Aldham House Lane, Barnsley – Ecological Assessment

South Yorkshire Housing Association

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September 2013

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Report to:	South Yorkshire Housing Association 43-47 Wellington Street Sheffield South Yorkshire S1 4HF
Report Title:	Aldham House Lane, Barnsley – Ecological Assessment
Revision:	Final
Issue Date:	September 2013
Report Ref:	3975

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1. Introduction

1.1.1 Ecus Ltd was commissioned by the South Yorkshire Housing Association (SYHA) in August 2013 to undertake an ecological assessment of land off Aldham House Lane in Barnsley (central national grid reference: SE 387 039), prior to development of residential housing.

1.1.2 The proposed development for the site comprises the construction of up to 25 dwellings.

1.1.3 The purpose of survey work at the site was to carry out an extended Phase 1 habitat survey and to review the potential for the site to contain, or be used by, species protected or considered to be of primary importance under UK legislation, namely the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Natural Environment and Rural Communities Act 2006. Any impacts upon these habitats or species likely to result from the proposed development were then assessed.

1.1.4 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 Data consultation was undertaken by Ecus Ltd in August 2013 with Sheffield Biodiversity Record Centre (SBRC) as part of the ecological assessment process, to determine whether there were any existing biological records or locally designated sites of nature conservation interest, within 1 km of the application area.

2.1.2 Natural England's Multi-Agency Geographical Information for the Countryside (MAGIC) website (http://magic.defra.gov.uk) was consulted in August 2013 for information on statutory designated sites of nature conservation interest within 1 km of the application area.

2.1.3 Information obtained from MAGIC and SBRC is included within the report where appropriate.

2.2 Extended Phase 1 Habitat Survey

2.2.1 The application area was surveyed on 20th August 2013 using extended Phase 1 habitat survey methodology (JNCC, 2010) by experienced ecologist Helen Lloyd ACIEEM. The habitats and vegetation types present were recorded on to a field map. 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 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. Species recorded are included within the report as appropriate and information is presented in Figure 1.

2.2.3 Habitats present that are listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the local Biodiversity Action Plans (LBAP) for Barnsley were noted.

2.2.4 The value and sensitivity of ecological features present on site were determined based on the guidance given in 'Guidelines on Ecological Impact Assessment' (IEEM, 2006). Individual ecological receptors (habitats and species that could be affected by the development) for the scheme were assigned levels of importance for nature conservation. The highest level is international, then decreasing in order of importance through UK, national, county, district, local to lastly, zone of immediate influence only.

2.3 Protected and Key Species

2.3.1 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit http://www.legislation.gov.uk.

Badger

2.3.2 Signs of badger (*Meles meles*) activity were searched for within the application area as part of the extended Phase 1 survey. Survey followed

standard methodology detailed in Surveying Badgers (Harris *et al*., 1989). This included survey for badger setts, along with survey of linear features and boundaries for signs of badger activity including dung pits, foraging marks, feeding signs and pathways.

Bats

2.3.3 No buildings or trees are present on site to provide potential bat roost features. An assessment of the site habitats suitability to support commuting/foraging bats was undertaken as part of the walkover.

Birds

2.3.4 Formal bird survey was not undertaken as part of this assessment, however whilst on site the opportunity was taken to record all species of birds encountered.

Reptiles

2.3.5 Detailed presence/absence surveys were not undertaken as part of the ecological walkover, however the habitats present on site were assessed for their suitability to support basking, foraging and hibernating reptiles and for connectivity with other suitable habitat within the surrounding area.

2.4 Other protected and notable species

2.4.1 The opportunity was taken whilst on site to assess habitats for the potential to support nationally or locally scarce or notable species, or any species protected under national or international nature conservation law.

Amphibians and riparian mammals

2.4.2 A desk based search was undertaken for waterbodies within 500 m of the application area and watercourses within 30 m of the application area, which are not separated from the site by a major barrier, using an Ordnance Survey (OS) map. None were identified and therefore great crested newt (*Triturus cristatus*), otter (*Lutra lutra*), water vole (*Arvicola amphibius*) and white-clawed crayfish (*Austropotamobius pallipes*) are not considered to be receptors for the site and are not discussed further in this report.

2.5 Invasive species

2.5.1 During the initial protected species walkover survey, the opportunity was also taken to record the presence of any invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), where present.

3. Findings and Evaluation

3.1 Site Description

3.1.1 The 0.7 ha site is situated in Wombwell, approximately 5 km south east of Barnsley City centre in South Yorkshire. The site comprises a strip of managed amenity grassland and a small area of scrub along the western boundary. There are no buildings present on site (Figure 1).

