

LAND AT EDGE LANE CENTRE, LIVERPOOL

UPDATED ECOLOGICAL SURVEY AND ASSESSMENT

SEPTEMBER 2010

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1.0 INTRODUCTION

1.1 Reasons for the Updated Report

- 1.1.1 This Updated Report of the Ecological Survey and Assessment of land at Edge Lane Centre in Liverpool has been produced because the design of the proposed retail/leisure scheme has been revised substantially following negotiations with Council officers and following a presentation to National CABI (the Commission for Architecture and the Built Environment). It is possible that the revised design may alter the assessment of the findings and conclusions of the February 2010 Ecological Assessment.
- 1.1.2 This Updated Report is based on the Landscape Masterplan (M1796.01E) by Barnes Walker.

1.2 Introduction to the Report

- 1.2.1 ERAP Ltd (Consultant Ecologists) was commissioned to carry out an extended Phase 1 Habitat Survey and ecological assessment of four sites in the Edge Lane Centre area of Liverpool in November 2009. The ecological survey was required in connection with proposals to redevelop the four sites. The four sites (Figure 1 of Appendix 1) are located approximately four kilometres east of the centre of Liverpool.
- 1.2.2 This “**UPDATED ECOLOGICAL SURVEY AND ASSESSMENT**” applies to the whole of the proposed development of **SITE 3** only, but the results of the surveys of the other sites are reported in this Assessment as part of the ecological assessment of the area surrounding the proposed development site.
- 1.2.3 As at November/December 2009, Site 1 (Figure 2 of Appendix 1) consists of a mainly abandoned retail development. Site 2 (Figure 3) is a mixture of mown and unmown grassland with an abandoned small-holding and allotment garden. Site 3 (Figures 4, 5 and 6) is an existing retail and office area with outlying disused areas of land. Site 4 (Figure 7) is also a disused retail development with only part of one building in use. The central grid references for the sites are:- Site 1: SJ392906, Site 2: SJ393908, Site 3: SJ387905 and Site 4: SJ387908.

2.0 SURVEY OBJECTIVES AND METHODOLOGIES OF SURVEY AND EVALUATION

2.1 The survey methodologies were as follows:-

- 1. A desk-top survey was undertaken to obtain records of any protected species in the sites or in the locality of the sites. The desk-top survey was directed to protected species, particularly bats and Great Crested Newts.
- 2. There was detailed habitat and vegetation mapping of each of the sites and the areas adjacent and immediately surrounding sites (Figures 2-7 of Appendix 1) based on the *Phase 1 Habitat Survey Methodology* (Joint Nature Conservation Committee 1993).
- 3. Habitats and vegetation within the sites were examined with preparation of Target Notes for features of ecological significance. The Target Notes consist of descriptions of the habitats, vegetation and faunal species present, with an assessment of their ecological value and the possible need for further more detailed surveys. Target Notes include identification and description of any rare,

uncommon and important biodiversity present including Priority Habitats and Priority Species. Target Notes also describe any stands of invasive and non native species such as Japanese Knotweed.

4. Detailed species lists were recorded and compiled, where appropriate, to identify, describe and evaluate plant communities. The species lists included estimates of the abundance, distribution and percentage ground cover of individual species including the identification of plant species with a high constancy of occurrence. Estimation of abundance was based on the DAFOR system (D=dominant, A=abundant, F=frequent, O=occasional and R=rare), this being a widely used and accepted system employed by ecological surveyors.
5. There were searches for and assessment of all habitats within and surrounding the sites for statutorily protected species including Badger, Great Crested Newt, bat species, Barn Owl, Water Vole and reptile species.
6. Assessment of the ecological value of the habitats at the sites, in terms of vegetation, was based on the *National Vegetation Classification (NVC)* (Rodwell 1991 & after) and the Ratcliffe criteria (*A Nature Conservation Review 1977*). The Ratcliffe criteria are size (extent), diversity, naturalness, rarity, fragility, typicalness, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.
7. The NVC provides a systematic and comprehensive analysis of British vegetation and is widely used by Natural England and other wildlife organisations as well as by ecological consultants to provide a scientific basis for the description and evaluation of habitats. The NVC provides a reliable framework for nature conservation and land-use planning, and for application of the Ratcliffe (1977) criteria. The NVC covers all natural, semi-natural and major artificial habitats.
8. Government advice on wildlife, as set out in *Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9)* has been taken into consideration, as have the *EC Habitats Directive* and *The UK Biodiversity Steering Group Report (1995)*. UK and local biodiversity action plans have been taken into account in the evaluation of habitats, vegetation, plant species and fauna.
9. The habitats in the sites were assessed for their ornithological value including suitability for breeding birds and suitability for breeding invertebrates including butterflies, terrestrial and aquatic invertebrates.
10. The surveys also identified the possible requirement for any further more detailed surveys that may be required at other times of the year to identify the possible presence of rare or protected species, and surveys that may be required for compliance with wildlife legislation during the proposed redevelopment of the sites.
11. A principal objective of the surveys was the identification of any ecological constraints on the proposed redevelopment of the sites.
12. The surveys also investigated the possible requirement for mitigation measures if the survey results indicated the likelihood of adverse effects on biodiversity. Where mitigation appeared to be required, the surveys identified the appropriate type or types of mitigation and the feasibility of mitigation.

13. Finally, the surveys identified potential opportunities to incorporate beneficial biodiversity in the design of the proposed redevelopment of **SITE 3** as required by Key Principles of *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*.

3.0 SURVEY FIELDWORK AND SURVEY LIMITATIONS

Fieldwork

- 3.1 The habitat and vegetation surveys were conducted on 30th November and 1st December 2009 by Mr Chris Swindells B.Sc. (Hons). under the directions of Dr Raymond Paul Gemmell B.Sc.(Hons), Ph.D., C.BIOL, MBS, MLI (Land Science). The weather was dry, sunny, periodically hazy, and with a maximum air temperature of 7°C.
- 3.2 Searches were made for uncommon, rare and statutorily protected plant species, species listed as protected in the *Wildlife and Countryside Act 1981*(as amended) and indicators of important and uncommon plant communities. Habitats were assessed for their potential to support protected species and other wildlife. All plant nomenclature follows Stace (1997).
- 3.3 There were searches for alien and invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981*, namely Japanese Knotweed (*Fallopia japonica*) and Giant Hogweed (*Heracleum mantegazzianum*).
- 3.4 The protected species surveys of the site and adjacent areas, up to 200 metres from the site boundaries, included Badger activity, especially in areas of scrub and adjacent to the railway.
- 3.5 The Badger surveys followed the search methods described in the '*Species Conservation Handbook – Badgers*' published by English Nature (now Natural England). The Badger surveys included searches for 1) 'D' shaped sett entrances at least 25 cms. wide and wider than they are high with large spoil mounds, 2) bedding at sett entrances (such as grass and leaves), 3) scratching posts on shrubs and trees close to a sett entrance, 4) presence of Badger hairs which are coarse, up to 100mm long with a long black section and a white tip, 5) pit latrines and footprints, and 6) trampled pathways through vegetation and beneath fences.
- 3.6 All habitats were assessed for their potential to support roosting, hibernating and feeding bats. This involved inspection of all the buildings and any mature trees for potential roost sites of holes, cavities and crevices. Late autumn and early winter are ideal times for inspection of trees because the absence of foliage facilitates observations.
- 3.7 The sites were searched for the presence of any suitable habitats that could support Water Voles.
- 3.8 Evidence of the presence of deer species, Red Fox and other mammals was recorded.
- 3.9 All habitats were assessed for their potential to support breeding, feeding and wintering birds and all the birds seen or heard were recorded.
- 3.10 There are no ponds in the sites and there are no known ponds within 250 metres of the sites. The possible presence of Great Crested Newts is discounted for this and other reasons including the urban, commercial and industrial nature of the surrounding area.

- 3.11 The habitats were assessed for their suitability to support species of invertebrate including butterflies, dragonflies and damselflies.

Survey limitations

- 3.12 Most flowering plants and grasses are evident and can be identified by the expert botanist in the early winter including December, particularly if there has been a very low incidence of hard frosts. However early spring flowering plants such as Bluebell (*Hyacinthoides non-scripta*) and Pignut (*Conopodium majus*) cannot be detected in the early winter but the habitats and urban location of the sites were unsuitable for these species.
- 3.13 Further, the NVC can be used, by reference to the published floristic tables in *British Plant Communities* Volumes 1-5, (Rodwell 1991, 1992, 1995, 2000) to identify species that are likely to be present in specific plant communities, particularly for the determination of likely presence of uncommon, rare and protected species.

4.0 REPORT OF SURVEY

4.1 Desktop Study

- 4.1.1 The desk-top survey covered all the sites and land up to 500 metres from the boundaries of the sites.
- 4.1.2 There are no sites with statutory nature conservation designations in the area and no Local Wildlife Sites, with non-statutory designations in the area of possible influence of development.
- 4.1.3 The only record for Badger was a dead animal found in 2003 on Binns Road in Wavertree. This indicates that Badgers are very rare in the area and probably only enter on a very occasional basis from setts in the wider area beyond 500 metres.
- 4.1.4 The only other protected species for which there are records is Noctule Bat. There was a sighting of one Noctule at Lance Lane in Wavertree in 1986, and a sighting of a single Noctule at Moss Pitts Road, Woolton and also in Wavertree in the same year.
- 4.1.5 Although there are no records of Pipistrelle species, they may occur in the area because they may be frequent in urban and developed areas.
- 4.1.6 There are modest numbers of bird records, namely breeding House Sparrows, a Priority Species (single pairs in the Newsham Park and Wavertree areas in 1997 and 1999), and nine records of 1-3 pairs of breeding House Sparrow in unspecified areas in 2001.
- 4.1.7 Breeding Lapwing (Priority Species) records, at unidentified locations in the area of search, are one pair in 1999 and four possible pairs also in 1999.
- 4.1.8 Song Thrush (Priority Species) breeding records are one pair in Newsham Park in 1997, two pairs at an unspecified location in 1992, three pairs at unspecified locations in 1999, and eight pairs in Wavertree in 1999.

- 4.1.9 Swifts were recorded breeding in Newsham Park (records of single pairs in 1997, and two records of single pairs at an unidentified location in 2000).
- 4.1.10 Invertebrate records are Blue-tailed Damselfly (2-5 adults in Wavertree Technology Pond in 2003), one adult Brown Hawker Dragonfly in Wavertree in 1940, and three female Emperor Dragonflies at Wavertree Technology Park Pond in 2003.
- 4.1.11 There are no records of Great Crested Newt, Water Vole, Barn Owl or reptiles.

4.2 Vegetation and Habitats

Site 1 (Figure 2)

- 4.2.1 Buildings A, B and C. in Site 1 (Figure 2 of Appendix 1) consist of six buildings in two separate sections. The eastern section contains three buildings. Building A is a modern red-brick single-storey structure with a flat roof and used as a video outlet. Building B is a modern single-storey, flat roof type constructed of shiny metal cladding and used as a fast food outlet. Building C is a modern, high, single-storey red-brick structure with a flat roof and is disused and empty. None of these buildings has potential to support roosting bats.
- 4.2.2 The northern, eastern and southern boundaries of the shared car park are defined by 0.5 metre high trimmed shrubs consisting of mainly exotic species including a Cotoneaster species (*Cotoneaster sp.*) and Snowberry (*Symphoricarpos albus*) with four standard London Plane trees (*Platanus x hispanica*) in the western corner. A four metres high red-brick wall forms the eastern boundary. A small area of mown grassland on the northern edge of the eastern boundary wall is the MG7 Perennial Rye-grass (*Lolium perenne*) ley community of the National Vegetation Classification (NVC). This species-poor grassland is of common and widespread occurrence in urban and suburban areas with no significant nature conservation value. The London Plane trees are introduced tree species with no significant ecological or amenity value, no Tree Preservation Order status, and are not an ecological constraint on redevelopment.

Buildings C, D and E.

