

THG Plot, Airport City North, Manchester Airport

Preliminary Ecological Appraisal

Airport City LP

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Revision History

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1. Executive Summary

AECOM was instructed by Airport City LP to carry out an updated Preliminary Ecological Appraisal (PEA), following a PEA conducted by AECOM in September 2016, of two specific areas (Areas 3B and 2B) known as the THG Hybrid within Airport City North, hereafter collectively referred to as the 'Site'. Ecological survey data are typically accepted as being valid for two years and therefore, the 2018 survey provides an update to the 2016 assessment. The Site is located to the north of Manchester Airport and is bordered to the south by Ringway Road West and to the east and north by Enterprise Way. The central grid reference for the Site is Ordnance Survey National Grid Reference (OSNGR) SJ 82052, 85868.

It is proposed that the Site is developed to provide additional car-parking and buildings for Manchester Airport. Specifically, this includes:

- Full Planning Permission for 288,507 sq. ft. / 26,803 sq. m. gross office space, 1,147 space multi-storey car park (MSCP), central amenity uses and access arrangements onto Enterprise Way (Phase 1); and,
- Outline Planning Permission for a further 427,039 sq. ft. / 39,673 sq. m gross office space and associated car parking (maximum 832 spaces) (Phases 2 and 3).

The extent of the Site is shown on Figure 1 (within Appendix A). The Site forms part of a wider area (hereafter referred to as 'Wider Site') which was the subject of the Phase 1 habitat survey and PEA in 2016; also shown on Figure 1. It is also noted that the desk study data from the 2016 PEA is also now out of date.

This PEA was commissioned to identify whether there have been any significant changes since 2016 and to confirm whether known or potential ecological receptors (nature conservation designations, and protected and notable habitats and species) identified in 2016 are still relevant and whether there are any new constraints that may affect or influence the design and implementation of the proposed redevelopment.

A desk study to collate existing records of protected sites and species, and a Phase 1 habitat survey was undertaken by AECOM in July 2018. The information gained from the desk study and Phase 1 habitat survey has been used to determine the likely ecological value of the Site, the potential for protected, notable and invasive species to be present and to determine whether further survey work will be required prior to the submission of a planning application.

The Site comprised broadleaved plantation woodland, individual broadleaved trees, running water, dense continuous scrub, tall ruderal, hard standing and bare ground.

Subject to further survey and assessment, potential ecological constraints have been identified relating to protected and/or priority species including, but not limited to:

- Bats; and
- Badger (*Meles meles*)

Further surveys have been recommended to determine the value of these habitats and species to inform any future planning application.

2. Introduction

AECOM was instructed by Airport City LP to carry out an updated Preliminary Ecological Appraisal (PEA), following a PEA conducted by AECOM in September 2016, of a specific area known as the THG Plot within Airport City North, hereafter referred to as the 'Site'. Ecological survey data are typically accepted as being valid for two years and therefore, the 2018 survey provides an update to the 2016 assessment from which the data would now be invalid.. The Site is located to the north of Manchester Airport and is bordered to the south by Ringway Road West and to the east and north by Enterprise Way. The central grid reference for the Site is Ordnance Survey Grid Reference: SJ 82052, 85868.

It is proposed that the Site is developed to provide additional car-parking and buildings for Manchester Airport. Specifically, this includes:

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The approach applied when undertaking this PEA accords with the *Guidelines for Preliminary Ecological Appraisal* published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2013). The PEA addresses relevant wildlife legislation and planning policy as summarised in Section 3 of this report, and is consistent with the requirements of *British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development*.

In order to inform the PEA, a desk study and an extended Phase 1 habitat survey were undertaken by experienced AECOM ecologists, to identify ecological features within the Site and the wider potential zone of influence of the Site.

The purpose of the PEA was to:

- identify and categorise all habitats present within the Site and any areas immediately outside of the Site where there may be potential for direct or indirect effects (the "zone of influence");
- carry out an appraisal of the potential of the habitats recorded to support protected or notable species of fauna and flora;
- provide advice on any potential ecological constraints and opportunities in the zone of influence, including the identification (where relevant) of any requirements for follow-up habitat and species surveys and/or requirements for ecological mitigation; and
- provide a map showing the location of the identified ecological receptors of relevance.

This report provides a high level appraisal of the ecological risks associated with the Site. This report identifies the scope of further work (where necessary) that would be required to support a future planning application. High level recommendations are made on potential options for the avoidance, mitigation or compensation of the potential impacts of the proposed development (where known) on the identified ecological receptors.

3. Wildlife Legislation and Planning Policy

3.1 Wildlife Legislation

The following wildlife legislation is potentially relevant to the Site:

- Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way (CROW) Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations);
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

The above legislation has been considered when planning and undertaking this PEA using the methods described in Section 3, when identifying potential constraints to the proposed development, and when making recommendations for further survey, design options and mitigation, as discussed in Section 5.

Further information on the requirements of the above legislation is provided as Appendix B.

3.2 National Planning Policy

The revised National Planning Policy Framework (NPPF) was published in July 2018 and details the Government's planning policies for England and how these are expected to be applied. The most relevant sections for biodiversity are Section 15 paras 170-177.

The NPPF states the commitment of the UK Government to minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. It specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and protected species under UK and international legislation and how this is to be delivered in the planning system. Protected or notable habitats and species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impact is unavoidable, compensation may be required.

Further information on the relevant parts of the NPPF is provided as Appendix B.

3.3 Local Planning Policy

Relevant local planning policies for the Site are detailed in Manchester's Core Strategy and are summarised within Table 1 below. For the precise wording of the policies please refer back to the source document. These planning policies have been considered when assessing potential ecological constraints identified by the desk study and field surveys; and, when assessing requirements for further survey, design options and ecological mitigation, as described in Section 5.

Table 1 Summary of Local Planning Policy.

Document	Planning Policy	Purpose
Manchester's Core Strategy	Policy EN9:	Green New development will be expected to

Document	Planning Policy	Purpose
	Infrastructure	maintain existing green infrastructure in terms of its quantity, quality and multiple functions. Where the opportunity arises and in accordance with current Green Infrastructure Strategies the Council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Including, the continued development of a network of green spaces, water bodies, canals, paths and cycleways.
Manchester's Core Strategy	Policy EN15: Biodiversity and Geological Conservation	The Council will seek to maintain or enhance sites of biodiversity and geological value throughout the City.

3.4 Biodiversity

The NERC Act 2006 Section 41 (S41) lists habitats and species which are of principal importance for the conservation of biodiversity in England. The habitats and species included on the S41 list are identified as conservation priorities under the UK Post-2010 Biodiversity Framework, which replaced the UK Biodiversity Action Plan (UK BAP).

Additionally, the Greater Manchester Biodiversity Action Plan (BAP) is the Local BAP (LBAP) for the Site. The Greater Manchester LBAP is under review; currently there are 13 Action Plans covering a range of habitats and species occurring within Greater Manchester, with a further five being updated. The recently updated Action Plans include:

- Brown hare *Lepus europaeus*;
- Grassland;
- Hedgerows;
- Native woodland;
- Ponds & lodges;
- Great crested newt;
- Lowland mosslands;
- Willow tit (*Poecile montanus*);
- Water voles (*Arvicola amphibius*);
- Black redstart (*Phoenicurus ochruros*);
- Native black poplar (*Populus nigra*);

The Action Plans still under review include:

- Bats;
- Floating water plantain (*Luronium natans*);
- Canals; and
- Urban-managed greenspace.

