MANCHESTER AIRPORT PLC
LAND OFF THORLEY LANE
EXTENDED PHASE 1 HABITAT SURVEY



Penny Anderson Associates Ltd
CONSULTANT ECOLOGISTS

MANCHESTER AIRPORT PLC

LAND OFF THORLEY LANE

EXTENDED PHASE I HABITAT SURVEY

Penny Anderson Associates Limited
'Park Lea'
60 Park Road
Buxton
Derbyshire
SK17 6SN

Project Manager
Mikael L Forup, BSc (Hons), PhD, IEEM

April 2009

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed:_____

CONTENTS

1. INTRODUCTION

1.4 Context of the Site

2. METHODOLOGY

2.1 Desktop Study
2.2 Extended Phase 1 Habitat Survey

3. RESULTS

3.1 Desktop Study
3.1 Protected Sites
3.2 Great Crested Newt
3.3 Badger
3.4 Bats
3.5 Birds
3.9 Water vole
3.10 Otter
3.11 Extended Phase 1 Habitat Survey
3.12 Target Note 1. Planted Shrubs and trees
3.13 Target Note 2. Ancient Tree Line
3.14 Target Note 3. Ancient Tree Line
3.15 Target Note 4. Ancient Tree Line
3.16 Target Note 5. Ancient Tree Line
3.17 Target Note 6. Brook B and Woodland Border North and East of the Western Car Park
3.20 Target Note 7. Planted Hedgerow
3.21 Target Note 8. Ancient Tree Line Remnant
3.22 Target Note 9. Planted Hedgerow
3.23 Target Note 10. Planted Woodland Northwest of the Western Car Park
3.24 Target Note 1. Pond and Woodland Border South and West of the Western Car Park
3.27 Target Note 12. Planted Woodland Southeast of the Western Car Park
3.28 Target Note 13. Planted Woodland North and Northwest of the Eastern Car Park
3.29 Target Note 14. Wetland Corridor East of the Eastern Car Park
3.32 Target Note 15. Ponded Section on Brook A
3.34 Target Note 16. Southern Woodland Fringe of the Eastern Car Park
3.35 Evaluation of Protected Habitats Presence and Assessment of Protected Species Potential

4. CONCLUSIONS AND RECOMMENDATIONS

REFERENCES

PLATES

1 Overview of the Eastern Car Park
2 Regenerating Oak Stump in the Woodland Patch described in Target Note 1. Lords-and-ladies (*Arum maculatum*) is Growing in Front of the Oak
3 The Brook in the Western Car Park. See Target Note 6
4 Fill and Rubble Dumped in the Area Described in Target Note 9
5 Planted Trees in the Woodland Border South of the Western Car Park. Plant Mortality is High because Tree Ties are Still in Place. See Target Note 12
6 A Dried-out Pond in the Wetland Corridor East of the Eastern Car Park. See Target Note 13

FIGURES

1 Extended Phase 1 Habitat Survey
2 Protected Sites
3 Bat Records

APPENDICES

I Botanical Species List
II Bat Records within 2.5km of the Thorley Lane Car Parks

1. INTRODUCTION

1.1 Penny Anderson Associates Limited (PAA) was commissioned by Manchester Airport Plc to undertake an Extended Phase 1 Habitat Survey of the disused car parks off Thorley Lane, north of Manchester Airport. The purpose of the survey was to identify any ecological constraints that may impact upon the site being taken back into car park use. Although this report provides information on the current ecological value of the site, the survey is intended to form the first stage of the assessment process and any recommendations for further detailed surveys should be taken into account.

1.2 It is understood that the applicant is not proposing to undertake any development of the site, other than the reinstatement of operating features previously consented; specifically lighting columns, bus shelters and welfare cabins for staff.

1.3 A range of ecological surveys has been carried out on the site in the past, when the site was in different ownership. Although the previous client has declined to make those data available to Manchester Airport, some past reports may have been submitted to the local planning authority. It is possible that these can be made available to Manchester Airport, if a request is made to the local authority.

Context of the Site

1.4 Because the site has been used as a car park for Manchester Airport in the past, it is largely covered by hardstanding, with the exception of scattered areas of hedgerows and mature oak trees (see Figure 1). The site boundaries contain linear sections of woodland and scrub. A brook (Brook A) flows along the eastern boundary of the site and drains into Painswick Pond. Another brook (Brook B) flows through the western car park and also drains into Painswick Pond. An electrified perimeter fence separates the hardstanding from the boundary scrub and woodland. Each of the two car parks has a single entry/exit point.

1.5 The site is surrounded by main roads, including the M56 motorway and its roundabouts (T2 and T1 junctions), as can be seen in Figure 1. Thorley Lane also runs between the two car parks, splitting the main site into two areas, which will be addressed as the east and west car parks in this report. Manchester Airport lies close to the south of the site, and there are residential houses to the east, leading onto the nearby Manchester Business Park.

2. METHODOLOGY

Desk Study

2.1 A number of organisations were contacted within the Greater Manchester area in order to identify any records of protected species using the site, or those known to be within the general area. These organisations included Greater Manchester Ecology Unit (GMEU) and John Harrison of the South Lancashire Bat Group (SLBG). The county bird recorder for Greater Manchester was also contacted to collate information of bird activity within 2km of the site.

Extended Phase 1 Habitat Survey

2.2 The survey was carried out on 15th April 2009, and consisted of a walkover assessment of the site, followed by a more detailed survey of the habitat types and plant species present. Weather conditions were dry and sunny throughout with a light breeze. The early-season survey may have resulted in some species being missed or under-recorded.

2.3 The different habitats on site were mapped using the Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee 2003). This methodology provides a standard technique for classifying and mapping wildlife habitats, including urban areas. This method is based primarily on vegetation, with additional information on topographic and substrate features. The survey is extended whereby plant species are recorded with their abundance and any evidence of statutory protected species noted.

2.4 Each plant species was also assigned a rank within each habitat using the DAFOR scale (d = dominant; a = abundant; f = frequent; o = occasional; r = rare), which provides an assessment of the relative abundance of each plant species. The DAFOR rank for each plant species within different sections of the site is presented in Appendix I.

