



Ripon Auction Mart – Ecological Assessment
Ripon Property Developments Ltd

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1. Introduction

- 1.1.1 This report has been commissioned by Ripon Property Developments Limited. Since June 2011, Ecus Ltd has been retained to advise on ecological matters to help inform the redevelopment of the Ripon Auction Mart site, North Yorkshire (Ordnance Survey Grid Reference: SE 315 719).
- 1.1.2 An ecological walkover survey and assessment has been undertaken to review the 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 Habitats Regulations 2010. An external inspection of buildings and trees on site was undertaken to identify any features that may be of interest to roosting bats.
- 1.1.3 This report details the findings of the survey work and subsequent assessment. Methodologies employed are described including site surveys and evaluation. Recommended mitigation measures and the need for any further survey work are included as appropriate.



Figure 1. Site location

2. Methodology

2.1 Desk Study and Data Consultation

- 2.1.1 Data consultation was undertaken with North and East Yorkshire Ecological Data Centre (NEYEDC) in July 2011 as part of the ecological assessment process. This was to determine whether any previous records of protected and key species exist on, or within, 1 km of the site. Records were requested for species protected under UK and European legislation such as badger, water vole, great crested newt, reptiles, birds and bats.
- 2.1.2 The Multi-Agency Geographical Information for the Countryside (MAGIC) website, www.magic.gov.uk, was consulted in July 2011 for information on statutory and non-statutory designated wildlife sites within 1 km of the site.
- 2.1.3 Information returned during the consultation process and identified using MAGIC is included within the report where appropriate.

2.2 Ecological Walkover Survey

- 2.2.1 The site was surveyed on 7th July 2011 by Ecus ecologists, Rob Harrison and Helen Lloyd, using the Phase 1 Habitat survey methodology (JNCC, 2007). The habitats and vegetation types present were recorded, 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 species 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 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 2. Target notes and species lists are included in Appendix 1.
- 2.2.4 Invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded where seen.

2.3 Protected and Key Species Survey

- 2.3.1 All signs of protected species or groups encountered during the survey visit were recorded. This included observations of tracks or other signs of species such as badger, which may be visible at the time of survey. The structure and quality of the habitats present were assessed for their suitability to support animal groups, paying particular attention to detecting signs of occupation by, or suitability for, protected species. In addition, a note was made of any animals or flora of conservation interest not protected by UK or European legislation.

2.4 Bat Assessment

- 2.4.1 During the 2011 field survey the exterior of buildings and the trees on site were inspected for features likely to be of interest to roosting bats.
- 2.4.2 Particular attention was paid to the areas that are normally favoured by bats, including the gable ends, roof tiles and soffits and fascias, to identify features (e.g. slipped tiles, cracks, crevices etc.) with potential to be of interest to roosting bats.
- 2.4.3 An individual building or 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:

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.

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.

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.

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 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.

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.

- 2.4.4 Further to the extended Phase 1 habitat survey, additional bat survey works were undertaken in both 2011 and 2012. The methodology, results and

evaluation of survey findings associated with further bat surveys are detailed in the Bat Survey Report, written to accompany this Ecological Assessment (Ecus, 2013).

- 2.4.5 Bat survey works undertaken since the original Phase 1 habitat survey include four dusk emergence surveys and two dawn return surveys targeted at buildings and trees within the application area which were assessed as having greater than negligible potential to support roosting bats during the initial assessment.

3. Survey Findings and Evaluation

3.1 General Site Description

- 3.1.1 The site is located adjacent to North Road (A6108) in the north of Ripon and comprises a disused auction mart with several buildings of various construction including a brick building, a wooden structure and a large metal frame barn. There are associated areas of semi-improved grassland, broad-leaved woodland, scattered trees and scrub, hedgerow, tall ruderal and hard standing.
- 3.1.2 The site is immediately surrounded by residential and commercial properties and an area of broad-leaved woodland. The wider area includes farmland, and riverine habitats to the north/east with further residential and commercial properties to the south within Ripon.

3.2 Sites of Nature Conservation Importance

- 3.2.1 No statutory sites of nature conservation importance occur within the site or were identified on MAGIC as present within 1 km of the application area.
- 3.2.2 Three local wildlife sites known in North Yorkshire as Sites of Importance for Nature Conservation (SINCs) were identified within 1 km of the application area. Little Studley Meadows SINC is situated 200 m to the north of the site and Ripon Disused Railway Embankment SINC is located 180 m to the east. The third SINC has now been denotified by the North Yorkshire SINC panel and is called the River Ure Side near Low Common SINC located 600 m to the north west of the site.

3.3 Habitats

Semi-improved grassland

- 3.3.1 The majority of the site consists of semi-improved grassland, as shown in Figure 2. Grass species include false oat-grass (*Arrhenatherum elatius*), crested dog's-tail (*Cynosurus cristatus*), cock's foot (*Dactylis glomerata*), tufted hair-grass (*Deschampsia cespitosa*), Yorkshire fog (*Holcus lanatus*) and timothy (*Pleum pratense*). Other non-grass species were also present including spiked sedge (*Carex spicata*), creeping thistle (*Cirsium arvense*), teasel (*Dipsacus fullonum*), meadow crane's-bill (*Geranium pratense*), herb Robert (*Geranium robertianum*), black medic (*Medicago lupulina*), creeping buttercup (*Ranunculus repens*), common sorrel (*Rumex acetosa*), broad-leaved dock (*Rumex obtusifolius*), common ragwort (*Senecio jacobaea*), sow-thistle (*Sonchus* sp.), common chickweed (*Stellaria media*), dandelion (*Taraxacum officinale* agg.), red clover (*Trifolium pratense*), white clover (*Trifolium repens*) and common nettle (*Urtica dioica*).
- 3.3.2 Semi-improved grassland is not included on the UK or local BAP. This habitat type is widespread, both within the local area and nationally, and is composed of common plant species of limited intrinsic nature conservation interest. In terms of the botanical diversity and habitat quality, semi-improved grassland on site is considered to be of interest to nature conservation within the zone of immediate influence only.