4. Methodology

4.1 Desk Study

A desk study was carried out to identify nature conservation designations and protected and/or notable habitats and species potentially relevant to the Site. This updated the previous desk study which was conducted in September 2016.

A stratified approach was taken when defining the desk study area, based on the likely zone of influence of the proposed development on different ecological receptors; and, an understanding of the maximum distances typically considered by statutory consultees. Accordingly, the desk study identified any statutory and local non-statutory nature conservation designations, and protected and notable habitats and species within approximately 2 km of the Site boundary.

The desk study was carried out using the data sources detailed in Table 2. All measurements stated in Table 2 are approximations. Protected and notable habitats and species include those listed under Schedules 1, 5 and 8 of the Wildlife and Countryside Act (WCA); Schedules 2 and 5 of the Habitats Regulations; species and habitats of principal importance for nature conservation in England listed under section 41 (S41) of the NERC Act; and other species that are Nationally Rare, Nationally Scarce or listed in national or local Red Data Lists and Biodiversity Action Plans.

Table 2 Desk Study Data Sources.

Data Source	Accessed	Data Obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) website	July 2018	Statutory designations within 2 km of the Site.
Greater Manchester Local Records Centre (GMLRC)	July 2018	- Non-statutory designations within 2 km of the Site. - Protected and notable species records within 2 km (records for the last 10 years only) of the Site.
Manchester's Core Strategy	July 2018	Information on local planning policies relevant to the Site.
Greater Manchester Biodiversity Action Plan Greater Manchester (LBAP)	July 2018	General information on Local Biodiversity Action Plan habitats and species.
AECOM 2016 PEA	July 2018	Results of the previous PEA

4.2 Field Survey

The field survey comprised a Phase 1 habitat survey and an appraisal was made of the potential suitability of the habitats present to support protected and notable species. Additional notes were made regarding species and habitats observed immediately adjacent to the Site.

4.2.1 Phase 1 Habitat Survey

A Phase 1 habitat survey was undertaken in accordance with the standard survey method (Joint Nature Conservation Committee, 2010). The Phase 1 habitat survey is a standard method of environmental audit. It involves categorising different habitat types and habitat features within a survey area. The information gained from the survey can be used to determine the likely ecological value of a site, and to direct any further survey work which may need to be carried out prior to the submission of a planning application. The standard Phase 1 habitat survey method can be "extended" to record target notes on protected, notable and invasive species.

The survey was undertaken on 18th July 2018 by an experienced AECOM ecologist who recorded and mapped all habitat types present within and immediately adjacent to the Site, along with any associated relevant ecological receptors observed. The survey area encompassed all safely accessible parts of the Site and immediately adjacent habitats (including the Wider Site), where access permission had been granted in advance of survey, or this land was visible from within the Site boundary or from public rights of way, or other publicly accessible areas.

Typical and notable plant species were recorded for different habitat types and reflect the conditions at the time of survey. This was not intended to be a detailed inventory of the plant species present in the survey area, as this is not required for the purposes of Phase 1 habitat survey.

4.2.2 Appraisal of potential suitability of habitats to support protected and notable species

As part of the Phase 1 habitat survey, an appraisal was made of the potential suitability of the habitats present within the Site to support protected and notable species of plants or animals. Field signs, habitat features with potential to support protected species and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species.

A note was made of visible instances of invasive non-native plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Japanese knotweed (*Fallopia japonica*). Locations of plants or stands of any such invasive non-native plant species if found were recorded.

Section 5 of this report identifies further steps required to protect biodiversity, based on the results of the habitat survey. These steps should be completed prior to construction of the development.

4.3 Desk Study and Field Survey Limitations

The aim of a desk study is to help characterise the baseline context of a proposed development and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular habitats or species does not necessarily mean that the habitats or species do not occur in the study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the proposed development.

Habitat locations mapped in the field are considered to be accurate. However, due to recent developments on Site, current Ordnance Survey base mapping did not correspond with the layout of features on Site. Consequently, minor discrepancies may exist between those on Figure 1 (Appendix A) and the actual extent of habitats on Site.

5. Results

5.1 Nature Conservation Designations

5.1.1 Statutory Designations

There is one statutory nature conservation designation within the 2 km search area. This is Cotteril Clough Site of Special Scientific Interest (SSSI), which is located approximately 1.8 km south-west of the Site. Cotteril Clough SSSI comprises part of a ravine or clough, cut into the Keuper Marl by the erosion of the Cotteril Brook. The majority of the SSSI is woodland with associated stream habitat and the citation notes that it is the most diverse Clough woodland on base-rich soils in Greater Manchester.

The SSSI also supports notable bird assemblage including spotted fly-catcher (*Muscicapa stia*), lesser spotted, greater spotted and green woodpecker (*Dryobates minor*, *Dendrocopos major*, *Picus viridis*), blackcap (*Sylvia atricapilla*) and whitethroat (*Sylvia communis*), and is noted for its diverse invertebrate assemblage.

5.1.2 Non-statutory Designations

Table 3 details the non-statutory nature conservation designations identified by the desk study. The designations are listed in order of those closest to the Site listed first. Six non-statutory designated sites were identified in the study area; these are designated as Sites of Biological Importance (SBI).

Table 3 Sites with Non-Statutory Designations for Nature Conservation.

Designation	Approximate Distance from Site
Painswick Park Meadow	628 m northwest
Big Wood	1.2 km northeast
Davenport Green Wood	1.4 km west
Park Wood	1.7 km northeast
Cotteril Clough	1.8 km southwest
Ponds at Davenport Green	1.9 km northwest

5.1.3 Protected Species

Table 4 Protected and Notable Species Relevant or Potentially Relevant to the Proposed Development

Species	Supporting Comments	Legislation
Bats	The desk study identified existing records of common pipistrelle (<i>Pipistrellus pipistrellus</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), unidentified pipistrelle bat (<i>Pipistrellus sp.</i>), noctule (<i>Nyctalus noctula</i>), brown long-eared (<i>Plecotus auritus</i>), unidentified Myotis bat (<i>Myotis sp.</i>) within 2 km of the Site. Additionally, roosts of common and soprano pipistrelle were identified. All species of bat are listed within the Greater Manchester LBAP.	Conservation of Habitats and Species Regulations, 2017; Wildlife and Countryside Act 1981; NERC Act Section 41
Great crested newt <i>Triturus cristatus</i>	The desk study identified existing records of great crested newt within 2 km of the Site. The closest record is located approximately 1.4 km west of the Site. Great crested newt is listed within the Greater Manchester LBAP.	Conservation of Habitats and Species Regulations, 2017; Wildlife and Countryside Act 1981; NERC Act Section 41

Species	Supporting Comments	Legislation
Breeding Birds	The desk study identified existing records of barn owl (<i>Tyto alba</i>), black redstart (<i>Phoenicurus ochruros</i>), kingfisher (<i>Alcedo atthis</i>), peregrine (<i>Falco peregrinus</i>), bullfinch (<i>Pyrrhula pyrrhula</i>), house sparrow (<i>Passer domesticus</i>), dunnoek (<i>Prunella modularis</i>), herring gull (<i>Larus argentatus</i>), lapwing (<i>Vanellus vanellus</i>), lesser spotted woodpecker (<i>Dendrocopos minor</i>), linnet (<i>Linaria cannabina</i>), redpoll (<i>Carduelis flammea</i>), skylark (<i>Alauda arvensis</i>), song thrush (<i>Turdus philomelos</i>), spotted flycatcher (<i>Muscicapa striata</i>), willow tit (<i>Poecile montanus</i>) and starling (<i>Sturnus vulgaris</i>) within 2 km of the Site. Bold species are listed within the Greater Manchester LBAP. Habitats present within the Site are likely to support breeding birds.	The Wildlife and Countryside Act; NERC Act Section 41

5.2 Phase 1 Habitat Survey

5.2.1 Phase 1 Habitat Types

The habitats recorded and their approximate extent are detailed below and shown on the Figure 1 (THG site red-line boundary). The associated target notes are provided in Appendix C (it should be noted that target note numbers are taken from the Wider Site survey in 2016 and so do not necessarily start at 1 or are not necessarily consecutive within this report for the Site itself); illustrative photographs are provided as appropriate in Appendix D.

