

MAG, Building 402, Manchester Airport

Preliminary Ecological Appraisal Report

Threadneedle Curtis Ltd

Project number: 60663052
60663052-ACM-402-XX-RP-EC-00001

February 2022

Quality information

Prepared by	Checked by	Verified by	Approved by
AC Senior Ecologist	FS Senior Ecologist	LD Technical Director	VB Technical Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
1	02/03/2022	Final			

Prepared for:

Threadneedle Curtis Ltd

Prepared by:

AECOM Limited
1 New York Street
Manchester M1 4HD
United Kingdom

T: +44 161 601 1700
aecom.com

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1. Executive Summary

Site Details	The Site comprises a large building (building 402), and surrounding land. Building 402 is surrounded by a car park, amenity grassland, introduced shrub, individual trees and a linear area of broadleaved woodland. The approximate centre of the Site is located at Ordnance Survey national grid reference (OSNGR) SJ 80831 84889. The Site is approximately 1.9 hectares (ha) in size.
Scheme Details	The Scheme seeks to demolish and subsequently redevelop building 402 (and smoking shelter) to create a large warehouse of four units at the Site's north western boundary, with associated carparking to the south-east and landscaping.
Ecological Features that may be affected by the Scheme	The Scheme would result in the loss of small areas of amenity grassland and introduced shrub. Additionally, a small smoking shelter which has low bat roost suitability will also be demolished.
Recommendations for Mitigation	The semi-natural habitats within the Site should be retained where possible. Habitats lost during construction of the proposed development should be reinstated and habitats outside of Site boundary should be protected by suitable stand-off buffers and fencing where appropriate. Pre-works checks for hedgehog will be undertaken where suitable habitat is to be impacted. A single emergence or re-entry survey will be undertaken of the smoking shelter (TN2) prior to its demolition. Additionally, if the mature oak tree (TN1) will require soft felling if it is to be impacted. Vegetation and buildings that may support breeding birds (e.g., woodland, trees and introduced shrub) which requires clearance should be removed outside of the nesting season (typically March to August, inclusive). If this is not possible, removal should be carried out within 24 hours of a nest search undertaken by a suitably experienced ecologist. An invasive non-native species management plan will be required if Schedule 9 invasive plant species (cotoneaster) cannot be avoided during construction. Requirement for areas containing invasive non-native plant species to be fenced off and avoided during construction.
Potential for Ecological Enhancements and Biodiversity Net Gain	Enhancement and / or planting of semi-natural habitats, such as wildflower-rich grasslands, trees or species-rich hedgerows. Removal / management of Schedule 9 invasive, non-native plant species. Installation of bat and invertebrate boxes.

	Inclusion of hedgehog passes (positioned to avoid directing animals toward roads) in any fencing to be installed.
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2. Introduction

Background

- 2.1 This Preliminary Ecological Appraisal Report (PEAR) has been prepared by AECOM on behalf of Threadneedle Curtis Limited, to assess the ecological constraints in connection with the proposed redevelopment of Building 402 and its surrounding land at Manchester Airport (hereafter referred to as the Scheme). The Scheme is located in the Manchester Airport complex and is bordered by Avro Way to the north east and Wilmslow Road to the south west, as shown on Figure 1 in [Appendix A](#). Building 402 is enclosed within the red line boundary within this Figure, which is hereafter referred to as the 'Site'.
- 2.2 The assessment of ecological constraints has been undertaken with reference to current good practice¹ and forms part of the technical information commissioned by Threadneedle Curtis Limited in connection with the Scheme. The PEAR addresses relevant wildlife legislation and planning policy as summarised in [Appendix B](#) and is consistent with the requirements of *British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development*.

The Site

- 2.3 The Site (shown on Figure 1 in [Appendix A](#)) is approximately 1.9 ha in area and comprises Building 402, small shelter, an adjacent car park, amenity grassland, introduced shrubs, individual trees and a linear area of semi-natural broadleaved woodland. The approximate centre of the Site is located at OSNGR SJ 80831 84889.