- 4.2.3 The western section contains three flat-roofed buildings; namely D, E and F, which are all of single-storey construction and consist of smashed plate-glass frontages, and boarded-up, with the rear of red brick. The buildings are an abandoned car showroom and service areas.
- 4.2.4 Holes in the roofs have allowed water to enter the buildings and form pools on the concrete floors. Where sufficient light can penetrate, patches of Butterfly-bush (*Buddleja davidii*), Broad Buckler Fern (*Dryopteris dilatata*), Male Fern (*Dryopteris filix-mas*), Lady Fern (*Athyrium filix-femina*), Hart's-tongue (*Phyllitis scolopendrium*), Herb Robert (*Geranium robertianum*) and Red Fescue (*Festuca rubra*) have colonised the wet material that formed the suspended ceilings.
- 4.2.5 The car parks surrounding the buildings are being colonised by locally abundant Butterfly-bush with locally frequent Silver Birch (*Betula pendula*) and Goat Willow (*Salix caprea*). None of the buildings contains habitats that could support roosting bats, including the small red-brick, flat-roofed sub-station located on the western boundary fence. The woody species are common in urban areas and have no significant ecological interest or amenity conservation value.

- 4.2.6 The south-western corner of Site 1, overlooking the rear gardens of Alexandra Road, contains a small area of coarse grassland consisting of a mixture of False Oat-grass (*Arrhenatherum elatius*), Yorkshire Fog (*Holcus lanatus*), Cock's-foot (*Dactylis glomerata*), Red Fescue, Common Bent-grass (*Agrostis capillaris*) and Creeping Bent-grass (*Agrostis stolonifera*). Scattered scrub and Bramble (*Rubus fruticosus* agg.) occur along the fence line. The grassland is the MG1 False Oat-grass coarse grassland NVC community which is of common, widespread and virtually ubiquitous occurrence in lowland areas on disused urban and rural land including derelict building sites and abandoned farmland. The same applies to the Bramble scrub which has formed the W24 Bramble-Yorkshire Fog underscrub community.
- 4.2.7 The northern boundary, along the A5080, is colonised by a mixture of exotic shrubs and a linear patch of abandoned MG7 NVC community Perennial Rye-grass planted grassland. Outside the southern boundary palisade fence is a tarmac footpath with mown MG7 planted grassland and shrubs.
- 4.2.8 The large quantities of bird droppings inside these buildings indicate that numerous Feral Pigeons have been nesting there for many years. During the survey a Grey Wagtail was seen feeding along the pools inside Building D. This species is known to be an occasional visitor to urban and suburban sites, particularly in the winter.

Site 2 (Figure 3)

- 4.2.9 Site 2 (Figure 3 of Appendix 1) consists of an abandoned small-holding/allotment garden, an overgrown disused play area, and mown grassland. The triangular-shaped site is bordered by Mill Lane in the west, a public house in the south, a school in the north, and the rear gardens of houses along Cunningham Road in the east.
- 4.2.10 The abandoned allotment in the western area of Site 2 has a 10 metres high overgrown Leyland Cypress (*Cupressocyparis leylandii*) hedge along Mill Lane with a Garden Privet (*Ligustrum ovalifolium*) hedge continuing from it into the north-western corner of the site.
- 4.2.11 Within the allotment Butterfly-bush is locally abundant with lesser amounts of Hazel (*Corylus avellana*), Goat Willow and Elder (*Sambucus nigra*) with scattered standard-sized and self-seeded Sycamore (*Acer pseudoplatanus*), Horse Chestnut (*Aesculus hippocastanum*) and Ash (*Fraxinus excelsior*). The tree and shrub cover has a high non-native species content of Sycamore and Horse Chestnut and therefore no significant ecological and amenity value, and no Tree Preservation Order status.
- 4.2.12 Pendulous Sedge (*Carex pendula*), Common Nettle (*Urtica dioica*), Rosebay Willowherb (*Chamerion angustifolium*), Red Fescue, Yorkshire Fog, Hogweed (*Heracleum sphondylium*) and Common Comfrey (*Symphytum officinale*) are the only herbs growing under the heavy shade cast by the trees and shrubs.
- 4.2.13 Adjacent to the eastern fence of the allotment is a triangular-shaped area of unmown grassland previously used as a play area; it still contains the frame of a children's swing. Red Fescue, Common Bent-grass (*Agrostis capillaris*), Creeping Bent-grass (*Agrostis stolonifera*), False Oat-grass (*Arrhenatherum elatius*), Common Couch-grass (*Elytrigia repens*) and Cock's-foot (*Dactylis glomerata*) are the most abundant grasses with lesser amounts of Perennial Rye-grass, Timothy (*Phleum pratense*) and Rough Meadow-grass (*Poa trivialis*). This grassland is the MG1 False Oat-grass coarse grassland NVC community which has been described earlier.

- 4.2.14 Associated grassland herbs are Common Mouse-ear (*Cerastium fontanum*), Broad-leaved Dock (*Rumex obtusifolius*), Common Ragwort (*Senecio jacobaea*), Red Clover (*Trifolium pratense*) and Common Vetch (*Vicia sativa*) (Table 1 of Appendix 2).
- 4.2.15 There is a large stand of Japanese Knotweed (*Fallopia japonica*) in the southern part of the grassland.
- 4.2.16 A linear section of mown MG7 NVC community grassland in the north-eastern section of the site is dominated by a mixture of Perennial Rye-grass, Red Fescue, Common Bent-grass, Annual Meadow-grass (*Poa annua*) and Yorkshire Fog. This grassland also contains Creeping Buttercup (*Ranunculus repens*), Common Mouse-ear, Dandelion (*Taraxacum officinale*), Daisy (*Bellis perennis*), Ribwort Plantain (*Plantago lanceolata*), Selfheal (*Prunella vulgaris*) and White Clover (*Trifolium repens*).
- 4.2.17 A solitary semi-mature Common Lime tree (*Tilia x europaea*) is in the mown grassland and non-native shrubs such as Flowering Currant (*Ribes sanguineum*), Snowberry and other exotic species are locally frequent along the garden boundary fences. Common Lime is a common and introduced tree species with no significant ecological or amenity value although it is the main larval foodplant of the Lime Hawkmoth which is found mostly in the south of England. The Lime Hawkmoth is not a Priority Species. There is no Tree Preservation Order and the Common Lime tree and scrub can be removed.
- 4.2.18 Birds recorded in Site 2 were Blackbird, Robin, Wren, Blue Tit and Great Tit.

SITE 3: THE APPLICATION SITE (Figures 4, 5 & 6)

- 4.2.19 This large and varied site extends from Edge Lane in the north and Pighue Lane in the south to Rathbone Road in the west and Milton Road in the west (Figure 1 of Appendix 1).
- 4.2.20 Site 3 (figures 4, 5 and 6 of Appendix 1) consists of a variety of urban/industrial habitats including a recreation ground, a large retail park, small industrial units, an abandoned bowling green, a railway line, an abandoned construction site and an office complex set in their own grounds. All the buildings in this site are occupied unless stated otherwise in this report.

Target Note 1. The Recreation Ground (including a species list).

- 4.2.21 The recreation ground on the eastern edge of the site is dominated by large areas of mown grassland containing Perennial Rye-grass, Red Fescue, Common Bent-grass, Annual Meadow-grass, Yorkshire Fog, Sweet Vernal-grass (*Anthoxanthum odoratum*), Cock's-foot, Timothy (*Phleum pratense*) and Rough Meadow-grass (*Poa trivialis*).
- 4.2.22 Grassland herbs are Yarrow (*Achillea millefolium*), Daisy (*Bellis perennis*), Common Mouse-ear (*Cerastium fontanum*), Smooth Hawk's-beard (*Crepis capillaris*), Common Cat's-ear (*Hypochaeris radicata*), Ribwort Plantain (*Plantago lanceolata*), Greater Plantain (*Plantago major*), Creeping Buttercup (*Ranunculus repens*), Clustered Dock (*Rumex conglomeratus*), Common Chickweed (*Stellaria media*), Dandelion (*Taraxacum officinale*), White Clover (*Trifolium repens*), Red Clover (*Trifolium pratense*) and Germander Speedwell (*Veronica chamaedrys*) (Table 2 of Appendix 2).
- 4.2.23 The recreation ground grassland is the MG7e Perennial Ryegrass-Ribwort Plantain sub-community of the MG7 NVC community which frequently occurs on playing fields of considerable age and where colonisation has produced appreciable species diversity of common grassland plants.

4.2.24 There is a stand of early mature Aspen (*Populus tremula*) along the northern boundary and large standard-sized London Plane and Common Lime on the northern side of the tarmac football field. Along the eastern boundary, young trees include solitary Grey Alder (*Alnus incana*), Laburnum (*Laburnum anagyroides*) and Cherry sp. (*Prunus sp.*). Lines of young Maple sp. (*Acer sp.*) and Oak sp. (*Quercus sp.*) have been planted on the north-eastern part of the grassland but many have been vandalised and destroyed. The planted trees consist of a high proportion of non-native species with no significant ecological value and no Tree Preservation Order status; their removal would be of no ecological or amenity consequence.

4.2.25 The only birds recorded were a flock of Feral Pigeons and several Magpies in the Aspen. There is a red-brick, flat-roofed sub-station in the north-western corner of the recreation ground; this building is unsuitable for roosting bats. None of the trees contains holes or crevices that could provide roosting places for bats.

Building A.

4.2.26 Building A (Figure 5) of Appendix 1) is a two-storey modern red-brick building with a flat roof. There is a 0.5 metre advertising board running around the top of the building just below the roof that could possibly provide a bat roost but this is unlikely.

Building B.

4.2.27 Building B (Figure 5) is a two-storey modern red-brick building with a gently sloping roof of corrugated plastic covered metal sheeting. There is no possibility of a bat roost here.

Building C.

4.2.28 Building C (Figure 5) is a single-storey red-brick warehouse with a gently-sloping sheeted roof with no possibility of a bat roost. A derelict area immediately north from the car park of the building contains locally abundant Butterfly-bush.

Building D.

4.2.29 Building D (Figure 5) is an old red-brick (partly two-storey) building with a gently-sloping metal roof. Broken vents at the front west-facing side provide a possible entry point for breeding or roosting bats. The metal roof is not conducive to roosting bats which are unlikely to be present.

Building E.

4.2.30 Building E (Figure 5) is a large, high, single-storey building, of red-brick construction up to a height of three metres above which are corrugated metal sheets and a flat roof. There are large plate-glass frontages and no possibility of roosting bats. The car park contains trimmed one metre high exotic shrubs with occasional standard Maple trees of no ecological or amenity significance.

4.2.31 Birds recorded in the shrubbery were Blackbird, Dunnock (a Priority Species), Robin, Wren and Goldfinch. The car park is used for feeding by Black-headed Gull, Common Gull, Herring Gull (a Priority Species), Lesser Black-backed Gull, Feral Pigeon, Starling (a Priority Species) and Pied Wagtail.

Building F.

- 4.2.32 Building F (Figure 5) is a single-storey, red-brick and timber-built fast food outlet with a flat roof and no bat roost possibilities. The car park contains small areas of mown MG7 grassland and is surrounded by a trimmed one metre high hedge of exotic species and containing standard-sized Hornbeam (*Carpinus betulus*) and Apple sp. (*Malus sp.*) trees. None of the trees has possible bat roosts or other ecological/amenity importance.

Building G.

- 4.2.33 Building G (Figure 5) is an abandoned, single-storey, red-brick building with a sloping roof. The slates have been removed to reveal bare metalwork and no bat roost possibilities. The car park contains trimmed one metre high exotic shrubs with occasional standard trees. None of the trees has possible bat roosts or other ecological or amenity importance.

Building H.

- 4.2.34 Building H (Figure 5) is a single-storey red-brick building with a sloping slate-covered roof with the possibility of roosting bats but they are unlikely to be present. The car park contains trimmed 1-2 metres high exotic hedges with occasional standard trees but with no bat roost potential or other wildlife or amenity importance.

Building I.

- 4.2.35 Building I (Figure 5) is a large, high, single-storey structure with red-brick sides up to three metres high, above which are corrugated metal sheets and a flat roof. There are large plate-glass frontages and no possibility of roosting bats. The car park contains trimmed 1-2 metres high exotic shrubs with occasional standard-sized Maple and Oak trees but with no bat roost potential or associated ecological or amenity value. A section of shrubs, adjacent to the abandoned bowling green, has been colonised by a large stand of Japanese Knotweed (*Fallopia japonica*).

Building J.

