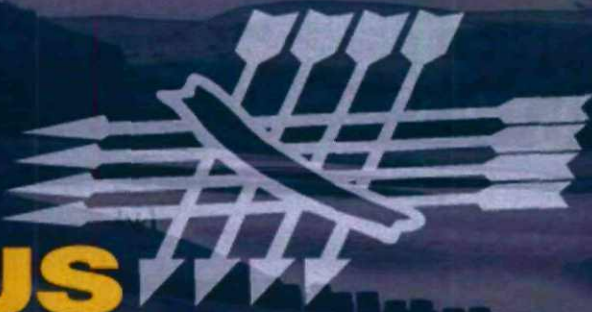




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Larch Place, Barnsley Ecological Assessment

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Report to: **Keepmoat Homes
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1. Introduction

- 1.1.1 Ecus Ltd was commissioned by Keepmoat Homes to undertake an ecological assessment of land at Larch Place, Barnsley (OS Grid Reference: SE 359 049). The survey was required to inform a planning application for the proposed redevelopment of the site.
- 1.1.2 An ecological walkover survey and assessment has been undertaken to review the habitats on site and potential for the site to contain, or be used by, species protected under both UK and European nature conservation legislation, namely The Wildlife & Countryside Act (1981) (as amended) and the Habitat Regulations (2010).
- 1.1.3 This report details the findings of the survey work and subsequent assessment. Methodologies employed are described including site surveys and evaluation and the need for any further survey work and/or mitigation measures are included where appropriate.



2. Methodology

2.1 Data Consultation

- 2.1.1 The local biological record centre would normally be contacted as part of the ecological assessment process, to determine whether there are any existing records of biological interests within 1km of the site. However, a local record centre does not exist for the Barnsley district.
- 2.1.2 Therefore, information on statutory designated sites and protected species records within this report is based upon consultation of the Multi-Agency Geographic Information for the Countryside (MAGIC) website (<http://www.magic.gov.uk/>) and the National Biodiversity Network (NBN) Gateway.

2.2 Extended Phase 1 Habitat Survey

- 2.2.1 The site was surveyed on 14th June 2011 using extended Phase 1 habitat survey methodology (JNCC, 2010). The habitats and vegetation types present were recorded on to a field map, together with an indication of their relative abundance. This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all plants occurring across the site.
- 2.2.2 Plant species recorded were classified according to the subjective method of DAFOR abundance ratings. The standardised terms are as follows:
- D Dominant
 - A Abundant
 - F Frequent
 - O Occasional
 - R Rare
- 2.2.3 The above terms can be combined where a species' relative abundance does not easily fall within a single category. For example, where a species' abundance is considered to be occasional to frequent this is denoted as O-F. In addition, plant species are rarely evenly distributed within an area of land recorded as a single habitat. In order to indicate this uneven distribution plants can be described as being locally dominant, locally abundant or locally frequent. This is denoted by preceding the DAFOR abundance with L. For example, locally dominant is denoted as LD. Where plant species exhibit equal dominance, this is termed co-dominance, which is denoted as CoD.
- 2.2.4 Notable, rare or scarce plant species were highlighted if present. Evidence of protected species or species of nature conservation importance was recorded where present at the time of survey. The information is presented using target notes (T), locations of which are shown on Figure 1 (Appendix 1).



2.3 Invasive Species

- 2.3.1 Invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended) were recorded as seen.

2.4 Protected and Key Species Survey

- 2.4.1 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of tracks and other field signs and an assessment of the suitability of the habitats present to support protected species.

Bats

- 2.4.2 All trees present within 5 m of the footprint of works were assessed for any features, such as cracks, cavities or holes that may support roosting bats. All methods used are consistent with current guidelines by the Bat Conservation Trust (BCT) 2007.
- 2.4.3 An individual tree may have several features of potential interest to roosting bats associated with it. It is not always possible to confirm usage of a feature by bats as often the animals may be present on one day and no evidence of occupation may be found on the next. Consequently it is customary when undertaking such surveys to assign each feature to a defined category of roosting potential as follows:
- 2.4.4 **Negligible:** This category is usually used where a feature appears initially to have significant bat roost potential but is considered on closer inspection to have low or negligible potential to support roosting bats. It is usually used during surveys to confirm that inspection of a feature has been carried out and has found that the feature is not considered to comprise suitable habitat for roosting bats.
- 2.4.5 **Low:** This category is used to describe a feature that may have some superficial interest to roosting bats, but is considered suboptimal to the extent that bats are not considered likely to use the feature for shelter. A cavity that is open at the top allowing access to wind and rain may be considered to be of low bat roost potential.
- 2.4.6 **Moderate:** This category is used to describe a feature that has some potential to support roosting bats, but is considered to be less than ideal in some way. For example the feature may be occupied by other animals, such as birds or squirrel, it may be subject to disturbance or have sub-optimal connectivity with navigational features. A surveyor would be neither surprised nor expect to find a bat using such a feature. Features considered to be of moderate roosting potential would not automatically be subject to an activity survey unless otherwise highlighted.
- 2.4.7 **High:** This category is used to describe an optimal feature considered to be ideally suitable for use by roosting bats where no evidence of occupation by bats has been found. Features considered to be of high bat roost potential may include upwards-leading cavities of appropriate dimensions and height from the ground, with no obstructions below the cavity entrance. The tree or structure may be particularly prominent within the landscape and is likely to have good connectivity with navigational features and sufficient suitable foraging habitat in the vicinity. Features with high bat roost potential are likely