3.1.2 The site is bound by Aldham House Lane to the east, housing to the south and west and further managed grassland to the north. The local area comprises a mixture of high density housing and playing fields. The wider area includes further housing, an industrial estate, a railway line, woodland and farmland.

3.2 Designated Sites

3.2.1 No statutorily designated, nor non-statutorily designated sites of importance to nature conservation were identified within 1 km of the site using MAGIC or by SBRC.

3.3 Habitats

Amenity grassland

3.3.1 The site consists, almost exclusively, of managed amenity grassland. Ground flora across the site comprises perennial rye grass (*Lolium perenne*), yarrow (*Achillea millefolium*), white clover (*Trifolium repens*), goatsbeard (*Tragopogon pratensis*) and greater plantain (*Plantago major*).

3.3.2 Amenity grassland habitat is species-poor and widespread, both throughout the local area and across the UK and is not included on either the NERC Act or the LBAP. In terms of ecological value, amenity grassland is considered to be of interest to nature conservation within the zone of immediate influence only.

Trees/scrub

3.3.3 There is a single line of Staghorn sumach (*Rhus typhina*) and raspberry (*Rubus idaeus*) along the western boundary of the site, adjacent to existing garden boundaries. Whilst Staghorn sumach is classed as a miniature tree, the structure of the specimens on site are considered to more closely resemble scrub structure.

3.3.4 The tree/scrub habitat comprises introduced species which are either remnant planting or likely to have encroached onto site from neighbouring gardens. The area is limited in extent, has no connectivity to other similar habitat and is isolated by the expanse of amenity grassland surrounding it. As such, the scrub is not considered to be of importance for nature conservation outwith the zone of immediate influence.

3.4 Species

Badger

3.4.1 Sheffield Biological Record Centre returned four records of badger, dating from 2012 and 2013, located approximately 1 km from the site.

3.4.2 No evidence of badger setts, nor signs of badger activity such as snuffle pits, latrines or footprints, was recorded on site on the day of survey and the short sward amenity grassland on site is considered to suboptimal for badger foraging. In addition, the known records are situated a significant distance from site, with no direct connectivity linking the two and an abundance of optimal habitat present to the south of the recorded location, reducing the need for badgers to travel further afield for foraging opportunities. As such, badger are not considered to be a receptor in relation to the development and are not discussed further within the report.

Bats

3.4.3 SBRC returned three common pipistrelle (*Pipistrellus pipistrellus*) and two noctule (*Nyctalus noctula*) bat records for within 1 km of the site. One pipistrelle record and one noctule record, both approximately 600 m north of the site, alluded to 'exit counts' i.e. roosts, however no numbers were given.

3.4.4 There are no buildings and no trees on site to provide any features to be of interest to roosting bats. Therefore, roosting bats are not considered to a receptor in relation to the proposed development.

3.4.5 The scrub has no connectivity to other suitable bat foraging habitat within the surrounding area and is of no more than 50 m in length. In addition, higher quality foraging habitat, such as woodland to the north of the site is available within the wider area. As such, the scrub within the application area is considered to be of negligible importance to foraging bats.

Birds

3.4.6 SBRC returned records of 90 bird species recorded within 1 km of the site. Seven of the records were for Schedule 1 bird species, as listed within the Wildlife and Countryside Act 1981 (as amended), including barn owl (*Tyto alba*), fieldfare (*Turdus pilaris*), firecrest (*Regulus ignicapillus*), kingfisher (*Alcedo atthis*), peregrine (*Falco peregrinus*), merlin (*Falco columbarius*) and redwing (*Turdus iliacus*). The amenity grassland habitat on site is unsuitable to support any of the Schedule 1 species.

3.4.7 In 2009, a re-assessment of Birds of Conservation Concern was published by Eaton *et al* (2009), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.

3.4.8 "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.

3.4.9 Bird species recorded within 1 km of the site included 11 Red list species, 19 Amber list species and 48 birds of Green status (unthreatened). However, the majority of bird species recorded within 1 km of the site are species associated with woodland, open farmland or wetland and as such the amenity

grassland and lack of trees on site is considered to be unsuitable to support many of the species.

Table 2. Red and Amber list bird species recorded within 1 km of the site.