Broad-leaved woodland

- 3.3.3 The western boundary of the site takes in the edge of an area of broad-leaved

woodland, which extends further beyond the site boundary. Tree species present include sycamore (*Acer pseudoplatanus*), horse chestnut (*Aesculus excelsior*), ash (*Fraxinus excelsior*), black poplar (*Populus nigra*) and hybrid poplars (*Populus* sp.).

- 3.3.4 The trees range from immature through to semi-mature and mature in age and are a mix of native and introduced species which occur frequently throughout the UK.
- 3.3.5 The understorey to the broad-leaved woodland comprises cleavers (*Galium aparine*), ivy (*Hedera helix*), bramble (*Rubus fruticosus* agg.) and common nettle. Indian balsam (*Impatiens glandulifera*) is also found within this understorey vegetation and is considered an invasive species. This species is discussed further within Section 3.6.
- 3.3.6 This broad-leaved woodland is not classed as “ancient” due to the lack of ancient woodland indicator species in the ground flora and as a result is not included on the UK or local BAP. Broad-leaved woodland is common within the wider landscape and across the UK. Therefore this habitat is considered to be of importance to nature conservation within the zone of immediate influence only.
- 3.3.7 It should be noted that although black poplar within this broad-leaved woodland is not protected under UK or European legislation and is not included on the UK or local BAP, there are only approximately 6000 left in Britain. Black poplars on site can be considered to contribute to the overall biodiversity of the site and are of interest to nature conservation within the local and wider area.

Scattered trees and scrub

- 3.3.8 Numerous scattered trees and areas of scrub exist across the site, predominantly associated with the site boundaries. Species include sycamore, horse chestnut, silver birch (*Betula pendula*), hawthorn (*Crataegus monogyna*), cypress (*Cupressocyparis* sp.), wild cherry (*Prunus avium*), pear (*Pyrus* sp.), elm (*Ulmus* sp.), butterfly-bush (*Buddleja davidii*), ivy, blackthorn (*Prunus spinosa*), bramble and elder (*Sambucus nigra*).
- 3.3.9 The scattered trees range from immature through to semi-mature and mature in age and comprise a mix of native and introduced species which occur frequently throughout the UK.
- 3.3.10 Scattered broad-leaved trees and scrub are not included on the UK or local BAP and both are common within the wider landscape and across the UK. Scattered trees and scrub within the application area are considered to be of importance to nature conservation within the zone of immediate influence only.

Hedgerow

- 3.3.11 A length of hedgerow was located centrally within the site during the 2011 field survey works, running east to west through the site. Species present included hawthorn, ash, wild cherry and blackthorn with ivy and hedge bindweed (*Calystegia sepium*). This hedgerow was removed in winter 2011.
- 3.3.12 Hedgerows will provide habitat for a range of species including invertebrates, birds and small mammals and all hedgerows comprised predominantly

(>80%) of one or more native woody species qualify as a priority habitat under the UK BAP. The hedgerow on site qualified under the UK BAP criterion. Ancient and/or species rich hedgerows are also considered a priority habitat under the local BAP, however, the hedgerow on site was not considered to be either ancient or species rich and did not qualify under this criterion.

3.3.13 The hedgerow on site was considered to be species-poor and lacked the required number of species stated in Schedule 1 Part II (7), to be classed as important under The Hedgerow Regulations (1997). The hedgerow was limited in extent and did not contribute significantly to the hedgerow network within the local and wider area. As such, the hedgerow on site was considered to be of importance to nature conservation within the zone of immediate influence only.

Tall ruderal vegetation

3.3.14 Three areas of tall ruderal vegetation are present within the application area, situated along the east of the site and in the south east and south west corners of the application area. Species include false-oat grass, rosebay willowherb (*Chamerion angustifolium*), cleavers, perforate St John's-wort (*Hypericum perforatum*), bramble, broad-leaved dock (*Rumex obtusifolius*) and common nettle.

3.3.15 Tall ruderal vegetation is not included on the UK or local BAP. This habitat type is widespread, both within the local area and nationally, and is composed of common plant species of limited intrinsic nature conservation interest. In terms of the botanical diversity and habitat quality, tall ruderal plant communities on site are considered to be of interest to nature conservation within the zone of immediate influence only.

Hardstanding

3.3.16 Hardstanding is present throughout the northern half of the application area associated with the buildings of the disused auction mart. The hardstanding is in a state of early succession in less disturbed parts and contains species such as false oat-grass, silver birch, butterfly-bush, foxglove (*Digitalis purpurea*), cleavers, purple toadflax (*Linaria purpurea*) and common nettle.

