
Land off Greenhill Road, Liverpool.

Extended Phase 1 Habitat Survey Report.

Compiled by Ecology Services Ltd.

Members of the Institute of Ecology and Environmental Management.

on behalf of

Morris Homes

June 2014



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1.0 Introduction

- 1.1 Ecology Services Limited was commissioned by Morris Homes in June 2014 to carry out an Extended Phase 1 Habitat Survey for the proposed development on land off Greenhill Road, Liverpool, NGR 340284 385499.
- 1.2 The survey is required to assess the ecological value of the area of land being used for development and of wildlife habitat bordering this development area.
- 1.3 The proposed development is for the development of 85 detached and semi-detached residential properties, associated gardens, landscaping and access roads. See Drawing 2 showing the proposed development.
- 1.4 To conduct an ecological assessment at this site, the aims of the survey were to:
- Undertake a Desktop Study up to 1km of the site.
 - Where land access is not available, undertake a Data Base Assessment (DBA) using existing maps of the area up to 250m of the development site.
 - Undertake an Extended Phase 1 Habitat Survey of the development site and up to 30m from the development site;
 - Identify any further detailed survey requirements.
- 1.5 The sites ecological values will be assessed in context with current UK planning and legislative policy, including:
- Statutory Protected Species
 - UK Species/Habitat of Principal Importance
 - Local Biodiversity Action Plan Habitat/Species
 - Statutory Protected Sites
 - Non-Statutory Protected Sites or Species of Conservation Concern
- 1.6 This report states the survey methodology, presents the results of the survey, evaluates the findings, assesses the impacts and makes recommendations concerning the protection of existing ecological features within and bordering the development plot. Further surveys will be recommended, where required.

2.0 Methodology

Desktop Study

- 2.1 Ecological data and historic records of protected species and sites was collated from the following sources; listed in Table 1.

Table 1: Desktop Study Results and Record Centres Consulted

Source of information	Information supplied
Local Biodiversity Action Plan	Identification of Local BAP Species and Habitats known to occur in the region.
Natural Environment and Rural Communities (NERC) Act 2006	Review of UK Habitats/Species of principal Importance known to occur in the region.
Multi Agency Geographical Information Centre www.magic.gov.uk	To identify Sites of Special Scientific Interest and UK Habitats of Principal Importance protected sites or features of interest within 1km of the site.
Mario Map	To view aerial photographs of the site and the surrounding area to check for pond locations and features of interest.

Biobank Merseyside (Local Records Centre)	To identify protected sites or features of interest within 1km of the site.
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- 2.2 The aim of the desktop study was to assist the surveyor undertaking the Extended Phase 1 Habitat Survey by providing background information on the likely habitats and species that occur within the local area.

Data Base Assessment

- 2.3 A Data Base Assessment (DBA) is undertaken using existing maps of the area (up to 250m of the development site) to identify any features of ecological interest, for example; a pond that may support amphibian species such as great crested newts (*Triturus cristatus*) or common toad (*Bufo bufo*).

Extended Phase 1 Habitat Survey

- 2.4 Habitats were assessed by using Phase 1 Habitat Survey techniques, which is a system for environmental audit widely used within the environmental consultancy field.
- 2.5 The Extended Phase 1 Habitat Survey followed Phase 1 Habitat Survey Methodology (JNCC, 2010). This involves walking over the site, mapping and target noting any semi-natural habitats. The survey area includes the footprint of the proposed development and up to 30m from the proposed development site.
- 2.6 A habitat map will be prepared to show the locations and extent of habitats and detailed descriptions of the principal and important plant communities will be provided as Target Notes.
- 2.7 Plant species abundances were recorded within the target notes, using DAFOR ratings, as Dominant, Abundant, Frequent, Occasional or Rare (Rare in the sense of having a very low abundance). Species recorded as locally abundant are abundant only in certain parts of the target noted habitat, rather than being abundant throughout. The ratings have no precise definition and are affected by plant size and season of survey however they have been shown to correlate with more quantitative measures.
- 2.8 The Extended Phase 1 Habitat Survey is a modified approach to the Phase 1 Habitat Survey, extended for use in environmental assessment (Institute of Environmental Assessment, 1995). The survey will record any signs of protected species/species of principal importance or other valuable ecological components of the site.
- 2.9 The locations of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and others were also mapped.

Timing

- 2.10 The Extended Phase 1 Habitat Survey was undertaken on 11th of June 2014 which is an optimal time of year to undertake such a survey.

Weather Conditions

- 2.11 Weather conditions during the survey were reasonable, with no appreciable rain or wind affecting survey.

Personnel

- 2.12 All survey works were carried out by experienced Ecologist Mr. P. Bonney BSc (Hons).

Constraints

- 2.13 Surveys only provide a snapshot of habitats and species that are there at that time. Further surveys at additional times of the year are likely to find additional species. The surveys were based on the information provided.