to be subject to activity surveys to assist confirmation of their status, and may be subject to a watching brief during works that may disturb them.

2.4.8 **Confirmed:** This category is used where positive evidence of bats usage has been recorded from a feature. For example, bats or bat droppings may be present, or existing bat records may be associated with the feature. A licence from Natural England is likely to be required if the bat roost is to be disturbed by the development.

2.4.9 In addition, trees were also described using the categories developed by the BCT (2007):

- 1: confirmed roost
- 2a: high potential to support roosting bats
- 2b: moderate/low potential to support roosting bats
- 3: negligible potential to support roosting bats

Birds

2.4.10 No formal bird survey was undertaken, however, whilst on site the opportunity was taken to record all species of birds encountered and assess the suitability of the habitats present to support nesting and foraging birds.

2.5 Constraints

2.5.1 A local biological record centre does not exist for the Barnsley area, therefore existing protected species records to support the survey visit findings could not be obtained.



3. Survey Findings and Evaluation

3.1 General Site Description

- 3.1.1 The site is located off Larch Place to the southeast of Barnsley. The site is dominated by ephemeral/short perennial vegetation over patchy bare ground with small areas of managed amenity grassland and trees/scrub along the boundary edges. Hardstanding pathways and an access road are present on site.
- 3.1.2 The immediate area around the site is dominated by residential housing with the surrounding wider area comprising of residential housing to the east and open greenspace to the west.

3.2 Sites of Nature Conservation Importance

- 3.2.1 No nationally or internationally designated sites of nature conservation importance were identified within 1 km of the site on the MAGIC website.
- 3.2.2 No statutory designated Local Nature Reserves were identified within 1km of the site on the MAGIC website.

3.3 Habitats

Ephemeral/short perennial vegetation

- 3.3.1 Ephemeral/short perennial vegetation has become established across the majority of the western half of the site where the ground has been disturbed. Botanical species diversity is moderately high, comprising a mixture of low growing and taller species, including black medick (*Medicago lupulina*), pineappleweed (*Matricaria discoidea*), shepherd's purse (*Capsella bursa-pastoris*), catsear (*Hypochaeris radicata*), common ragwort (*Senecio jacobaea*), nipplewort (*Lapsana communis*), ribwort plantain (*Plantago lanceolata*), Yorkshire fog (*Holcus lanatus*), teasel (*Dipsacus fullonum*) and perennial rye-grass (*Lolium perenne*).
- 3.3.2 The eastern half of the main site differs slightly in composition to that of the west. This area has a slightly taller sward dominated by white melilot (*Mellilotus albus*) and golden melilot (*M. altissima*) with abundant black medick beneath.
- 3.3.3 The smaller section of site (off Mansons Way) is similar in botanical composition to the majority of the main site.
- 3.3.4 Although botanical species diversity is moderately high, this habitat comprises common plant species which establish easily and quickly and are widespread both locally and throughout the UK. Ephemeral/ short perennial vegetation is therefore considered to be of importance to nature conservation within the zone of immediate influence only.

Amenity grassland

- 3.3.5 Small areas of managed amenity grassland are present in four areas along the boundary of the site. The short sward, mown grassland is dominated by perennial rye grass with common daisy (*Bellis perennis*) and ribwort plantain.



- 3.3.6 This habitat has been heavily managed, is species-poor and consists of common species which are widespread both locally and throughout the UK. As such, amenity grassland habitat is considered to be of importance to nature conservation within the zone of immediate influence only.

Scattered trees

- 3.3.7 The southern boundary of the site has occasional early mature to mature silver birch (*Betula pendula*), oak (*Quercus sp.*), Leylandii (*Callitropsis × leylandii*) and sycamore (*Acer pseudoplatanus*), interspersed with shrubs (see Section 3.3.9 below). A single, multi-stemmed sycamore is located along the northern edge of the ephemeral/short perennial vegetation within the eastern half of site.
- 3.3.8 Mature trees help to increase structural diversity on site and support a range of invertebrate species, however the species on site are limited in extent, are commonly occurring, include non-native species and are therefore considered to be of importance to nature conservation within the zone of immediate influence only.