- 4.2.36 Building J (Figure 5) is an old red-brick sub-station with a flat roof. Broken vents on the north and east-facing walls could allow possible bat access; therefore a bat roost cannot be discounted but a roost is unlikely to be present.

Target Note 2. The disused bowling green.

- 4.2.37 The disused bowling green (Figure 5), located on the northern boundary with Edge Lane, is bordered by a two metres high sandstone wall on the east side, and a recently built two metres high red-brick wall on the west side, with a two metres high concrete panel fence on the south side and a two metres high wooden fence on the north side. The overgrown grassland consists of fine-leaved species including fescues and bents (developing MG1 NVC community), with locally abundant Rosebay Willowherb (*Chamerion angustifolium*) which is the common and widespread OV27 tall-herb NVC community of open habitats. The rubble mounds on the northern side of the bowling green, which are probably where the associated buildings were demolished, are colonised by abundant Butterfly-bush shrubs. Along the southern boundary patches of Japanese Knotweed have spread from the adjacent shrubbery, and the spread of this species is likely to continue unless the plants are killed by herbicide application or otherwise destroyed.

Building K.

- 4.2.38 Building K (Figure 5) is an abandoned two-storey red-brick old house with a more recent red-tiled roof with gaps under barge-boards providing a possible bat roost entry point. A single-storey extension on the east side of the house has been partly gutted by fire. A bat roost cannot be discounted but in view of the disuse of the building and a fire, roosting bats are unlikely to be present.

Building L.

- 4.2.39 Building L (Figure 5) is an abandoned petrol station with a modern single-storey red brick kiosk with a flat roof. The canopies over the old pumps have been dismantled; there are no possible bat roosts. Butterfly-bush is locally frequent on the old forecourt.

Building M.

- 4.2.40 Building M (Figure 4) is a high single-storey building of metal fabricated sheeting and a flat roof with no possibility of bat roosts. There are two very small areas of exotic shrubs in the car park.

Buildings N, O and P.

- 4.2.41 Buildings N, O and P (Figure 5) are single-storey red-brick buildings with gently sloping metal roofs. There are barge-boards on the ends of the buildings that could provide access for roosting bats but bat presence is unlikely. Narrow strips of mown MG7 grassland are along the eastern side and part of the northern side of the buildings with three standard-sized Maple species of no ecological or amenity significance.

Building Q.

- 4.2.42 Building Q (Figure 5) is a single-storey building of red-brick construction up to a height of two metres, above which the sides are constructed of plastic-coated sheet-metal. The building has a gently-sloping roof and no bat roost possibilities. Associated with the tarmac along the northern side of the building are standard Hawthorn (*Crataegus monogyna*) and Norway Maple (*Acer platanoides*) trees with no bat roost potential and no significant wildlife or amenity value.

Building R.

- 4.2.43 Building R (Figure 5) is a large, high, single-storey structure with red-brick walls up to a height of three metres, above which is metal sheeting leading up to a gently-sloping roof. There is no bat roost potential. There are mown MG7 grasslands and exotic shrubs along the southern and eastern boundaries, with locally abundant Bramble. Standard trees include Cherry species Maple species, all of which are non-native and lacking ecological and amenity importance. Birds in the scrub were Blackbird, Song Thrush (Priority Species), Dunnock (Priority Species), Robin and Wren.

Building S.

- 4.2.44 Building S (Figure 5) is a large, very high, single-storey structure with red-brick sides up to three metres high, on top of which is plastic-covered metal sheeting with a flat roof and no bat roost possibilities. Some boundaries have trimmed exotic shrubs with occasional standard trees which lack significant ecological and amenity value.

Target Note 3. The Railway Line.

- 4.2.45 There was no access to the railway line (Figure 4) so it was surveyed from the two bridges and the eastern side. There are scattered standard Sycamore, Ash and Silver Birch trees with locally frequent Goat Willow, Elder and Butterfly-bush. Bramble scrub (W24 NVC community) is abundant with patches of coarse MG1 grassland and patches of tall-herb vegetation comprised mainly of Rosebay Willowherb (OV27 NVC community). Male Fern is locally abundant. There is a large stand of Japanese Knotweed near the Binns Road Bridge in the south. The scattered trees are non-native and common species, with no significant nature conservation value.

Building T.

- 4.2.46 Building T (Figure 4) is a two-storey rendered red-brick structure comprising a public house next to the railway and two adjoining terraced houses, all of which have sloping slate roofs where gaps in the slates could provide possible bat roost access but there are no other features to indicate a likely bat roost.

Target Note 4. The abandoned construction site

- 4.2.47 There was no access to this part of Site 3 (Figure 4) which is surrounded by a two metres high palisade fence. There is a 10 metres high metal framework structure at the centre of the area, which has grasses and Butterfly-bush growing inside the framework. A large sub-soil mound north of the framework contains locally frequent Butterfly-bush, coarse grasses (MG1 NVC community) and tall-herb vegetation. The southern part of the building site contains an old tarmac car park with a mound of tipped material that has been colonised by coarse grasses, and there is a bare mound of concrete. Scattered young trees and scrub around the perimeter fence include Sycamore, Ash, Silver Birch and Butterfly-bush, all of which have negligible ecological value.

Target Note 5. Tattersall Way office development (including plant species list)

- 4.2.48 The buildings in the office development (Figure 4: buildings U, V and W) are modern, two-storey and of red-brick construction with pitched slate roofs. There is possible but unlikely bat access under the soffits. The car parks surrounding the office buildings have been landscaped with exotic shrubs and standard trees, the latter including London Plane and a Cherry species. Goat Willow, Sycamore, Ash, Dog Rose (*Rosa canina*) and Bramble scrub have started to colonise the area adjacent to the southern boundary fence. Early-mature Horse Chestnut, London Plane and Wych Elm (*Ulmus glabra*) occur along the western boundary fence. Butterfly-bush is frequent in an area of scrub along the northern boundary fence. The tree component of the vegetation consists largely of non-native species with little wildlife interest, the loss of which would be inconsequential.
- 4.2.49 Most of the grasslands on the eastern part of the site appear to have been uncut this year (2009) and legumes have become abundant including Black Medick (*Medicago lupulina*), Red Clover, White Clover, Common Vetch (*Vicia sativa*), Bush Vetch (*Vicia sepium*) and Smooth Tare (*Vicia tetrasperma*) (Table 3 of Appendix 2).
- 4.2.50 Red Fescue, Perennial Rye-grass, Yorkshire Fog, Common Bent-grass and Annual Meadow-grass are the most abundant grasses in this MG7 grassland.
- 4.2.51 There are two small stands of Japanese Knotweed in the southern grassland next to the entrance gate off Binns Road.

Site 4

- 4.2.52 Site 4 (Figure 7) is on the northern side of Edge Lane and consists of two buildings and a large car park which has four metres high red-brick boundary walls on the eastern and northern sides.

Building A.

- 4.2.53 Building A (Figure 7) is a flat-roofed, high, single-storey structure with red-brick walls up to 2.5 metres high, above which there is cladding with metal sheets. There is a store in the western third of the building but the cladding has been removed from the western side revealing the breeze block construction beneath. There is no possibility of bat roosts in this building.

Building B.

- 4.2.54 Building B (Figure 7) is a disused single-storey building of red-brick up to 2.5 metres high above which is cladding and a sloping roof of the same material. The cladding has been removed from the southern and western sides revealing the steel frame within. There are no potential bat roosts but Feral Pigeons are nesting in the building. Small verges of mown MG7 grassland form part of the southern boundary along Edge Lane.

4.3 Invasive Species

- 4.3 Sites 2 and 3 contain several patches of Japanese Knotweed but no other invasive species such as Giant Hogweed and Indian Balsam (*Impatiens glandulifera*) are present.

4.4 Animal Life

- 4.4.1 No evidence of Badger activity was detected in the sites or the areas of search. Habitats in the immediately surrounding area are unsuitable for Badgers because the area is intensively developed with much disturbance and limited greenspace.
- 4.4.2 The sites contain no suitable habitat that could support Water Voles. There are no other suitable habitats for Water Voles in the immediately surrounding area.
- 4.4.3 None of the trees in the sites contains cracks or crevices suitable for use by roosting bats, largely because none of the trees is sufficiently mature.
- 4.4.4 Bird species recorded during the surveys that are likely to nest in the sites because of the presence of suitable nesting and feeding habitat are Robin, Wren, Blackbird, Song Thrush (UK BAP Priority Species), Dunnock (UK BAP Priority Species), Feral Pigeon and Magpie.
- 4.4.5 Species recorded feeding in the sites were Black-headed Gull, Common Gull, Herring Gull (UK BAP Priority Species), Lesser Black-backed Gull, Starling (UK BAP Priority Species) and Grey Wagtail. With the exception of Starling there are no suitable nesting sites for any of these species. However it is possible for Starlings to nest in roof cavities of buildings, or other cavities in buildings, but there are no potential tree-nesting sites because of the absence of mature timber with holes and cavities.
- 4.4.6 There are no known ponds within at least 250 metres of the site which could support breeding amphibians such as Common Frog and Common Toad.

- 4.4.7 The habitat is highly unfavourable for reptiles owing to its isolation from other areas of suitable habitat and the high level of disturbance in the site area with little cover and no suitable feeding habitats for reptiles. Further, all common reptile species are absent or rare in Liverpool and in the surrounding area.
- 4.4.8 Due to the lateness in the year, a survey for invertebrates was impractical. The site contains no suitable habitat to support dragonflies and damselflies. The grasses in the site are suitable breeding habitat, although sub-optimal, for low numbers of common butterflies such as Orange-tip, Small White, Green-veined White, Meadow Brown and Small Heath whose larvae feed on grasses. Species whose larvae feed on Common Nettle which is also present, include Small Tortoiseshell, Red Admiral and Peacock.
- 4.4.9 No evidence of Red Fox or Brown Hare (a Priority Species) was recorded during the surveys. The area is totally unsuitable for Brown Hare which requires large territories and wide open spaces in rural areas.
- 4.4.10 No evidence of Rabbits and Moles was detected in the grasslands of the site or elsewhere.

4.5 The Ecology of the Surrounding Area

- 4.5.1 The habitats surrounding the sites are a mixture of industrial and retail units and houses that will have similar species to those recorded during the surveys.
- 4.5.2 There are no designated sites of international, national or local importance in sufficiently close proximity to the sites that could be affected by redevelopment.

5.0 EVALUATION

5.1 Vegetation and Habitats

- 5.1.1 The four sites consist of a mixture of industrial units, retail outlets, office development, abandoned buildings, derelict areas and a recreation ground. The grasslands are not species-rich and are characteristic of species-poor and very common plant communities of the National Vegetation Classification. None of the grasslands is of significant nature conservation value or ecological interest, even in an urban context. Most of the trees and shrubs in the sites are exotic, non-native species, and all the woody vegetation lacks significant ecological interest and associated amenity importance. There are no Tree Preservation Orders.
- 5.1.2 None of the habitats in the sites is representative of UK BAP Priority Habitat. Species-poor neutral grassland (MG1 and MG7 NVC communities), tall-herb vegetation and species-poor scrub are the principal vegetation types of the site which contains only an extremely small amount and low proportion of semi-natural vegetation.
- 5.1.3 Although the semi-mature trees and scrub are not sufficiently large or of suitable size to form important habitat for breeding birds in the urban environment, they provide habitat for the few species that breed within the sites. They will also act as linear habitat for the dispersal of young birds but they are not of sufficient value to justify a constraint on redevelopment.
- 5.1.4 No evidence of any protected species was detected during the surveys but it is possible that bats such as Common Pipistrelle may roost in some of the buildings or

forage over parts of the sites where there is vegetation, but bat roosts are unlikely to be present because the buildings are unfavourable due to a combination of disuse, poor structural condition, wet and damp conditions, and disturbance.