3.0 Results

Desktop Study

Protected Sites

- 3.1 The desktop study found 3 records of Non-Statutory protected sites or habitats within 1 kilometre of the proposed development. These include:
- Cressington Heath Local Wildlife Site (LWS)
 - Allerton Cemetery (LWS)
 - Land within Allerton Green Wedge (LWS)

Protected Species

- 3.2 Desktop searches found 5 records of European and Statutory protected species within 1km of the proposed development. These include:
- Common pipistrelle (*Pipistrellus pipistrellus*)
 - Noctule bat (*Nyctalus noctula*)
 - Red squirrel (*Sciurus vulgaris*)
 - Barn owl (*Tyto alba*)
 - Bluebell (*Hyacinthoides non-scripta*) (Partial protection)

Invasive Species

- 3.3 Desktop searches also revealed records of 5 invasive species within 1km of the site, which include:
- Indian (Himalayan) balsam (*Impatiens glandulifera*)
 - Japanese knotweed (*Fallopia japonica*)
 - Japanese rose (*Rosa rugosa*)
 - Montbretia (*Crocasmia*)
 - Rhododendron (*Rhododendron ponticum*)

UK Habitats of Principal Importance

- 3.4 A review of the list of UK Habitats of Principal Importance (England) was undertaken to check for habitats that may potentially be located within the site. Based upon the information gathered from the sources listed in Table 1, no habitats were identified

UK Species of Principal Importance

- 3.5 A review of the list of UK Species of Principal Importance (England) was undertaken to check for species that may potentially use the site. Based upon information gathered from the sources listed in Table 1, species are listed below:
- Mammals – Noctule bat*, common pipistrelle*, Eurasian hedgehog and red squirrel*
 - Birds – Bullfinch (*Pyrrhula pyrrhula*), dunnock (*Prunella modularis*), house martin (*Passer domesticus*), linnet (*Carduelis cannabina*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*), willow tit (*Parus montanus*) and barn owl*
 - Plants – Native bluebell
- NB: Those listed with an asterisk (*) are also statutorily protected.

- 3.6 UK Habitats/Species of Principal Importance are a material consideration of planning and fall under the NERC Act (2006). Section 40 of the NERC Act (2006), places a duty to conserve biodiversity on every public body. The Local Planning Authority and Natural England will expect account to be taken of these habitats in the overall layout and landscape strategy for the development.

Local Biodiversity Action Plan (LBAP)

- 3.7 Local Biodiversity Action Plan (LBAP) lists key local habitats/species considered to be rare or declining in the area. Some may be of national concern, while others may only be locally rare. Some are statutorily protected, although the great majority are not.

- 3.8 While local BAP documents have no legal status, the Local Planning Authority and Natural England will expect account to be taken of these species/habitats in the overall layout and landscape strategy for the development.

- 3.9 No habitats listed within Local BAP were identified which the site may be classified under.

- 3.10 The species of local concern which might potentially use the site, based upon information gathered from the sources listed in Table 1 are as follows:
- Mammals – Red squirrel, noctule bat* and pipistrelle bat* and Eurasian hedgehog.
 - Birds – House martin, house sparrow (*Passer domesticus*), skylark, song thrush, starling and swift (*Apus apus*).
 - Flowering Plants – Native bluebell and purple rambling-fumitory.

NB: Those listed with an asterisk () are statutorily protected
Species of biodiversity significance on the Lancashire Long List have been reviewed but are generally covered under an associated Habitat Action Plan.*

- 3.11 Based on information gathered from the sources listed in Table 1 and the surveyors knowledge, the following protected species were taken into account when the site assessment was carried out:
- Badger (*Meles meles*)
 - Amphibians
 - Bats (all species)
 - Birds (all species)
 - Reptiles
 - Red squirrel
 - Eurasian Hedgehog

Extended Phase 1 Habitat Survey

- 3.12 An Extended Phase 1 Habitat Survey of the site was undertaken during June 2014. Descriptions of the principle habitats are provided below and are illustrated on Drawing 1.

- 3.13 In brief the proposed development site contained the following habitats.
- Scrub (Dense/continuous or Scattered)
 - Scattered Trees
 - Neutral Semi-improved Grassland
 - Semi-improved grassland (species-poor)
 - Marshy grassland
 - Tall Ruderal
 - Ephemeral/Short Perennial

- Introduced Shrub
- Drainage Ditch (Defunct)
- Boundaries (Fencing/Walls)
- Buildings
- Bare Ground

3.14 The wider survey area, including features of ecological interest located up to 250m from the development site, contains the following habitats:

- Scrub (Dense/continuous or Scattered)
- Scattered Trees
- Neutral Semi-improved Grassland
- Semi-improved grassland (species-poor)
- Tall Ruderal
- Amenity Grassland
- Ephemeral/Short Perennial
- Introduced Shrub
- Boundaries (Fencing/Walls)
- Buildings
- Bare Ground

3.15 Descriptions of the principle habitats types that are to be impacted by the development found within the Extended Phase 1 Habitat Survey are reviewed within the following sections. This will also cover habitats that may support protected species. Features of ecological interest located within the wider survey area that are affected by the development works are also described. Features separated from the site that are unaffected by the development have been omitted.

3.16 Target Notes have been provided for all semi-natural habitats that are deemed either ecologically important or have the potential to support protected species/species of principal importance; see Appendix 1 for Extended Phase 1 Habitat Survey Target Notes.

Scrub Dense/Continuous & Scattered

3.17 Scrub is relatively common habitat throughout the local vicinity and is found at several locations within the wider survey area.

3.18 The development site contains large areas of dense and continuous scrub. Species include abundant bramble (*Rubus fruticosus*), locally frequent dogwood (*Cornus sanguinea*), buddleia (*Buddleia davidii*) and rare sycamore sapling (*Acer pseudoplatanus*), common ash sapling (*Fraxinus excelsior*) and willow scrub sp. (*Salix sp.*). Occasional self seeding laburnum (*Laburnum sp.*) was also recorded within the grassland at T3.