The Scheme

- 2.4 The Scheme seeks to demolish and subsequently redevelop Building 402 into a large warehouse of four units at the Site's north western boundary with associated carparks to the south east and landscaping.

Purpose of the Preliminary Ecological Appraisal

- 2.5 This PEAR presents ecological information obtained during the following:
- A desk-study was undertaken in February 2022, to obtain records of designated sites and protected and notable species² and habitats³ within a 2-kilometre (km) radius (reduced to 1 km for ancient and veteran trees due to the unlikelihood of impacts beyond this distance) of the Site (the area covered by the desk study is hereafter referred to as the Study Area). Due to the proximity and similarity of the Sites, records from a recent AECOM PEAR were utilised to inform this PEAR. Additionally, species records were not obtained for two relatively small areas within the southeast and southwest of the Study Area no closer than 1.3 km from the Site, beyond the River Bollin where the border between Greater Manchester and Cheshire lies. This would have required additional data to be sourced from Record (the Local Biological Records Centre serving Cheshire, Halton, Warrington and Wirral) and it was considered proportionate to omit this based on the distance from the Site and the additional cost for the data; and,
 - A walkover survey of the Site and connected habitats up to an unobstructed 30 metre (m) radius was undertaken on 15th February 2022 (the area covered by the survey is hereafter referred to as the Survey Area).
- 2.6 The purpose of the PEAR is to provide a high-level ecological appraisal of the Site, specifically to:

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

² Notable species are taken as principal species for the conservation of biodiversity listed under Section 41 of the *Natural Environment and Rural Communities Act 2006*; any species listed in an IUCN Red Data Book; and any other species listed under the Greater Manchester Biodiversity Action Plan (BAP).

³ Notable habitats are taken as principal habitats for the conservation of biodiversity listed under Section 41 of the *Natural Environment and Rural Communities Act 2006*; habitats listed under the Greater Manchester Biodiversity Action Plan; hedgerows identified as being 'important' under the wildlife criteria of the *Hedgerow Regulations 1997*, ancient woodlands and veteran trees.

- Establish baseline conditions and determine the presence of Important Ecological Features (IEF)⁴ (or those that could be present), as far as is possible;
 - Identify potential ecological constraints to the Scheme and make initial recommendations to avoid impacts on IEFs, where possible;
 - Identify requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
 - Establish any requirements for more detailed surveys; and,
 - Identify any opportunities offered by the Scheme to deliver biodiversity enhancements.
- 2.7 The methodologies followed for undertaking the desk study and field surveys, including any limitations to the assessment, are provided in Appendix C.

⁴ Important Ecological Features are habitats, species, ecosystems and their functions and processes that are of conservation importance and could potentially be affected by the Scheme.

3. Ecological Baseline, Constraints and Recommendations

- 3.1 The following sections detail the results of the desk and field-based studies undertaken to inform this PEAR. Where necessary, recommendations for mitigation measures to protect known IEFs, or further surveys to determine the presence or likely absence of likely IEFs, are provided.
- 3.2 With regard to background data, 'recent' records are considered to be those no older than 10 years from the date of the desk study. Records outside of this period are historical and have only been reported where more recent records for a feature do not exist. Exceptions to this are detailed in the appropriate sections below. Non-statutory Local Wildlife Sites (LWS) are also referred to as Sites of Biological Importance (SBI) within Greater Manchester; therefore, the terms LWS and SBI can be used interchangeably.

Desk Study

Designated Sites

- 3.3 Table 1 summarises the statutory and non-statutory designated sites situated within the Study Area.