5.2 Evaluation of the Target Noted Features

- 5.2.1 Five features were Target-noted, all being in **Site 3**, the **APPLICATION SITE**.
- 5.2.2 The grassland of the Recreation Ground (Target Note 1) which is the MG7c NVC Perennial Ryegrass-Ribwort Plantain sub-community occurs widely on re-seeded verges and lawns which are regularly mown and which receive only moderate trampling (Rodwell 1992). It contains only common plant species and lacks nature conservation importance.
- 5.2.3 The disused bowling green (Target Note 2) is developing species-poor coarse grassland (MG1 community) with patches of Rosebay Willowherb (OV27 tall-herb community of open habitats. These plant communities are widespread and common on disused land and uncut grasslands in lowland areas.
- 5.2.4 The Railway Line (Target Note 3) contains the MG1, W24 (Bramble) and OV27 (Rosebay Willowherb) communities which are widespread and common on disused land in urban and rural areas. There is also Japanese Knotweed which is an alien and invasive species.
- 5.2.5 The abandoned construction site (Target Note 4) is similar to the above in being colonised by MG1 coarse grassland plus tall-herb vegetation and scattered young trees and shrubs. These types of vegetation are widespread and common in lowland disused areas.
- 5.2.6 The Tattersall Way Office Development including the car park and landscaped area (Target Note 5) have been planted to standard trees and exotic shrubs, with some native shrub colonisation. None represents semi-natural vegetation or NVC communities, being similar to other planted vegetation of urban areas. They have no significant ecological or amenity value.
- 5.2.7 The Target-noted areas and their vegetation have no significant nature conservation value, either individually or collectively. All the plant communities are of common occurrence, even in urban areas, and develop spontaneously on vacant and disused land.

6.0 ECOLOGICAL MITIGATION REQUIREMENTS

- 6.1 There are no mitigation requirements identified by the survey results. However there is the possibility that licensed mitigation will be necessary if a bat roost or roosts are unexpectedly found during building demolition or other works where the possible but unlikely presence of roosting bats cannot be entirely discounted.
- 6.2 Compliance with wildlife legislation is necessary for the protection of breeding birds and for the avoidance of spreading Japanese Knotweed in the wild, as described in Section 8 of this report.

7.0 ASSESSMENT AND RECOMMENDATIONS

7.1 Assessment

- 7.1.1 The recommendations detailed below apply specifically to Site 3, the APPLICATION SITE, but are based on the ecological appraisal of the four sites carried out in November/December 2009 and aim to provide appropriate guidance for the planning application process. The main objectives of the guidance are to avoid and minimise any potential adverse impacts on protected species and breeding birds, and to ensure compliance with wildlife legislation.
- 7.1.2 The recommendations are also aimed at the identification of opportunities to promote the enhancement and creation of habitats where possible, as required by Key Principles of PPS9 which require beneficial biodiversity to be incorporated in the design of development so that there is a net increase in biodiversity.
- 7.1.3 Account has also been taken of the Landscape Masterplan proposals by Barnes Walker which incorporate tree and shrub planting that is designed to provide visual and aesthetic environmental benefits throughout the year. These proposals will also provide biodiversity benefits, particularly if the proposals are appropriately modified to combine the visual and aesthetic benefits with biodiversity benefits.
- 7.1.4 The Landscape Masterplan proposals are discussed further in Sections 7.2 and 7.3 which deal with landscape planting.

7.2 Landscape Planting

- 7.2.1 Native trees and shrubs should be planted to complement the habitats of the wider area. An indicative list of preferred native species that should be used in the landscape planting is given in the following Table A.

TABLE A: TREE AND SHRUB SPECIES FOR LANDSCAPE PLANTING	
Scientific name	Common name
Native standard trees	
<i>Alnus glutinosa</i>	Alder
<i>Betula pendula</i>	Silver Birch
<i>Fagus sylvatica</i>	Beech
<i>Fraxinus excelsior</i>	Ash
<i>Quercus petraea</i>	Sessile Oak
<i>Quercus robur</i>	Pedunculate Oak
<i>Sorbus aucuparia</i>	Rowan
Native shrubs	
<i>Cornus sanguinea</i>	Dogwood
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Euonymus europaeus</i>	Spindle Tree
<i>Hedera helix</i>	Ivy
Continued	

TABLE A CONTINUED	
Scientific name	Common name
<i>Ilex aquifolium</i>	Holly
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Malus sylvestris</i>	Crab-apple
<i>Prunus spinosa</i>	Blackthorn
<i>Viburnum opulus</i>	Guelder Rose

7.2.2 The list in Table A contains evergreens to provide nesting sites in urban areas, species producing berries to provide bird food, and species producing flowers that will attract flying invertebrates and prey for foraging bats.

7.3 Consideration of the Revised Landscaping Proposals for SITE 3 from a Biodiversity Perspective

8.3.1 The Landscape Masterplan for Site 3 by Barnes Walker itemises the following proposals, each of which presents substantive biodiversity opportunities as summarised following each proposal:-

1. It is stated that the landscaping scheme has been designed to include undulating grass, trees and hedges. The selection of tree species is designed to provide year-round interest by contrasting leaf colours and other aesthetic features. Further, large tree stock will be planted to create an instant impact, and trees will be underplanted with drifts of bulbs.

Biodiversity opportunities: Planting large stock will produce earlier biodiversity benefits. The proposed selection of tree and shrub species will increase biodiversity gains by selection based on bird nesting value (Holly, Privet etc), and bird feeding value (Rowan, Cherry, Hawthorn, Firethorn and other berry species) and nest-box provision (at later dates). Underplanting will enable native woodland herbs to be introduced for naturalisation in combination with bulb planting (Lesser Celandine, Bluebell, Ramsons, Wood Anemone, Primrose, Dog Violet, Hart's-tongue Fern, Wood Sorrel, Snowdrop and others).

2. Natural tree/shrub planting is proposed for screening purposes between buildings, housing and the public realm.

Biodiversity opportunities: Planting of a mixture of tree and shrub species for screening will also function as bird nesting, feeding and roosting habitat, particularly composed of native species and combined with climbing species (Ivy, Dog Rose, Honeysuckle etc.), and will attract butterflies and moths.

2. The pedestrian axis will be reinforced with tree planting.

Biodiversity opportunities: Planting along the pedestrian axis, if designed and planted as recommended in 1. and 2. above, will extend biodiversity habitat throughout the development and provide a greater area of high biodiversity, particularly for birds and invertebrates. It will provide ecological connectivity in the developed site.

6. There will be tree planting in the Canopy Shopping Plaza

Biodiversity Opportunities: Although bird, invertebrate and other wildlife use of this area will be restricted by disturbance, tree and shrub planting as proposed in 1, 2. and 3 above will encourage wildlife use in the early morning and at other quiet times.

8. There will be a green wall to shield the existing sub-station.

Biodiversity Opportunities: Planting the green wall to as specified in 1. and 2. above will further increase the biodiversity potential of the site, particularly for breeding birds and invertebrates.

9. Landmark trees

Biodiversity opportunities: Planting native species such as Pedunculate Oak and evergreen species such as Evergreen (Holm) Oak will promote the development of mature trees that can provide additional biodiversity benefits such as nest box installation and the planting of climbers such as Honeysuckle and other woody but non-invasive native climbing plants that will attract nesting and feeding birds, and flying invertebrates including butterflies, moths and hoverflies.

10. An avenue of trees will be planted along the retail boundary to provide a green backdrop and screen, filter and frame the view.'

Biodiversity opportunities: Given the inclusion of biodiversity design and planting as recommended in preceding points, this planting element of the development will benefit biodiversity for birds, invertebrates and other mobile (particularly flying) wildlife, thereby increasing biodiversity connectivity in the development as well as extending the range of biodiversity in the developed area.

11. There will be a grid of trees planted at approximately 10 metre centres to frame views and introduce green vertical elements within car parking areas.

Biodiversity opportunities: This proposal will assist in maximising the biodiversity holding capacity of the site including connectivity and the biodiversity use of operational areas at times when there is little or no activity there such as at night and in the early morning.

11. Two contrasting tree species will be planted in rows to provide visual interest as viewed from Rathbone Road.

Biodiversity opportunities: This planting provides a further opportunity to increase the biodiversity and ecological connectivity elements of the scheme as a whole, provided that the associated biodiversity elements described in the earlier points 1. and 2. are incorporated in the planting design.

13. "Hot Spot" areas are proposed that lend themselves to features such as artwork and prominent planting.

Biodiversity opportunities: These areas present an opportunity to incorporate the planting of a combination of selected plant species to provide "hot spots" for butterflies, other flying invertebrates and birds. This can be achieved by a

combination planting of *Buddleja davidii* (Butterfly-bush) with other nectar-producing and scented herbs and climbing plants such as Honeysuckle.

8.0 PROTECTION OF BREEDING BIRDS

- 8.1 Any buildings, trees, scrub, grassland, or other suitable breeding bird habitats which are to be removed as part of the redevelopment proposals will only be removed **outside** the bird breeding season, unless it can be adequately demonstrated that no breeding birds, nests, eggs or fledglings are present in the area to be cleared.
- 8.2 The bird breeding season typically extends between March to August inclusive. This is a legal requirement to ensure the protection of all species of breeding bird under the *Wildlife and Countryside Act 1981*.
- 8.3 All trees and shrubs proposed to be cleared will be removed and cleared from the site before the end of February to protect breeding birds.

9.0 HABITAT ENHANCEMENT MEASURES

- 9.1 There are significant opportunities to design landscape planting to maximise biodiversity, as described in Section 8.3, and to encourage biodiversity still further by providing features such as nest boxes on buildings and bird feeding stations.
- 9.2 Where planting consists of low-growing shrubs (in the interests of vehicular visibility) suitable species to plant include berry-producing shrubs such as Cotoneaster which will be used by feeding birds, and flowering shrubs including Lavender, *Hebe* species and *Potentilla* species which can attract and provide food for widespread and more mobile butterfly species including Speckled Wood, Small White, and Red Admiral.

10.0 ERADICATION OF JAPANESE KNOTWEED

- 10.1 It is an offence under *The Wildlife and Countryside Act (1991)* to allow Japanese Knotweed to spread and grow in the wild and it should be treated by an experienced Japanese Knotweed contractor to ensure safe and total eradication. The following example of Knotweed treatment illustrates the difficulty and complex methods required for successful eradication, and specialist advice and the use of up-to-date methods and equipment are essential to ensure full compliance with legislation:
 - 1. Cut and clear the Japanese Knotweed when it has attained its full height.
 - 2. Destroy the cut material by incineration or take to a licensed tip to prevent regeneration.
 - 3. Spray the regrowth with Glyphosate (or similar) and cut back the treated vegetation after about three weeks.
 - 4. Spraying should be carried out in still weather to avoid spray drift and when conditions are dry with no rain forecast to ensure complete absorption by the foliage.
 - 5. Repeat this treatment if any further regrowth occurs (which is probable).

6. Continue the full treatment in the second and third years, and thereafter if necessary until there is no further regeneration.
- 10.2 Alternatively, the Japanese Knotweed can be cleared mechanically to a depth of at least two metres and preferably three metres, and the ground material buried to a depth of at least two and preferably three metres on site. If this material is taken from site it is classified as controlled waste and must be taken to a licensed landfill site. Most Japanese Knotweed plants and colonies have more biomass underground than above ground.

11.0 CONCLUSIONS

- 11.1 An ecological survey and evaluation of Site 3, the proposed redevelopment site, and the surrounding area at Edge Lane Central, Liverpool has shown that the proposed redevelopment site contains no significant ecological or biodiversity constraints on the redevelopment proposals. Redevelopment will have or is unlikely to have adverse effects on protected species or on important biodiversity within the area or in the surrounding area, provided that there is compliance with wildlife legislation.
- 11.2 Precautions will be taken to protect wildlife during site clearance and demolition, and to protect breeding birds and to prevent effects on protected species if any are present during the works, which has been assessed as unlikely.
- 11.3 It is necessary to eradicate the colonies of Japanese Knotweed and to avoid causing the spread of this species in the wild, as required by UK legislation.
- 11.4 Effects on breeding birds will be avoided by pre-redevelopment clearance of potential nesting habitats outside the bird-breeding season of March to August inclusive. All trees and shrubs proposed to be cleared will be removed and cleared from the site before the end of February to protect breeding birds.
- 11.5 There are no mature or veteran trees, most of the trees being planted non-native species with associated recent planting and recent colonisation by common species. The tree and shrub vegetation has no significant ecological and nature conservation value, and no significant amenity value. None of the woody vegetation is protected by Tree Preservation Order and is not a biodiversity constraint on redevelopment.
- 11.6 The proposals can be achieved in accord with all the key principles of (1) to (1v) of *Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9)*, local planning policies, wildlife legislation and best practice.
- 11.7 In conclusion the development can be achieved without any significant adverse effect on biodiversity and it is feasible to incorporate substantial beneficial biodiversity within the design of redevelopment, as described in this Assessment.