Scattered Trees (broad-leaved and coniferous)

3.19 The wider survey area contains areas of scattered trees.

3.20 The site contains many scattered trees, mainly in association with boundaries. They are generally semi-mature to mature in age. Broad-leaved species include; occasional common ash, sycamore, English oak (*Quercus robur*) and willow sp. Self seeding of these species was also evident, especially along the northern boundary of the site. Coniferous species include mature Leyland cypruss (*Cupressocyparis leylandii*), especially along the residential boundaries to the site.

Neutral Semi-improved Grassland and Semi-improved Grassland (species-poor)

- 3.21 The site contained neutral semi-improved grasslands. Species recorded include; dominant false oat-grass (*Arrhenatherum elatius*), abundant Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaris*) and frequent hawkweed sp. (*Hieracium* sp.). As well as locally frequent sweet vernal-grass (*Anthoxanthum odoratum*), ribwort plantain (*Plantago lanceolata*), spear thistle (*Cirsium vulgare*) and smooth tare (*Vicia tetrasperma*), occasional cock's-foot (*Dactylis glomerata*), rough meadow-grass (*Poa trivialis*), meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*), curled dock (*Rumex crispus*), greater plantain (*Plantago major*), nipplewort (*Lapsana communis*), common ragwort (*Senecio jacobaea*), black medick (*Medicago lupulina*), creeping thistle (*Cirsium arvense*) and crane's-bill species (*Geranium* sp.). Rare species included black knapweed (*Centaurea nigra*), dandelion (*Taraxacum officinale* agg), common vetch (*Vicia sativa*), hedge woundwort (*Stachys sylvatica*), crested dog's-tail (*Cynosurus cristatus*), perennial rye-grass (*Lolium perenne*), wild strawberry (*Fragaria vesca*), creeping cinquefoil (*Potentilla reptans*), lady's-mantle (*Alchemilla vulgaris*), common mouse-ear (*Cerastium fontanum*) and birds-foot trefoil (*Lotus corniculatus*).
- 3.22 Species richness of the grassland depreciated considerably at the eastern entrance to the site, where fly-tipping was apparent, to a semi-improved (species-poor) grassland habitat, with cock's-foot becoming the dominating grass species, with occasional false oat-grass, rough meadow grass and Yorkshire fog.

Marshy Grassland

- 3.23 An area of marshy grassland was identified at TN3 with abundant sweet vernal-grass, red fescue, common bent and soft rush (*Juncus effusus*).

Tall Ruderal

- 3.24 Large areas of tall ruderal was located within the site mainly in conjunction with adjacent habitats and species included; dominant common nettle (*Urtica dioica*) with abundant rosebay willow-herb (*Chamerion angustifolium*) and locally frequent hogweed (*Heracleum sphondylium*).

Ephemeral/Short Perennial

- 3.25 Ephemeral short perennial was found mainly in connection with bare ground, species list typically contained abundant perennial rye-grass, frequent white clover, occasional annual meadow-grass (*Poa annua*), creeping buttercup, creeping thistle, common mouse-ear, Yorkshire fog, and pineapple weed (*Matricaria discoidea*), with rare ribwort plantain, meadow buttercup, spear thistle and daisy (*Bellis perennis*).

Introduced Shrub

- 3.26 There is a relatively small area of introduced shrub in the site, located adjacent to TN11 that contain several introduced and planted shrubs. Shrub species include; cotoneaster sp. (*Cotoneaster* sp.), and snowberry (*Symphoricarpos albus*).

Ditch (Dry)

- 3.27 A dry, defunct ditch is located along the scrub and tree line at TN6. The ditch originates from narrow field drains to the north and south of the site.

Buildings & Structures

- 3.28 Buildings are present within the site, some of which are old commercial nursery glasshouses (TN9) which still contain an abundance of remnant cultivated plants and shrubs.
- 3.29 The following section evaluates habitats and their suitability to support species that are affected by the proposed development works.

4.0 Evaluation

Habitat Evaluation

Protected Sites, UK Habitats of Principal Importance & Local BAP Habitats.

- 4.1 The desktop study found 3 Local Wildlife Sites (LWS) within 1 km of the proposed development site; Cressington Heath Local Wildlife Site (LWS), Allerton Cemetery (LWS) and Land within Allerton Green Wedge (LWS). All 3 sites are located some distance from the development site and are not directly or indirectly affected.
- 4.2 Local Wildlife Sites (LWS) are designated in a Local Authority Unitary Development Plan for their nature conservation value. In 2006 Defra issued guidance on their identification, selection and management. The guidance recommends that County-wide partnerships be established to manage Local Site systems for each county. Merseyside has a total of 342 Local Wildlife Sites to date. To designate Local Wildlife Sites all sites for which MEAS hold records and which are assessed against the Local Wildlife Sites guidelines. Any sites, which meet the designation guidelines, are designated as Local Wildlife Sites. The designation guidelines are based on Ratcliffe (1977) A Nature Conservation Review (i.e. rareness, diversity, naturalness, fragility etc) as well as guidelines, which highlight protected species and Biodiversity Action Plan species and habitats.
- 4.3 The desktop study did not identify any UK Habitats of Principal Importance that might potentially be located within the proposed development site. However, following the site visit neutral semi-improved grassland was found which may classify as Neutral Grassland UK Priority Habitat.
- 4.4 The desktop study did not identify any Local BAP Habitats that might potentially be located within the proposed development site; however, following the site visit, neutral semi-improved grassland was found which may classify as a Neutral Grassland Local BAP Habitat.
- 4.5 The following sections briefly evaluate the importance of each habitat of ecological value and the species it is considered suitable to support.