Broadleaved Plantation Woodland

Broadleaved plantation woodland of varying ages was present in the centre and southern parts of the Site (Appendix D, Photograph 1). The strip in the centre of the Site was more mature than that in the south with canopy species comprising mature and semi-mature ash *Fraxinus excelsior*, alder (*Alnus glutinosa*), sycamore (*Acer pseudoplatanus*), pedunculate oak (*Quercus robur*) and cherry (*Prunus avium*). Typical understory species included hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*) and bramble (*Rubus fruticosus* agg.) while ground flora was dominated by Himalayan balsam (*Impatiens glandulifera*) with wood avens (*Geum urbanum*) and hogweed (*Heracleum sphondylium*) also present.

The species and composition of species within the younger strip of broadleaved plantation woodland in the south of the Site (Appendix D, Photograph 2) is typical of dense highways landscape planting. The canopy of the woodland is dominated by young ash, cherry, and rowan (*Sorbus aucuparia*). Understory species comprise dogwood (*Cornus sanguinea*) and hazel (*Corylus avellana*). Due to the density of the planting, there was very little ground flora present in the area.

Bare Ground

Bare ground is the predominant habitat on the northern and eastern boundaries of the Site. This habitat is present as result of earthworks in relation the construction of the road immediately north of the Site boundary (Appendix D, Photographs 3 & 4). This habitat is starting to be colonised by small numbers of ruderal species such as broadleaved willowherb (*Epilobium montanum*), broadleaved dock (*Rumex obtusifolius*), scentless mayweed (*Tripleurospermum inodorum*) and ragwort (*Senecio jacobaea*).

Dense Continuous Scrub

Dense continuous scrub borders the northern edge of the broadleaved plantation woodland and extends through the centre of Area 3B (Appendix D, Photograph 5). Dense continuous scrub was also the dominant habitat type within Area 2B. This habitat in both Areas was dominated by hawthorn and bramble and was largely impenetrable.

Tall ruderal

An area of tall ruderal habitat exists in the southern part between the bare ground and plantation woodland. Typical species included Italian rye-grass (*Lolium multiflorum*), perennial rye-grass (*Lolium perenne*), smooth meadow-grass (*Poa pratensis*), reed canary-grass (*Phalaris arundinacea*), broadleaved dock (*Rumex obtusifolius*), creeping thistle (*Cirsium arvense*), tufted vetch (*Vicia cracca*), ragwort, and rosebay willowherb (*Chamaenerion angustifolium*) and scentless mayweed.

Individual Trees

An individual mature pedunculate oak was present within the ground along the northern boundary of Area 3B (Figure 1, TN 8 - Appendix D, Photograph 6). There are also numerous mature trees along the boundaries Area 2B.

Running Water

Baguley Brook flows northwards through the centre of the Site. For the most part, this watercourse is shallow, located within the broadleaved plantation woodland and free from emergent and submergent plants. However, to the west of the Site boundary, the channel widens at the culvert under the new road and has been colonised by water mint (*Mentha aquatica*), great willowherb (*Epilobium hirsutum*) and common reedmace (*Typha latifolia*) (Appendix D, Photograph 7).

Standing Water

Areas of standing water identified within the Wider Site in 2016 were dry during the 2018 surveys (Figure 1, TNs 5 & 6); see Section 5.3.2 for further details.

Poor Semi-improved Neutral Grassland

A small area of poor semi-improved neutral grassland was present in the eastern side of Area 2B. The dominant grass species recorded was false-oat grass *Arrhenatherum elatius* with Italian rye-grass, Yorkshire fog *Holcus lanatus* and smooth meadow grass also noted.

5.3 Protected and Notable Species

Where species are identified in Table 4 as present or potentially present, they are likely to represent legal constraints or may need to be considered in relation to a planning application. Further surveys may be required to determine presence or likely presence. Requirements for further survey are identified in Section 6 of this report.

5.3.1 Bats

A specific Preliminary Bat Roost Appraisal Preliminary was not undertaken as part of this survey but, the potential for the Site to support roosting bats was noted during the survey.

The previous Preliminary Bat Roost Appraisal of the Wider Site undertaken by AECOM in 2016 identified eight trees as having potential roost features (PRFs). The appraisal also identified one group of trees as collectively having PRFs. This group of trees were felled to facilitate construction of the new road.

During the 2018 survey, several mature oak trees (Figure 1, TNs 3 & 9) within the strip of woodland in the centre of Area 3B and the boundaries of Area 2B (Figure 1, TNs 11 & 12) were noted to be of a size and age to provide suitable roosting opportunities for bats.

The woodland, scrub and tall ruderal habitats within the Site boundary may provide foraging and commuting habitat for bats. In the wider landscape, habitats to the north and south are largely urban and will provide limited foraging and commuting habitat for bats, to the west of the Wider Site are woodland blocks and open countryside which may be of value to bats.

5.3.2 Great Crested Newt

During the 2016 surveys, four potentially suitable waterbodies were identified within the Wider Site boundary. One of these waterbodies has subsequently been lost to the road development. Two of the remaining three waterbodies were dry (Figure 1, TNs 5 & 6) and the fourth waterbody is formed by widening of the Baguley Brook channel at the culvert on the northern side of the new road (Figure 1, TN 7 and Appendix D, Photograph 8).

Great crested newt (GCN) eDNA surveys on these waterbodies in 2016 were negative and the 2018 desk study returned no records for GCN within 500 m of the Site. Whilst the 2016 data is likely to be considered out of date in terms of a planning submission, it is unlikely that GCN have subsequently colonised the Site, given the barriers to dispersal around the Site (housing developments, major road system) and given the fact that historically they are not known within 500 m of the Site and surrounding area.

For further details of previous survey data please refer to the Great Crested Newt Survey Report, AECOM, 2016 - Appendix E.

5.3.3 Badger

There are habitats present on Site which could support badger. No evidence of the species was observed during the survey however, a specific badger survey was not undertaken as part of the Preliminary Ecological Appraisal.

Badger surveys undertaken in 2012 and 2016 identified also identified no evidence of badger.

5.3.4 Breeding Birds

Vegetation present within the Site, including areas of scrub, woodland and scattered trees provide suitable habitat for nesting birds.

5.3.5 Other Fauna

One possible fox den (Figure 1, TN 2) was identified within the Site and mitigation measures will be required to ensure that the animals are not harmed during the Site clearance works.

