

Ecological Assessment

Aldi

Old Mill Lane,
Barnsley,
S71 1LL

U R B A N
G R E E N



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1 Introduction

1.1 Background to the scheme

Aldi propose to redevelop an area of land off Old Mill Lane, Barnsley (hereafter referred to as 'the site') It is proposed to construct a food store with associated parking areas as well as hard and soft landscaping.

Planning permission for the proposals will be sought and accordingly Urban Green have been appointed to provide an Ecological Assessment in support of the application.

1.2 Site context

The site is located at National Grid Reference SE 35168 07329 and comprises a total area of 0.78ha (see Figure 1).



The site is located in an urban area and is located approximately 1.2km north east of Barnsley town centre. The site is bordered by a retail unit and car parking to the north, Burton Road to the east and south¹, and Old Mill Lane to the west. The site is located approximately 50m to the north of the River Dearne which is bordered by broadleaved woodland.

¹ Note that the road to the south of the site is not shown on Google Earth due to its recent construction

1.3 Purpose of this report

This report is intended to support the planning application for a new food store and associated parking areas and areas of hard and soft landscaping. The report is intended to provide all necessary ecological information to support the application, and it is not intended to be supported by any additional documents.

For the purposes of this study, the term 'protected and notable species' is defined in Appendix 1.

Further information on legal protection of those species which are formally protected is defined in Appendix 2.

2 Methods

2.1 Desk study

Sources of information used in the desk study are presented in Table 2.1 below.

Table 2.1 – Desk study sources of information

Source	Date consulted	Information sought
MAGIC website www.magic.gov.uk	20/04/2016	Locations of statutorily-designated wildlife sites within 1km of the site boundary
Sheffield City Council Local Records Centre	15/04/2016	Locally designated wildlife sites within 1km of site boundary Records of protected and notable species within 1km of the site boundary.
South Yorkshire Bat Group	15/04/2016	Records of bats within 1km of the development boundary
Local Biodiversity Action Plans	20/04/2016	Species and habitats which are included on local BAPs.
Barnsley Highways Authority	20/04/2016	Contacted to discuss the location of the culvert containing the large bat roost.
Natural England https://designatedsites.naturalengland.org.uk/	16/04/2016	Relevant SSSI citations
JNCC http://jncc.defra.gov.uk/	16/04/2016	Information on European wildlife sites Details of relevant Section 41 species and habitats

2.2 Extended Phase 1 Habitat Survey

The site was subject to a field survey on 20/4/2016. The weather conditions were cold but clear and the survey was undertaken by Robert Wreglesworth.

Robert Wreglesworth is an ecologist and has 4 years in undertaking ecological surveys, Ecological Assessments and Preliminary Ecological Appraisals.

The methods were based on the standard 'Phase 1' habitat survey technique (JNCC 2010), which was extended (IEA 1995) to include any relevant information on evidence or suitability for use by protected or notable species.

2.3 Impact assessment

The assessment of impacts is based on the approach to Environmental Impact Assessment (EIA) as set out within CIEEM's recently-published guidance (CIEEM, 2016). Although the

project is not subject to EIA regulations, by loosely following the EIA approach, a transparent and robust method of assessment is assured.

The approach avoids the use of a significance matrix, but instead relies on the consultant to consider various factors to determine whether an impact is significant or non-significant. Factors requiring consideration in the assessment of impacts are;

- extent;
- magnitude;
- duration;
- frequency / timing; and,
- reversibility.

As stated in the guidelines, "a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general." The guidance continues to state that "a significant effect is simply an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project."

Note that, to a certain extent, all impacts are 'assessed' to some degree within this document. However this does not inherently make them 'significant' as could be interpreted from the paragraph above. A significant effect would be clearly stated as being such, and would then be subject to a higher level of detailed assessment, whereby the effects on population and ecosystem levels could be determined.

3 Results

3.1 Desk study

A total of 0 statutory and 3 non-statutory wildlife sites were found within the relevant search areas. These are detailed in Table 3.1 below.

Table 3.1 – Designated wildlife sites within the search area.

Name of wildlife site	Distance from site	Interest features / reasons for designation
Non-statutory wildlife sites		
Old Mill Lane LWS	0.05km south	The site is home to a large maternity colony of Daubenton's bats which roost within a surface water culvert that discharges into the River Dearne.
Cliff Wood LWS	0.8km south east	Semi-natural broadleaved woodland with high species diversity including ancient woodland indicator species.
Barnsley Canal at Wilthorpe LWS	0.8km north west	This site has a number of different habitats, both terrestrial and aquatic which are valuable and have a recreational value for the local communities.

In addition, the desk study highlighted the presence of the following protected or notable species within the search area:

- The majority of bat records within close proximity to the site are associated with the large Daubenton's bat roost within the surface water culvert under Old Mill Lane. This roost was originally located in 1990 with a peak count of 412 bats however numbers have reduced recently and latest figures showed 58 bats in 2012. There are also records of common pipistrelle bats associated with the River Dearne corridor.
- There is a single record of badger approximately 0.9km north east of the site.

The site lies within the Dearne Valley Green Heart Nature Improvement Area. In this area biodiversity enhancements are always required.