Scrub Dense/Continuous & Scattered

- 4.6 Small areas of scrub are common place within the wider survey area, whereas larger areas of dense scrub were scattered throughout the proposed development site.
- 4.7 Small areas of scrub are of relatively low ecological value, however, larger areas of scrub are of ecological value at a site level, especially in association with other adjacent habitats.
- 4.8 Scrub habitats can be valuable for birds (breeding and foraging), invertebrates and foraging bats, small mammals, amphibians (foraging and hibernating) and common reptiles.

Scattered Trees

- 4.9 Scattered trees are located within the wider survey area and the proposed development site some of which are mature in age. Deadwood tree was also identified at TN4. Scattered trees are important features within the landscape.
- 4.10 Trees support a wide range of terrestrial invertebrates which in turn support foraging bats and birds. They are also important for breeding birds and can provide suitable bat roost habitat if they contain crevices, especially in deadwood.

Neutral Semi-improved Grassland and Semi-improved Grassland (species-poor)

- 4.11 The neutral semi-improved grassland found on site contain species typical of grasslands that are not subject to management, although the diversity of the grassland is relatively good, the majority of species were rare, in the context as being in low abundance. The presence of frequent sweet vernal-grass suggests that the grassland is succeeding to unimproved in areas. The neutral semi improved grassland may classify as a UK Priority Habitat and is also classified as a Local BAP Habitat for North Merseyside and these habitats will be affected.
- 4.12 The small areas of semi-improved grassland (species-poor) are of relative low ecological value, due to low species diversity and size.
- 4.13 Neutral grasslands such as this are a rare habitat within urban areas and can provide suitable habitat for birds (foraging), mammals (foraging bats), terrestrial invertebrates and common reptiles (foraging and basking).

Marshy Grassland

- 4.14 A small area of marshy grassland is located within the site, this is poor in flora species diversity and is small in size and considered to be of relative low ecological value.

Tall Ruderal

- 4.15 Habitats such as tall ruderal are scattered throughout the wider survey area and the site. Tall ruderal within the site increases the diversity of habitats at a site level, but it is a common habitat locally and flora species diversity is poor. Tall ruderal contributes to mosaic habitats around the site but it is considered to be of relative low ecological value.

Ephemeral/Short Perennial

- 4.16 Ephemeral short perennial has developed upon areas of bare ground within the site, the areas are small in size, and contain no noteworthy flora species. Ephemeral short perennial is considered to be of low ecological value.

Introduced Shrub

- 4.17 A very small area of introduced shrub is located adjacent to the building at TN11 within the site. Although small in size these shrubs can still add to the diversity of the site.

Ditch (Dry)

- 4.18 A dry ditch which seems to have been defunct for some time showing no signs of water and has become overgrown with dense scrub and mature/semi-mature trees.
- 4.19 Dry drainage ditches fall under the UK Broad Habitat of Boundaries and Linear features for their conservation value within the landscape, although in this instance, at a site level there appears to be no indication that water flows within the ditch and has not done for some

time. Water was heard flowing from the field drains which indicate that the water flow must now be situated subterranean.

Buildings & Structures

- 4.20 Buildings are present within the site, especially old nursery glasshouses (TN9) which still contain an abundance of remnant plants and shrubs. Although buildings are not usually of high ecological value they can be suitable to support protected species such as roosting bats, breeding birds and in this case, common reptiles.

Protected Species Evaluation

- 4.21 As part of the Extended Phase 1 Habitat Survey, surveyors also recorded any wildlife observed. Particular emphasis was placed upon sightings of protected species or species of conservation interest. Direct observations of the species were noted. Furthermore, sites/habitats with potential to support the species were also noted, even if direct signs of presence were not apparent. This was done in order to scope the potential for protected species being present so that the Client could be advised on the basis of a precautionary approach before undertaking works.

Amphibians

- 4.22 The desktop study found no records of amphibians within 1km of the development site.
- 4.23 The wider survey area contains suitable terrestrial habitat to support amphibians, but no suitable aquatic breeding habitat was identified within 250m of the site.
- 4.24 The development site contains suitable terrestrial habitats to support amphibians for foraging, refuge and hibernation in the form of dense vegetation, underground in small mammal holes, amongst tree roots, tussocky rank grassland, scrub, tall ruderal, deadwood and rubble. No aquatic breeding habitat is present within the site.
- 4.25 Amphibians require both suitable terrestrial and aquatic habitats to survive and it is considered unlikely that amphibians will be affected by the development proposals.
- 4.26 Great crested newts and the habitat they use for protection and shelter are protected under Conservation of Habitats & Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended).
- 4.27 Common toad is a UK Species of Principal Importance and a material consideration for planning.

Badger

- 4.28 The desktop study found no records of badger within 1km of the development site.
- 4.29 The development site contains habitats suitable to support badger although no signs of badger were recorded within the site or within 30m of the site
- 4.30 Badgers and their setts are protected under the Protection of Badgers Act (1992). Sett interference includes: disturbing badgers whilst they are occupying a sett, as well as destroying a sett or obstructing it.

Bats

- 4.31 The desktop study found records of pipistrelle and noctule bat species of bats within 1km of the development site. However, these records are 20 years old and none were recorded within the survey area.
- 4.32 The wider survey area contains buildings, and scattered trees that are considered to be suitable for roosting bats. Linear features such as the railway line are likely to be those associated with greatest bat activity. Overall, habitats within the immediate and wider survey area hold varying levels of suitability for bat species although pockets of higher value habitat are present.
- 4.33 The development site contains several buildings and trees that may provide suitable bat roost habitat. Foraging habitats take the form of scrub, tussocky grassland and scattered trees.
- 4.34 All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed under Annex IV of the Habitats Directive as in need of protection. The buildings and trees affected by development require further detailed surveys to determine their potential as bat roost habitat before a full evaluation can be made.

