBI)		1983
uncategorised local keywords		
Original Recorder Code	5019	no date

Site Designation Criteria

Woodland 8/7/09 Chair of Designation: Cadman, Mr David

Designation Cmttee: DC, VB, AM, SL, AG, AL, LO, WW, AE, MP, SB, JB.

Biotopes (Habitats)

Code	Habitat	Area (ha)
A111	Woodland: broadleaved, semi-natural	1.59ha
A22	Scrub: scattered	
B22	Grassland: neutral, semi-improved	0.54ha
B6	Grassland: poor semi-improved	0.17ha
C2	Tall herb and fern: upland species-rich ledges (Habitat is no longer present 2009)	
J4	Bare ground	0.23ha

Dimensions

Dimension	Value/units
altitude	175m
area	2.53ha

Contacts

record compiler	29/6/09	Maxwell, Anna L.
field surveyor (staff)	1/6/09	Maxwell, Anna L.
field surveyor (staff)	1/6/09	Brooks, Victoria R.
record compiler	24/8/89	Slawson, G.Craig
field surveyor	28/9/83	Martin, John P.
field surveyor	28/9/83	Barnes, Steve M.

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Site Description

Source: ***Brooks & Maxwell, 2009***

Summary: The site is located in Biddulph, to the east of Newpool, to the west of the A527 Tunstall Road, southeast of Akesmoor Lane and to the northeast of Brown Lees Road. The Newpool Road runs through the centre of Newpool (east of). The site is bordered by a track leading to Woodside Farm on the northern side, on the eastern side by poor semi-improved and marshy grassland and on the western side by poor semi-improved grassland and housing.

The site covers an area of approximately 2.53 hectares and consists mainly of broad-leaved semi-natural woodland with an area of semi-improved neutral grassland and scattered trees situated towards the north of the site. A tarmacked path passes through the entire length of the site, as this area is part of the Staffordshire Moorlands Walk.

In the area of semi-improved grassland, species present include frequent Creeping Buttercup, Bush Vetch and Common Bent; locally frequent Rosebay Willowherb, Field Horsetail, Creeping Forget-me-not and Colt's-foot, occasional Cock's-foot, Annual Meadow-grass, Meadow Foxtail and White Clover with Germander Speedwell, Creeping Thistle and Common Daisy also present on the site. Scattered trees consist of occasional Hawthorn and Grey Willow.

There are a few species of interest including locally frequent Meadowsweet and Common Knapweed, occasional Ribwort Plantain and Wild Angelica with Common Sorrel, Meadow Buttercup, Tufted Vetch, Meadow Vetchling, Pignut, Red Clover and Common Mouse-ear occurring in low frequencies in the grassland.

The semi-natural broad-leaved woodland comprises of frequent Pedunculate Oak and Grey Willow, occasional Silver Birch, Horse-chestnut, Sycamore and Ash with Beech, Alder and Wych Elm also present in the tree canopy. The understorey layer consists of occasional Hawthorn with Elder, Dog Rose, Hazel and Holly occurring in low frequencies. A few species of interest are present in the woodland canopy, such as Crab Apple and Dogwood.

The ground flora comprises of abundant Common Nettle, frequent Bramble and Raspberry, locally frequent Rosebay Willowherb, Garlic Mustard, Ground-elder and Floating Sweet-grass, occasional Herb-robert, Broad-leaved Willowherb and Foxglove with Male-fern and Great Willowherb also present. There are a few species of interest including locally frequent Common Figwort and Greater Stitchwort with occasional Bluebell and Honeysuckle.

Newpool (east of) is owned by Staffordshire Moorlands Council, however the site is not currently managed. As a management recommendation grassland sites require only one or two cuts a year. The main cut should be done during August to allow the plants to flower, fruit and set seed and ensure that invertebrates have largely completed their lifecycles. After cutting the dead vegetation should be removed from the site. This prevents the coarse grasses from taking over and allows the more uncommon species to survive.