Table 1. Designated Sites within Study Area

Designated Site	Reason for Designation	Location of Designated Site ⁵
Cotteril Clough Site of Special Scientific Interest (SSSI) and Local Wildlife Site (LWS) / Site of Biological Importance (SBI)	The SSSI / SBI predominantly comprises woodland (the most diverse clough woodland in Greater Manchester) and Cotteril Brook with associated stream habitat; a grassland embankment adjacent to the A358, which bisects the SSSI / SBI, is also present. The woodland features three distinct zones, each dominated by birch-oak (<i>Betula-Quercus</i>), ash-wych elm (<i>Fraxinus-Ulmus</i>) and alder (<i>Alnus glutinosa</i>), including a diverse understorey and ground layer flora. Notable fauna associated with the SSSI / SBI include birds (green, lesser spotted and great spotted woodpeckers (<i>Picus viridis</i>, <i>Dryobates minor</i> and <i>Dendrocopos major</i>, respectively), spotted flycatcher (<i>Muscicapa striata</i>), blackcap (<i>Sylvia atricapilla</i>) and whitethroat (<i>Curruca communis</i>)), 79 species of spiders and the rare beetle <i>Dropephylla grandiloqua</i>.	0.4 km south of Site
Sunbank Wood and Ponds LWS / SBI	Priority deciduous woodland and series of ponds.	0.51 km south west of Site
Ponds Near Manchester Airport Runway LWS / SBI	Series of ponds and priority purple moor grass and rush pasture.	0.8 km south of Site
Road Cutting at Castle Hill LWS / SBI	Priority good quality semi-improved grassland.	1.1 km south of Site
Davenport Green Wood LWS / SBI	Priority deciduous woodland.	1.13 km north west of Site
Wood Near Chapel Lane LWS / SBI	Priority deciduous woodland.	1.25 km south west of Site
Well and Double Wood LWS / SBI	Priority deciduous woodland.	1.31 km south of Site
Rossmill LWS / SBI	Priority deciduous woodland.	1.45 km west of Site
Painswick Park Meadow LWS / SBI	Grassland / meadow.	1.5 km north of Site
Ponds at Davenport Green LWS / SBI	Series of ponds.	1.84 km north west of Site

⁵Where designated sites are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

Habitats

3.4 Table 2 summarises the records of notable habitats within the Study Area.

Table 2. Notable Habitats within Study Area

Habitat/ Flora Feature	Reason for Conservation/ Notable Interest	Approximate Location of Habitat/ Flora ⁶
Urban managed greenspace (amenity grassland)	Local Biodiversity Action Plan (LBAP) habitat	Within and adjacent to Site
Ancient woodland	Natural Environment and Rural Communities (NERC) Act (2006) Section 41 habitat of principal importance and LBAP habitat	Several areas within the Study Area, with the closest c.0.4 km from the Site, within Cotteril Clough SSSI.
Priority deciduous woodland	NERC Act (2006) Section 41 habitat of principal importance	Within and adjacent to the Site.
Priority good quality semi-improved grassland	LBAP habitat	Three areas located 0.8 km south and 0.98 km and 1.26 km from the Site
Priority purple moor grassland	NERC Act (2006) Section 41 habitat of principal importance and LBAP habitat	One area located 0.85 km south of the Site
Traditional orchard	NERC Act (2006) Section 41 habitat of principal importance	One area located 1.1 km south west of the Site
Priority habitats where no main habitat is classified, but others / several are present	N/A	Several within Study Area, with the closest found roughly 1.2 km south of the Site.

Constraints and Recommendations

- 3.5 Cotteril Clough SSSI / SBI is located roughly 0.4 km from the Site and there are several priority habits and SBI/LWS within the Study Area. However, due to the existing development and habitats present on Site, it is considered there is no functional (including hydrological) link to these designated sites. Therefore, direct, and indirect adverse impacts to designated sites because of the Scheme are considered unlikely. However, the Site is situated within the SSSI Impact Risk Zone for Cotteril Clough SSSI and therefore Natural England should be consulted as a formality. As the negative impacts are considered unlikely, however, the SSSI is not discussed further within this report.
- 3.6 Priority deciduous woodland is within the south western fringes of the Site; however, no direct impacts are anticipated. A small area of the woodland's root protection area will be impacted by the Proposed Development; however, it is not considered to be a sufficiently significant impact to reduce the woodlands character or function. No impacts on other priority habitats are anticipated.

Field Survey

- 3.7 Summary descriptions of the habitats within the Survey Area are provided below and shown on Figure 1 within [Appendix A](#), with notable features highlighted by target notes (TNs). TN descriptions and photographs are provided in [Appendix D](#).
- 3.8 The Survey Area comprises both the Site and connected habitats within 30 m of the Site.