2.5 Any statutory protected species or habitat identified during field survey was highlighted. Based on the data from both the desk study and the field survey, an assessment was made of the potential of the site to support protected species.

3. RESULTS

Desk Study

Protected Sites

3.1 GMEU identified a number of Sites of Biological Importance (SBIs) within 2km of the site. They are shown in Figure 2 and include: Big Wood *c.*1km to the northeast, Davenport Green Wood up to 1km to the west and the associated Ponds at Davenport Green *c.*2km to the northwest. Sunbank Wood, Cotteril Clough and Well and Double Woods are more than 2km to the south of the site. It is important to note that due to the urban setting of the Thorley Lane site, much of the land between it and the SBIs appear unlikely to provide functional connectivity between these areas.

Great Crested Newt

3.2 GMEU do not hold any records of protected species within the site itself, although a number of great crested newt (*Triturus cristatus* (GCN)) have been identified within 2km of the site boundary. The closest record of GCN appears to be approximately 1km from the site boundary to the west, at grid reference SJ 805 863. The M56 motorway would act as a physical barrier preventing this population colonising the ponds present at the Thorley Lane site. A further nearby record of GCN is to the southwest, just over 1km from the site boundary at grid reference SJ 806 854. Again, physical barriers would prevent connectivity between this site and that of Thorley Lane, due to the presence of the airport. GCN have also been located at the SBI to the northeast of the site at Big Wood, however, there is a high concentration of urban housing and road networks that would prevent the GCN from accessing the site.

Badger

3.3 No records of badger (*Meles meles)* activity are held by GMEU within 2km of the site boundary. However, anecdotal records have indicated badger activity just over 2km from the south of the site, on the most southerly edge of the nearby airport runway.

Bats

3.4 Six bat roosts and a number of other bat activity records have been located within 2km of the site boundary (see Figure 3 and Appendix II). The roosts are predominately pipistrelle species (*Pipistrellus* sp.) roosts but also include a brown long-eared bat (*Plecotus auritus*) roost. Several other species, including Daubenton's bat (*Myotis daubentonii*), noctule (*Nyctalus noctula*) and Brandt's bat (*Myotis brandtii*), have been recorded.

Birds

3.5 A large diversity of birds has been recorded within 2km of the site by the county bird recorder from Greater Manchester. The list includes a number of birds with conservation value, although the majority of these species may not adopt the site as a breeding habitat. However, several of the species may utilise the Thorley Lane site as a potential foraging area or for other purposes, such as temporary or permanent roosting.

3.6 The list has been sorted using the Population Status of Birds in the UK (Gregory *et al.* 2002). Under this approach bird populations are assessed, using quantitative criteria, to determine the population status of each species, then placed upon one of three lists: red, amber and green. Red list species are of high conservation concern, having declined by 50% or more in

population or breeding range in the last 25 years. Amber listed species are of medium conservation concern, having suffered between 25% and 49% reduction in breeding or non-breeding populations, breeding or wintering ranges, for example. Green list species have a favourable conservation status and are, therefore, not used as indicators of the site's function

3.7 Red list species recorded within 2km of the site include spotted flycatcher (*Muscicapa striata*), song thrush (*Turdus philomelos*), common linnet (*Carduelis cannabina*), common bullfinch (*Pyrrhula pyrrhula*), house sparrow (*Passer domesticus*), common starling (*Sturnus vulgaris*) and reed bunting (*Emberiza schoeniclus*). In addition to their status as Red list species, the above bird species are also Biodiversity Action Plan (BAP) species. Common grasshopper warbler (*Locustella naevia*) and barn owl (*Tyto alba*) have also been recorded within 2km of the site boundary. However, it is unlikely that the site would be used by these species due to habitat constraints.

3.8 Amber list species recorded within 2km of the Thorley Lane site and which could be utilizing the site, include common redstart (*Phoenicurus phoenicurus*), hedge accentor (*Prunella modularis*), mistle thrush (*Turdus viscivorus*), goldcrest (*Regulus regulus*) and possibly the lesser redpoll (*Carduelis cabaret*) during the winter. In addition to being amber listed, hedge accentor and lesser redpoll are also BAP species.

Water Vole

3.9 No records of water voles within 2km of the site were reported.

Otter

3.10 No records of otter within 2km of the site were reported.

Extended Phase 1 Habitat Survey

3.11 Figure 1 presents a Phase 1 Habitat Map for the site. The site is predominantly hardstanding, planted scrub and woodland, with a few remnants of old hedgerow or woodland, a pond and two stream corridors. The hardstanding areas are very similar in the western and eastern car parks and almost completely devoid of vegetation (see Plate 1) and hold few ecological opportunities. There has been extensive planting of trees and shrubs within the last decade, and some of these areas incorporate existing hedgerow or woodland remnants. The site has been described through a series of target notes, which are detailed below. Complete botanical species lists can be found in Appendix I.

Target Note 1. Planted Shrubs and Trees

3.12 This is a rather densely planted stand of predominantly native trees and shrubs. The vegetation is immature and reaches 10-15m in height. It is mainly characterized by abundant bramble[1] (*Rubus fruticosus*), elder (*Sambucus nigra*) and wild privet (*Ligustrum vulgare*). However, a high diversity of mainly native broadleaved species has been planted. The ground flora tends to be sparse but is locally dominated by common nettle (*Urtica dioica*) and cleavers (*Galium aparine*).

[1] *Nomenclature follows Stace, 1997.*

Target Note 2. Ancient Tree Line

3.13 Although most of this area has been planted with trees and shrubs, including abundant or locally dominant alder (*Alnus glutinosa*), dogwood (*Cornus sanguinea*), silver birch (*Betula pendula*) and the non-native snowberry (*Symphoricarpos albus*), the stumps of five large pedunculate oaks (*Quercus robur*) indicate that this is an ancient tree line. These trees were felled within the last few years and three are currently re-sprouting (see Plate 2). It is likely that these trees were planted at the same time as the extant pedunculate oak described in TN3, below. Lords-and-ladies (*Arum maculatum*) are locally abundant and further point to a long history of woodland cover. However, the vegetation is dominated by the recent plantings, which are still immature and only reach some 10-15m in height. Bramble is locally dominant. Soil has been dumped in part of this stand.