Birds

- 4.35 The desktop study found barn owl (*Tyto alba*) to be present within 1km of the development site.
- 4.36 The wider survey area provides a range of habitats suitable for birds such as, scattered trees, scrub and hedgerows.
- 4.37 The development site provides a range of habitats suitable for birds such as buildings, scattered trees, scrub and grassland. The grassland is rank and tussocky in areas which are suitable habitat for small mammals and could support foraging barn owl. However given the isolation of the site within a dense urban environment it is considered that barn owl are unlikely to use the site for foraging.
- 4.38 The Wildlife and Countryside Act (WCA) 1981 (as amended), states that all wild birds are protected. Under the WCA, it is an offence to kill, injure or take any wild bird, to take damage or destroy the nest of any wild bird, or to take or destroy the egg of any wild bird. It is good practice to carry out any works outside the breeding season that might affect nests of those species and result in an offence being committed. Breeding bird season is March to August inclusive.

Reptiles

- 4.39 The desktop study found no records of reptiles within 1km of the development site.
- 4.40 Habitats within the wider survey area are considered to be suitable to support the more common reptile species such as slow worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) in the form of the railway line and associated embankment.
- 4.41 Given the connectivity of the grassland, scrub, bare ground and rubble which form mosaic habitats, to the railway and with no physical barrier of separation, habitats within the site are considered suitable to support reptile species.

- 4.42 Common reptiles receive some degree of protection through the Wildlife and Countryside Act 1981 (as amended). They are protected against killing and injuring. The habitats for these widespread species are not protected. Therefore, in practice this requires a reptile protection scheme before implementing planning permission. No specific licence is required. It is not an offence under the Wildlife and Countryside Act 1981 (as amended) to possess these animals.

Red Squirrel

- 4.43 The desktop study found several records of red squirrel within 1km of the development site, although these records date from 1930s.
- 4.44 Red squirrels are protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is illegal to "intentionally kill, injure or take" or "damage, destroy or obstruct" access to any structure or place used for shelter or protection, or to disturb any animal while it is in a dray.
- 4.45 The trees within the site do not form a significant habitat for red squirrel or are not linked to any wooded areas that might be used by the species. Therefore the development is not considered to affect red squirrels.

Invasive Species Evaluation

Cotoneaster

- 4.46 One cotoneaster species was present within the site located next to buildings at TN11.
- 4.47 Five species of cotoneaster were added to Schedule 9 of The Wildlife and Countryside Act 1981 (as amended). The amendment came into force on the 6th of April 2010. This change means that it is illegal to allow the spread of these species onto neighbouring land and it is a requirement, by law, to treat and dispose of them accordingly.

5.0 Impacts & Recommendations

Habitats Impacts and Recommendations

- 5.1 The survey found 3 Non-Statutory protected Local Wildlife Sites located on the extremity of the 1km buffer boundary, these sites are not considered to be directly or indirectly impacted by the development.
- 5.2 The survey found the site to possibly contain a UK Habitats of Principal Importance, Neutral Grassland and possibly a Local BAP Habitat, namely Neutral Grassland.
- 5.3 Habitats within the wider survey area and the development site are considered suitable to support European and Statutory Protected Species, UK Species of Principal Importance and Local BAP species.
- 5.4 The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, states that Habitats and Species listed as Principal Importance, formerly UK BAP's, are capable of being a material consideration in the making of planning decisions.
- 5.5 In brief the National Planning Policy Framework (NPPF) is asking the Local Planning Authority to have an aim to conserve and enhance biodiversity and that any new

developments should ensure that there is a minimum of no net loss of biodiversity at a site and result in an overall biodiversity gain.

- 5.6 The following sections briefly evaluate each habitat that is impacted by, or adjacent to the site that may be impacted by the proposed development, provides advice upon each habitat of ecological value and the species it is considered suitable to support.

Scrub Dense/Continuous & Scattered Including Introduced Shrub

- 5.7 Scrub areas are relatively large, dense and common throughout the site and this can be a valuable wildlife habitat, particularly for breeding birds. It is recommended that scrub is retained where possible.
- 5.8 For areas of large scrub loss it is recommended that a sensitive a landscape scheme is designed to create new scrub areas, ideally in association with other features of interest such as the trees located around the boundary of the site. Any scrub planting should be native species of local provenance.
- 5.9 It is advised that works affecting scrub areas may need to take into account breeding birds, amphibians and common reptiles prior to works.

Scattered Trees

- 5.10 The development contains several mature trees, mainly associated around the boundaries of the site. There will be some tree loss to development especially in the northern area of the site. The following points need to be taken into consideration.
- Impacts to trees should be minimised where possible and trees retained.
 - For retained trees tree root protection measures need to be implemented in order to avoid damage to the trees. The works should be carried out according to BS 5837:2012 Trees in relation to design, demolition and construction.
 - If there is a loss of scattered trees to development then mitigation works should be undertaken to replace trees on a minimum like for like basis to ensure that there is no net loss of biodiversity at the site. Replacement tree species should be native and of local provenance.
 - Any trees that are affected by development should be checked prior to any works, to see if they fall under any Tree Preservation Order's (TPO).
- 5.11 Consideration for tree dwelling species such as breeding birds and roosting bats (TN2, TN4, TN5 and TN6) may also need to be taken into consideration if trees are impacted by the proposed development.