5.3.6 Invasive Plant Species

A specific invasive species survey was not conducted as part of the PEA but a single Himalayan balsam plant was identified within recent landscape planting (Figure 1, TN 1) along the new road that forms the northern and eastern Site boundary.

A stand of Himalayan Knotweed (*Persicaria wallichii*) was observed on the eastern side of the Wider Site (Figure 1, TN10 - Appendix D, Photograph 9).

An individual Japanese knotweed plant was also identified in the Wider Site within the bare ground along the northern side of the new road (Appendix D, Photograph 10).

6. Identification of Ecological Constraints and Recommendations

6.1 Approach to the Identification of Ecological Constraints

Relevant ecological receptors that may represent constraints to the proposed development are identified in Section 5 of this report.

The NPPF and local planning policy (summarised in Section 2 of this report) specify requirements for the protection of features of importance for biodiversity. Planning policy is a material consideration when determining planning applications.

Compliance with planning policy requires that the proposed development considers and engages the following mitigation hierarchy where there is potential for impacts on relevant ecological receptors:

1. Avoid features where possible;
2. Minimise impact by design, method of working or other measures (mitigation) e.g. by enhancing existing features; and
3. Compensate for significant residual impacts, e.g. by providing suitable habitats elsewhere (whether in the control of Airport City LP or otherwise legally enforceable through planning condition or Section 106 agreement).

This hierarchy requires the highest level to be applied where possible. Only where this cannot reasonably be adopted should lower levels be considered. The rationale for the proposed mitigation and/or compensation should be provided with planning applications, including sufficient detail to show that these measures are feasible and would be provided.

The likelihood of the relevant ecological receptors constraining the proposed development has been assessed with reference to the scale described in Table 5. The higher the importance of the ecological receptor for the conservation of biodiversity at national and local scales, the more likely it is to be a material consideration during determination of the planning application for the proposed development.

Table 5 Scale of Constraint to Development

Likelihood	Definition
High	An actual or potential constraint that is subject to relevant legal protection and is likely to be a material consideration in determining the planning application (e.g. statutory nature conservation designations and European/nationally protected species). Further survey likely to be required (as detailed in this report) to support a planning application.
Medium	An actual or potential constraint that is covered by national or local planning policy and, depending on the level of the potential impact as a result of the proposed development, may be a material consideration in determining the planning application. Further survey may be required (as detailed in this report) to support a planning application.
Low	Unlikely to be a constraint to development or require further survey prior to submission of a planning application. Mitigation is likely to be covered under Construction Environmental Management Plan (CEMP) or precautionary working method statement (e.g. generic requirements for the management of nesting bird risks).

6.2 Constraints and Requirements for Further Survey: Designations

Based on available information, none of the identified statutory and non-statutory designated nature conservation sites identified in the desk study are considered to be relevant to the proposed

development. This is due to the distance from the Site to these conservation designations and lack of potential impact pathways between the proposed development and the designated sites.

6.3 Constraints and Requirements for Further Survey: Habitats

Broadleaved plantation woodland recorded within the Site may represent a constraint to development; native woodland forms part of the Greater Manchester LBAP. The extent of the loss and thus the magnitude of potential impacts will depend on the layout/design of the proposed car-park. In developing the masterplan, it is recommended that the existing woodland and individual trees are retained, where possible. Where this is not possible replacement habitats may be required following removal. If this can be delivered on Site then there would be no conflict with planning policies in Manchester's Core Strategy.

Native woodland and individual tree loss would need to be mitigated for by new plantings of locally sourced, native trees. All tree loss should be compensated in line with the agreed ratio for the wider strategy for the CAN Masterplan.

There are no other notable or particularly diverse habitats present within the Site that represent a constraint to development. Much of the habitat present within the Site i.e. bare ground, tall ruderal and scrub are of negligible ecological value and the loss of these areas would not require specific habitat mitigation.

6.4 Constraints and Requirements for Further Survey: Species

6.4.1 Badger

Badgers are protected under the Protection of Badger Act 1992. They are not an endangered species but have suffered from a long history of persecution. The Act is based primarily on the need to protect badgers from baiting and deliberate harm or injury. It also contains the following criminal offences that apply more widely:

- To wilfully kill, injure, take, possess or cruelly ill-treat a badger; or
- To attempt to do so; or to intentionally or recklessly interfere with a sett.

Sett interference includes damaging or destroying a sett, obstructing access to a sett and disturbing a badger whilst it is occupying a sett. Where damage or significant disturbance to an active badger sett cannot be avoided during the development, a licence should be sought from Natural England authorising actions that would otherwise amount to an offence. It is not illegal, and therefore a licence is not required, to carry out activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.

No evidence of badgers was recorded during the Phase 1 habitat survey; although, in some areas of dense scrub, access was limited and so badger activity could not be fully ruled out. In addition, specific badger surveys carried out in 2012 and 2016 also found no evidence of badgers on Site.

Whilst it is considered unlikely that badgers are present on Site the previous surveys (2012 and 2016) would be considered out of date; in addition, full access to some areas could not be attained to fully rule out badgers being present. Therefore, to significantly reduce any risk of badgers being found during construction works, it is recommended that a walkover survey of the Site is undertaken (where access permits within 50 m from the Site) to look for any signs of badger presence. This should be carried out between October and March, but ideally during early spring (February/March), when there is likely to be more badger activity and when the areas of scrub are likely to be more accessible.

6.4.2 Bats

All species of bats are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. Under this legislation it is illegal to:

- intentionally or recklessly kill, injure or capture a bat;

- intentionally or recklessly disturb a bat when it is occupying a roost; and
- intentionally or recklessly damage, destroy or obstruct access to a bat roost.

A bat roost is defined as being 'any structure or place that is used for shelter or protection', and since bats regularly move roost site throughout the year, a roost retains such a definition whether or not bats are present at the time.

As the preliminary bat roost survey within the Wider Site, undertaken in 2016, and the 2018 Phase 1 habitat survey identified PRFs within the Site (TNs 3, 9, 11 & 12), it is recommended that further assessment is undertaken. The 2016 survey data are now considered to be out of data for planning purposes; therefore, an updated PRF survey should be conducted to determine the potential for roosting bats.

The woodland and scrub present within the Site may provide foraging and commuting habitat for bats. Should any future development or use of the Site result in the loss of any of these habitats then the impacts to foraging and commuting bats should be assessed by a suitably experienced and licenced ecologist.

Should one or more of the trees be found to hold a roost and be affected by the proposed development either directly through loss or indirectly through change in lighting or disturbance (noise/vibration), then a European Protected Species Mitigation (EPSM) licence issued by Natural England will be required for loss and possibly for disturbance along with appropriate mitigation.

6.4.3 Breeding Birds

All species of bird are protected under Section 2 of the Wildlife and Countryside Act 1981 (as amended).

This legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take, destroy an egg of any wild bird.

Schedule 1 of the Act affords additional protection to a number of bird species. Schedule 1 makes it illegal to intentionally and/or recklessly disturb these species during the breeding season without an appropriate licence.

The 2018 Phase 1 habitat survey concluded that the Site is likely to support breeding birds within various habitats, including scrub, woodland and individual trees. Therefore, clearance of the Site to facilitate development works during the bird breeding season carries a risk of an offence under the Wildlife & Countryside Act 1981 (as amended). It is recommended that vegetation clearance is undertaken outside of the breeding season, which is typically March to August (inclusive). If this is not possible, all vegetation will need to be checked for active nests by an experienced ornithologist no more than 24 hours prior to clearance. If an active nest is found, vegetation clearance must stop and an exclusion zone established (depending on species) until the young have fledged.