Target Note 3. Ancient Tree Line

3.14 Although most of this area has also been densely planted with trees and shrubs, including abundant or locally dominant guelder-rose (*Viburnum opulus*), silver birch, snowberry and wild privet, native bluebells (*Hyacinthoides non-scripta*) are locally abundant. These, together with a mature pedunculate oak and occasional lords-and-ladies, indicate that this is an ancient tree line, hedgerow or woodland remnant. The mature oak has potential for roosting bats and reaches some 20m in height. Most of the vegetation is immature. Where the soil has seen much disturbance, the ground flora is characterised by abundant bramble and common nettle. However, other areas are heavily shaded by the dense plantings and have sparse ground flora.

Target Note 4. Ancient Tree Line

3.15 This area appears to have been part of the tree line or woodland that originally incorporated the area described in TN3. A mature oak, similar in size to the one mentioned in TN3, has recently been felled. Most of the stand is now dominated by dense bramble in addition to densely planted alder, bird cherry (*Prunus padus*), guelder-rose, hazel (*Corylus avellana*), snowberry and wild privet.

Target Note 5. Ancient Tree Line

3.16 This area also appears to have been part of the tree line or hedgerow or woodland network that originally incorporated the area described in TN3. Four mature oaks remain that are similar in size to the one mentioned in TN3. They have potential for roosting bats. However, most of the stand is dominated by dense bramble in addition to densely planted alder, bird cherry, dogwood, guelder-rose, silver birch and snowberry. Crack-willow (*Salix fragilis*) is locally abundant. The ground flora is locally dominated by ground elder (*Aegopodium podagraria*). Hogweed (*Heracleum sphondylium*) and cow parsley (*Anthriscus sylvestris*) are locally abundant, whereas lords-and-ladies is locally frequent.

Target Note 6. Brook B and Woodland Border North and East of the Western Car Park

3.17 This area is predominantly scrub and woodland planted by the remains of a hawthorn (*Crataegus monogyna*) hedge (H2 on Figure 1). The hedge itself is approximately 60m long and rich in species, including ash (*Fraxinus excelsior*), blackthorn (*Prunus spinosa*), elder, hazel, holly (*Ilex aquifolium*), pedunculate oak and sycamore (*Acer pseudoplatanus*). The ground flora includes abundant dog's mercury (*Mercurialis perennis*) and occasional lords-and-ladies. The planted vegetation is characterised by cherry laurel (*Prunus laurocerasus*), dogwood, hazel, silver birch, snowberry and wild cherry. Apart from snowberry, other exotic shrubs have also been planted near the entry gate to the car park. The ground flora is typical of

disturbed ground and includes locally dominant ground elder as well as abundant bramble and common nettle.

3.18 Brook B, which flows through the western car park, appears to arise from a culvert at the boundary of the site, close to Manchester Airport. It drains into Prestwick Lake to the north east of the site. The brook is relatively narrow (<1m), marked by a high abundance of decomposing leaves, contains no vegetation and has steep banks (see Plate 3). At the time of survey, water flow was slow. The watercourse may be linked with drainage for the nearby roads and Manchester Airport.

3.19 No signs of water vole (*Arvicola terrestris*) or otter (*Lutra lutra*) activity were recorded along any section of this brook, both of which are European protected species.

Target Note 7. Planted Hedgerow

3.20 This is a rather densely planted stand of predominantly native trees and shrubs, most of which are still immature. The hedge is 5m wide and 10-15m tall. Tree ties are still in place and plant mortality has been high as plant girth has reached the limit set by the ties. The vegetation is mainly characterized by alder, bramble, crack-willow, guelder-rose, silver birch and snowberry. The ground flora tends to be sparse but is locally dominated by dog's mercury. Hogweed is locally abundant.

Target Note 8. Ancient Tree Line Remnant

3.21 This is a remnant of old hedgerow or woodland but has been densely planted in with trees and shrubs and is characterised by an immature canopy of alder, blackthorn, crack-willow, dogwood, grey willow (*Salix cinerea*), guelder-rose, hazel, silver birch, snowberry, wild plum (*Prunus domestica*) and wild privet. Four mature pedunculate oaks and one sycamore are still present, but one of the oaks has been cut back to a 2m tall standard. It is likely that these trees were planted as part of the same network of tree lines mentioned in TN3 and TN4. The ground is locally disturbed; fill and rubble has been dumped in some places. Bramble and ground elder are locally dominant, common nettle is abundant.

Target Note 9. Planted Hedgerow

3.22 This is a densely planted stand of trees and shrubs, all of which are immature. The hedge is 5m wide and 10-15m tall. Alder, dogwood, silver birch and wild cherry are locally dominant. The ground is disturbed and contained much dumped rubble (see Plate 4). The ground flora tends to be sparse but is locally dominated by bramble, cleavers and cock's-foot (*Dactylis glomerata*).

Target Note 10. Planted Woodland Northwest of the Western Car Park

3.23 This area is predominantly immature scrub and woodland. The vegetation is characterised by alder, bird cherry, dogwood, field maple (*Acer campestre*), grey willow, hazel, large-leaved lime (*Tilia platyphyllos*), silver birch and snowberry. The ground flora is characterized by locally abundant bramble, cleavers, dandelion (*Taraxacum* agg.) and dog rose (*Rosa canina*).

Target Note 11. Pond and Woodland Border South and West of the Western Car Park

3.24 A narrow woodland fringe surrounds the boundary of the western car park site. The area within the site boundary only reaches a few metres wide but continues for a further 10-15m beyond the boundary towards the main road. Most of the vegetation is immature plantation

characterised by bird cherry, hawthorn, dogwood, field maple and wild plum. The ground flora is typical of disturbed ground and dominated by bramble but closer to the southern end, where the brook crosses the section, the ground flora is slightly richer and includes cow parsley, hedge woundwort (*Stachys sylvatica*) and hogweed.