The scattered scrub and trees situated throughout the grassland, needs to be managed to ensure it does not encroach further into this area. If an appropriate management regime is not introduced, then the scrub will take over. Clearing any encroaching scrub and trees for

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example, will increase the botanical diversity of the site.

Source: ***Martin & Barnes, 1983***

Summary: A section of disused railway track with scrub along the edge, mostly of sallow and young oak. There are also a few other shrub/tree species with much tangled growth of $Rubus fruticosus$, etc. There are some open grassy banks with various herbaceous species noted - possibly worth a revisit, probably not!

Bibliography

described **Brooks, V. & Maxwell, A. (2009)**
Staffordshire Moorlands LDF, Staffordshire Wildlife Trust (Wolseley Centre, Stafford)

described **SNCT (County Survey) (1984)**
The Phase 1 Survey of Staffordshire - 1978-1984, Staffordshire Nature Conservation Trust (Sandon, Staffs.)

kind of Report

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Administrative Areas based on the National Biodiversity Network Dictionary © NBN, 1999-2002

Site Key: **85/86/22** Site Type: **Standing open water and canals {B}**

Site Name: **Knypersley Fishing Pool**

Grid Ref: **SJ882562**

Civil Parish: Biddulph, Staffordshire Moorlands, Staffordshire, England

GB Vice-County: Staffordshire,

Keywords

Keyword	Details	Date
associated information		
amendments	Site Code - changed from '85/86/23' to match historical site	2003
Local Site Status		
Biodiversity Alert Site	previously grade 2 in 1983	25/5/00
uncategorised local keywords		
Original Recorder Code	250077	no date

Site Designation Criteria

General 25/5/00 Chair of Designation: Stanford, Ms Sally

Designation Cmttee: SDL, RNH, AL, GW, AJ, JS, JB, ER

Biotopes (Habitats)

Code	Habitat	Area (ha)
A111	Woodland: broadleaved, semi-natural	0.39
A31	Parkland/scattered trees: broad-leaved	
C31	Tall herb and fern: other, tall ruderal	
F1	Swamp	0.12
F21	Marginal/inundation: marginal	
G1	Open water: standing water	0.77
J11	Cultivated/disturbed land: arable	0.33
J232	Boundaries, hedge with trees, species-poor	

Dimensions

Dimension	Value/units
area	1.6ha

Contacts

field surveyor	3/5/00	Stanford, Sally
field surveyor	3/5/00	Jukes, Andy
field surveyor	28/9/83	Martin, John P.
field surveyor	28/9/83	Barnes, Steve M.
landowner	no date	Knypersley Fishing Club

Site Description

Source: ***Jukes & Stanford, 2000***

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Staffordshire Ecological Record

Ecological Site Report

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Summary: Knypersley fishing pool is situated on the grounds of Knypersley cricket club, north west of Knypersley Reservoir. The pool was surveyed from the edge as the landowner could not be located.

A hawthorn hedge with occasional elder and sycamore runs around the boundary of the site.

As the pool is used for fishing, it has a path running around it's perimeter on which the vegetation is closely mown. Species here include locally frequent creeping buttercup and occasional greater plantain and clover. Coltsfoot is rare for the site.

Around the edges of the path, patches of tall ruderal species include locally abundant rosebay willowherb and nettles with occasional hogweed and spear thistle.

Marginal vegetation comprises of reed sweet-grass, reed canary-grass and water horsetail. Bulrush is also locally frequent. White water lily is occasional in the pool, which is rare for the county.

At the edge of the pool, goat willow is locally frequent and crack willow is present.

At the southern end of the site is a small area of woodland that comprises of beech and oak with occasional sycamore. Under the canopy, red campion is occasional and wood anemone is a rarity.