3.3.17 This habitat type is widespread, both within the local area and nationally, and is composed of species of limited intrinsic nature conservation interest. In terms of habitat quality, the hardstanding on site with early successional plant species is considered to be of interest to nature conservation within the zone of immediate influence only.

3.4 Species

Birds

3.4.1 NEYEDC returned records of 10 different bird species within 1 km of the site. Species include mallard (*Anas platyrhynchos*), dipper (*Cinclus cinclus*), woodpigeon (*Columba palumbus*), rook (*Corvus frugilegus*), robin (*Erithacus rubecula*), coot (*Fulica atra*), grey wagtail (*Motacilla cinerea*), wren (*Troglodytes troglodytes*), blackbird (*Turdus merula*) and song thrush (*Turdus philomelos*). Of these species, the habitats on site are considered suitable to support woodpigeon, rook, robin, wren, blackbird and song thrush. The remaining species are associated with wetland habitats, which are not

present on site.

- 3.4.2 Although no formal bird survey was undertaken it is customary when undertaking a Phase 1 habitat survey to record birds seen on the site. Bird species recorded during the site visit on 7th July 2011 are shown in Table 1 below.

Table 1. Bird species seen during site visit

Common Name	Scientific Name	Birds of Conservation Concern (BoCC) Status
Blackbird	<i>Turdus merula</i>	Green
House sparrow	<i>Passer domesticus</i>	Red
Magpie	<i>Pica pica</i>	Green
Feral pigeon	<i>Columba livia</i> (domest.)	Green
Robin	<i>Erithacus rubecula</i>	Green
Swift	<i>Apus apus</i>	Amber
Wren	<i>Troglodytes troglodytes</i>	Green

- 3.4.3 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.
- 3.4.4 “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.
- 3.4.5 During the site visit one Red List species, house sparrow (*Passer domesticus*) and one Amber List species, swift (*Apus apus*), were seen on/over site. A further five green list species were recorded during the site visit.
- 3.4.6 Feral pigeon (*Columba livia* (domest.)) were seen to be nesting in Buildings 2 and 3 and the vegetation types and buildings on site may also be used by other common bird species for nesting and foraging.
- 3.4.7 The habitats on site provide a foraging and nesting resource for birds resident in the local area. The buildings, semi-improved grassland, broad-leaved woodland, scattered trees and scrub, hedgerow and tall ruderal on site are likely to support foraging sources such as common invertebrates, berries, fruit, seeds together with habitat for nesting and foraging bird species. However, an abundance of similar habitat is present in the local area and habitats on site are considered to be of importance to nesting and foraging birds within the zone of immediate influence only.

Bats

- 3.4.8 NEYEDC returned no bat records for within 1 km of the application area.

- 3.4.9 During the 2011 Phase 1 habitat survey three buildings situated towards the north of the application area were assessed for their potential to support roosting bats. The buildings comprise a variety of construction styles ranging from open sided steel structures to brick and wooden walls with corrugated metal and slate roofs.
- 3.4.10 Building 1 (B1; Figure 2) is constructed of brick with a pitched corrugated asbestos/cement roof. Two holes were recorded in the gable wall and gaps were recorded under the ridge section. No suitable gaps for bats were recorded which would allow access into the large soffit box/panelling at the front of the building. No access was obtained inside for internal inspection. No evidence of bat occupation of this building was recorded. This building was assessed as having a low level of potential to support roosting bats.
- 3.4.11 Building 2 (B2; Figure 2) is a wooden building with breeze block base and a pitched slate roof. There were some gaps present under ridge tiles and a few raised slates having potential to be of interest to roosting bats, although no evidence of this use was recorded. No access was obtained into the building at ground level, although it was possible on the upper level. Feral pigeon (*Columba livia*) were seen entering the building and further evidence was found in the form of numerous droppings. Access into the roof void was blocked, however holes in the ceiling allowed a reasonable view into the roof void. The ridge beams were heavily cobwebbed and ivy (*Hedera helix*) was growing through into the roof. This building was considered to have a low-moderate potential for supporting roosting bats.
- 3.4.12 Building 3 (B3; Figure 2) comprised open sided agricultural sheds, previously used for the livestock auction, these buildings had no clear roosting opportunities for bats and were considered to have no more than negligible potential to support roosting bats.
- 3.4.13 Building 4 (B4; Figure 2) is a disused public house; brick built, rendered on the front elevation with a hipped slate roof. The roof was generally intact with a few raised slates on the front elevation and on the front porch roof. All chimney flashings were tight with no suitable gaps. There was some damaged pointing on the hip ridges at the front and rear of the building but these areas were considered unlikely to be used by bats. The only features considered of moderate to high potential to be of interest to roosting bats were on the rear of the building, which were: two gaps at the top of the wall on the kitchen area and some raised slates above one of these. Two gaps in brickwork below the guttering near to down pipes on the main building area were identified and were found to be full of cobwebs, indicating they are not used by bats. No external signs of bat use were recorded from any location on the building during the building inspection. Building 4 was considered to have a moderate overall level of bat roosting potential.
- 3.4.14 Several mature trees on site were noted to contain features that may be of interest to roosting bats. The trees of concern are noted on Figure 2 and in Appendix 1 by Target Notes 3-4. The trees identified have low (TN3) or moderate/high (TN4) bat roost potential to support roosting bats. Suitable features for roosting bats present on the trees include missing limbs and cavities. Ivy cover may also be concealing cavities suitable for roosting bats.
- 3.4.15 Nocturnal survey results are reported in the accompanying Bat Survey Report (Ecus, 2013). Nocturnal surveys recorded low number of common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*)

roosting in the mature ash tree in the centre of the site (TN4, Figure 2) and a low numbers of common pipistrelle roosting in the rear of the pub building (B4, Figure 2).