12.0 REFERENCES

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APPENDIX 1: FIGURES OF THE SITES

Figure 1: Map to Show Locations of the Four Proposed Redevelopment Sites in Liverpool

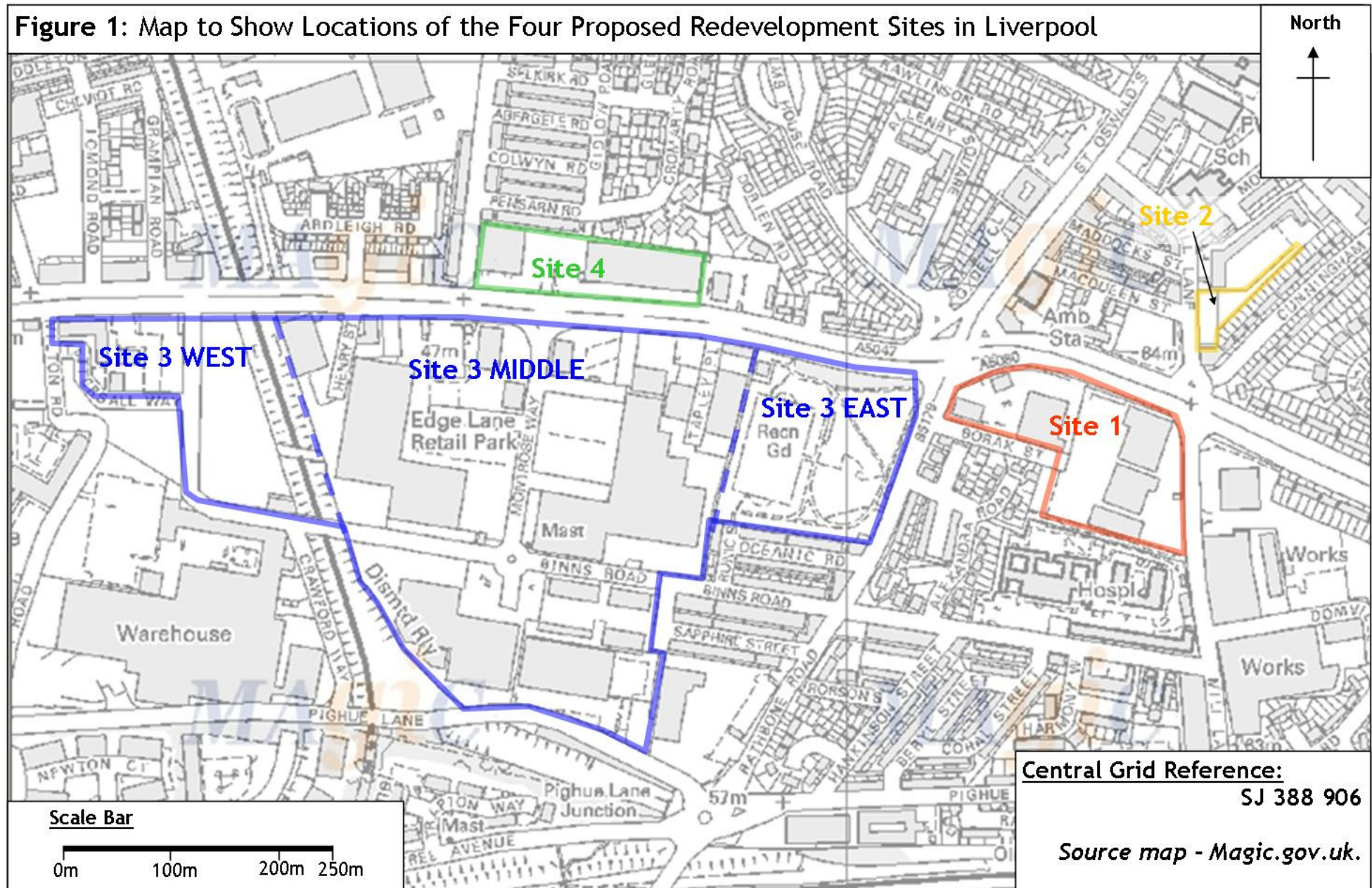


Figure 2: Phase 1 Habitat and Vegetation Map of Site 1 at Land at Edge Lane, Liverpool

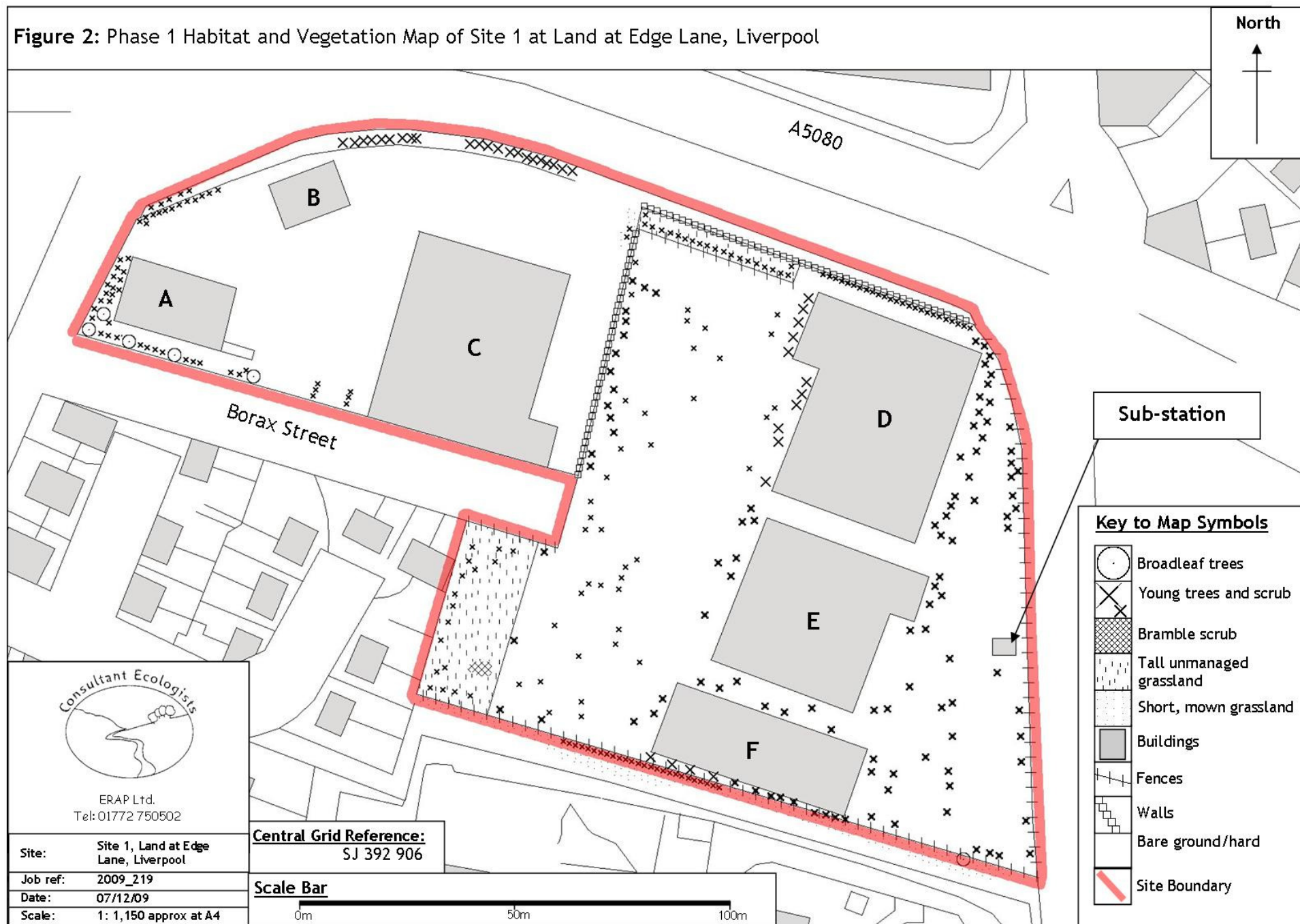


Figure 3: Phase 1 Habitat and Vegetation Map of Site 2 at Land at Edge Lane, Liverpool

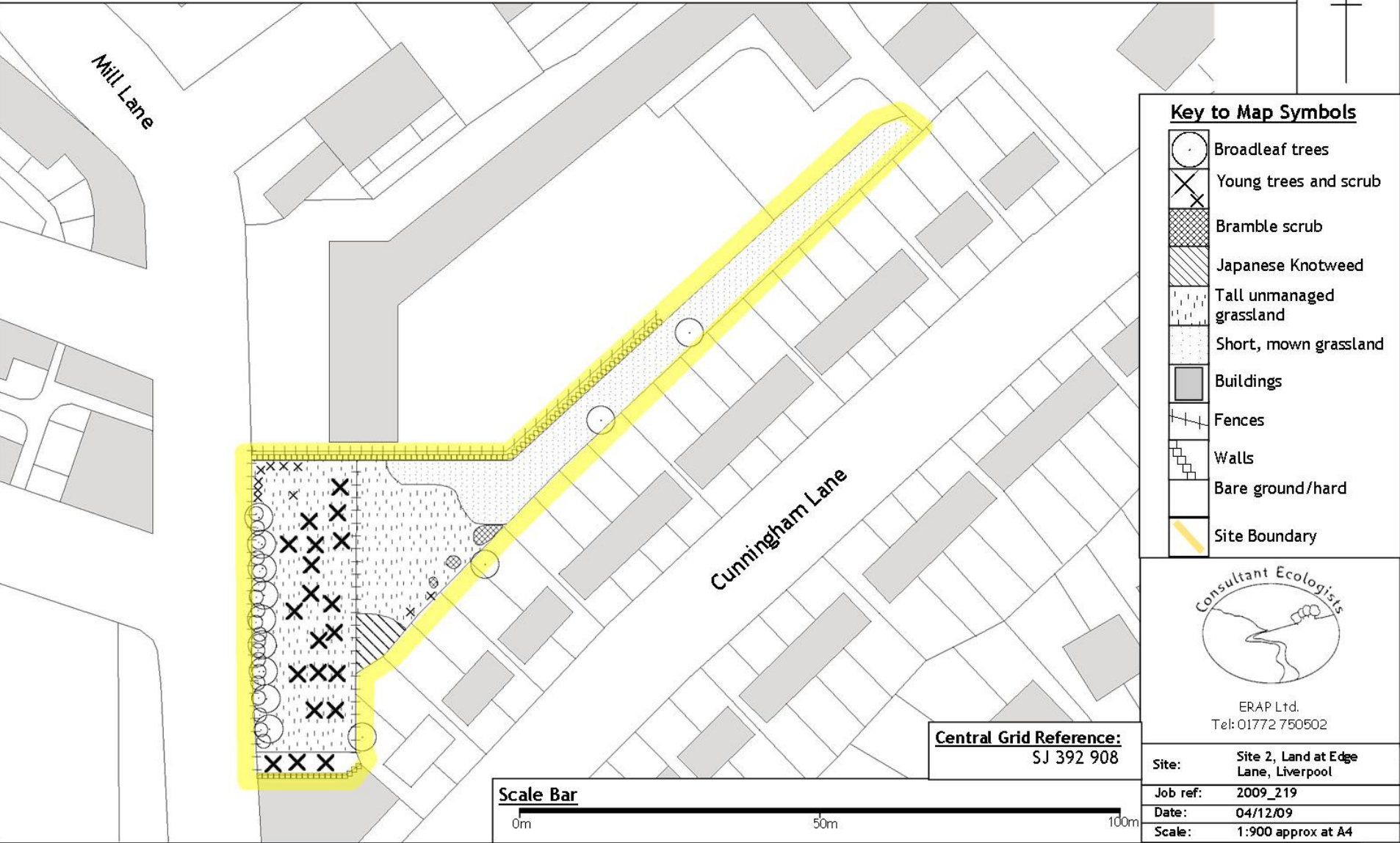


Figure 4: Phase 1 Habitat and Vegetation Map of Site 3 WEST at Land at Edge Lane, Liverpool