Neutral Semi-improved Grassland

- 5.12 The areas of neutral semi-improved grassland (TN3 and TN7) found on site may classify as a UK Priority Habitat and also a Local BAP Habitat for North Merseyside.
- 5.13 The development affects this potential UK and LBAP habitat and measures need to be taken to either retain this grassland and minimise any losses or compensate for losses. Possible compensation would be the creation of native wildflower meadows incorporated into the landscape planting. All species must be of local provenance.
- 5.14 In line with planning policy, new developments are seeking to ensure that there is a no net loss of biodiversity to development and any loss of the neutral semi-improved grassland

with adjacent mosaic habitat would be considered a net loss, in the absence of mitigation and/or compensation.

- 5.15 Neutral grasslands such as this are a rare habitat within urban areas and can provide suitable habitat for birds (foraging), mammals (foraging bats), terrestrial invertebrates and common reptiles (foraging and basking).

Marshy Grassland

- 5.16 The loss of a small area of marshy grassland of low ecological value is considered to be negligible.

Tall Ruderal

- 5.17 The loss of small areas of tall ruderal which is of low ecological value is considered to be negligible.

Ephemeral/Short Perennial

- 5.18 The loss of small areas of ephemeral short perennial, which is of low ecological value is considered to be negligible.

Introduced Shrub

- 5.19 The loss of introduced shrub, which is of low ecological value, is considered to be negligible.

- 5.20 The dry ditch seems to have been defunct for some time showing no signs of water and has become overgrown with dense scrub and mature/semi-mature trees.

- 5.21 Dry drainage ditches fall under the UK Broad Habitat of Boundaries and Linear features for their conservation value within the landscape, although in this instance, at a site level there appears to be no indication that water flows within the ditch and has not done for some time. Water was heard flowing from the field drains which indicate that the water flow must now be situated subterranean.

Ditch (Dry)

- 5.22 The ditch has become defunct with water now draining underground. The development plans show the drainage ditch restored. This would create a UK Broad Habitat of Boundaries and Linear features and would add conservation value at a site level and the wider landscape.

Buildings

- 5.23 Several Buildings are present within the site, including TN1, TN8 and TN11. Old commercial nursery glasshouses at TN9 still contain an abundance of remnant cultivated plants and shrubs. These buildings can be suitable to support protected species such as roosting bats, breeding birds and in the case of the old glasshouses, breeding birds and common reptiles, see following species sections.

Species Impacts & Recommendations

Amphibians

- 5.24 Taking into account that no records of amphibians were found during the desktop study and that there is no suitable aquatic habitat within 250m of the proposed development site. As amphibians require both suitable terrestrial and aquatic habitat to survive, it is considered

unlikely that amphibians, including great crested newt or common toad will be affected by the development and no further action is required.

Badger

- 5.25 No signs of badger were found during the Extended Phase 1 Habitat Survey within the development site or within 30m of the proposed works. Therefore, there are no apparent implications with regards to development and badgers at the time of survey.
- 5.26 As badgers are a highly transient species, and as habitats are suitable within the 30m boundary, then as best practice any development must be mindful of the potential for badgers at all times. If a badger or badger sett is identified or suspected during the works then all works must cease and the Ecologist notified for advice.

Bats

- 5.27 The desktop survey identified bats within 1km of the site and it is highly likely that bats are within the survey area and features such as trees should be retained if possible, works kept to a minimum and habitats reinstated on completion of works.
- 5.28 Buildings at TN1, TN8 and TN11 and several trees TN2, TN4, TN5 and TN6 have been identified as possibly containing potential bat roost habitat. If these structures/trees are to be disturbed or affected by development, an inspection and assessment survey by a suitably licensed bat Ecologist shall be undertaken to check further the level of roosting potential.
- 5.29 If potential is of such a level or the survey is inconclusive or a bat roost is found, there will be a requirement for nocturnal surveys to be undertaken a suitable time of year. Nocturnal surveys can only be completed between May to August and up to three surveys may be required which need to be spaced accordingly over the survey period.
- 5.30 The Local Planning Authority will require adequate surveys in support of any planning application at the site, which will include the results of an inspection and assessment survey and if required the nocturnal surveys, should the buildings and trees listed in Section 5.25 be affected.

Breeding Birds

- 5.31 The development has the potential to cause disturbance to breeding birds within the dense scrub, trees and buildings within the site. It is recommended that:
- All suitable breeding bird habitats are removed during the winter.
 - If working during the bird breeding season is unavoidable, then a further survey for breeding birds, including ground nesting birds, is carried out prior to working in all areas. Breeding bird season runs from March through to August, inclusive.
 - If breeding birds are identified, a species assessment should be made and options to minimise the likelihood of any nest being damaged or destroyed.
- 5.32 It is further recommended that the development includes several bird boxes to assist in reducing temporary impacts on nesting birds. For example the inclusion of communal tree and house sparrow nesting boxes within existing mature trees, larger holed and open nest boxes for song thrush, dunnock and blackbird. The inclusion of smaller nest boxes for tit sp., robins and wrens

Reptiles

- 5.33 Habitats within the wider survey area and the site are considered suitable for slow worm and common lizard.
- 5.34 The site is considered to contain a mosaic habitat that is suitable to support both reptile species the following is recommended prior to development;
- Undertake a reptile survey of the site to fully assess the impacts upon the common reptile species and development. If reptiles are absent, precede with the development works. If reptiles are present produce a Method Statement to remove suitable habitats within the site in a way that does not result in killing or injury, with habitat enhancements to incorporate within the landscape design.