- 3.4.16 The habitats present on site, including semi-improved grassland, broad-leaved woodland, scattered trees and scrub, hedgerows and tall ruderal vegetation offer some foraging opportunities for bats. However, there is an abundance of trees, woodland, hedgerows, riverine habitats and other suitable foraging habitat within the local area. The site may contribute to the mosaic of foraging habitat in the local area. However, due to the limited extent of suitable habitats on site and the extensive network of hedgerows and availability of similar land in the local and wider area, habitats on site are not considered to be of interest to foraging or commuting bats outwith the zone of immediate influence.

Badgers

- 3.4.17 NEYEDC returned no records of badger (*Meles meles*) within 1 km of the application area noted within the last 10 years.
- 3.4.18 No badger setts or evidence of badger activity, such as latrines, snuffle holes or paths were recorded during survey.
- 3.4.19 Whilst it cannot be ruled out that any foraging badgers resident in the wider area may use the site from time to time as part of a wider foraging resource, due to the absence of badger signs and the paucity of records, the application area is considered to be of importance to badgers within the zone of immediate influence only.

3.5 Other Protected and Key Species

- 3.5.1 During the survey, the site was also checked for suitability for, and signs of use by, other protected species. No signs of other protected species were recorded on the day of survey.

Reptiles

- 3.5.2 No records of reptiles were returned by NEYEDC within 1 km of the site. A subsequent check of the National Biodiversity Network (NBN) website confirmed an absence of reptile species, both within 1km and the wider area.
- 3.5.3 There are no waterbodies present on site to provide grass snake (*Natrix natrix*) preferred habitat. Whilst sections of the site comprise tall sward grassland and woodland edge, which have some suitability to support foraging reptiles such as common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*), connectivity to suitable habitats present to the east/south east of site is limited by the presence of Magdalen's Road in the immediate vicinity and the A61 Ripon Bypass further to the east. The A6108 North Road, which is the main arterial road into and out of Ripon, to the north also presents a major barrier to reptile movement from the north. Taking into account the paucity of records locally and the isolation of the site from the wider landscape, it is considered that the habitats on site are not of importance to reptiles outwith the zone of immediate influence.

Amphibians

- 3.5.4 NEYEDC returned 11 records of great crested newt (*Triturus cristatus*), one

record of common toad (*Bufo bufo*) and one record of common frog (*Rana temporaria*) within 1 km of the site. The great crested newt (GCN) records, dated between 1998 – 2004 relate to Little Studley Meadows to the north of the site and to Ripon College located 800 m west of the site. The toad and frog records date from 1970 – 1977 and are therefore considered to be historic.

- 3.5.5 GCN are known to travel distances of up to 1 km across suitable terrestrial habitat, but typically up to 500 m from a known breeding pond, with 250 m from a pond considered to be the core foraging habitat.
- 3.5.6 There are no waterbodies (ponds) present on site to support breeding great crested newt or other amphibians, however one pond occurs within 500 m of the site. The Little Studley Meadows GCN records grid reference is given as SE 314 719, which is assumed to be the waterbody shown on OS mapping, which lies approximately 350 m to the north west of the site.
- 3.5.7 Whilst there is a confirmed GCN breeding pond within 500 m of the site, the semi-improved grassland habitat on site which may provide some suitable GCN foraging habitat is considered to be outside of the core habitat foraging zone from the identified GCN pond. In addition, connectivity between the breeding pond to the north and the site is severed by the presence of housing and the main arterial North Road (A6108) which runs between the two sites, presenting a significant barrier to GCN dispersal.
- 3.5.8 The second known breeding pond located at Ripon College is 800m from the site boundary and has no connectivity to the site and is separated by large areas of residential housing and a number of main roads including the A6108 Palace Road.
- 3.5.9 As the site does not contain any waterbodies which would support breeding amphibians and has no connectivity to known breeding ponds, being separated by residential development and major roads, amphibians are not considered to be receptor in respect to the development as proposed.

Riparian mammals

- 3.5.10 No watercourses occur on site and whilst the River Ure is situated approximately 150 m to the east, residential and commercial properties and Magadlen's Road represent a physical barrier to movement between the River Ure and the site. As a result protected riverine species such as otter (*Lutra lutra*), water vole (*Arvicola amphibious*) and white-clawed crayfish (*Austropotamobius pallipes*) are not considered a receptor with regards to development.

Invertebrates

- 3.5.11 A bee colony, considered to consist of honey bees (*Apis* sp.) is situated on the corner of the north face of Building 2 within a gap in the wall. Honey bees are not protected by any UK or European legislation nor do they appear on the UK or local BAP. However, bees are currently in decline and should be considered in terms of the biodiversity of the local and wider area. They also constitute a health and safety issue if works are to be carried out near the colony.

3.6 Invasive Plant Species

- 3.6.1 An area of Indian balsam (*Impatiens glandulifera*) was recorded within the broad-leaved woodland understorey at the boundary of the site, noted in Figure 2 and Appendix 1 by T1.
- 3.6.2 No other invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded on the day of the survey.