Semi-natural Broadleaved Woodland

- 3.9 A young dense linear woodland is found to the south western boundary of the Site with a line of mature oak (*Quercus sp.*) (TN1) found along the woodland edge that follows Wilmslow Old Road. The woodland is on flat ground, however, towards the north western corner of the Site it rises onto a small bank. The canopy comprises oak, alder (*Alnus glutinosa*) and sycamore (*Acer pseudoplatanus*). The under canopy comprises hazel (*Corylus avellana*), holly (*Ilex aquifolium*), dogwood (*Cornus sanguinea*), elder (*Sambucus nigra*), privet (*Ligustrum vulgare*), bramble (*Rubus fruticosus*) and hawthorn (*Crataegus monogyna*). The ground layer is bare in most places due to the density of canopy cover, with small areas of locally dominant ivy (*Hedera helix*). In the more open areas the ground layer comprises woodruff (*Galium odoratum*), cow parsley (*Anthriscus sylvestris*), nettle (*Urtica dioica*), dock (*Rumex sp.*), cock's

⁶Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

foot (*Dactylis glomerata*) and dandelion (*Taraxacum sp.*). A small footpath enters the woodland roughly central to the Site's width and heads north, and litter is present throughout the woodland.

Scattered Scrub

- 3.10 Small areas of scattered scrub are present along the south eastern boundary fence and comprised buddleia (*Buddleja davidii*) and bramble.

Broadleaved Scattered Trees

- 3.11 Young planted scattered alder trees are found along the Site's south western boundary.

Introduced Shrub

- 3.12 Ornamental planting is found to the north and western boundaries of the Site. Species included snowberry (*Symphoricarpos sp.*), *Brachyglottis sp.*, rose of Sharon (*hypericum calycinum*), box-leaved honeysuckle (*Lonicera pileata*) and cotoneaster (*Cotoneaster sp.*). Some Cotoneaster species are listed on Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended) (WCA), therefore, this is discussed further within the Invasive Non-native Species section below.

Amenity Grassland

- 3.13 Well managed amenity grassland is found along the edge of the Site, mainly along the north and western boundaries, with a small strip around the carpark boundary. Species composition and structure were consistent throughout. All areas of amenity grassland appeared recently mown and it is considered likely that these areas are intensively managed (mown) throughout each year. Species comprise perennial ryegrass (*Lolium perenne*), creeping buttercup (*Ranunculus Repens*), dock sp., red fescue (*Festuca rubra*), ribwort plantain (*Plantago lanceolata*), silver weed (*Argentina anserina*), white clover (*Trifolium repens*), dandelion, daisy (*Bellis perennis*), nettle, and springy turf moss (*Rhytidiadelphus squarrosus*).

Buildings

- 3.14 A large warehouse type building takes up much of the Site's northern area, known as building 402. The building has brick walls, with areas of corrugated cladding and a pitched corrugated roof. It is in good condition and is well lit by street and fixed external security lighting. A similar building to the east, known as building 401, is of very similar construction and condition with more cladded walls. Additionally, a small wooden smoking shelter (Figure 1, TN2) is located in the north eastern corner of the carpark. The suitability of these buildings for roosting bats is assessed in Table 3.

Species-poor Hedgerow

- 3.15 Small unmanaged hedgerows are found mostly along the Site's western boundary. A dogwood hedge approximately 14 m in length and 2 m in height and width is present along the southwestern boundary of the Site's carpark. A hawthorn hedge, roughly 50 m in length and 2.5 m in height is found along the western boundary of building 402. Additionally, an unmanaged hawthorn hedge is found along the linear woodland's south western boundary, roughly 50 m in length and 2.5 m in height.

Fence

- 3.16 A tall metal mesh fence surrounds the Site's operational boundary.