3.25 A single pond is located within the site boundary. The pond is approximately 10x10m, with a dense litter layer, leaving a relatively shallow maximum water depth of less than 0.5m. Grey willows are abundant in and around the pond and with the recent plantings to the north and east of the pond, the water is in deep shade for most of the day.

3.26 The pond is considered to be suboptimal for GCN, a European protected species, due to the heavy shade and lack of aquatic vegetation.

TN12. Planted Woodland Southeast of the Western Car Park

3.27 This is a densely planted stand of trees, all of which are immature. The dominant species are bird cherry, field maple, hazel, pedunculate oak and silver birch. Mortality has been high because tree ties have not been removed from individual plants (see Plate 5). There is much fly tipping in the woodland. The ground flora is sparse, but contains locally abundant bramble, garlic mustard (*Alliaria petiolata*) and tufted hair-grass (*Deschampsia cespitosa*).

TN13. Planted Woodland North and Northwest of the Eastern Car Park

3.28 This area is predominantly immature scrub and woodland south of a hawthorn hedge (H1 on Figure 1). The hedge itself is approximately 175m long and rich in species, including ash, bird cherry, hazel, silver birch and snowberry. The ground is disturbed and topsoil has been dumped in some areas. Bramble, cleavers, ground elder and lords-and-ladies are locally abundant.

TN14. Wetland Corridor East of the Eastern Car Park

3.29 The area between the brook and the perimeter fence of the eastern car park contains much planted woodland, similar in character to that of the other fringes of the car parks. However, the banks of the brook contain more mature vegetation. Bird cherry, hazel and silver birch dominate but are interspersed with mature crack willow, grey willow, pedunculate oak and large-leaved lime. The ground flora is dominated by bramble and common nettle.

3.30 A small watercourse runs along the site boundary to the east that feeds into Prestwick Lake to the northeast. The brook appears to be of relatively low quality with much detritus, heavy shade and no aquatic species. However, some sections are of slightly higher quality and include species such as common reed *Phragmites australis*, reed canary-grass *Phalaris arundinacea* and water starwort *Callitriche* sp. Sticklebacks *Gasterosteus aculeatus aculeatus* were observed in the water.

3.31 No signs of water vole or otter activity were recorded along any section of this brook.

Target Note 15. Ponded Section on Brook A

3.32 A small section of Brook A widens and becomes practically ponded, with very slow flows. However, this is found within a shaded section of the brook and contained no aquatic vegetation at the time of survey. A depression northwest of the ponded section may contain standing water during wet times of the year but was dry at the time of survey (see Plate 6). It contained abundant remote sedge (*Carex remota*) and soft-rush (*Juncus effusus*) in addition to common nettle.

3.33 A series of burrows was found in the slope between this area and the perimeter fence. However, these holes were considered too narrow to have been dug by badgers and are more likely to be rabbit burrows. No hairs were found.

Target Note 16. Southern Woodland Fringe of the Eastern Car Park

3.34 This area is very dense plantation and bramble scrub, with little or no ground flora. The actual fringe within the site boundary is relatively narrow, approximately 1m, but the woodland extends a further 15m towards the road connecting to the airport. The vegetation is characterised by bird cherry, field maple and two short sections of overgrown hawthorn hedges (H3 and H4 on Figure 1). These contain occasional lords-and-ladies.

Evaluation of Protected Habitats Presence and Assessment of Protected Species Potential

3.35 The three sections of mature tree lines described in Target Notes 3, 5 and 8, above, are relatively species-rich. Because they were not managed as hedges in the past but were allowed to develop into a line of trees, they do not qualify as 'important' hedgerows as defined in the Hedgerow Regulations (DEFRA 1997). However, the mature oaks and one sycamore found within these stands might qualify for Tree Preservation Orders (TPOs). The purpose of a TPO is to protect a tree for the public's enjoyment. It is made for the 'amenity' of the tree. This can include the tree's nature conservation value but more often refers to its visual amenity. If a tree is not visible or accessible from a public place a TPO cannot usually be enforced.

3.36 Two sections of hedgerow, H2 and H3, are moderately species-rich and could be 'important' based upon the ecological criteria of the Hedgerow Regulations 1997. A detailed survey to establish whether the sections fall under the Regulations should be undertaken, if the sections were to be removed or impacted by the current or future proposals for the site. The remaining hedgerows on the site are small or newly planted and of little conservation value.

3.37 No protected species of amphibian, bat, bird or mammal, is likely currently to be utilizing the site.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 The majority of the site holds limited ecological value, due to a combination of the large areas of hardstanding on the site, the young age of most of the plantings, the severity of fragmentation caused by major roads and because of the recent use of the site as a car park. The woodland fringes of the site contain a range of common species, with some typical woodland ground flora in the eastern section of the site. However, the majority of the linear boundaries are dense, dominated by bramble and floristically poor.

4.2 The mature pedunculate oak trees scattered throughout the site are unlikely to be covered by a TPO, although they may hold potential for roosting bats. Therefore, a bat survey should be undertaken to identify the presence of roosts, especially if more of these trees are to be removed, or if tree surgery is to be undertaken.

4.3 A detailed survey to establish whether the H1 and H2 hedge sections qualify under the Regulations should be undertaken, if the sections were to be removed or impacted by the current or future proposals for the site.

4.4 The pond in the western car park and the ponded section of Brook A are considered suboptimal for GCN. However, if these waterbodies were to be removed or impacted by the current or future proposals for the site, a GCN survey should first be undertaken.

4.5 A detailed bird survey was not undertaken on the site. Therefore, if the woodland fringes and scrub areas are to be impacted by the proposed development, it is recommended that a detailed bird survey be undertaken prior to any works. Under the Wildlife and Countryside Act, 1981 (as amended), all wild birds (except some pest and game species not recorded on site) are protected from intentional killing and injuring, and their nests and eggs are also protected from taking, damaging or destroying. It is further recommended that any development should proceed outside of the breeding bird season (March to August inclusive).