4. Ecological Assessment & Mitigation

4.1 Proposed development

- 4.1.1 Outline planning is currently being sought for residential development of the site but no detailed plans or proposed layouts are available. However, it is anticipated that the development will require landtake of buildings, trees and grassland habitats on site to accommodate development of new housing.

4.2 Sites of Nature Conservation Importance

- 4.2.1 The development as proposed is not anticipated to impact upon the three SINCS sites identified within 1 km of the site. The site is separated from the sites by major built infrastructure including large areas of residential housing and major roads and no mechanism by which the proposed works may affect the sites of nature conservation importance or the species they are likely to support has been identified.

4.3 Habitats

Semi-improved grassland

- 4.3.1 Total landtake of the semi-improved grassland is anticipated to be required to accommodate the development. However, due to the common and widespread nature of this habitat, landtake is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effect.

Broad-leaved woodland

- 4.3.2 Limited landtake of broad-leaved woodland at the edge of the site is anticipated to be required to accommodate the development. Whilst landtake of the woodland edge trees will be significant at the level of the individual tree, the woodland edge at the perimeter of the site represents a small section of the overall woodland in the wider area and landtake of trees is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effect.
- 4.3.3 The black poplar situated in the broad-leaved woodland adjacent to site should be retained where practicable due to the rarity of this species in Britain. As good ecological practice consideration should be given to retention of this species and other mature and semi mature trees close to the boundary where possible. Retained trees should have Root Protection Zones (RPZs) implemented in accordance with British Standard 5837 (2012): Trees in Relation to Design, Demolition and Construction, to safeguard the trees during redevelopment at the site.
- 4.3.4 Where practicable, tree planting should be incorporated into the proposed scheme using native species typical of the local area and of UK provenance. Suitable species may include pedunculate oak (*Quercus robur*), beech (*Fagus sylvatica*), crab apple (*Malus sylvestris*), common whitebeam (*Sorbus aria*), rowan (*S. aucuparia*), bird cherry (*Prunus padus*), wild cherry (*P. avium*) and field maple (*Acer campestre*). In addition, the wood from the felled trees could be retained within the woodland edge in suitable areas to create habitat piles for invertebrates and small mammals.

Scattered trees and scrub

- 4.3.5 Landtake of scattered trees and scrub will be required to accommodate the development, although, trees along the boundaries are likely to be retained and incorporated into garden areas.
- 4.3.6 Whilst landtake will be significant at the level of an individual tree, the limited extent of the habitat to be affected and the abundance of similar habitat locally means landtake of scattered trees and scrub is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effect.
- 4.3.7 It is recommended that areas of native planting are included within the landscape plan to enhance the nature conservation value of the site. Species to be planted should be selected to maximise food and nectar sources for birds, invertebrates and small mammal species. Appropriate species may include hawthorn, field rose (*Rosa arvensis*), dog-rose (*Rosa canina*), holly (*Illex aquifolium*) and hazel (*Corylus avellana*). Should ornamental species be considered more suitable, species of known wildlife value i.e. pollen, nectar and/or fruiting species should be utilised where practicable. New native planting would comply with the National Planning Policy Framework (NPPF) aim that "opportunities to incorporate biodiversity in and around developments should be encouraged" (NPPF, 2012).

Hedgerow

- 4.3.8 Following the initial survey in 2011, as detailed in sections 3.3.12 – 3.3.14 above, the hedgerow was removed in winter 2011.
- 4.3.9 Whilst the hedgerow was not considered to be important under The Hedgerow Regulations (1997) and landtake was not considered to be of importance to nature conservation outwith the zone of immediate effect, species-rich and/or continuous hedgerows can make a valuable contribution to the nature conservation value of a site.
- 4.3.10 It is therefore recommended that where feasible, new hedgerows are incorporated within the landscape design, for instance along site boundaries. Hedgerows should utilise native species typical of the local area and of UK provenance, and where practicable, link to existing landscape features to enhance the connectivity within the local area resulting in a net enhancement of the hedgerow habitat on site.

Tall ruderal vegetation

- 4.3.11 Total landtake of the tall ruderal vegetation is anticipated to be required to accommodate the development as proposed. Due to the common and widespread nature of the species within this habitat and the abundance of similar habitat in the local area, landtake is not considered to represent a significant adverse impact to nature conservation outwith the zone of immediate effect.

Hardstanding

- 4.3.12 Total landtake of hard standing with early successional vegetation on site is anticipated to be required to accommodate the development as proposed. Due to the common and widespread nature of the species within this habitat and the abundance of similar habitat in the local area, landtake is not considered to be of importance to nature conservation outwith the zone of

immediate effect.