Constraints and Recommendations

- 3.17 The Scheme will likely require the removal small areas of introduced shrub and amenity grassland. Additionally, Building 402 and the small shelter will require demolition. It is not currently anticipated that any of the scattered trees, hedgerows, or semi-natural woodland will be affected by the Scheme. The habitats present within the Survey Area are generally considered to be common and of no more than local importance, with the acceptance of the semi-natural broadleaved woodland.
- 3.18 Of the habitats present likely to be directly impacted, only the semi-natural broadleaved woodland and amenity grassland is considered to be notable due to the inclusion of amenity grassland within the Urban Managed Greenspace category as part of the Greater Manchester Biodiversity Action Plan (BAP). However, the amenity grassland within the Site is considered to have low ecological value as it appears to be heavily managed and is therefore unlikely to provide important habitat for wildlife. Some young trees are due to be removed it is noted trees are cited within Policy EN 9 (Green Infrastructure) within the Manchester Core Strategy: "The Council will seek to protect existing street trees and promote new planting, particularly where this can enhance green links in the urban area" and within Policy EN 15

(Biodiversity and Geological Conservation): “*The Council will seek to maintain or enhance sites of biodiversity and geological value throughout the City. Particular consideration will be given too... the Council’s objective to protect and conserve the City’s existing trees and woodland and the aim for a net increase in trees across the City*”⁷. Policy EN 15 also states that “*any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal... Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and/or compensation*”.

- 3.19 It is recommended that the habitats surrounding the Site boundary are protected from construction with suitable stand-off buffers.
- 3.20 Habitats adjacent to the Site are potentially at risk of disturbance and indirect effects such as changes in light and air or water quality during construction works. Therefore, standard pollution prevention measures and construction environmental management procedures should be adhered to during all works.
- 3.21 The semi woodland is within the south western fringes of the Site; however, no direct impacts are anticipated. A small area of the woodland’s root protection area will be impacted by the Proposed Development; however, it is not considered to be a sufficiently significant impact to reduce the woodland’s character or functionality.
- 3.22 The extended Phase 1 habitat survey was conducted outside the optimal period to confidently identify habitats and plant species, however, given the relatively simple nature of the habitats within the Survey Area, all habitats were identified appropriately, and additional habitat surveys would not provide any additional benefit beyond the identification of a small number of additional plant species. Therefore, there are no significant constraints to the assessment.

Invasive, Non-native Plants

- 3.23 A search for invasive, non-native plant species was undertaken during the extended Phase 1 habitat survey. Cotoneaster was identified within the introduced shrub planting within the Survey Area. Some species within the Cotoneaster genus are listed on Schedule 9 of the WCA and it is therefore an offence to allow the spread of those plants listed.

Constraints and Recommendations

- 3.24 It is recommended that a Schedule 9 invasive species management plan (ISMP) and method statement should be produced and adhered to during work to avoid an offence being committed under the Wildlife and Countryside Act 1981 (as amended).

Badger (*Meles meles*)

Desk Study

- 3.25 There is one recent record of a badger sett, and six recent records of badger field signs (e.g., footprints) within the Study Area.

Field Survey

- 3.26 A search for evidence of badger was carried out during the survey, however, no evidence of badger was recorded. The linear woodland provides suitable habitat; however, it has limited connectivity and high levels of disturbance. The other habitats present within the Survey Area do not provide suitable habitat for badgers. Due to the heavily urbanised nature of the wider area, poor connectivity (built up urban landscape) between the Survey Area and suitable habitats within the wider landscape, and regular human disturbance, it is considered unlikely that badgers are present within the Site and therefore not discussed further within this report.

Bats

Desk Study

- 3.27 The desk study returned records of nine bat roosts, including whiskered (*Myotis mystacinus*), soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*) and brown long-eared

⁷ Manchester Core Strategy. Accessed February 2022 at https://secure.manchester.gov.uk/downloads/download/5672/core_strategy

(*Plecotus auritus*), within the Study Area. The closest recorded roosts is for whiskered bat, approximately 540 m east of the Site. Furthermore, there are 33 records of other bat activity (e.g., foraging) within the Study Area; the closest records are of soprano pipistrelle, common pipistrelle and *Myotis* species foraging approximately 0.33 km north of the Site.