4.6 Because a range of ecological surveys were carried out on the site in the past, when the site was in different ownership, some surveys could still be valid. If they have been submitted as reports to the local planning authority, it is possible that they can be made available to Manchester Airport, if a request is made to the local authority.

REFERENCES

DEFRA, 2007. *The Hedgerow Regulations 1997 – A Guide to the Law and Good Practise.* Department of the Environment, Food & Rural Affairs, London

Gregory, R. D., Wilkinson, N. I., Noble, D. G., Robinson, J. A., Brown, A. F., Hughes, J., Procter, D., Gibbons, D. W. and Galbraith, C. A., 2002. *The Population Status of Birds in the UK - Birds of conservation concern: 2002-2007.* BirdLife International, BOU, BTO, CCW, English Nature, Environment & Heritage Service Northern Ireland , GCT, HOT, JNCC, NT, RSPB, SNH, WWT, The Wildlife Trusts

JNCC, 2003. *Handbook for Phase 1 Habitat Survey – a technique for environmental audit* (2007 reprint). JNCC

Stace, C., 1997. *The New Flora of the British Isles.* Cambridge University Press

PLATES

PLATES



Plate 1

Overview of the eastern car park

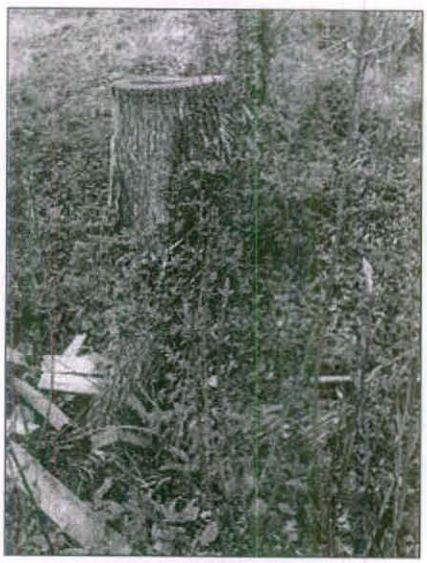


Plate 2

Regenerating oak stump in the woodland patch described in Target Note 1. Lords-and-ladies (*Arum maculatum*) is growing in front of the oak



Plate 3

The brook in the western car park. See Target Note 6

PLATES



Plate 4

Fill and rubble dumped in the area described in Target Note 9



Plate 5

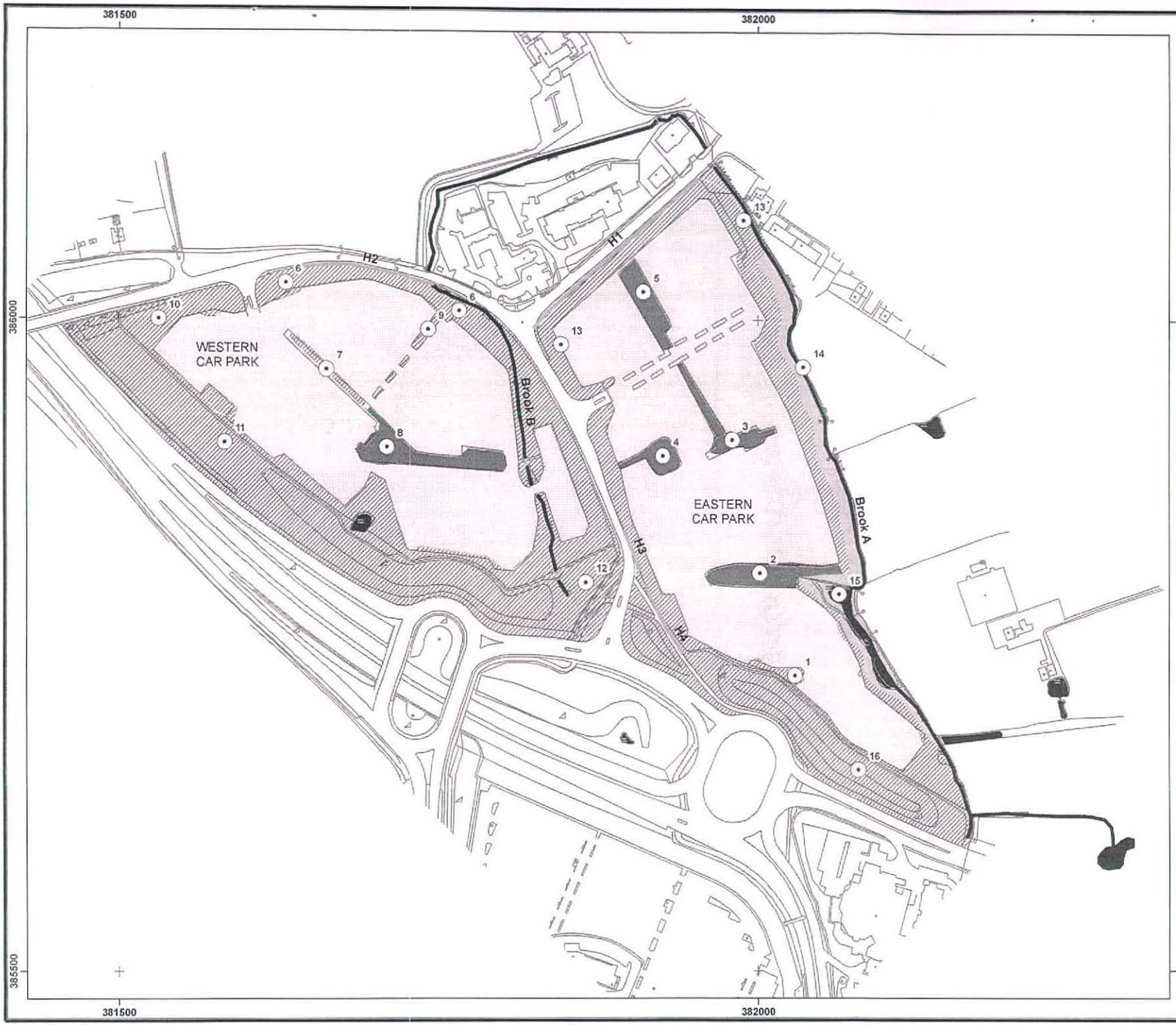
Planted trees in the woodland border south of the western car park. Plant mortality is high because tree ties are still in place. See Target Note 12