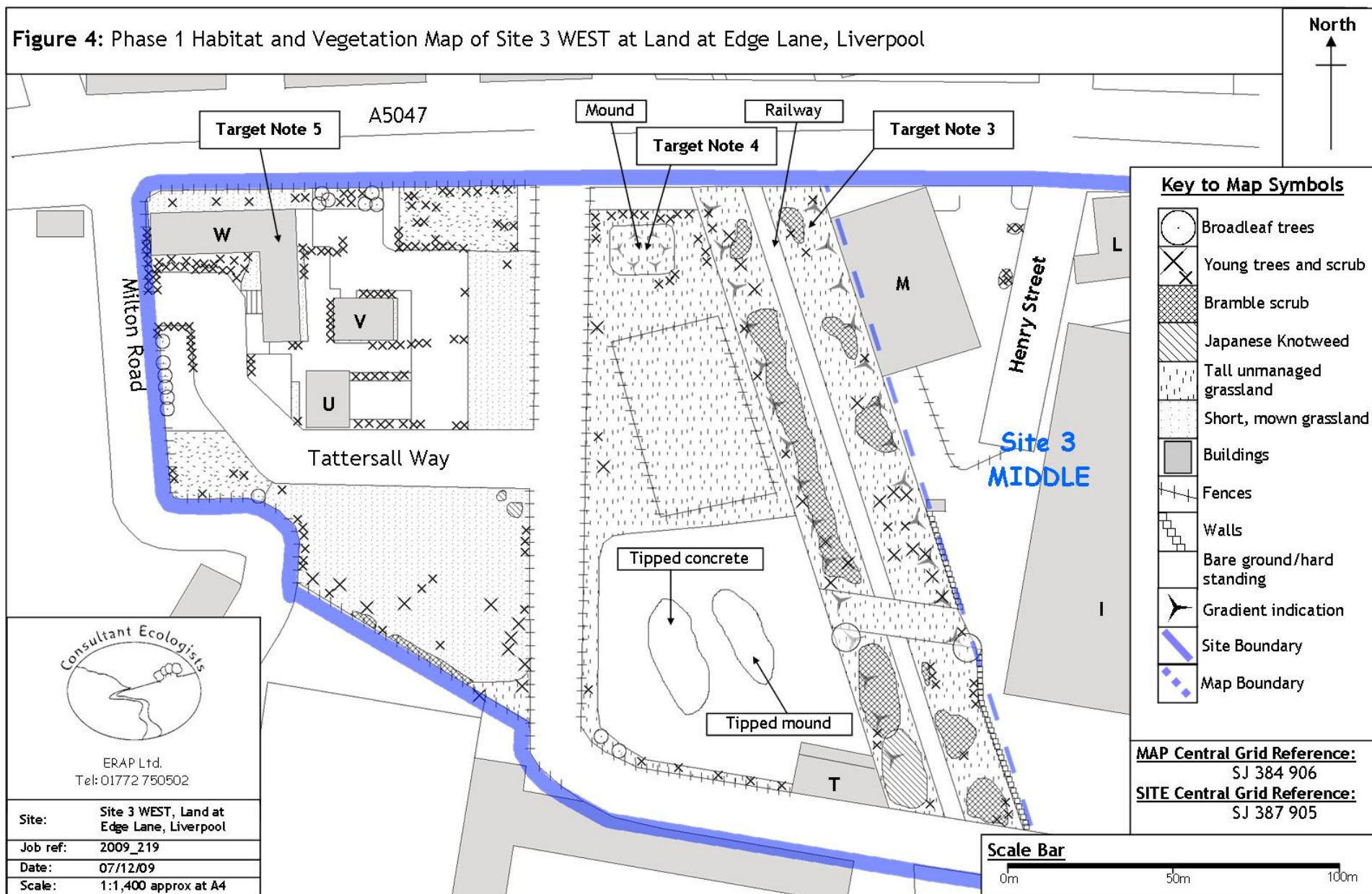
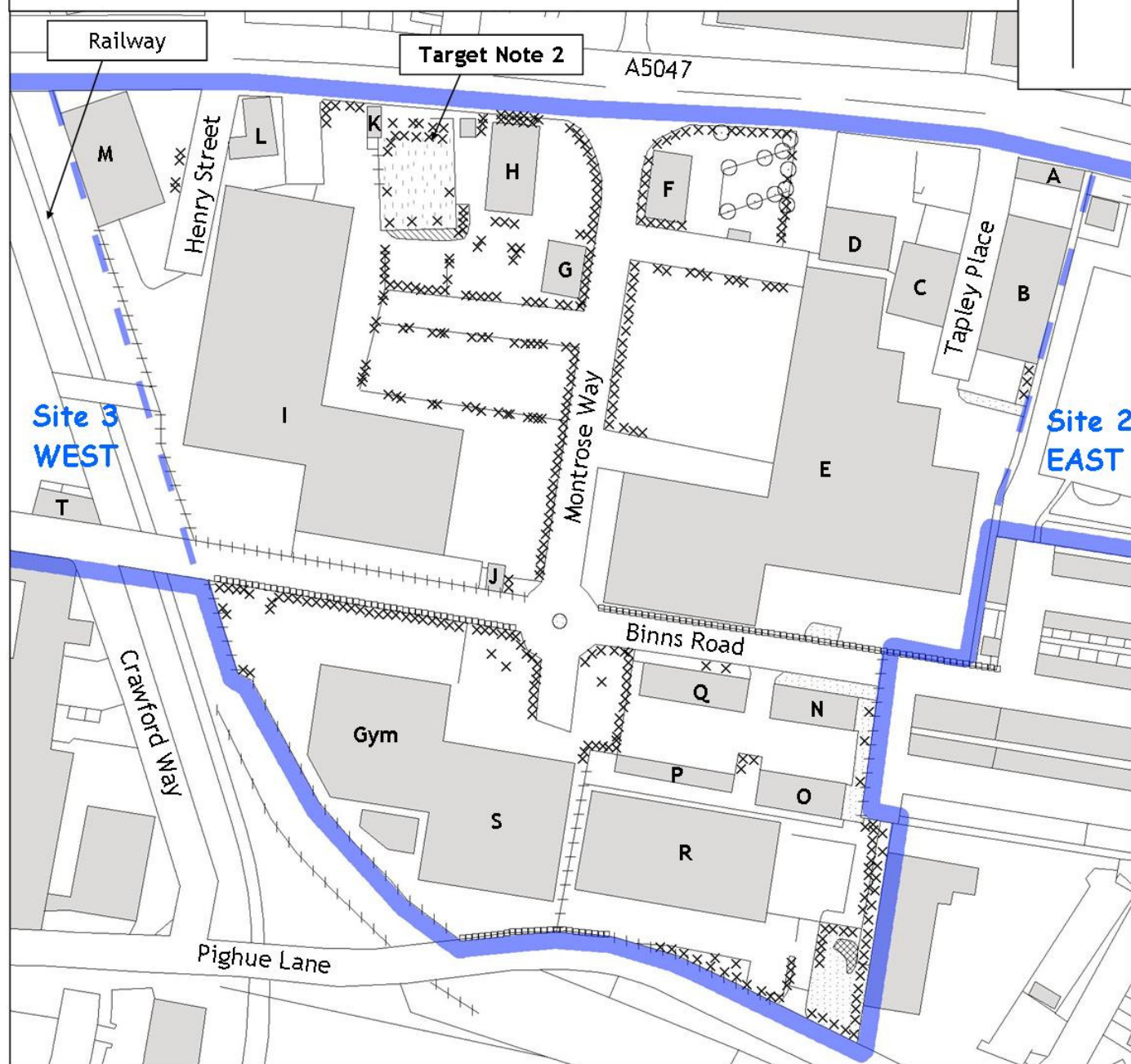


Figure 5: Phase 1 Habitat and Vegetation Map of Site 3 MIDDLE at Land at Edge Lane, Liverpool

North



Scale Bar:

0m 100m

Central Grid Reference:

SJ 387 905



ERAP Ltd.
Tel: 01772 750502

Site: Site 3 MIDDLE, Land at Edge Lane, Liverpool
Job ref: 2009_219
Date: 07/12/09
Scale: 1:2,500 approx at A4

Key to Map Symbols

- Broadleaf trees
- Young trees and scrub
- Bramble scrub
- Japanese Knotweed
- Tall unmanaged grassland
- Short, mown grassland

- Buildings
- Fences
- Walls
- Bare ground/hard standing
- Gradient indication
- Site Boundary
- Map Boundary

Figure 6: Phase 1 Habitat and Vegetation Map of Site 3 EAST at Land at Edge Lane, Liverpool

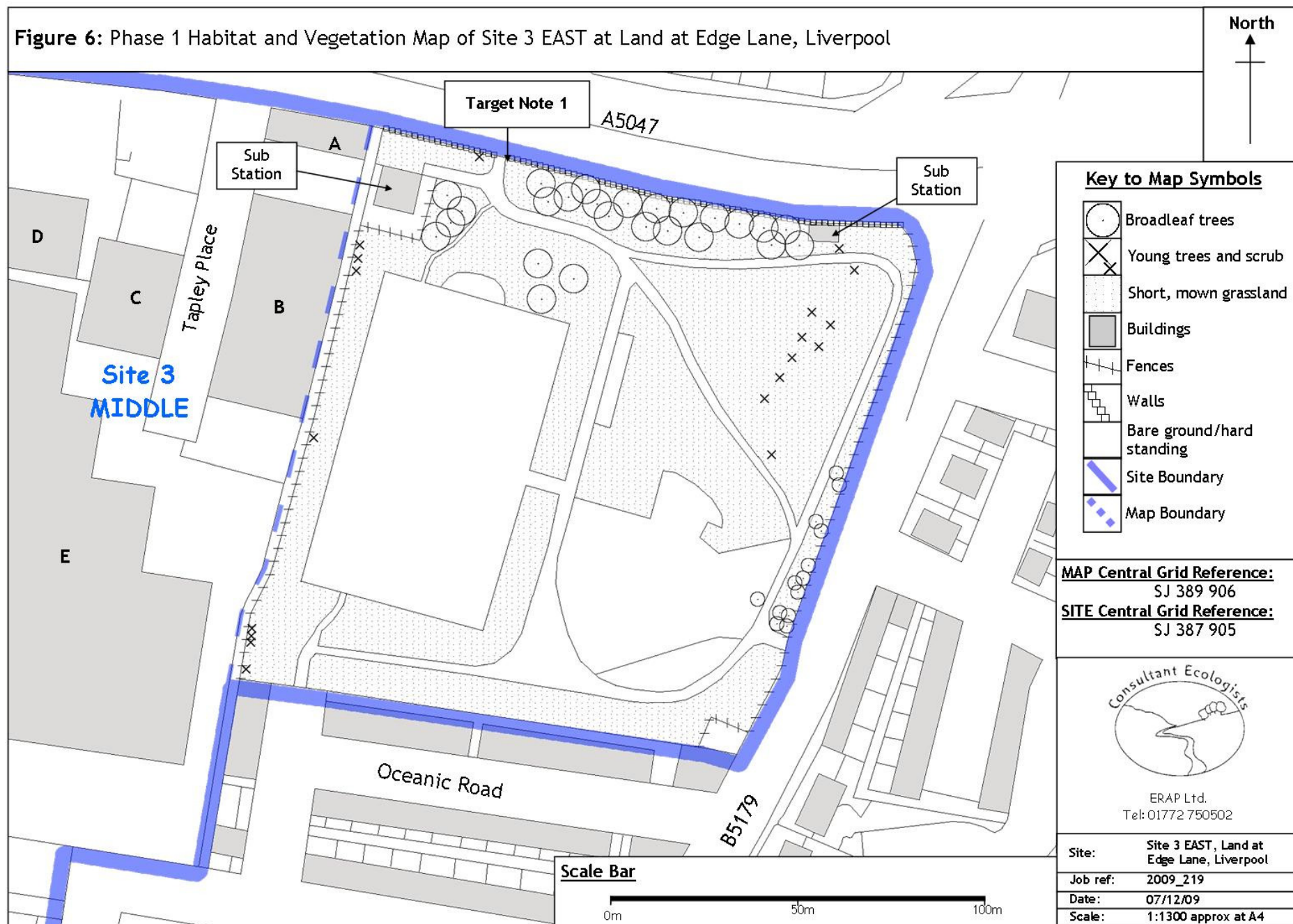
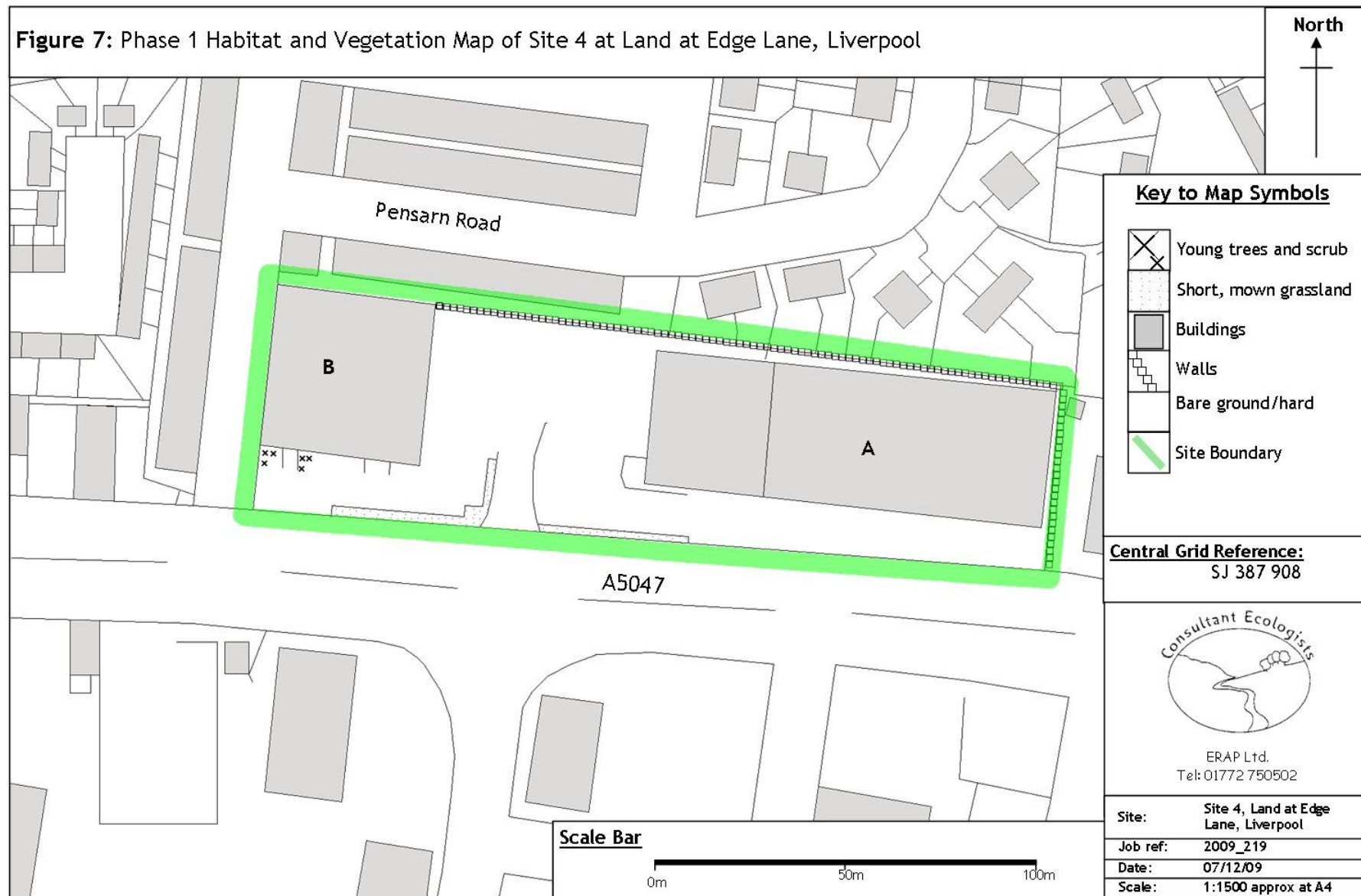