3.28 There are 10 bat mitigation licences with the Study Area, the closest of which is 250m west of the Site.

Field Survey

3.29 A ground-based external preliminary bat roost appraisal was carried out on the trees and buildings within the Survey Area, where accessible, following the latest good practice survey guidelines⁸ and in accordance with the British Standards Institution (2015) BS 8596:2015 *Surveying for bats in trees and woodland – guide*. The results of the appraisal are summarised in Table 3.

Table 3. Summary of buildings and trees within Survey Area and tree potentially suitable for roosting bats

Feature	Description	Suitability
Building 402	A large warehouse style building which takes up much of the Site's northern area. The building has brick walls, with areas of corrugated cladding and a pitched corrugated roof. It is in good condition and is well lit by street and fixed external security lighting. No potential roosting features were identified.	Negligible
Building 401	Very similar to Building 402 in construction and condition, however, with more wall cladding.	Negligible
Mature oak tree TN1	Mature oak of suitable size and age to provide suitable roosting features but no visible potential roosting features. Within woodland to the south western edge of the Site.	Low
Smoking shelter TN2	A small wooden smoking shelter (TN2) is found in the north eastern corner of the carpark. It has a breeze block walls with a wood panel to the rear which provides a sheltered cavity.	Low

3.30 The habitats within the Site are considered to offer limited opportunities for foraging and / or commuting bats. However, the linear woodland on the south western edge of the Site is well connected to other suitable habitats and provides suitable foraging and commuting habitat.

Constraints and Recommendations

3.31 The Scheme is not due to affect the mature oak that has low bat roost suitability (TN1). However, should this change, and removal or reduction works are required, then it is recommended that this tree is soft felled under an ecological watching brief, following a method statement. This would involve removing the branches and trunk in stages and carefully lowering to the ground, where it should be left for at least 24 hours. If bats are found at this stage, then the roost would need to be left in situ and Natural England would need to be informed. Fencing around the tree should be implemented during construction to avoid damage and protect the potential bat roosting features if it is to be retained.

3.32 The smoking shelter is likely to be demolished as part of the Scheme and will require a single emergence or re-entry survey to establish the presence or likely absence of a bat roost given the structure of the building and its proximity to the adjacent woodland. If a bat roost is identified further surveys and a Natural England mitigation licence will be required

3.33 The Site and surrounding habitats are suitable for foraging and commuting bats, particularly along the woodland edge. Works should be undertaken in winter, which will minimise disturbance to foraging and commuting bats. If night-time working (or working during times of the day when natural light levels are low)

⁸ Collins, J.(ed) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edition). The Bat Conservation Trust. London

is necessary, then any artificial lighting used will be directional and task specific. The lighting intensity should also be the minimum necessary for the purpose of the works. This will avoid additional illumination of retained habitats, including trees and woodland, which may be used by bats.

- 3.34 The Scheme design should seek to include sensitive lighting following suitable guidance⁹ to reduce the potential impact foraging and commuting bats.

Great Crested Newt (*Triturus cristatus*)

Desk Study

- 3.35 There are seven recent records of great crested newt within the Study Area. The closest of these is situated approximately 0.86 km south of the Site.
- 3.36 There are 16 recent granted great crested newt mitigation licence applications within the Study Area, the closest of which is roughly 300 m north west.
- 3.37 No waterbodies were identified within 250 m of the Site with habitat connectivity during the desk study.

Field Survey

- 3.38 As no possible ponds were identified within 250 m of the Site and the terrestrial habitats within the Site are unsuitable and considered to be too isolated from any potentially suitable newt habitats within the wider area. Therefore, it is considered unlikely that great crested newt is present within the Survey Area and this species is not considered further within the report.

Birds

Desk Study

- 3.39 There are recent records for 44 notable¹⁰ bird species within the Study Area. These include two species peregrine (*Falco peregrinus*) and kingfisher (*Alcedo atthis*) listed on Annex I of the EC Birds Directive, four species (peregrine, hobby (*Falco subbuteo*), black redstart (*Phoenicurus ochruros*) and kingfisher) listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), 12 Species of Principal Importance (SPI), 9 species on the Birds of Conservation Concern 5 (BoCC5) Red list and 3 species on the BoCC5 Amber list. The records also include species of bird that are priority species in Greater Manchester listed on the Greater Manchester BAP; namely black redstart and farmland birds (specific details of species not available).