Plate 6

A dried-out pond in the wetland corridor east of the eastern car park. See Target Note 13

FIGURES



REPRODUCED FROM ORDNANCE SURVEY 1:1250 LANDLINE BY PERMISSION OF ORDNANCE SURVEY ® ON BEHALF OF HER MAJESTY'S STATIONARY OFFICE, © CROWN COPYRIGHT. LICENCE NUMBER AL100013280



Legend

- Target Notes
- Hedge
- Stream
- A1.1.1- Broadleaved woodland - semi-natural
- A1.1.2 - Broadleaved woodland - plantation
- Wetland corridor
- Waterbody
- Hardstanding

N

ISO A3

Metres

0 25 50 100

Manchester Airport plc,
Registered Office PO Box 532,
Town Hall
Manchester
M60 2LA

Penny Anderson Associates Ltd
Corporate Governance

Penny Anderson Associates Ltd,
Parklea, 60 Park Road,
Buxton, Derbyshire, SK17 6SN.
Telephone 01298 27086

Project Name: Phase 1 Habitat Survey and Desk Study

Discipline: Ecology

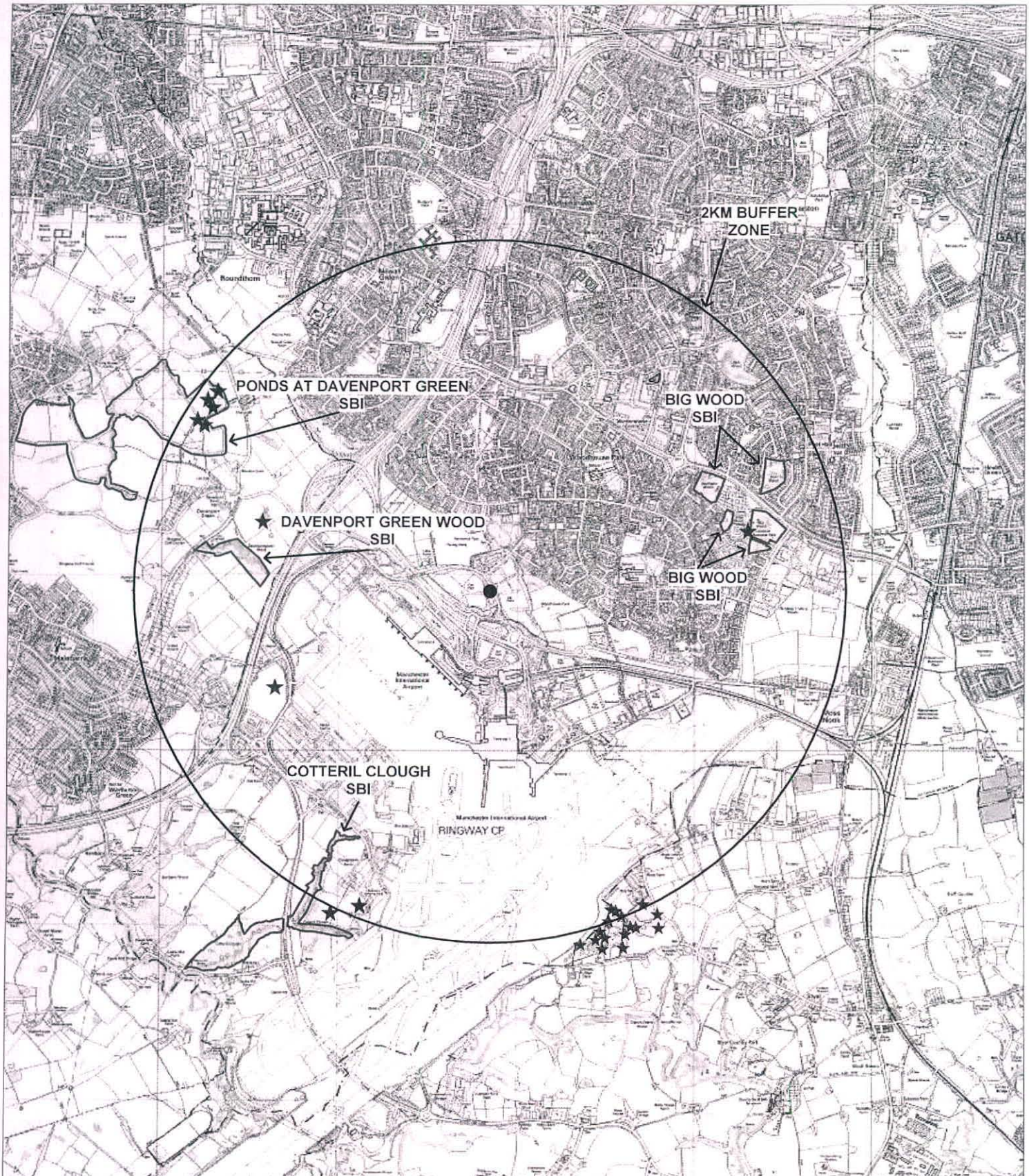
Title:

Extended Phase 1 Habitat Survey

Scale: 1:2,750		Drawing No.: Figure 1	
Drawn By: JL	Originator: MF	Date: APR 2009	
PAA Ref.: Q:\ManchesterAirportPlc\Maps		Revision: A	

FIGURE 2

Protected Sites



GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - THORLEY LANE CAR PARKS GR SJ 81849 85903
SCALE 1:20000

KEY

★ GREAT CRESTED NEWT RECORD

THE MAP IS BASED UPON ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HMSO ©CROWN COPYRIGHT UNAUTHORISED REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