4.4 Species

Birds

- 4.4.1 Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) and it is therefore recommended that any vegetation clearance is undertaken between October and February i.e. outside of the breeding bird season (March – September inclusive) to minimise the risk of destruction of active nests. Should clearance of vegetation within the breeding season be unavoidable, no such works should be undertaken until the site has been inspected by an appropriately trained, qualified and experienced ecologist to check for active nests. Should nests be found, works in that area should cease and the nest should be inspected/monitored by an ecologist to confirm when works can resume.
- 4.4.2 Nesting feral pigeons have been recorded on site within Buildings 2 and 3. Although feral pigeons can be considered as a pest species, all nesting birds, including feral pigeons are protected whilst nesting under the Wildlife and Countryside Act 1981 (as amended). Feral pigeons have also been noted to breed in all months of the year. Prior to demolition of these buildings it is recommended that the structures are checked for the presence of nesting birds.
- 4.4.3 The inclusion of native trees, scrub, hedgerows within the landscape design would provide a benefit to foraging birds resident within the local area.
- 4.4.4 Appropriate nest boxes could also be incorporated into the development where practicable, to mitigate for the loss of existing nesting opportunities. The inclusion of Schwegler 1SP Sparrow Terraces would benefit the populations of house sparrows known to be resident in the local area. The nest boxes should be located on the outside of buildings at eaves level. Schwegler sparrow terraces can either be fixed externally to the outside of the wall or built into the fabric of the building itself. Where it is not practicable to include nest boxes on buildings, other types of nest box can be included on retained trees of sufficient trunk diameter. Final box choice and siting should be discussed with an ecologist.

Bats

- 4.4.5 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 through their inclusion on 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. This is irrespective of whether the animals are present.
- 4.4.6 Buildings 1 was considered to display a low level of potential to support roosting bats, Building 2 a low/moderate potential and Building 4 moderate/high potential for this use. Building 3 was considered to have only negligible potential to support roosting bats. The mature ash tree (TN4, Figure 2) in the centre of the site was assessed as having moderate/high potential to support roosting bats and the ash denoted by TN3, low potential for this use.
- 4.4.7 Subsequent bat activity survey undertaken during the optimal bat activity

season were undertaken in order to determine whether any features were used by roosting bats. A full evaluation of all bat surveys undertaken is provided in the accompanying Bat Survey Report (Ecus, 2013)

- 4.4.8 Roosts were confirmed in B4 and the ash tree in the centre of the site (TN4, Figure 2). Taking into account both confirmed bat roosts within the application area, it appears the site is used by no more than 15 common pipistrelle and 5 soprano pipistrelle bats over a typical year. Common and soprano pipistrelles are the two most common bat species in the UK (Battersby, 2005) and the roosts within the application area are considered to be of conservation significance at a low level (Mitchell-Jones, 2004). The roosts present within the application area are considered to be of importance to common and soprano pipistrelle populations at no more than a local level.
- 4.4.9 The public house (B4), and mature ash tree (TN4) would be likely to require removal as the result of any proposed development. Due to the presence of two confirmed bat roosts, a European Protected Species (EPS) licence would be required from Natural England to enable any such development to proceed, whilst preventing injury/disturbance to resident bats and maintaining the favourable conservation status of local bat populations.
- 4.4.10 No bat roosts were identified in B1, B2 or B3. However, B1 is joined to B4 and it is therefore recommended this building be included within any EPS licence. In addition, B2 was assessed as having low-moderate potential to support roosting bats and is of a construction type that may support roosting bats in the future. As such, whilst no bat roost was recorded during surveys, it is recommended as a precautionary measure that B2 is also included within any EPS licence.
- 4.4.11 In order to obtain a EPS licence it would be necessary to develop a mitigation and compensation plan for the site detailing measures to ensure that any bat roosts on site are maintained at 'Favourable Conservation Status'. An EPS application would then need to be written to include a Method Statement clearly detailing all survey work and mitigation proposals, to be written by an ecological consultant and a Reasoned Statement document, to be written by the client or their planning representative, detailing and justifying the 'Purpose' of the development and showing there is 'No Satisfactory Alternative' to the component of works impacted on the EPS. Once submitted, Natural England have 30 working days to determine EPS licence applications.
- 4.4.12 The habitats on site provide some habitat for foraging bats. However similar and more optimal habitats are present in the local area, notably within woodland east of the site, and fields and hedgerows along the River Ure, it is consequently considered the site is of importance to foraging and commuting bats within the zone of immediate influence only.

Badgers

- 4.4.13 Badgers and their setts are protected under the Protection of Badgers Act 1992. It is an offence under the act to kill, injure or take a badger. It is also an offence to destroy damage or obstruct a badger's sett, or to disturb animals within the sett. Any operation likely to affect badgers by direct disturbance to the animals or their setts is required under the Act to be licensed by the appropriate authority.
- 4.4.14 No signs of badger activity were recorded anywhere within the site and no

setts were recorded. Due to the abundance of alternative, high quality badger habitat in the surrounding area, landtake associated with the proposed development is not considered to be of importance to badger outwith the zone of immediate effect.

- 4.4.15 Although no signs of badger were seen on the day of survey and the works are not considered likely to impact upon badgers or their setts, badgers are highly mobile and inquisitive animals and could travel onto site at any time in search of food as part of a wider foraging resource, therefore as a precautionary measure, it is recommended that any trenches left overnight should be either covered, or have a suitable escape ramp e.g. long scaffold board, inserted to allow escape should a badger fall in.

4.5 Other Protected and Key Species

Invertebrates

- 4.5.1 A bee colony was recorded within Building 2. Whilst bees are not protected under legislation, they are important pollinators and their populations are currently in steep decline. It is recommended as good ecological practice, and for reasons of health and safety, that the bee hive is safely and humanely removed by a local swarm collector. Details of local swarm collectors can be obtained from the British Beekeepers Association.