6.4.4 Great Crested Newts

The great crested newt (GCN) is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. This legislation, when taken together, results in a level of protection that prohibits the intentional, deliberate or reckless:

- killing, injuring, taking or disturbance of a great crested newt;
- damaging, destroying or obstructing any place used by a great crested newt for the purposes of breeding or sheltering / protection; and

- selling and/or advertising for sale a great crested newt or any part thereof.

During the 2018 Phase 1 habitat survey, all ponds previously identified within the previous surveys were either dry or no longer present, with the exception of the waterbody formed by the widening of Baguley Brooke (TN 7). In addition, in 2016 all ponds within 500 m tested negative for presence of GCN. Further, there are no records for GCN within 500 m of the Site (nearest record is approximately 1.4 km west of the Site boundary).

Given that there are significant barriers to GCN movement (major roads and housing) and no GCN are known within 500 m (or even 1 km), it is considered highly unlikely that GCN have colonised the ponds on or near the Site since 2016 and no further mitigation is required for GCN.

6.4.5 Invasive Non-native Species

As the 2018 Phase 1 habitat survey identified Himalayan knotweed on Site and the 2016 and 2018 surveys recorded various stands of Invasive Non-native Species (INNS) in and around the Site, it is recommended that prior to any construction works starting that a detailed survey for INNS is conducted within the Site. Following the survey a the management and removal plan of invasive species will be completed as part of the detailed CEMP (which will be conditioned)"It is illegal to plant or otherwise cause to grow in the wild any plant listed on Schedule 9 Part II of Section 14(2) of the Wildlife and Countryside Act 1981 (as amended).

6.4.6 Other Species

European hedgehog (*Erinaceus europaeus*) and common toad (*Bufo bufo*) may use habitats within the Site. Both receive limited legal protection but are S41 species (listed under Section 41 of the 2006 NERC Act), and are therefore part of a national programme of actions outlining the measures needed to protect England's most important and at-risk wildlife. As such, precautions are recommended to ensure they are not harmed during construction through a Construction Environmental Management Plan (CEMP) or precautionary working method statement.

It is recommended that, where possible, any future development is planned to take account of likely mitigation requirements for these species and where possible, unnecessary damage to retained semi-natural habitats should be avoided. This could include the use of temporary fencing to protect such habitats. This is concordant with the expected requirements for tree protection zones. During construction any open pits/holes should be covered at night or where not possible a wooden plank positioned at a 45° from the base to the top of the hole so that mammals can escape. Hedgehogs and toads should be removed from habitats prior to and during clearance to a safe location outside the development area.

Table 6 (below) gives a summary of recommended further work to support a planning application.

Table 6 Requirements for Further Survey

Survey	Season	Method	Why required	When required		
				To Inform Design	Before Planning Application	Pre-construction Onwards
Badger	October to March	Walked survey noting badger evidence encountered (Harris, Cresswell & Jefferies 1989, and Roper, 2010).	To determine the extent of the use of the Site by badger, if any, and to inform any avoidance and mitigation measures and possibly a Natural England licence.	✓	✓	
Bat Roost Potential Survey	Any time	Bat roost potential surveys following (Collins, 2016)	To determine likely presence of roosting bats within the Site to inform the potential need for further surveys and mitigation requirements.	✓	✓	
Invasive Non-native Species (INNS)	Prior to construction and between April - September		To determine the presence / likely absence of INNS within the Site and to inform mitigation requirements	✓	✓	

7. Conclusions

AECOM was instructed by Airport City LP to carry out an updated Preliminary Ecological Appraisal (PEA), following a PEA conducted by AECOM in September 2016, of two specific areas (Areas 3B and 2B) known as the THG Hybrid, within Airport City North, hereafter referred to as the 'Site'. The Site forms part of a wider area, referred to as the Wider Site. The Site has been identified for a potential new car-parking and buildings for Manchester Airport. The assessment comprised a Phase 1 habitat survey and a review of the 2016 PEA and associated surveys conducted within the Wider Area and also included a desk study to determine potentially significant ecological receptors within the Site and wider area.

The desk study identified Cotteril Clough, approximately 1.8 km southwest of the Site, as the only statutory designated site within 2 km. Six non-statutory designated sites were identified within 2 km of the Site. Additionally, a number of protected and notable species, including bats, GCN and birds, were identified as part of the desk study.

The Phase 1 habitat recorded a number of habitats within the Site, one of which (broadleaved plantation woodland) falls within the native woodland Greater Manchester LBAP list. No further habitats recorded were of notable status, these included: bare ground, scrub, individual trees and running water.

Based on the assessment, further surveys have been recommended, these include:

- Badger survey;
- Bat roost survey;
- Bird nest checks of Site if vegetation clearance is carried out in bird nesting season;
- INNS survey prior to construction to inform a detailed Management and Removal Plan to be completed as part of a CEMP.

Detailed mitigation recommendations, and potentially further survey recommendations for bats will be informed by the results of the additional surveys.

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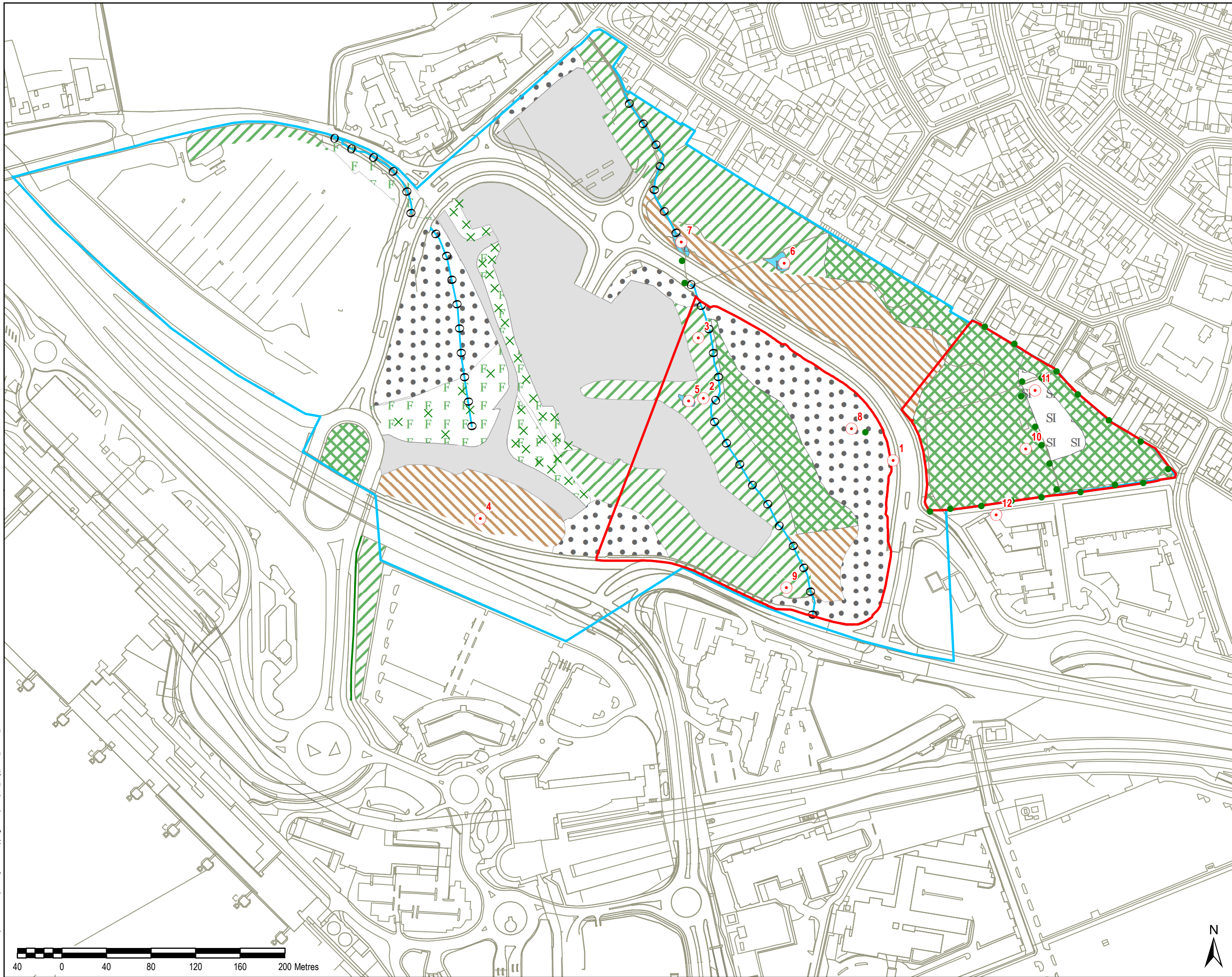
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Appendix A Figure 1: Site Boundary and Phase 1 habitat map