Common Name	Scientific Name	BoCC Status
Cuckoo	*Cuculus canorus*	Red
Grasshopper warbler	*Locustella naevia*	Red
Grey partridge	*Perdix perdix*	Red
House sparrow	*Passer domesticus*	Red
Lapwing	*Vanellus vanellus*	Red
Lesser redpoll	*Carduelis cabaret*	Red
Linnet	*Carduelis cannabina*	Red
Skylark	*Alauda arvensis*	Red
Song thrush	*Turdus philomelos*	Red
Starling	*Sturnus vulgaris*	Red
Yellowhammer	*Emberiza citrinella*	Red
Dunnock	*Prunella modularis*	Amber
Green woodpecker	*Picus viridis*	Amber
Grey wagtail	*Motacilla cinerea*	Amber
Greylag goose	*Anser anser*	Amber
House martin	*Delichon urbicum*	Amber
Jack snipe	*Lymnocryptes minimus*	Amber
Kestrel	*Falco tinnunculus*	Amber
Little grebe	*Tachybaptus ruficollis*	Amber
Mistle thrush	*Turdus viscivorus*	Amber
Oystercatcher	*Haematopus ostralegus*	Amber
Pochard	*Aythya ferina*	Amber
Reed bunting	*Emberiza schoeniclus*	Amber
Shoveler	*Anas clypeata*	Amber

Snipe	*Gallinago gallinago*	Amber
Swallow	*Hirundo rustica*	Amber
Teal	*Anas crecca*	Amber
Wheatear	*Oenanthe oenanthe*	Amber
Wigeon	*Anas penelope*	Amber
Woodlark	*Lullula arborea*	Amber

3.4.10 Although no formal bird survey was undertaken it is customary when undertaking a Phase 1 habitat survey to record birds seen on the site. Birds recorded during the August site visit were limited to a single blackbird (*Turdus merula*) on site and house sparrow (*Passer domesticus*) heard within the vicinity.

3.4.11 The Staghorn sumach may offer some nesting potential for urban bird species resident within the local area, however it is considered to be of suboptimal structure and is limited in extent. The scrub is likely to support/provide some common invertebrates, berries and seeds for foraging birds, but is again limited in extent, with availability of similar and higher quality foraging habitat present within surrounding residential gardens. As such, the habitats on site are not considered to be of importance to nesting and foraging birds outwith the zone of immediate influence.

3.5 Other key and notable species

Reptiles

3.5.1 A single grass snake (*Natrix natrix*) record was provided by SBRC for within 1 km of the site. The record is located approximately 650 m south west of the site, along a dismantled railway line, of which the closest point to the site is approximately 320 m west.

3.5.2 Habitats on site do not include heathland, woodland, waterbodies or long grassland and have no direct connectivity to such habitats within the wider area, therefore the site is considered to be unsuitable to support all UK reptile species and as such, reptiles are not considered to be receptors in relation to the proposed development.

3.6 Invasive plant species

3.6.1 Three records of the invasive species Japanese knotweed (*Fallopia japonica*), listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were supplied by SBRC. The records date between 1992 and 2013. Only one six figure grid reference was provided, pertaining to a location approximately 1 km north west of the site.

3.6.2 No Japanese knotweed was recorded on site on the day of survey.

4. Ecological Assessment and Mitigation

4.1.1 The proposed development design layout is not yet fixed, however will comprise the construction of residential dwellings and associated garden areas across the site. The assessment of the proposed scheme is based upon drawings SK_014 and SK_015 produced by Proctor and Matthews Architects, July 2013. Total landtake of site habitats is assumed.

4.2 Designated Sites

4.2.1 There are no statutorily or non-statutorily designated sites of importance for nature conservation located within 1 km of the application site to be affected by the proposed works.

4.3 Habitats

Amenity grassland

4.3.1 Landtake of all amenity grassland on site is required for the proposed scheme. However, as the amenity grassland is species-poor, a frequently occurring habitat within the surrounding area and similar habitat (turf lawns) will be instated on site post development, landtake is not considered to be of importance to nature conservation outwith the zone of immediate effect.

Trees/scrub

4.3.2 The scrub to be removed includes non-native, introduced species and is of limited extent, with no connectivity to other scrub/woodland habitat. Landtake of the scrub is not considered to be of importance to nature conservation outwith the zone of immediate effect.

4.3.3 Where practicable, inclusion of native tree planting on site post development to increase diversity and habitat structure on site would be considered beneficial for the development and local area. Tree species chosen should be typical of the local area, of UK provenance where practicable and be selected to maximise food and nectar sources for birds, invertebrates and small mammal species. Appropriate tree species to be included within landscape plans may include rowan (*Sorbus aucuparia*), common whitebeam (*Sorbus aria*), silver birch (*Betula pendula*), oak (*Quercus* sp.), wild cherry (*Prunus avium*), bird cherry (*P. padus*), hornbeam (*Carpinus betulus*) and field maple (*Acer campestre*).