4.6 Invasive Plant Species

- 4.6.1 Indian balsam has been noted in the understorey of the broad-leaved woodland on the western boundary of the site.
- 4.6.2 It is an offence under the Wildlife and Countryside Act 1981 (as amended) to cause the spread of invasive species in the wild. Care should be taken to avoid the risk of spreading this species.
- 4.6.3 Indian balsam is an invasive plant which spreads through explosive dispersal of seed pods up to a distance of 7 m, when touched. Therefore care should be taken to avoid disturbance of the infested area during July-October when seed pods are in production and maturing for dispersal. Where practicable, it may be suitable to tape/fence off the infested area to prevent disturbance by site contractors/machinery.
- 4.6.4 For control of the species in situ, the cutting, strimming or pulling method(s) used on a regular basis (when not in seed) for approximately 3 years can be effective, potentially resulting in full eradication in isolated areas. It should be noted that plants must be cut below the lowest node to avoid re-flowering.
- 4.6.5 Alternatively if the area containing Indian balsam falls within the footprint of the works, soil containing the species and its seed bank should be carefully removed and stored elsewhere on site, with measures put in place to ensure that this soil does not leave the site and potentially be chemically treated.

References

British Beekeepers Association <http://www.bbka.org.uk/> (accessed 19/07/11)

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.

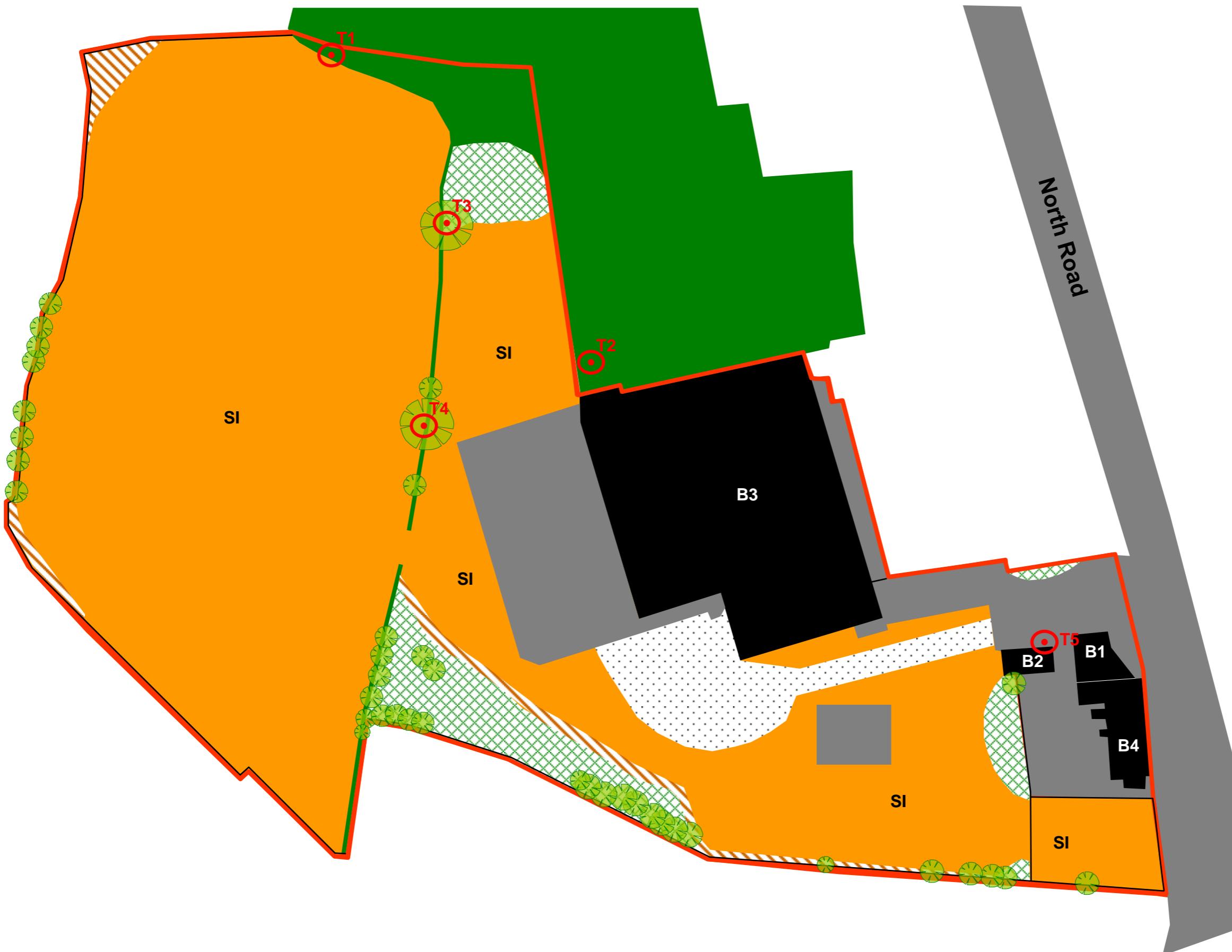
Ecus (2013) *Ripon Auction Mart – Final Bat Survey Report*. Ecus Ltd, Sheffield.

Environment Agency. 2010. *Managing Invasive Non Native Plants*. Environment Agency. Bristol.

JNCC. 2004. *Bat Workers' Manual*. 3rd Edition (Eds Mitchell-Jones A J & McLeish AP). JNCC. Peterborough.