Scrub

- 3.3.9 A line of scrub is present along all but the eastern boundary of the site with species including elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), garden privet (*Ligustrum ovalifolium*), goat willow (*Salix caprea*) and lilac (*Syringa vulgaris*).
- 3.3.10 The scrub species present are common species both throughout the local area and the UK and are considered to be of importance to nature conservation within the zone of immediate influence only.

Tall ruderal vegetation

- 3.3.11 A small area of tall ruderal vegetation, dominated by common nettle (*Urtica dioica*), with broad leaved dock (*Rumex obtusifolius*) has established along the southern boundary.
- 3.3.12 This habitat is species-poor and consists of common species which are widespread both locally and throughout the UK. As such, the tall ruderal habitat is considered to be of importance to nature conservation within the zone of immediate influence only.

Hardstanding

- 3.3.13 A tarmac pathway and an access road lead into the site on the east and west sides of the site. Hardstanding requires no further consideration in relation to nature conservation.

3.4 Species

Bats

- 3.4.1 No existing bat records for within 1km of the site were shown on the NBN Gateway.



Buildings

- 3.4.2 There is one semi-detached residential house along Cypress Road (parallel to the western boundary) which is included within the site boundary. The house is no longer occupied and was boarded up at the time of survey. The house dates from approximately the early 1900's, with gable end roofing and clay tiles. External assessment from ground level found it to be in a good state of repair overall with no features e.g. missing roof tiles, with potential to be of interest to roosting bats. As such, roosting bats are not considered likely to be a receptor with respect to this scheme.

Trees

- 3.4.3 All of the trees around the boundaries of the site and the single multi-stemmed sycamore were considered to be early mature and did not contain any features of potential interest for bats. The trees were assessed as Category 3 using BCT guidelines (2007) i.e. negligible potential for roosting bats. As such, roosting bats are not considered likely to be a receptor with respect to this scheme.
- 3.4.4 The scattered trees and scrub offer some potential foraging habitat for bats if resident within the local area, however, alternative foraging habitat is available within the wider area in the form of residential gardens to the north and greenspace with scrub to the west. Whilst the scrub may be used from time to time by foraging bats if resident in the wider area, the scrub is limited in extent and areas of more suitable foraging habitat exist within the wider area. Therefore the scrub on site is not considered important to foraging bats outwith the zone of immediate influence.

Birds

- 3.4.5 Casual observations whilst on site identified blackbird (*Turdus merulus*), magpie (*Pica pica*), wood pigeon (*Columba palumbus*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*) and goldfinch (*Carduelis carduelis*) using the site for foraging.
- 3.4.6 The most recent version of Birds of Conservation Concern (BoCC) published by Eaton *et al.*, in 2009, defines rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern. "Red" is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. "Amber" is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by Green, indicating that the species are relatively unthreatened.
- 3.4.7 Of the bird species recorded on the day of survey, house sparrow and starling are red listed species, whilst the remainder are green status.
- 3.4.8 The scattered trees and scrub on site are likely to provide a foraging and nesting resource for a variety of common bird species which are resident within the surrounding area. However, the habitat is limited in extent and large



areas of alternative habitat of equal or greater value exist within the wider area surrounding the site. Therefore the tree and scrub habitat is considered to be of importance to nesting and foraging bird species within the zone of immediate influence only.

3.5. Other Protected and Notable Species

- 3.5.1 No signs of other protected species were found on the day of survey. There are no waterbodies/courses within the site boundary to support amphibians, water vole or otter and no habitat suitable for badger or reptiles. These species are considered to be receptors with respect to this scheme.



4. Ecological Assessment and Mitigation

- 4.1.1 This report is based on the concept layout drawing 11008-001, provided by the client. The access roads are to be altered and new housing with soft landscaping is to be developed.

4.2 Habitats

Ephemeral/short perennial vegetation

- 4.2.1 Whilst complete landtake of all of the ephemeral vegetation on site is anticipated to result from the development as proposed, this habitat is comprised of common species both locally and throughout the UK. Landtake of the ephemeral/short perennial vegetation is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effects.

Amenity grassland

- 4.2.2 Landtake of all of the amenity grassland on site is anticipated to result from the development as proposed, however, this habitat is species-poor and common both locally and throughout the UK. Landtake is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effects.