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THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Site Boundary
- Wider Site Boundary
- Individual Broad-leaved Tree
- Scattered Scrub
- Target Note
- Intact Hedge - Species-poor
- Running Water - Oligotrophic
- Standing Water - Eutrophic
- Bare Ground
- Dense Scrub
- Hardstanding
- Planted Broad-leaved Woodland
- Poor Semi-improved Grassland
- Recently-felled Broad-leaved Woodland
- Tall Ruderal

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Purpose of Issue
FINAL

Client
AIRPORT CITY LP

Project Title
AIRPORT CITY NORTH

Drawing Title
**PHASE 1
HABITAT PLAN**

Drawn C.Sutton	Checked F.Tarry	Approved M.Hampton	Date 16/08/2018
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AECOM Internal Project No. 60489357	Scale @ A3 1:3,125
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Appendix B Legislation and Planning Policy

The Conservation of Habitats & Species Regulations 2017

The Habitats Regulations consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. The Regulations came into force on 30th October 1994. In Scotland the Habitats Directive is transposed through a combination of the Habitats Regulations 2017 and 2010 (in relation to reserved matters) and the 1994 Regulations. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

Under the Regulations, competent authorities i.e. any Minister, Government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the EC Habitats Directive.

The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I and II of the Habitats Directive respectively) to the European Commission. Once the Commission and EU Member States have agreed that the sites submitted are worthy of designation, they are identified as Sites of Community Importance (SCIs). The EU Member States must then designate these sites as Special Areas of Conservation (SACs) within six years. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs) classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites form a network termed Natura 2000.

The Regulations enable the country agencies to enter into management agreements on land within or adjacent to a European site, in order to secure its conservation. If the agency is unable to conclude such an agreement, or if an agreement is breached, it may acquire the interest in the land compulsorily. The agency may also use its powers to make byelaws to protect European sites. The Regulations also provide for the control of potentially damaging operations, whereby consent from the country agency may only be granted once it has been shown through Appropriate Assessment that the proposed operation will not adversely affect the integrity of the site. When considering potentially damaging operations, the country agencies apply the precautionary principle i.e. consent cannot be given unless it is ascertained that there will be no adverse effect on the integrity of the site.

In instances where damage could occur, the appropriate Minister may, if necessary, make special nature conservation orders, prohibiting any person from carrying out the operation. However, an operation may proceed where it is or forms part of a plan or project with no alternative solutions, which must be carried out for reasons of overriding public interest. In such instances the Secretary of State must secure compensation to ensure the overall integrity of the Natura 2000 system. The country agencies are required to review consents previously granted under the Wildlife and Countryside Act 1981 for land within a European site, and may modify or withdraw those that are incompatible with the conservation objectives of the site.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The Regulations make special provisions for the protection of European marine sites, requiring the country agencies to advise other authorities of the conservation objectives for a site, and also of the operations which may affect its integrity. The Regulations also enable the establishment of

management schemes and byelaws by the relevant authorities and country agencies respectively, for the management and protection of European marine sites.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the major domestic legal instrument for wildlife protection in the UK, and is the primary means by which the following are implemented:

- b) The Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention'); and
- c) The Council Directive 79/409/EEC on the Conservation of Wild birds (the 'Bird Directive')

Wild Birds

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally:

- d) kill, injure, or take any wild bird,
- e) take, damage or destroy the nest of any wild bird while that nest is in use or being built (also [take, damage or destroy the nest of a wild bird included in Schedule ZA1] under the Natural Environment and Rural Communities Act 2006), or
- f) take or destroy an egg of any wild bird.

Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

Other Animals

The Act makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Flora, Fungi and Lichens

The Act makes it an offence (subject to exceptions) to intentionally pick, uproot or destroy:

- g) any wild plant listed in Schedule 8, or
- h) unless an authorised person, to intentionally uproot any wild plant not included in Schedule 8,
- i) to sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Non-native Species

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

Countryside and Rights of Way (CROW) Act 2000

The Countryside and Rights of Way Act 2000 applies to England and Wales only. Part III of the Act deals specifically with wildlife protection and nature conservation.

The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

Schedule 9 of the Act amends the SSSI provisions of the Wildlife and Countryside Act 1981, including increased powers for their protection and management of SSSIs. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and

enhancement of SSSIs; increase penalties on conviction where the provisions are breached; and include an offence whereby third parties can be convicted for damaging SSSIs.

Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', include an offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Natural Environment and Rural Communities (NERC) Act 2006

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act required the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list was drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the (now withdrawn) UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.

There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the (now withdrawn) UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the hen harrier has also been included on the list because without continued conservation action it is unlikely that the hen harrier population will increase from its current very low levels in England.

Protection of Badgers Act 1992

Badgers and their setts (burrows) are protected under the Act. This makes it an offence to kill or take a badger, to cruelly ill-treat a badger, or to interfere with a badger sett, including disturbing a badger while it is occupying a sett.

Licences to permit otherwise prohibited actions can be granted under section 10 of the Act for various purposes. This includes licences to interfere with a badger sett for the purpose of development as defined by section 55(1) of the Town and Country Planning Act 1990.

Licences may be granted in order to close down setts, or parts of setts, prior to development or to permit activities close to a badger sett that might result in disturbance. A licence will be required if a sett is likely to be damaged or destroyed in the course of development or if the badger(s) occupying the sett will be disturbed.

Licences can be applied for at any time, but a licence for development will not normally be issued unless full planning permission has been granted. The closure of setts under licence is normally only permitted during July to November, inclusive.

The Hedgerow Regulations 1997

The intention of the Act is to protect important countryside hedges from destruction or damage. The Act does not apply where planning permission has been granted. There are various other exemptions under the Act, including:

- j) To make a new opening in substitution for an existing one that gives access to land. For example, a gate. However, the old opening must be filled in within 8 months;

- k) To obtain access to land where other means are not available or are only available at disproportionate cost;
- l) For the proper management of the hedgerow. This means real management, such as coppicing. But if the hedgerow is deliberately 'over-managed' this might qualify as removal.