4.3.4 It is recommended that consideration also be given to inclusion of native or known wildlife-attracting shrub species within the landscaping schedule to increase species diversity and habitat structure on site, as a benefit to nature conservation. Where possible, species chosen should maximize flowering, pollen/nectar production and/or berries/fruit production to benefit invertebrates, birds and small mammals. Where appropriate, it may be more suitable for ornamental species such as lavender (*Lavandula* sp.), mahonia (*Mahonia* sp.) and berberis (*Berberis* sp.), to be included at the discretion of the landscape architect.

4.3.5 Several species often used in landscaping, such as wall cotoneaster (*Cotoneaster horizontalis*) and Japanese rose (*Rosa rugosa*) are now listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) due to their non-native and invasive nature. Care should be taken to avoid

incorporation of any Schedule 9 species in the landscaping plan.

4.4 Species

Bats

4.4.1 All species of bat occurring within the UK are included in Schedule 2 of the Habitats Regulations (as amended). Under regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).

4.4.2 All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

4.4.3 There are no buildings or trees on site to offer bat roosting opportunities therefore no nocturnal bat activity surveys are recommended.

4.4.4 As an ecological enhancement to the site, which would comply with the National Planning Policy Framework aim that "opportunities to incorporate biodiversity in and around developments should be encouraged" (NPPF, 2012), consideration could be given to installing a small number of bat bricks/boxes e.g. Schwegler 1FR bat tubes, as part of the development. Internal bat bricks/boxes installed within the fabric of buildings offer discreet and secure, self contained units without providing access into cavity walls. External boxes can also be mounted securely on external walls. Bat bricks/boxes should be placed in a number of locations facing different aspects (southerly aspects are optimal) to maximise the chances of occupation and at a minimum height of 3.5 m (or preferably at eaves level). Areas of bright lighting should be avoided.

4.4.5 The section of scrub on the western boundary is of such limited extent and isolated that it is suboptimal for foraging bats resident in the surrounding area. In addition, alternative, higher quality foraging habitat is present in the wider area, particularly to the south west and north east of the site. As such, the landtake is not considered to be of importance to foraging bats outwith the zone of immediate effect.

Birds

4.4.6 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) against destruction of the nest during the bird breeding season, which falls between March and September, inclusive.

4.4.7 Whilst landtake of scrub within the application area will result in a minor loss of nesting and foraging opportunity, this habitat is limited in extent and there is an abundance of alternative and higher quality habitat in the local and wider area. As such, landtake is not considered to be of importance to nesting and foraging birds outwith the zone of immediate effect.

4.4.8 Whilst no evidence of previous nesting was seen on site, there is potential for nesting birds to use the site and therefore as a precautionary measure, it is recommended that scrub removal works should be undertaken between September and February i.e. outside of the bird breeding season. Should this

not be possible, vegetation should be checked for nesting birds by an experienced ecologist no more than 72 hours prior to works. Where an active nest is identified, a suitable exclusion zone is to be set up. No works should proceed within this zone until an ecologist has confirmed that the chicks have fledged and the nest is no longer is use.

4.4.9 Appropriate nest boxes could be incorporated into the development, where practicable, to provide a positive enhancement for nature conservation. The nest boxes should be mounted externally on the outside of buildings at a minimum height of 3 m, or ideally at eaves level. General purpose woodcrete bird boxes with 32 mm entrance hole, such as the Schwegler 1B, suitable for a range of common urban and garden dwelling species would be suitable for the site.

4.4.10 Once established, soft landscape planting, as detailed above, will also provide potential foraging and nesting habitat in the future.

4.5 Other key and protected species

4.5.1 No mitigation for other protected/key species is anticipated to be required.

4.6 Invasive species

4.6.1 The presence of plants listed on Schedule 9 Part II of the Wildlife and Countryside Act 1981 (as amended) on site does not constitute an offence in itself, however planting or causing them to spread in the wild does.

4.6.2 Whilst Staghorn Sumach is not included on the Schedule 9 list of invasive plants, it can be invasive in nature, due to its vigorous suckering habit which can cause encroachment onto surrounding land. As such, it is recommended that extra care is taken to remove all of the root system during scrub clearance on site and landscaping for the site does not include this species post development.