Figure 7: Phase 1 Habitat and Vegetation Map of Site 4 at Land at Edge Lane, Liverpool



APPENDIX 2. TABLES OF SPECIES LISTS

TABLE 1 – THE PLANT SPECIES COMPOSITION OF THE VEGETATION OF SITE 2

SITE: Site 2, Edge Lane Central, Liverpool

Date of survey: 30/11/09

Weather: sunny, 7 degrees C.

Wind speed: 5 mph North

Scientific name	Common name	Abundance	Cover
Woody species			
<i>Acer pseudoplatanus</i>	Sycamore	LF	<1%
<i>Aesculus hippocastanum</i>	Horse Chestnut	LF	2%
<i>Buddleia davidii</i>	Butterfly-bush	LA	3%
<i>Corylus avellana</i>	Hazel	LF	<1%
<i>Cupressocyparis leylandii</i>	Leyland Cypress	LA	3%
<i>Fraxinus excelsior</i>	Ash	VL	<1%
<i>Hedera helix</i>	Ivy	VLA	<1%
<i>Ligustrum ovalifolium</i>	Garden Privet	LF	1%
<i>Ribes sanguineum</i>	Flowering Currant	VL	<1%
<i>Rubus fruticosus</i> agg.	Bramble	VLF	<1%
<i>Salix caprea</i>	Goat Willow	VL	2%
<i>Sambucus nigra</i>	Elder	LF	1%
<i>Symphoricarpos albus</i>	Snowberry	VLF	<1%
<i>Tilia x europaea</i>	Common Lime	R	<1%
Exotics		VLF	<1%
Herb species			
<i>Aegopodium podagraria</i>	Ground Elder	LF	<1%
<i>Agrostis capillaris</i>	Common Bent-grass	LA	10%
<i>Agrostis stolonifera</i>	Creeping Bent-grass	LF	3%
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	LF	2%
<i>Arrhenatherum elatius</i>	False Oat-grass	LA	5%
<i>Bellis perennis</i>	Daisy	LF	<1%
<i>Calystegia sepium</i>	Hedge Bindweed	LA	2%
<i>Carex pendula</i>	Pendulous Sedge	LF	<1%
<i>Cerastium fontanum</i>	Common Mouse-ear	LF	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	VLF/LA	1%
<i>Cirsium arvense</i>	Creeping Thistle	LF	<1%
<i>Dactylis glomerata</i>	Cock's-foot	LA	5%
<i>Elytrigia repens</i>	Common Couch-grass	LF	1%
<i>Epilobium montanum</i>	Broad-leaved Willowherb	VLF	<1%
<i>Equisetum arvense</i>	Field Horsetail	VLF	<1%
<i>Fallopia japonica</i>	Japanese Knotweed	LA	1%
<i>Festuca rubra</i>	Red Fescue	LA	20%
<i>Galium aparine</i>	Cleavers	VLF	<1%
Continued			

TABLE 1 CONTINUED.

Scientific name	Common name	Abundance	Cover
<i>Heracleum sphondylium</i>	Hogweed	VL	<1%
<i>Holcus lanatus</i>	Yorkshire Fog	LA	10%
<i>Lolium perenne</i>	Perennial Rye-grass	LA	20%
<i>Phleum pratense</i>	Timothy	LF	3%
<i>Plantago lanceolata</i>	Ribwort Plantain	LF	1%
<i>Poa annua</i>	Annual Meadow-grass	LA	5%
<i>Poa trivialis</i>	Rough Meadow-grass	LF	3%
<i>Prunella vulgaris</i>	Selfheal	LF	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	LA	3%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	VLF	<1%
<i>Senecio jacobaea</i>	Common Ragwort	LF	<1%
<i>Senecio vulgaris</i>	Groundsel	VLF	<1%
<i>Stellaria media</i>	Common Chickweed	VLF	<1%
<i>Symphytum officinale</i>	Common Comfrey	VL	<1%
<i>Taraxacum officinale</i>	Dandelion	LF	1%
<i>Trifolium repens</i>	White Clover	LA	5%
<i>Trifolium pratense</i>	Red Clover	VLF	<1%
<i>Urtica dioica</i>	Common Nettle	LF	1%
<i>Vicia sativa</i>	Common Vetch	VLF	<1%
Exotics		LF	<1%

KEY: D=Dominant, COD=Co=dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare L=Local/locally, V=Very, *=Constant species

**TABLE 2 – THE PLANT SPECIES COMPOSITION OF THE VEGETATION OF SITE 3:
EASTERN RECREATION GROUND**

SITE: Site 3, Edge Lane Central, Liverpool

Date of survey: 30/11/09

Weather: sunny, 7 degrees C.

Wind speed: 5 mph N

Scientific name	Common name	Abundance	Cover
Woody species			
<i>Acer x hispanica</i>	London Plane	VL	<1%
<i>Acer platanoides</i>	Norway Maple	LF	1%
<i>Acer sp.</i>	Maple sp.	VL	<1%
<i>Alnus incana</i>	Grey Alder	R	<1%
<i>Laburnum anagyroides</i>	Laburnum	R	<1%
<i>Populus tremula</i>	Aspen	LA	3%
<i>Prunus sp.</i>	Cherry sp.	R	<1%
<i>Quercus sp.</i>	Oak sp.	VL	<1%
<i>Sambucus nigra</i>	Elder	VLF	<1%
<i>Tilia x europaea</i>	Common Lime	LF	1%
Herb species			
<i>Achillea millefolium</i>	Yarrow	LF	<1%
<i>Agrostis capillaries</i>	Common Bent-grass	A*	10%
<i>Agrostis stolonifera</i>	Creeping Bent-grass	LF	2%
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	LF	3%
<i>Bellis perennis</i>	Daisy	F*	3%
<i>Cardamine flexuosa</i>	Wavy Bittercress	VLF	<1%
<i>Cerastium fontanum</i>	Common Mouse-ear	LF	<1%
<i>Matricaria discoidea</i>	Pineappleweed	VLF	<1%
<i>Crepis capillaries</i>	Smooth Hawk's-beard	VLF	<1%
<i>Dactylis glomerata</i>	Cock's-foot	LF	3%
<i>Epilobium montanum</i>	Broad-leaved Willowherb	VLF	<1%
<i>Festuca rubra</i>	Red Fescue	A*	20%
<i>Holcus lanatus</i>	Yorkshire Fog	A*	10%
<i>Hypochaeris radicata</i>	Common Cat's-ear	O	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	A*	60%
<i>Phleum pratense</i>	Timothy	LF	1%
<i>Plantago lanceolata</i>	Ribwort Plantain	F*	2%
<i>Plantago major</i>	Greater Plantain	LF	<1%
<i>Poa annua</i>	Annual Meadow-grass	A*	10%
<i>Poa trivialis</i>	Rough Meadow-grass	LF	3%
<i>Prunella vulgaris</i>	Selfheal	LF	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	A*	10%
<i>Rumex conglomeratus</i>	Clustered Dock	VL	<1%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O	<1%
<i>Senecio jacobaea</i>	Common Ragwort	VL	<1%
<i>Senecio vulgaris</i>	Groundsel	VL	<1%
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	VLF	<1%
<i>Stellaria media</i>	Common Chickweed	VLA	<1%
Continued			

TABLE 2 CONTINUED.