Scattered trees

- 4.2.3 Removal of the trees along the site boundary is anticipated in relation to the development as proposed, although retention of the native species of trees where practicable is recommended. If any trees are to be retained, it is recommended that Root Protection Areas (RPA's) are set up in accordance with British Standard 5837: Trees in Relation to Construction, to protect the root zones from harm during construction and prevent failure of the trees during or after construction.
- 4.2.4 Replacement tree planting is proposed as part of the development. Species used should be appropriate to the local area and of UK provenance. Suitable species may include crab apple (*Malus sylvestris*), English oak (*Quercus robur*), ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), rowan (*Sorbus aucuparia*), wild cherry (*Prunus avium*), bird cherry (*Prunus padus*) and field maple (*Acer campestre*).

Scrub

- 4.2.5 Landtake of the scrub around the boundary edges is anticipated to result from the development as proposed. However the species present are common and easily replaced, therefore landtake of this habitat is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effects.
- 4.2.6 Replacement planting of native shrub/scrub where possible as part of the soft landscaping is recommended. All shrubs planted should be native species typical of the local area and of UK provenance, suitable species may include: hawthorn, blackthorn (*Prunus spinosa*), hazel (*Corylus avellana*), field rose (*Rosa arvensis*), dog rose (*Rosa canina*), holly (*Ilex aquifolium*) and spindle (*Euonymus europaeus*).



4.3 Species

Bats

- 4.3.1 All species of bat are protected under the EC Habitats Directive (1992), as implemented by the Habitat Regulations (2010). These regulations update the *Wildlife and Countryside Act (1981)*, which provides protection to certain animals under Section 9 and listed in Schedule 5 of the Act. Under the Act (as amended) it is an offence intentionally or recklessly to kill, injure, capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection. Bat roosts are protected at all times whether bats are in occupancy or not. All UK bats are European Protected Species (see <http://www.opsi.gov.uk> for full legislation details). A range of bat species are listed on the UK Biodiversity Action Plan as Priority Species.
- 4.3.2 In the unlikely event that bats are discovered during the demolition of the house, works in the immediate area should stop and an appropriately trained, qualified and licensed ecologist be consulted immediately.
- 4.3.3 Whilst landtake of potentially suitable bat foraging/commuting habitat is proposed, alternative foraging and commuting habitat of equal, or greater, value to that on site is available within the local area. Landtake associated with the development is not anticipated to represent a significant adverse impact to foraging and commuting bats outwith the zone of immediate effects.

Birds

- 4.3.4 All nesting birds are protected under the *Wildlife and Countryside Act (1981)* (as amended) against damage and destruction of the nest during the bird nesting season (March – August, inclusive).
- 4.3.5 The shrub and trees on site offer potential foraging and nesting habitat for birds. However there is abundant alternative habitat within the wider area which the birds can readily relocate to during works. Landtake of shrub is not considered to represent a significant adverse impact to nesting birds outwith the zone of immediate effects.
- 4.3.6 However, there is some potential for significant adverse impacts to nesting birds to arise during the construction period if birds and/or their nests are inadvertently harmed during site clearance works. It is recommended that clearance of trees/shrubs should be undertaken between October to February inclusive i.e. outside of the bird breeding season. Should this not be possible to accommodate within the schedule of works, a nesting bird check should be undertaken by an ecologist prior to any removal. Should nesting birds be found, a suitable buffer zone would be set up around the nest and works should not commence in this area until chicks have fledged (monitoring to be undertaken by an ecologist).
- 4.3.7 In accordance with Planning Policy Statement 9 (PPS9) which states that '*planning decisions should aim to maintain, enhance or restore biodiversity*', it is recommended that two bird boxes be installed to provide/enhance nesting opportunities whilst new planting on site establishes. A variety of bird boxes are available which can be mounted on external walls or trees. Bird bricks can also be installed within the fabric of buildings if incorporated early enough within design plans. Further advice on the supply, siting and types of boxes suitable is available from Ecus Ltd on request.



5. References

Bat Conservation Trust (2007), *Bat Surveys-Good Practice Guidelines*, Bat Conservation Trust, London.

JNCC (2010). *Handbook for Phase 1 habitat survey – A technique for environmental audit*. JNCC. Peterborough.

Stace, C. (1997). *New Flora of the British Isles*. Second Edition. Cambridge University Press, Cambridge.



Appendix 1 – Survey Findings



Legend:

-  Site boundary
-  Ephemeral/ short perennial vegetation
-  Amenity grassland
-  Shrub/ scrub
-  Tall ruderal
-  Scattered tree
-  Hard standing
-  Building
-  Existing housing plot to remain

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Larch Place, Barnsley

Figure 1:
 Phase 1 Habitat Map

Date:
 June 2011

Not to Scale

ECUS Ref: 3262

Appendix 2 – Site photographs



Photograph 1. Looking west. Typical ephemeral/short perennial vegetation on site. Boarded house within site boundary second from left.



Photograph 2. Looking west. Vegetation dominated by white melilot, the single sycamore tree in the background.