3.2 Extended Phase 1 Habitat Survey

3.2.1 Habitats on site

The majority of the site consists of hardstanding with patches of **ephemeral/ short perennial vegetation**. Species include dandelion *Taraxacum sp.*, ribwort plantain *plantago lanceolata*, Ragwort *Jacobaea vulgaris*, groundsel *Senecio vulgaris*.

A small sloping bank is present around the southern and western edges of the site which is covered by **poor semi-improved grassland**, species include Yorkshire fog *Holcus lanatus*, red fescue *Festuca rubra*, birdsfoot trefoil *Lotus corniculatus*, ribwort plantain *Plantago lanceolata*, creeping thistle *Cirsium arvense* and hogweed *Heracleum sp.*

The poor semi-improved grassland is interspersed with areas of **tall ruderal** vegetation with species including nettle *Urtica dioica* and teasel *Dipsacus sp.* and areas of **scattered scrub** with species including bramble *Rubus fruticosus*.

A small number of immature broadleaved trees are present on site, species include elder *sambucus nigra*.

3.2.2 Habitats off site which require consideration

The River Dearne is located approximately 50m south of the site. A significant bat roost is present within a surface water culvert which discharges into the river.

This roost is underground and is considered to be a maternity roost judging by the local records, the River Dearne provides a wooded river corridor ideal for use by commuting and foraging bats.

3.2.3 Species and species groups which may be present

Table 4.1 indicates the species and species groups which are given further consideration in this appraisal.

Table 4.1 Species and species groups requiring further consideration

Species / species group	Field evidence	Rationale for consideration
Bats (all species)	None	The proposals would not result in the destruction of roosts as there are no possible roosting sites on the site which could be affected (buildings, trees with cavities, etc...) within the site boundary. However, the nearby significant roost must be considered due to the possibility of indirect impacts.
Birds (nesting)	None	Birds may nest within the small area of scrub and trees in the centre and eastern areas of the site.

3.2.4 Species and species groups which are unlikely to be present

Table 4.2 indicates the species and species groups which could be present based on a very basic knowledge of the site, but aren't given further consideration in the appraisal due either to the lack of suitable habitat or the lack of an effect pathway.

Table 4.2 Species and species groups which are not given further consideration

Species / species group	Field evidence	Rationale for exclusion from the appraisal
Great crested newt (<i>Triturus cristatus</i>)	None	No ponds or large areas of suitable terrestrial habitat are present on site. All ponds within the search area are outside of 250m and not connected to the site by suitable terrestrial habitat (such as woodland, hedgerows, unmanaged grassland, or scrub).

Water vole	None	There are historic records of Water Vole associated with the River Dearne, however there is a significant distance (c.50m) between the river and the site and the site lacks suitable habitat for water voles.
Reptiles	None	Although reptiles can habitats on site, the site lacks the mosaic of habitats needed for reptiles.
Otter	None	Although the River Dearne may provide suitable habitat for otters the site does not contain any potential places of rest suitable for otters.
Badger	None	No evidence was found during the survey and the habitats present are unlikely to experience use.

4 Ecological Baseline and Evaluation

4.1 Habitats

No S41 or LBAP habitats are present on site and therefore none of these habitats will be lost as part of the development proposals.

4.2 Protected and notable species

4.2.1 Bats

There are no features on site suitable for use by roosting bats however it was noted that a large roost of Daubenton's bats is present within a surface water culvert nearby.

The site is assessed as having low value for foraging and commuting bats due to a lack of mature trees, hedgerows or waterbodies. The dispersal corridor as for the bats has been identified as along the River Dearne and therefore not towards the site.

Based on the habitats present, the site is of less than local value for bats. However, this does not preclude the possibility of indirect impacts on the nearby bat roost.

4.2.2 Nesting Birds

The scrub on site is suitable to support nesting birds. The site is considered to be of less than local value for nesting birds.

5 Impact Assessment

5.1 Habitats

There will be a small loss of scattered scrub and poor semi-improved grassland. These habitats are not of value in their own right and therefore this loss would not be of significance. Depending on the specifics of the proposals it would be expected that it would be a straightforward matter to achieve net biodiversity gain.

5.2 Protected species

5.2.1 Bats

After consultation with the Barnsley Council Highways Department it was confirmed that the surface water culvert with the significant bat roost does not run beneath the proposed development site.

However, there is a possibility that any significant vibration from the construction phase of the development may indirectly impact upon bats using the roost. There is very little literature which defines what constitutes 'disturbance' for indirect impacts such as this, but it can be stated that impacts would be short-term and reversible.

The habitats on site that will be lost to the development are of low value to foraging and commuting bats in the form of small areas of scrub and grassland. The site is not connected to any commuting or foraging habitat.

5.2.2 Nesting birds

Nesting birds could be affected if vegetation removal were to occur within the bird breeding season.

6 Ecological Measures and Residual Impacts

6.1 'Designed-in' measures

A small area of ornamental planting and tree planting is proposed around the site.