Red Squirrel

- 5.35 The trees within the site do not form a significant habitat for red squirrel or are not linked to any wooded areas that might be used by the species. Therefore the development is not considered to impact red squirrel.

Invasive Plant Species Impacts & Recommendations

Cotoneaster

- 5.36 Small areas of cotoneaster were identified on site and will be removed prior to development. It is not known if the cotoneaster sp. on site is one of the species listed on Schedule 9 of The Wildlife & Countryside Act 1981 (as amended). As best practice it shall be removed and chipped on site and used as mulching around vegetated areas. This should also coincide with regular checks and spot treating if required.

Biodiversity Gain Recommendations

- 5.37 In line with current planning policy, new developments should ensure that there is no net loss of biodiversity to development and ideally biodiversity gains should be achieved.
- 5.38 A sensitive ecology advised landscape scheme shall be required to ensure that there is no net loss of biodiversity at the site. Specific details shall be advised upon completion of the recommended protected species surveys. Ideally the scheme shall include the enhancement of the retained section of dry ditch, creation of native species-rich hedgerows which are a UK BAP, planting of trees and scrub and creation of wildlife flower meadow.
- 5.39 If mitigation can not be achieved within the site Biodiversity offsetting may be considered.
- 5.40 Further possible recommendations to ensure that there is an overall biodiversity gain are as follows:
- Installation of bat boxes of trees to be retained and within any new build works at the site. Bat boxes should be placed away from well lit areas, at suitable locations.
 - The creation for log piles within retained woodland to the northwest of the site for species that rely upon dying and dead wood and for hibernating and foraging including amphibians, reptiles and invertebrates.

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Appendix 1:

Extended Phase 1 Habitat Survey Target Notes

TN1 - Building

Solid brick building with slated, apex roof. Brickwork is in good condition although gaps visible in tiled roof which has possible bat potential.

TN2 Mature sycamore trees x 2

Two mature sycamore trees on adjacent land in close proximity to site boundary, show visible signs of missing limbs, knot holes and fissures for possible bat roosting potential.

TN3 – Mosaic Habitat (Neutral Semi-improved Grassland/Marshy Grassland/Tall Ruderal/ Scrub and Bare Ground)

Neutral semi-improved and marshy grassland, tall ruderal and scrub mosaic habitat, situated next to the railway line to the north of the site. Mosaic habitat offers rich potential for reptiles, breeding birds, foraging bats, small mammals and invertebrates. The tussocky grassland in connection with scrub and bare ground next to railway line offer good basking habitat for common reptiles such as slow worm and common lizard.

TN4 - Scattered trees

A line of mature & semi-mature trees along northeast fence line include; occasional common ash, sycamore and rare English oak. Several of the trees contain knot holes, cracks and crevices. In addition there are two dead trees showing extensive de-lamination, cracks and splits. All the trees, in particular the dead trees have possible bat roost and breeding bird potential.

TN5 - Scattered tree

Very mature common ash with deep crack and fissures which may contain potential for bat roosting.

TN6 - Scattered Trees

A linear stand of mature trees species include; occasional English oak, sycamore, common ash and willow. These trees have links with the boundary of TN3 with some specimens being old in age and showing some signs of decay. They all show deep scars and knot holes, broken limbs and deadwood which have the potential for breeding birds and possibly roosting bats. The tree line follows old filled in ditch and culvert with the ground layer of dense dominant bramble scrub with abundant ivy and common nettle.

TN7 - Neutral Semi improved Grassland

As TN3 but including locally frequent yellow hawkweed, spear thistle and smooth tare. In addition there is occasional curled dock, greater plantain, nipplewort, common ragwort, black medick, creeping thistle and crane's-bill sp. Also evident was rare common vetch, hedge woundwort, crested dog's-tail, perennial rye-grass, wild strawberry, creeping cinquefoil, lady's-mantle, common mouse-ear and birds-foot trefoil.

TN8 - Abandoned Boiler House Building

Brick structure with apex tiled roof and chimney. Brickwork in good condition although airbricks visible for possible ingress. Roof shows signs of gaps under ridge tiles. A main door is open on the side. This building has possible bat roost potential. Entry into building was not possible due to asbestos warning signs.

TN9 - Old Commercial Nursery Glasshouses

Several large abandoned commercial nursery glasshouses exist to the west of the site. Old cultivated overgrown plants and shrubs are still abundant within. A potentially suitable habitat for fauna species such as breeding birds, amphibians, small mammals and common reptiles. Access was not possible due to falling glass (health and safety hazard).

TN10 - Dense scrub/tall ruderal mosaic

An area of dense impenetrable scrub and saplings species include frequent common ash, bramble, willow sp., and snowberry with occasional Norway maple and rare field rose. These are probably remnants of cultivation from old nursery. Several of the common ash and Norway maple are becoming semi-mature. This is a good habitat for breeding birds, bats (foraging), small mammals and common reptiles.

TN11 - Abandoned Store Room

Old brick store room with apex and tiled roof with visible gaps in the roof tiles and eaves. The roof showed signs of decaying fascia boards with mortar gaps in ridge tiles. Building is accessible and has no loft space although there is a potential for bat roosting within rafters and under roof tiles.

TN12 Bare ground/Concrete

Open exposed areas of bare ground, concrete and tarmac in close proximity to dense patches of scrub and tussocky grassland makes it ideal habitat for basking reptiles including common lizard and slow worm. Areas of abandoned corrugated metal roofing and building rubble also litter the site.