If the proposed works are not exempt or subject to a current planning permission then the landowner must serve a Hedgerow Removal Notice in writing on their local planning authority. The authority then has 42 days (which period can be extended if the applicant agrees) to determine whether or not the hedge is considered 'important' under the regulations, and if so, whether or not to issue a Hedgerow Retention Notice. The local authority does not have to issue a Retention Notice, even if the hedgerow counts as important. If they do not issue a notice for an important hedge this is often on condition that certain things are done, e.g. reinstatement or replanting to a certain standard, or creation of an equivalent boundary elsewhere.

National Planning Policy Framework

The NPPF came into being in March 2012 and was revised and updated in July 2018, relevant sections are as follows (although full details should be considered, which are found at <https://www.gov.uk/government/publications/national-planning-policy-framework--2>):

Section 15 of the NPPF relates specifically to “Conserving and Enhancing the Natural Environment”.

Paragraph 170 states that “*Planning policies and decisions should contribute to and enhance the natural and local environment by:*

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate..”

Paragraph 171 states that Plans should: distinguish between the **hierarchy of international, national and locally designated sites**; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a **strategic approach to maintaining and enhancing networks of habitats and green infrastructure**; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries

Paragraph 174 states that: *To protect and enhance biodiversity and geodiversity, plans should:*

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider **ecological networks**, including the hierarchy of international, national and locally designated sites of importance for biodiversity; **wildlife corridors and stepping stones** that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

- b) promote the **conservation, restoration and enhancement of priority habitats, ecological networks** and the protection and **recovery of priority species**; and identify and **pursue opportunities for securing measurable net gains for biodiversity**.

Paragraph 175 states: *When determining planning applications, local planning authorities should apply the following principles:*

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) **development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it** (either individually or in combination with other developments), **should not normally be permitted**. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) **development resulting in the loss or deterioration of irreplaceable habitats** (such as ancient woodland and ancient or veteran trees) **should be refused**, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while **opportunities to incorporate biodiversity improvements in and around developments should be encouraged**, especially where this can secure measurable net gains for biodiversity.

Paragraph 176 states: *The following should be given the same protection as habitats sites:* potential Special Protection Areas and possible Special Areas of Conservation;

- a) listed or proposed Ramsar sites; and
- b) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Paragraph 177 states: **The presumption in favour of sustainable development does not apply where development requiring appropriate assessment** because of its potential impact on a habitats site is being planned or determined.

Appendix C Target Notes

Table 7 Phase 1 habitat survey Target Notes

Target Note Number	Description
1	Small number of Indian balsam plants with landscape planting
2	Possible fox den
3	Mature trees within woodland, may require preliminary bat roost appraisal.
4	Dry waterbody
5	Dry waterbody
6	Waterbody (widening of channel)
7	Mature oak within area of bare ground
8	Mature trees, may require preliminary bat roost appraisal
9	Mature trees, may require preliminary bat roost appraisal
10	Stand of Himalayan knotweed
11	Mature trees, may require preliminary bat roost appraisal

Appendix D Site Photographs



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



Photograph 7



Photograph 8



Photograph 9



Photograph 10

Appendix E Great Crested Newt Survey Report, AECOM, 2016

Airport City North

**Great Crested Newt
Survey Report**

September 2016

60489357

Prepared for:

**Manchester Airport
Group**

REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
0	September 2016	Draft for comment	Andrew Kenny Consultant Ecologist Graduate member of CIEEM	Anna Davies Principal Ecologist Full member of CIEEM	Rob Pilcher Associate

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1. INTRODUCTION

1.1 Background

AECOM was commissioned by Manchester Airport Group to carry out an updated presence/absence survey for great crested newt (*Triturus cristatus*), at Airport City North, hereafter referred to as the “Site”. The Site is located to the north of Manchester Airport, to the south of Manchester, with Handforth to the east and Altrincham to the west. The central grid reference for the Site is Ordnance Survey Grid Reference: SJ 820 858 and the boundary is shown on the figure within **Appendix 1**.

The four ponds on Site and Painswick Park Lake approximately 50 m north of the Site were subject to presence/absence surveys for great crested newt in 2012 by URS (now AECOM). No great crested newts were recorded within any of the waterbodies surveyed ponds in 2012.

At the time of preparing this report the exact nature and layout of the proposed development was unknown. As such this report provides general guidance on the potential ecological risks associated with the Site and potential requirements for ecological.

This Report is intended to be read in conjunction with the AECOM (2016) Airport City North: Preliminary Ecological Appraisal Report.

1.2 Site Description

The Site comprises bare ground, rough grassland, stands of ruderal species, scrub and mature broadleaved woodland. In addition to the four ponds on the Site there are two watercourses present within the Site boundary: Baguley Brook runs diagonally across the Site for approximately 600 m, from the southern Site boundary to the north-western Site boundary; and Timperley Brook runs parallel to Baguley Brook approximately 200 m to the west for approximately 300 m.

2. LEGISLATION

The great crested newt is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). This legislation, when taken together, results in a level of protection that prohibits the intentional, deliberate or reckless:

- Killing, injuring, taking or disturbance of a great crested newts;
- Damaging, destroying or obstructing any place used by great crested newt for the purposes of breeding or sheltering/ protection; and
- Selling and/ or advertising for sale a great crested newt or any part thereof.

The great crested newt is also listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as a Species of Principal Importance for Conservation in England. The NERC Act requires that the section 41 list be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 ‘to have regard’ to the conservation of biodiversity in England, when carrying out their normal functions.

Derogation licences can be granted under the Conservation of Habitats and Species Regulations 2010, so that activities which would otherwise contravene this legislation can be carried out (e.g. disturbance of great crested newt and / or destruction of breeding / terrestrial habitat). These are issued by the Wildlife Licensing Unit of Natural England. Licence applications must satisfy a series of rigorous tests in order for a derogation licence to be granted.

3. METHODOLOGY

3.1 Desk Study

In March 2016 the Greater Manchester Ecology Unit was approached for records of great crested newt within 1 km of the Site boundary.

3.2 Identification of Ponds

Aerial photography and 1:2,500 Ordnance Survey mapping were reviewed to identify potential waterbodies within 500 m of the Site. In addition, the Site and surrounding area were walked to identify and verify the continued presence of potential waterbodies and locate any additional waterbodies which had not been identified on mapping or photography.

Four ponds: TN1; TN3; TN4 and TN5 were confirmed as present within the Site and the lake in Painswick Park (TN6) confirmed as the only waterbody present within 500 m of the Site. These are shown on the figure within **Appendix 1**.

Photographs and descriptions of each pond are included within **Appendix 2**.

3.3 Habitat Suitability Index

On 29th April 2016, ponds TN 1, TN3, TN4 and TN5 (shown on **Appendix 1**) were subjected to a Habitat Suitability Index (HSI) appraisal (Oldham *et al.*, 2000). The HSI assessment evaluates the potential suitability of a pond for great crested newt by aggregating values assigned by a suitably experienced surveyor to a set of attributes (such as surface area, water quality and macrophyte cover) into a cumulative figure representing how suited a pond may be for great crested newt. While HSI is not intended for use as a means to determine which waterbodies do and do not require further survey for great crested newt, it does provide qualitative data on the habitats present.