6.2 Protected species

6.2.1 Bats

The roost is known to be used as a maternity roost with peak counts being in June. It is therefore recommended that any works that may cause significant ground vibrations, such as piling or drilling should not be undertaken between May and August which is the most sensitive time for bats when in a maternity roost.

The entrance point to the roost is a considerable distance from the site and therefore constructional and operational stage lighting should not have a detrimental effect.

6.2.2 Nesting Birds

A small number of small trees and areas of scattered scrub will be lost as part of the development proposals which may provide habitat for nesting birds.

The work should be undertaken outside of the breeding bird season (which is from March to August inclusive). If this is not possible, a suitably experienced ecologist should check the habitat for breeding bird activity no more than 48 hours before clearance. If nesting activity is found, it will need to be left *in situ* until the young have fledged.

6.3 Residual impacts

It is difficult to mitigate completely against indirect impacts such as vibration. However, in this case it is clear that the most successful way of minimising impacts would be through appropriate timing, as opposed to relocating the bats / closing the roost etc. It is not anticipated that the structural integrity of the roost would be affected and therefore residual impacts would be limited to vibration for the construction period only, and (provided the advice regarding timings as set out above is followed), at a time which would avoid the most sensitive time of year. This impact is considered within the acceptable range.

No other residual impacts are expected.

7 Conclusion

A desk based study and a field study were conducted in order to assess habitats within and close to the survey site and to determine the presence/absence of, or potential for, any 'protected and notable species' on site. The study has concluded that:

- The site of low value to bats (foraging) and birds.
- There is a risk of indirect impacts to a nearby bat roost.

Recommendations on site include:

- any works that may cause significant ground vibrations, such as piling or drilling should not be undertaken between May and August which is the most sensitive time for bats when in a maternity roost.
- site clearance of trees and scrub, should be undertaken outside of the breeding bird season (which is from March to August inclusive).

8 References

Collins J. (2016). Bat Surveys for Professional Ecologists : Good Practice Guidelines (3rd edn).

Appendix 1 – “Protected and notable species” as relevant to this report

For the purposes of this report, legal protection refers to:

- species included on Schedules 2 and 4 of the *Conservation of Habitats and Species Regulations 2010* (as amended);
- species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see section 9[5] and 13[2]); and
- badgers, which are protected under the *Protection of Badgers Act 1992*.

Appendix 2 – Relevant legislation

Bats

All species of bat are listed in Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and Schedule 2 of the *Conservation of Habitats and Species Regulations 2010*. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb any such animal, including in particular any disturbance which is likely to:
 - impair its ability to survive, breed, or rear or nurture their young;
 - impair its ability to hibernate or migrate.
 - affect significantly the local distribution or abundance of that species; or
- damage or destroy a breeding site or resting place of any such animal; or
- intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*)
- Lesser horseshoe bat (*Rhinolophus hipposideros*)
- Bechstein's bat (*Myotis bechsteinii*)
- Barbastelle (*Barbastella barbastellus*)
- Greater mouse-eared bat (*Myotis myotis*)

Breeding Birds

With certain exceptions², all wild birds, their nests and eggs are protected by section 1 of the *Wildlife and Countryside Act 1981* (as amended). Therefore, it is an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- intentionally take or destroy the egg of any wild bird.

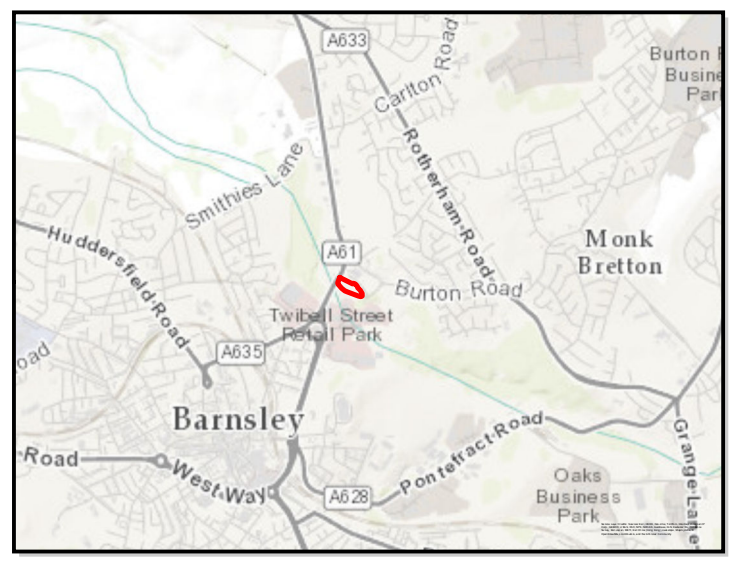
² Some species, such as game birds, are exempt in certain circumstances

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls.

Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- intentionally or recklessly disturb the dependent young of any such bird.

Appendix 3 – Habitat Map



- Key**
- Red Line Boundary
 - Scattered Scrub
 - Broadleaved Tree
 - Fence
 - Wall
 - Introduced Shrub
 - Tall Ruderal
 - SI Poor Semi-Improved Grassland
 - Hardstanding



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Client
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Project
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Description
Habitat Map

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NTS	RW	16/05/2016
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11177	11177.H1	N/A