Scientific name	Common name	Abundance	Cover
<i>Taraxacum officinale</i>	Dandelion	A*	10%
<i>Trifolium repens</i>	White Clover	A*	10%
<i>Trifolium pratense</i>	Red Clover	LF	3%
<i>Urtica dioica</i>	Common Nettle	VLF	<1%
<i>Veronica chamaedrys</i>	Germander Speedwell	LF	1%

KEY: D=Dominant, COD=Co=dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare L=Local/locally, V=Very, *=Constant species

**TABLE 3 – THE PLANT SPECIES COMPOSITION OF THE VEGETATION OF
SITE 3 WESTERN OFFICE COMPLEX**

SITE: Site 3, Edge Lane Central, Liverpool

Date of survey: 1/12/09

**Weather: hazy sunshine,
6 degrees C.**

Wind speed: 10 mph SW

Scientific name	Common name	Abundance	Cover
Woody species			
<i>Acer x hispanica</i>	London Plane	LF	<1%
<i>Acer pseudoplatanus</i>	Sycamore	VLF	<1%
<i>Aesculus hippocastanum</i>	Horse Chestnut	LF	1%
<i>Alnus glutinosa</i>	Alder	VL	<1%
<i>Betula pendula</i>	Silver Birch	VLF	<1%
<i>Buddleia davidii</i>	Butterfly-bush	LF	1%
<i>Cotoneaster sp.</i>	Cotoneaster sp.	VLF	<1%
<i>Fraxinus excelsior</i>	Ash	VLF	<1%
<i>Prunus sp.</i>	Cherry sp.	LF	<1%
<i>Rubus fruticosus</i> agg.	Bramble	VLA	<1%
<i>Rosa canina</i>	Dog Rose	R	<1%
<i>Salix caprea</i>	Goat Willow	LF	2%
<i>Ulmus glabra</i>	Wych Elm	VL	<1%
Exotics		LA	5%
Herb species			
<i>Agrostis capillaris</i>	Common Bent-grass	LA	10%
<i>Agrostis stolonifera</i>	Creeping Bent-grass	LF	3%
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	LF	2%
<i>Arrhenatherum elatius</i>	False Oat-grass	LF	3%
<i>Bellis perennis</i>	Daisy	VLF	<1%
<i>Cardamine flexuosa</i>	Wavy Bittercress	VL	<1%
<i>Cerastium fontanum</i>	Common Mouse-ear	VLF	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	VLF	<1%
<i>Cirsium arvense</i>	Creeping Thistle	VLF	<1%
<i>Dactylis glomerata</i>	Cock's-foot	LF	3%
<i>Epilobium montanum</i>	Broad-leaved Willowherb	VL	<1%
<i>Fallopia japonica</i>	Japanese Knotweed	VLF	<1%
<i>Festuca rubra</i>	Red Fescue	LA	30%
<i>Galium aparine</i>	Cleavers	VLF	<1%
<i>Holcus lanatus</i>	Yorkshire Fog	LA	20%
<i>Lolium perenne</i>	Perennial Rye-grass	LA	30%
<i>Luzula campestris</i>	Field Wood-rush	LF	<1%
<i>Medicago lupulina</i>	Black Medick	LA	5%
<i>Phleum pratense</i>	Timothy	LF	2%
<i>Plantago lanceolata</i>	Ribwort Plantain	LF	2%
<i>Plantago major</i>	Greater Plantain	VLF	<1%
<i>Poa annua</i>	Annual Meadow-grass	LA	5%
<i>Poa trivialis</i>	Rough Meadow-grass	LF	2%

Continued

TABLE 3 CONTINUED.

Scientific name	Common name	Abundance	Cover
<i>Ranunculus repens</i>	Creeping Buttercup	LA	3%
<i>Rumex conglomeratus</i>	Clustered Dock	O	<1%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	VL	<1%
<i>Senecio jacobaea</i>	Common Ragwort	LF	<1%
<i>Senecio squalidus</i>	Oxford Ragwort	LF	<1%
<i>Senecio vulgaris</i>	Groundsel	VLF	<1%
<i>Taraxacum officinale</i>	Dandelion	LF	1%
<i>Trifolium repens</i>	White Clover	LA	5%
<i>Trifolium pratense</i>	Red Clover	LF	2%
<i>Tussilago farfara</i>	Colt's-foot	VLF	<1%
<i>Urtica dioica</i>	Common Nettle	VLF	<1%
<i>Veronica chamaedrys</i>	Germander Speedwell	LF	<1%
<i>Vicia sativa</i>	Common Vetch	LF	<1%
<i>Vicia sepium</i>	Bush Vetch	LF	<1%
<i>Vicia tetrasperma</i>	Smooth Tare	LA	10%
Exotics		LF	<1%

KEY: D=Dominant, COD=Co=dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare L=Local/locally, V=Very, *=Constant species.

LAND AT EDGE HILL, LIVERPOOL

BREEDING BIRD SURVEY

JUNE 2010

1.0 INTRODUCTION

- 1.1 ERAP Ltd (Consultant ecologists) was commissioned to carry out a breeding bird survey at four sites around the Edge Hill area of Liverpool in June 2010 in connection with a proposed redevelopment of the area.
- 1.2 The brief included a walk over site survey and a physical search for any active nests or nests that would have been used earlier in the breeding season.
- 1.3 The four contiguous sites, including Site 3 (THE APPLICATION SITE) are described from east to west from the disused factories on the eastern side of Mill Lane to the large car park west of Milton Road.

2.0 SURVEY METHODOLOGY

2.1 Field Survey Methodology

- 2.1.1 The site was visited on the 13th June 2010 by Mr Chris Swindells B.Sc. (Hons). The weather was suitable for a breeding bird survey, with no significant wind or rain.
- 2.1.2 The walk over site survey was carried out and birds were recorded both visually and audibly. Some of the shrubs within the site were physically searched for the presence of active or recently used nests but it was not possible to search every shrub due to time constraints of the survey. All birds seen, heard or flying over the survey area were recorded.

2.2 Limitations of Survey

- 2.2.1 No serious survey limitations were encountered during the survey but the railway line running in a north to south direction through the site was not accessed, however all birds seen or heard within this area were recorded.

3.0 REPORT OF SURVEY

3.1 Introduction

- 3.1.1 The site is located 4 kilometres east from the centre of Liverpool and is located on both sides of the A5047 and continuing on the southern side of the A5080. The central site grid reference is SJ 387907.
- 3.1.2 The site contains a variety of urban habitats and associated birds and are described in the report from east to west.

3.2 The disused factories east of Mill Lane

- 3.2.1 The two derelict stone built factories on the eastern side of Mill Lane had several holes in the slate roofs that allowed access to many Feral Pigeon. A total of 38+ pigeons inhabited the buildings. Colonising scrub on the eastern sides of the buildings contained singing males of Blackbird, Dunnock and Robin together with a solitary Blue Tit and a family of Long-tailed Tits. A singing male Dunnock and Greenfinch were in the gardens south of the buildings.

3.3 The disused buildings west of Mill Lane and east of Rathbone Road

- 3.3.1 The three derelict car show rooms on the eastern section of this area had 20 Feral Pigeon on the roof and access was possible to the buildings on all sides. Scrub along a footpath

along the southern boundary contained singing male Blackbird and Robin with a family of Blue Tit and House Sparrow, the latter would have nested in the surrounding houses.

- 3.3.2 Scrub running along the bottom of a wall in the centre of this area contained two singing male Dunnock and singing male Blackbird, Greenfinch and Robin as well as a calling male Greenfinch and solitary male Blackbird. A pair of Magpie and a singing male Blackbird were in the scrub on the northern boundary.
- 3.3.3 A derelict red brick building in the western section of this area contained 20+ Feral Pigeon and the trimmed shrubs and standard sized trees around the other smaller buildings contained two singing male Dunningtons, a singing male Robin, a pair of Greenfinches and a solitary Wood Pigeon.

3.4 The recreation ground west of Rathbone Road

- 3.4.1 A stand of mature trees along the northern boundary of the recreation ground contained a singing male Wood Pigeon, a family of Blue Tits, a calling male Greenfinch, a solitary Carrion Crow and a pair of Mistle Thrushes.
- 3.4.2 50+ Starling, 7 Feral Pigeon, 2 Jackdaw and a Wood Pigeon were feeding on the mown grassland within the recreation ground. Scattered young mature trees along the eastern boundary contained a singing male Goldfinch and Collard Dove and a family of Blue Tit. A male House Sparrow was calling from the rows of terraced houses on the southern boundary and a solitary Lesser Black-backed Gull was flying west over the area.

3.5 Edge Lane Retail Park

- 3.5.1 Almost all of the buildings in this survey area are occupied and in present use. The car parks surrounding the stores have 1-2 metres high trimmed shrubs around their boundaries containing scattered standard sized trees. A railway line runs in a north to south direction through this part of the site and an abandoned construction site is located on the western section.
- 3.5.2 The overgrown scrub in the south eastern corner of this area contained singing males of Song Thrush, Blackbird, Robin, Dunnock, Wood Pigeon and Goldfinch with a pair of Magpie and three male Blackbirds. A solitary Herring Gull was perched on the sloping roof of a large industrial unit but would not have nested there.
- 3.5.3 The shrubs and trees in the central section adjacent to the roundabout of Montrose Way and Renus Road contained 2 singing male Dunningtons, a singing male Wren and Goldfinch, a calling male Greenfinch and a pair of Goldfinch.
- 3.5.4 The scrub around the smaller units off Montrose Way contained a singing male Dunnock, a calling male Greenfinch, a pair of Magpie and a pair of Blackbird with the female carrying nesting material.
- 3.5.5 A disused bowling green on the northern boundary contained 4 Magpies with 2 empty Magpie nests within the overgrown scrub, a family of Robin, singing male Wren and Blackbird, a calling male Greenfinch and a solitary Goldfinch. Scrub around a disused petrol station west of the bowling green contained a singing male Dunnock and calling male House Sparrow, Greenfinch and Goldfinch.
- 3.5.6 The railway line running through this area contained many singing males comprising 2 Robin, 5 Wren, 2 Wood Pigeon, 3 Greenfinch, 2 Blackbird, 2 Goldfinch, 2 Blackcap and a Song Thrush.

- 3.5.7 The abandoned construction site on the western boundary of this area contained singing male Dunnock, Robin, Goldfinch and Whitethroat and a family of Blue Tit. 2 Lesser Black-backed Gull were perched on the steelwork and 7 were flying over this area. A solitary Swift was feeding over this area.

3.6 The two buildings on the northern side of Edge Lane

- 3.6.1 There are 2 buildings on the northern side of Edge Lane in the central part of the site. The western building is derelict and contains 30+ Feral Pigeon and part of the western building is still used. The 4 Feral pigeon on this building are likely to nest in the derelict one. Singing male Greenfinch and wren were calling from the northern boundary gardens and a family of Blue Tit were in the trees lining Edge Lane.

3.7 The fruit and vegetable market north of Edge Lane

- 3.7.1 The wholesale market buildings were surrounded by large areas of tarmac and concrete and contained a variety of feeding birds consisting 8 Collared Dove, 4 Feral Pigeon, 5 Magpie, 1 Goldfinch, 1 Pied Wagtail and 1 Wood Pigeon. The scrub on the railway line along the western boundary of this area contained 2 singing male Wren, a singing male Greenfinch and a singing male Wood Pigeon.

3.8 Tattersall Way Business Park and Daydon Road

- 3.8.1 The scattered trees and scrub surrounding the buildings in this area contained singing males consisting 3 Dunnock, 4 Wood Pigeon, 2 Robin, 1 wren, 1 Blackcap, 2 Blackbird and 1 Goldfinch together with calling Goldfinch, Magpie and Greenfinch. 3 Swift were feeding over this area.

3.9 The western car park

- 3.9.1 The western most area within the site contains a large car park with low 1 metre high trimmed shrubs around it. The singing males within the shrub consist “ Dunnock, 2 Greenfinch, 1 Robin, 1 Wren and 1 Goldfinch.

4.0 ASSESSMENT OF THE SITE

- 4.1 The site contains common and widespread species of bird that are typically found in urban environments. Species of note breeding within the area include 20 nesting pairs of Dunnock and 3 nesting pairs of Song Thrush. Both of these species are UK BAP Priority Species. Other UK BAP Priority Species recorded during the survey comprise 50+ Starling and 5+ House Sparrow. These species will only use the habitats within the site for feeding and would have nested in the houses and other buildings surrounded the site. The solitary Herring Gull (a UK BAP Priority Species) would have been flying over the site and stopped to feed in the car parks adjacent to the fast food outlets.
- 4.2. UK BAP Species of Conservation Concern recorded breeding within the site comprise Blackcap, Blue Tit, Gold Finch, Greenfinch, Pied Wagtail and Whitethroat.
- 4.3 The site contains the typical habitats found in the urban environment including managed scrub and associated standard size trees. The habitat with the densest population of birds was the disused railway line running through the site and will not be affected by the proposed development.
- 4.4 It is likely that any new development will contain similar habitats as those that presently occur throughout the site including landscape planting of trees and shrubs. Therefore there would be no net loss of most of the breeding birds within the area including Dunnock and Song Thrush, both of which are UK BAP Priority Species.

- 4.5 The demolition of the old buildings within the site will only affect the Feral Pigeon, which are widely regarded as a pest species.
- 4.6 There is opportunity to plant a variety of native species within the redevelopment that would encourage a wider variety of birds to the area. Presently many of the shrubs are exotic and not native.