Appendix 2:

Desktop Study Records






















Please refer to accompanying MEAS Ecology Report Document.

Drawing 1:
Extended Phase 1 Habitat Survey Map

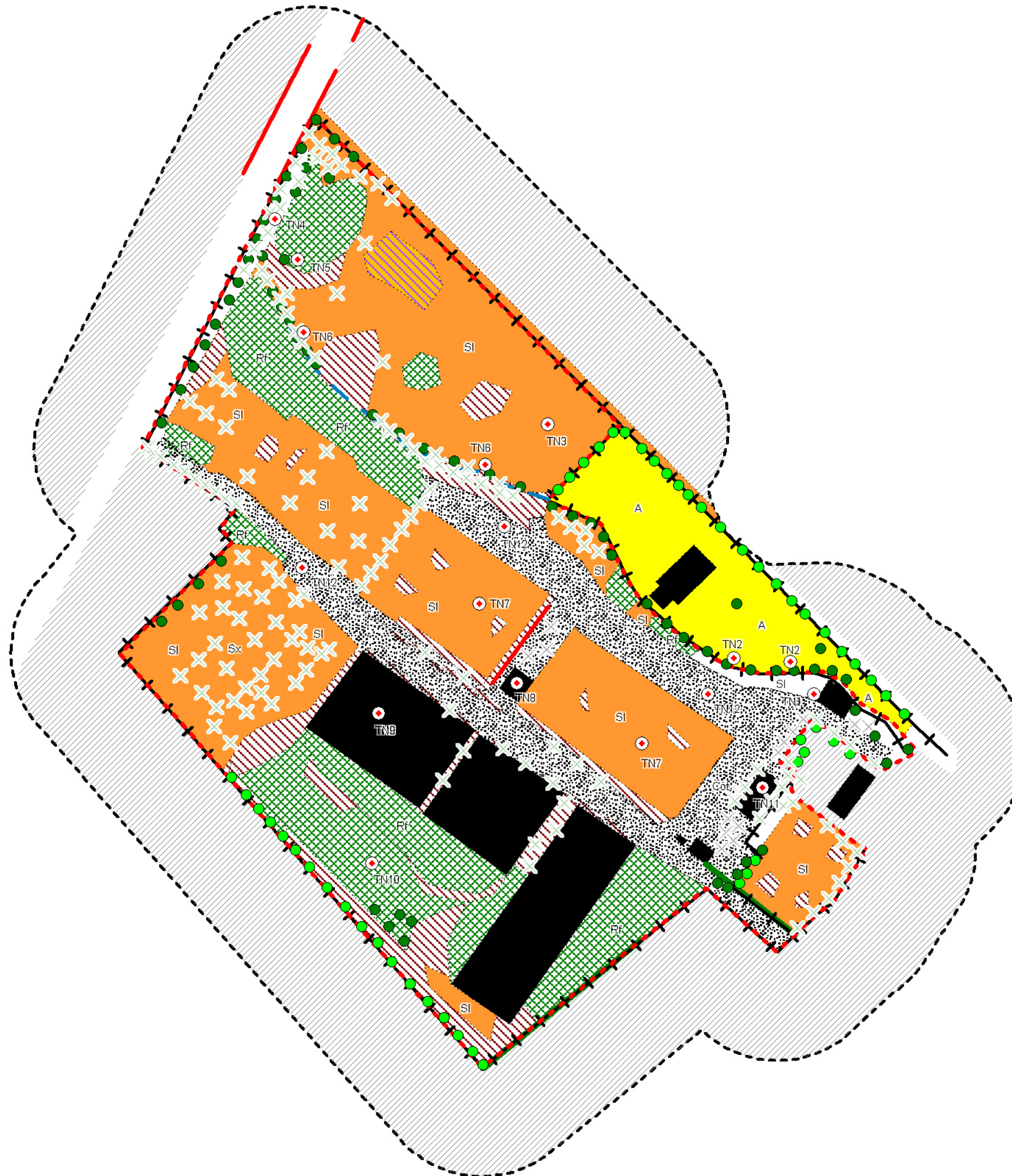
Drawing 1: Extended Phase 1 Habitat Survey Map

Map Ref: NGR 340284 385499
Scale: 1:1200 @ A3

Key:

-  Site Boundary
-  30m buffer
-  Target Note
-  Scrub (dense)
-  Scrub (scattered)
-  Scattered tree (broad-leaved)
-  Scattered tree (coniferous)
-  Neutral semi-improved grassland
-  Marshy grassland
-  Semi-improved grassland (species-poor)
-  Tall ruderal
-  Amenity grassland
-  Ephemeral/short perennial
-  Introduced shrub
-  Hedgerow (species-poor)
-  Fenceline
-  Wall
-  Region
-  Bare ground
-  No access
-  Ditch (dry)

Dominant Species Code:
Cot: *Cotoneaster* sp.
Rf: *Rubus fruticosus* agg.
Sx: *Salix* sp.



N
1

Drawing 2:
Proposed Development Plan



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Ca	Capesthorpe	2
Ch	Chatsworth	16 28 mews/semi
Du	Dunham	10
R	Rufford	7
Di	Didsbury	7
Ca	Capesthorpe	3 27 3 bed det
Ap	Appleton	10
Be	Berrington	8
Ma	Malham	4
Br	Bramhall	4
Wf	Wharfedale	4 30 4 bed det
Total		85

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