JNCC. 2010. *Handbook for Phase 1 habitat survey – a technique for environmental audit*. JNCC. Peterborough.

Figure 2. Survey Findings Plan



Legend:

-  Building
-  Hardstanding
-  SI Semi-improved grassland
-  Broad-leaved woodland
-  Bare ground
-  Scrub
-  Tall ruderal
-  Hedge (removed winter 2011)
-  Fence/wall
-  Site boundary
-  Tree (Indicative)
-  T1 Target note
-  B1 Building reference



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Ripon Auction Mart

Figure 2:
Phase 1 Habitat Plan

Date:
February 2013

Not to scale

ECUS Ref:
3329/RH

Appendix 1. Target Notes and Species Lists

Target Notes:

T1 – Area of Indian balsam.

T2 – Black poplar is present in this woodland edge.

T3 – Large mature ash tree with missing limbs and ivy cover. Low bat roost potential.

T4 – Large mature ash tree with missing limbs, areas of rot and some cavities visible. It is unclear whether the cavities lead anywhere. Moderate/high bat roost potential.

T5 – Bee hive situated in a gap in the wooden wall.

Species Lists:

Table A: Semi-improved grassland

Scientific Name	Common name	Abundance (DAFOR)
<i>Arrhenatherum elatius</i>	False oat-grass	A
<i>Cynosurus cristatus</i>	Crested dog's-tail	O
<i>Dactylis glomerata</i>	Cock's foot	F
<i>Deschampsia cespitosa</i>	Tufted hairgrass	O
<i>Holcus lanatus</i>	Yorkshire fog	A
<i>Phleum pratense</i>	Timothy	F
<i>Carex spicata</i>	Spiked sedge	R
<i>Cirsium arvense</i>	Creeping thistle	O
<i>Dipsacus fullonum</i>	Teasel	O
<i>Geranium pratense</i>	Meadow crane's-bill	F
<i>Geranium robertianum</i>	Herb Robert	O
<i>Medicago lupulina</i>	Black medic	O
<i>Ranunculus repens</i>	Creeping buttercup	O
<i>Rumex acetosa</i>	Common sorrel	R
<i>Rumex obtusifolius</i>	Broad-leaved dock	O
<i>Senecio jacobaea</i>	Ragwort	F
<i>Sonchus</i> sp.	Sonchus	O
<i>Stellaria media</i>	Common chickweed	R
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Trifolium pratense</i>	Red clover	R
<i>Trifolium repens</i>	White clover	A
<i>Urtica dioica</i>	Common nettle	LD

Table B: Broad-leaved woodland

Scientific Name	Common Name	Abundance (DAFOR)
Broad-leaved woodland		
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Aesculus excelsior</i>	Horse chestnut	R
<i>Fraxinus excelsior</i>	Ash	F
<i>Populus nigra</i>	Black poplar	O
<i>Populus sp.</i>	Poplar	F
Understorey		
<i>Galium aparine</i>	Cleavers	O
<i>Hedera helix</i>	Ivy	F
<i>Impatiens glandulifera</i>	Indian balsam	LD
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Urtica doica</i>	Common nettle	F

Table C: Scattered trees and scrub

Scientific Name	Common Name	Abundance (DAFOR)
Scattered trees		
<i>Acer pseudoplatanus</i>	Sycamore	A
<i>Aesculus excelsior</i>	Horse chestnut	O
<i>Betula pendula</i>	Silver birch	O
<i>Crataegus mongyna</i>	Hawthorn	F
<i>Cupressocyparis sp.</i>	Cypress	O
<i>Fraxinus excelsior</i>	Ash	A
<i>Prunus avium</i>	Wild cherry	O
<i>Pyrus sp.</i>	Pear	R
<i>Ulmus sp.</i>	Elm	R
Scrub		
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Buddleja davidii</i>	Butterfly-bush	A
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Fraxinus excelsior</i>	Ash	F
<i>Hedera helix</i>	Ivy	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Sambucus nigra</i>	Elder	R

Table D: Hedgerows

Scientific Name	Common Name	Abundance (DAFOR)
<i>Calystegia sepium</i>	Hedge bindweed	O
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Fraxinus excelsior</i>	Ash	F
<i>Hedera helix</i>	Ivy	O
<i>Prunus avium</i>	Wild cherry	O
<i>Prunus spinosa</i>	Blackthorn	F

Table E: Tall ruderal

Scientific Name	Common Name	Abundance (DAFOR)
<i>Arrhenatherum elatius</i>	False oat-grass	O
<i>Chamerion angustifolium</i>	Rosebay willowherb	A
<i>Galium aparine</i>	Cleavers	O
<i>Hypericum perforatum</i>	Persorate St John's-wort	O
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Rumex obtusifolius</i>	Broad-leaved dock	F
<i>Urtica dioica</i>	Common nettle	F

Table F: Hard standing

Scientific Name	Common Name	Abundance (DAFOR)
<i>Arrhenatherum elatius</i>	False oat-grass	F
<i>Betula pendula</i>	Silver birch	O
<i>Buddleja davidii</i>	Butterfly-bush	A
<i>Digitalis purpurea</i>	Foxglove	R
<i>Galium aparine</i>	Cleavers	O
<i>Linaria purpurea</i>	Purple toadflax	A
<i>Urtica dioica</i>	Common nettle	O