5. References

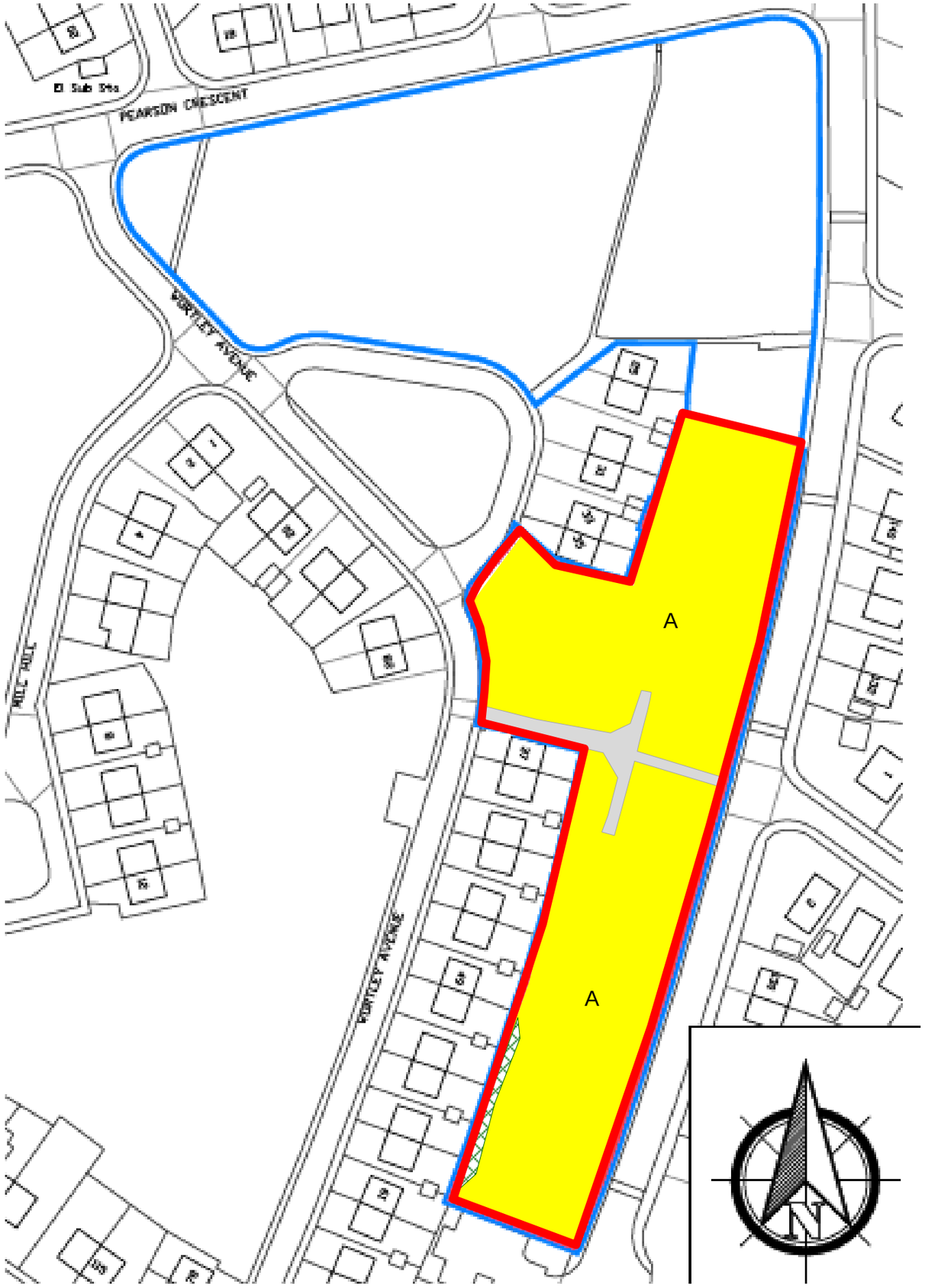
Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD, 2009: Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. British Birds 102, pp296–341.

Hundt, L. (2012) *Bat Surveys – Good Practice Guidelines Version 2*. Bat Conservation Trust, London.

JNCC (2007). *Handbook for Phase 1 habitat survey – A technique for environmental audit*. JNCC. Peterborough.

National Planning Policy Framework (2012) Communities and Local Government. London.

Figure 1. Survey Findings Plan



N

Legend:

- Site boundary
- A — Amenity grassland
- Scrub
- Hardstanding

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Figure 1: Survey Findings	**Date:** **September 2013**
Schematic	**ECUS Ref: 3975**

Appendix 1. Site photographs



Plate 1. Staghorn sumach and raspberry scrub along western boundary (left). Managed amenity grassland dominating site (right).