TAMESIDE MBC LICENCE NO LA100022697, 2009

Greater Manchester Ecology Unit

Telephone 0161 371 9171
Email: gmeu@tameside.gov.uk

Date Produced: 15th April 2009

FIGURE 3

Bat Records



APPENDICES

APPENDIX I

Botanical Species List

Appendix I. Botanical Species List

English	Latin	Area on map															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Trees and shrubs																	
Alder	*Alnus glutinosa*		la		ld	ld		la	la	ld	la	lf					f
Ash	*Fraxinus excelsior*						la				lf	ld		lf			lf
Bird cherry	*Prunus padus*				la	ld	ld	ld		ld	la	ld	ld	la			ld
Blackthorn	*Prunus spinosa*	f	o				o		la								
Bramble	*Rubus fruticosus* agg.	a	ld	la	ld	ld	la	ld	ld	ld	la	ld	la	ld			ld
Buckthorn	*Rhamnus cathartica*				lf		lf							lo			
Cherry laurel	*Prunus laurocerasus*						lf										
Cherry plum	*Prunus cerasifera*													la			
Cotoneaster	*Cotoneaster* sp.						la										
Crack-willow	*Salix fragilis*		r		o	la	o	ld	ld						ld		
Dog rose	*Rosa canina*		f						o	o	la	a					a
Dogwood	*Cornus sanguinea*	f	la			ld			ld	ld	ld	la	ld	f	f		lf
Elder	*Sambucus nigra*	a			f		o							o			
Field maple	*Acer campestre*	f									lf	la	la				la
Goat willow	*Salix caprea*	o	lf			lf											
Grape-vine	*Vitis vinifera*												r				
Grey willow	*Salix cinerea*						o		la		ld	la			a		la
Guelder-rose	*Viburnum opulus*		o	la	lf	ld		la	la								
Hawthorn	*Crataegus monogyna*	f	f				ld		f		o	ld		ld	f		ld
Hazel	*Corylus avellana*	f	f	o	la	f	a		lf			la	a	a	ld		la
Holly	*Ilex aquifolium*		f				o										
Honeysuckle	*Lonicera periclymenum*						o										
Horse chestnut	*Aesculus hippocastanum*						r										
Ivy	*Hedera helix*		f			la	a		la		a		ld	a	la		
Large-leaved lime	*Tilia platyphyllos*										lf						
Norway maple	*Acer platanoides*						f		o		o		lf				
Pedunculate oak	*Quercus robur*	f				o	o		r			lf	la				
Rowan	*Sorbus aucuparia*		r					o	o	r		o					r
Scots pine	*Pinus sylvestris*	f										lo	o				
Silver birch	*Betula pendula*	f	la	la		ld	lf	ld		ld	la		ld	ld			
Snowberry	*Symphoricarpos albus*		ld	ld	la	ld	ld	ld		lf	la		a	ld			
Sycamore	*Acer pseudoplatanus*						lf		r								
Unknown exotic shrub						la	la										
Wild cherry	*Prunus avium*			ld													
Wild plum	*Prunus domestica*	o							la			la					
Wild privet	*Ligustrum vulgare*	a	f	ld	ld				f			o	f				
Wilson's honeysuckle	*Lonicera nitida*					la	o				o						
Wisteria	*Wisteria* sp.						f										
Wych elm	*Ulmus glabra*						o										

Appendix I. Botanical Species List

English	Latin	Area on map															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Forbs																	
Bindweed	*Calystegia* sp.		o														
Bluebell	*Hyacinthoides non-scripta*			la													
Broad buckler fern	*Dryopteris dilatata*						o					o	o				
Broad leaved dock	*Rumex obtusifolius*	o			o												
Broad-leaved willowherb	*Epilobium montanum*		f	o								o	f		f		
Cleavers	*Galium aparine*	a	la	a		la	la	f		a	la		f	ld			
Colt's-foot	*Tussilago farfara*						o				o			la			
Common nettle	*Urtica dioica*	a	lf	a	la		la		a	la	f		a	ld	a		
Cow parsley	*Anthriscus sylvestris*	f		lf	f	la	lf	o	lf			la	la	la	la		
Creeping buttercup	*Ranunculus repens*	f	f	o	lf				f			lf	o	o			
Curled dock	*Rumex crispus*													o			
Daffodil	*Narcissus* sp.			o													
Dandelion	*Taraxacum* agg.		o		o		o	f	o		la	la	o	o			
Dog's mercury	*Mercurialis perennis*						a	ld					f				
Field horsetail	*Equisetum arvense*											lf			o		lf
Foxglove	*Digitalis purpurea*											r					
Garlic mustard	*Alliaria petiolata*			lf		f							la	la			
Great willowherb	*Epilobium hirsutum*	f	f		f	o		lf	la	lf							
Ground elder	*Aegopodium podagraria*				la	ld	ld		ld					ld			
Hedge woundwort	*Stachys sylvatica*							o				r					
Herb-Robert	*Geranium robertianum*						o										
Hogweed	*Heracleum sphondylium*	f	f		la	la	ld	a	lf	a	lf	lf	f	lf	la		lf
Knotweed	*Persicaria* sp.						o										
Lesser burdock	*Arctium minus*						r										
Lesser celandine	*Ranunculus ficaria*		la						lf	lf		lf	f				lf
Lords-and-ladies	*Arum maculata*		la	o	f	lf	o			lf	lf			la			o
Marsh willowherb	*Epilobium palustre*														lf		
Meadow buttercup	*Ranunculus acris*								o								
Pineapple-weed	*Matricaria discoidea*	f	f			f											
Red campion	*Silene dioica*											r					
Ribwort plantain	*Plantago lanceolata*	o				o						o	o				
Rosebay willowherb	*Chamerion angustifolium*				f		la										
Spear thistle	*Cirsium vulgare*			o				o									
Tufted vetch	*Vicia cracca*	o			lf			o	lf	f		o					
Water starwort	*Callitriche* sp.															o	
White clover	*Trifolium repens*						la										
Wood avens	*Geum urbanum*												o	lf			
Wood dock	*Rumex sanguineus*					o	la					lf	o	o	o		lo