Source: ***Martin & Barnes, 1983***

Summary: A pool, much used by anglers, with a surround of shrubs and a limited amount of emergent vegetation. This consisted mostly of Typha latifolia and Glyceria maxima. Probably too disturbed for breeding waterbirds (except moorhen), although water vole was noted. The site could be good for dragonflies.

Bibliography

described **Radford, E., et al (2000)**
The SBI Resurvey of Staffordshire Moorlands 1998 - 2000 (Sites Surveyed in 2000), Staffordshire Wildlife Trust (Sandon, Stafford)

described **SNCT (County Survey) (1984)**
The Phase 1 Survey of Staffordshire - 1978-1984, Staffordshire Nature Conservation Trust (Sandon, Staffs.)

End of Report

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Rock Names and Rock Unit Terms based on the Rock Classification and Rock Unit Lexicon respectively © British Geological Survey, 2002
Mineral Terms based on the Hey Classification of Mineral, 2nd Edition © Natural History Museum, 1993
Administrative Areas based on the National Biodiversity Network Dictionary © NBN, 1999-2002
Chronostratigraphy and Taxonomy based on the systems compiled by the authors © G.C.Slawson, 2002

Site Key: **85/86/42** Site Type: **glacial meltwater channel**

Site Name: **Knypersley Meltwater Channel**

Grid Ref: **SJ884562**

Civil Parish Biddulph, Staffordshire Moorlands, Staffordshire, England

Site Description

Source: ***Harris & Waller, 2005***

Summary: The site stretches from Knypersley Cricket Club through two fields. The grid reference refers to the centre of the field that best demonstrates the features of this channel. The channel is the largest example of a subglacial meltwater that cuts across a drainage divide, namely the Trent/Mersey watershed. The channel can be traced from north of the bridge crossing the former mineral railway line at Newpool, through the designated site and into Knypersley reservoir.

Conservation Status

Status	Details	Date
Regionally Important Geological Site		2006

Stratigraphy

Stratigraphy Group	Higher Stratigraphy
Time Unit Devensian	Cainozoic, Quaternary, Pleistocene
Rock Unit	

Geomorphology

Geomorphological Type	Details
Glaciofluvial glacial melt-water channel	

Contacts

record compiler	24/11/05	Slawson, G.Craig
field surveyor	21/9/05	Harris, T.D.
field surveyor	21/9/05	Waller, Richard
landowner (possible)	2005	Miners' Welfare Fund

This needs to be confirmed (Nov 2005)

End of Report

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Drawings



Key

- Survey boundary
- Scattered broad-leaved trees
- Species-poor intact hedge
- Fence
- Wall
- A — Amenity grassland
- Buildings
- Hardstanding

Map contains information from the following sources:

- Base map provided by client
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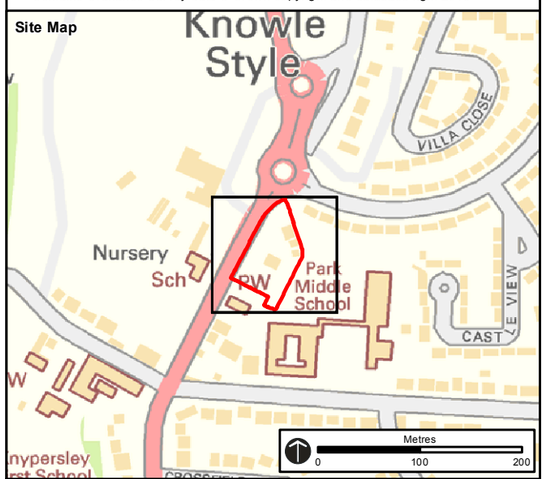
Site Map



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Project: **TUNSTALL ROAD, KNYPERSLEY**

Title: **PHASE 1 HABITAT SURVEY**

Drawing No: **G5523.001**

Scale:	Date:
1:400 @ A3	21/12/2015

Drawn:	Checked:	Approved:
MK	CB	MN