The lake in Painswick Park (TN6), located outside the Site boundary, was subject to a visual inspection on 29th April. This waterbody is an amenity lake with vertical concrete edges set in a parkland landscape. It has minimal emergent macrophytes, supports a large wildfowl population and as a recognised fishery, well stocked with fish. Based on these criteria, an HSI assessment was not undertaken of this lake as it was deemed unsuitable to support breeding great crested.

3.4 Great Crested Newt Survey Methodology

Environmental DNA (eDNA) surveys were undertaken of ponds TN1, TN3, TN4 and TN5 on 29th April 2016. This is a standardised methodology to establish the presence/ absence of the great crested newt that has been developed through a Department for Environment, Food & Rural Affairs (Defra) funded study (Biggs *et al.*, 2014). It was accepted by Natural England in 2014 as an appropriate technique to establish presence/absence of great crested newts. The technique requires the collection of a series of water samples from around the edge of a waterbody at least seven days after great crested newts may have present (as determined by suitable weather conditions). As such samples can be collected during a single visit at any time of day between mid April and the end of June and are sent off to a specialist laboratory

for analysis. Turnaround is typically over 2-4 weeks, with detection rates using eDNA (99%) higher than that using traditional survey methodologies (95%).

3.5 Limitations

The aim of a desk study is to help characterise the baseline context and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular habitats or species does not necessarily mean that the habitats or species do not occur in the study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of a particular development.

Current eDNA protocols indicate that results will only be accepted from water samples collected following the onset of suitable weather conditions for surveying great crested newts from mid April through to 30th June. This is to allow for great crested newts to have been present in a waterbody for at least seven days before eDNA can be detected. As the eDNA surveys were collected on 29th April this is within the accepted seasonal window.

Only laboratories that can demonstrate adherence to the accepted laboratory assessment protocols should be commissioned to conduct the analysis of great crested newt eDNA. This includes having evidence of adequate documented quality management system that follows, or is equivalent to, the outline of ISO/IEC 17025 standard. In this instance the samples were processed by one of the laboratories that follow the current eDNA protocols.

There were no other limitations to the survey.

4. RESULTS

4.1 Desk Study

The desk study revealed there were no records of great crested newt within 1 km of the Site.

4.2 Habitat Suitability Index

Full descriptions and photographs of surveyed ponds are within **Appendix 2**.

The HSI values recorded are presented in Table 1 below. The full HSI calculations are shown in **Appendix 3**.

Table 1: HSI Results

Pond number	HSI Value
TN1	Poor
TN3	Average
TN4	Below Average
TN5	Average

4.3 Great Crested Newt Survey

Table 2 summarises the results of the eDNA surveys of each pond.

Table 2: eDNA Survey Results

Pond number	Great Crested Newt Presence/ Absence
TN1	Negative
TN3	Negative
TN4	Negative
TN5	Negative

5. CONCLUSIONS

Great crested newt eDNA surveys of four ponds TN1, TN3, TN4 and TN5 were undertaken in April 2016. A negative result for the presence of great crested newt was returned for each pond. It is therefore reasonable to conclude that great crested newt were absent from the Site and pose no constraint to any future development.

Should development of the Site not commence for 24 months, then it is recommended that the surveys presented within this report are repeated.

6. REFERENCES

Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014), Analytical and methodological development for improved surveillance of the Great Crested Newt, Defra Project WC1067, Freshwater Habitats Trust: Oxford.

Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4): 143 – 155.

Appendix 1 Phase 1 Habitat Plan

File Name: C:\Users\masnikosa\Desktop\Mapping02 Maps\Airport_City_North_Phase1_2016-09-20.mxd



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Approximate Site Boundary
- Individual Broad-leaved Tree
- Target Note
- Running Water - Oligotrophic
- Standing Water - Eutrophic
- Amenity Grassland
- Dense Scrub
- Ephemeral / Short Perennial
- Hardstanding
- Introduced Scrub
- Planted Broad-leaved Woodland
- Recently-felled Broad-leaved Woodland
- Semi-improved Neutral Grassland
- Semi-natural Broad-leaved Woodland
- Tall Ruderal

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Client
MANCHESTER AIRPORT GROUP

Project Title
AIRPORT CITY NORTH

Drawing Title
PHASE 1
HABITAT PLAN

Drawn S.Masnikosa	Checked S.Baldwin	Approved A. Kenny	Date 21/09/2016
AECOM Internal Project No. 60489357		Scale @ A3 1:3,250	

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Appendix 2 Photographs and Descriptions

Pond/ Target Note	Grid Reference	Note	Photograph
TN1	SJ 82221 85707	Looking north. Pond located in the south of the Site, little aquatic vegetation and some marginal vegetation present.	
TN3	SJ 82062 85796	Shallow woodland pond, possibly seasonal or occasionally dry. The area was shaded by overhanging trees with emergent vegetation in the form of pockets of rough hair grass (<i>Agrostis scabra</i>).	

TN4	SJ 82147 88925	Photograph looking south. Heavily shaded pond with bankside vegetation dominated by crack-willow, (<i>Salix fragilis</i>) coarse grasses and cleavers (<i>Galium aparine</i>). The water was highly turbid.	
TN5	SJ 82091 85857	Photograph looking north. At the time of survey the waterbody had slight flow with the east bank supporting a burgeoning stand of Himalayan balsam which is expanding into the woodland block visible on the righthand side of the photograph.	
TN6	SJ 81914 86190	Photograph looking north west. Small lake at the eastern extent of Painswick Park. The banks of the lake are vertical and concrete lined. At the time of survey the lake had minimal aquatic vegetation. The lake was used by a variety of wildfowl, with anecdotal evidence suggesting the presence of fish. The lake was determined as not suitable to support GCN and an HSI of the waterbody was not undertaken.	

Appendix 3 Habitat Suitability Index Data

Results of Pond TN1

HSI Indicator	Score
Pond Area	0.5
Water Quality	0.67
Shoreline Shading	1
Macrophyte Cover	0.3
Fish Presence	0.67
Wildfowl Presence	0.01
Years Dry Per Decade	0.9
Number of Ponds Within 500 m	0.8
Area of Suitable Habitat	1
Geographic Zone	1
Score	0.47

Results of Pond TN3

HSI Indicator	Score
Pond Area	0.1
Water Quality	0.67
Shoreline Shading	0.55
Macrophyte Cover	0.75
Fish Presence	1
Wildfowl Presence	1
Years Dry Per Decade	0.5
Number of Ponds Within 500 m	0.8
Area of Suitable Habitat	1
Geographic Zone	1
Score	0.64

Results of Pond TN4

HSI Indicator	Score
Pond Area	0.2
Water Quality	0.33
Shoreline Shading	0.25
Macrophyte Cover	0.3
Fish Presence	0.67
Wildfowl Presence	1
Years Dry Per Decade	0.9
Number of Ponds Within 500 m	0.8
Area of Suitable Habitat	1
Geographic Zone	1
Score	0.55

Results of Pond TN5

HSI Indicator	Score
Pond Area	0.4
Water Quality	0.33
Shoreline Shading	1
Macrophyte Cover	0.45
Fish Presence	0.67
Wildfowl Presence	0.33
Years Dry Per Decade	0.9
Number of Ponds Within 500 m	0.8
Area of Suitable Habitat	1
Geographic Zone	1
Score	0.63

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