Appendix I. Botanical Species List

English	Latin	Area on map															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Graminoids																	
Annual meadow-grass	*Poa annua*			o		lf		lf									
Cock's-foot	*Dactylis glomerata*	f	la			la		la		la				f			
Common reed	*Phragmites australis*															ld	
Hard rush	*Juncus inflexus*						r	lf									
Pendulous sedge	*Carex pendula*				r						o			o		o	
Reed canary-grass	*Phalaris arundinacea*															lf	
Remote sedge	*Carex remota*															la	
Soft-rush	*Juncus effusus*															la	
Tufted hair-grass	*Deschampsia cespitosa*					lf	la						la		la		
Yorkshire-fog	*Holcus lanatus*							la									
Bryophytes																	
Cypress-leaved plait-moss	*Hypnum cupressiforme*		la		o						la						
Heath plait-moss	*Hypnum jutlandicum*	a	a			la	la		a		la	a	a		a		a

APPENDIX II

Bat Records within 2.5km of the Thorley Lane Car Parks

Appendix II. Bat Records within 2.5km of the Thorley Lane Car Parks

(Data provided by South Lancashire Bat Group)

Vernacular	GridRef	Qty	Date	Method	Stage	Status
Pipistrellus Genus	SJ813883	0	12-Jun-2001	Roost	Not Recorded	Not Recorded
Common Pipistrelle	SJ8272184 090	1	11-Aug-2008	Aural Bat Detector	Not Recorded	In Flight
Common Pipistrelle	SJ8402186 104	1	11-Aug-2008	Aural Bat Detector	Not Recorded	In Flight
Pipistrellus Genus	SJ78	100	08-Sep-1964	Roost	Not Recorded	Not Recorded
Pipistrellus Genus	SJ794852	0	31-Jul-1989	Roost	Not Recorded	Not Recorded
Pipistrellus Genus	SJ795850	0	07-May-1999	Roost	Not Recorded	Not Recorded
Pipistrellus Genus	SJ795855	2	10-Jun-2002	Casualty	Not Recorded	Not Recorded
Pipistrellus Genus	SJ798852	3	15-Nov-1988	Field Record	Not Recorded	Not Recorded
Common Pipistrelle	SJ798854	0	06-Nov-2006	Roost	Not Recorded	Not Recorded
Noctule Bat	SJ801853	1	08-Oct-2008	Aural Bat Detector	Adult	In Flight
Noctule Bat	SJ801853	1	13-Oct-2008	Aural Bat Detector	Adult	In Flight
Common Pipistrelle	SJ801853	2	08-Oct-2008	Aural Bat Detector	Adult	In Flight
Common Pipistrelle	SJ801853	1	13-Oct-2008	Aural Bat Detector	Adult	In Flight
Soprano Pipistrelle	SJ801853	2	08-Oct-2008	Aural Bat Detector	Adult	In Flight
Common Pipistrelle	SJ800857	8	17-Sep-2007	Aural Bat Detector	Not Recorded	In Flight
Whiskered Bat	SJ821848	1m	14-Nov-2006	Casualty	Adult	Released
Whiskered Bat	SJ8083	1	16-Jun-2004	Aural Bat Detector	Not Recorded	In Flight
Noctule Bat	SJ8083	1	16-Jun-2004	Aural Bat Detector	Not Recorded	Not Recorded
Whiskered Bat	SJ821855	1	06-Sep-2004	Casualty	Adult	Not Recorded
Brandt's Bat	SJ824849	1f	09-Aug-2003	Casualty	Adult	Released
Common Pipistrelle	SJ818864	1	15-Aug-2003	Casualty	Not Recorded	Not Recorded
Pipistrellus Genus	SJ821855	1	26-Apr-2003	Casualty	Not Recorded	Not Recorded
Daubenton's Bat	SJ78	1	1900	Field Record	Adult	Not Recorded
Noctule Bat	SJ78	1	1894	Field Record	Adult	Not Recorded
Noctule Bat	SJ78	1	1975	Field Record	Adult	Not Recorded
Pipistrellus Genus	SJ78	1	05-Nov-1969	Field Record	Adult	Not Recorded
Brown Long-eared Bat	SJ78	1	1894	Field Record	Adult	Not Recorded
Myotis Genus	SJ8072185 969	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Noctule Bat	SJ8281784 061	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Common Pipistrelle	SJ8300783 864	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight

Vernacular	GridRef	Qty	Date	Method	Stage	Status
Common Pipistrelle	SJ8328384 594	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Soprano Pipistrelle	SJ8356285 345	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Noctule Bat	SJ8359585 345	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Common Pipistrelle	SJ8368385 333	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Soprano Pipistrelle	SJ8384584 791	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Noctule Bat	SJ8393785 154	1	26-Sep-2006	Aural Bat Detector	Not Recorded	In Flight
Whiskered Bat	SJ804880	1m	12-Sep-2003	Casualty	Adult	Released
Pipistrellus Genus	SJ809875	1	13-Oct-2004	Casualty	Not Recorded	Dead
Common Pipistrelle	SJ821864	1m	13-Aug-2003	Casualty	Adult	Euthanased
Pipistrellus Genus	SJ826871	1	04-Oct-1984	Casualty	Not Recorded	Not Recorded
Brown Long-eared Bat	SJ8287	0	1988	Roost	Not Recorded	Not Recorded
Pipistrellus Genus	SJ834873	0	04-Apr-2003	Field Record	Not Recorded	Not Recorded
Pipistrellus Genus	SJ834874	4	Jun-2002	Field Record	Not Recorded	Feeding
Pipistrellus Genus	SJ839869	1m	01-Jul-2003	Casualty	Not Recorded	Long Term Captive
Pipistrellus Genus	SJ839869	1	04-Jul-2003	Casualty	Not Recorded	Released
Common Pipistrelle	SJ807872	2	12-Aug-2008	Aural Bat Detector	Adult	Feeding
Common Pipistrelle	SJ807872	3	17-Aug-2008	Aural Bat Detector	Adult	Feeding
Common Pipistrelle	SJ807872	2	17-Aug-2008	Aural Bat Detector	Adult	Commuting
Common Pipistrelle	SJ807872	3	06-Oct-2008	Aural Bat Detector	Adult	Feeding