Field Survey

- 3.40 The woodland, hedgerow, buildings, scattered trees and introduced shrub habitats within the Survey Area are considered to offer suitable nesting habitat for common bird species.

Constraints and Recommendations

The records for the four species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) recorded within the Study Area do not indicate these species breed within close enough proximity to potentially be directly or indirectly (through disturbance) at risk from construction works within the Site. Furthermore, the habitats present within the Survey Area are not considered to offer suitable nesting opportunities for these species or other schedule 1 species. However, there is suitable nesting habitat within the Study Area for common nesting bird species. Where these habitats are to be impacted it should be done so outside the nesting season (typically considered to be March to August, inclusive). Should avoidance of these timings not be possible, removal should be carried out within 24 hours following a nesting bird check, undertaken by a suitably experienced ecologist

⁹ Guidance Note 08/18, Bats and Artificial Lighting in the UK, Institution of Lighting Professions and The Bat Conservation Trust, 2018.

¹⁰ Notable bird species are taken as those listed: on Annex I of the EC Birds Directive (2009/147/EC); on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); as Species of Principal Importance (SPI) for the Conservation of Biodiversity in England listed in Section 41 of the Natural Environment and Rural Communities Act 2006; as Red or Amber in the Birds of Conservation Concern (BoCC) 5 (Stanbury, A, Eaton MA, Aebischer NJ, Balmer, D, Brown A, Douse, A, Lindley, P, McCulloch N, Noble DG and Win I (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747); bird species or groups listed under the Greater Manchester BAP.

- 3.41 All active bird nests are protected by the Wildlife and Countryside Act, 1981 (as amended). Should an occupied nest be found during the construction works, a buffer zone will need to be incorporated to reduce the risk of the nest being abandoned by the birds until the nest is no longer in use / dependent offspring have fledged; the size of the buffer zone will need to be determined by the ecologist. Additional measures would apply if the species was listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), which affords birds additional protection from disturbance when nesting, although the presence of such species is considered unlikely within the Survey Area.

Other Notable Species

Desk Study

- 1.1 There are six recent records of other notable species¹¹ within the Study Area; all of which are of hedgehog (*Erinaceus europaeus*). The closest hedgehog record is within the grounds of Manchester Airport, approximately 0.68 km north east of the Site, whilst all other records are located no closer than 1 km from the Site.

Field Survey

- 3.42 Areas of introduced shrub, hedgerows, and woodland within and adjacent to the Site are considered to offer limited suitable habitat for commuting, resting and / or foraging hedgehog.

Constraints and Recommendations

- 3.43 Although suitable habitat is limited, it is possible that small numbers of hedgehog may occur within the Site. Where vegetation removal / modification works are due to be carried out as part of the Scheme, a pre works check should be made to ensure the absence of hedgehog. If a hedgehog is found, it should be carefully moved to sheltered habitat (i.e. the woodland) beyond works areas, but as close as possible to where they were found.

¹¹Notable species are taken as principal species for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; any species listed in an IUCN Red Data Book; and any other species listed under the Greater Manchester BAP that are not referred to in previous sections of the report.

4. Opportunities for Enhancements

- 4.1 This section highlights opportunities for providing ecological enhancements, based on the current Scheme details.

Other Enhancements

- 4.2 The following enhancements could be delivered for biodiversity as part of the Scheme. Such measures may not necessarily contribute towards the calculation of Biodiversity Net Gain (BNG) assessment but could still deliver significant improvements for biodiversity in general:
- Enhancement and / or planting of semi-natural habitats along the north west boundary of the Site, such as wildflower-rich grasslands, trees or species-rich hedgerows (although not comprising those which produce berries, fruits or nuts due to their potential to attract flocks of birds within the vicinity of the airport) – such species / habitats should comprise native species of local provenance and comply with the airport bird strike landscape constraints;
 - Removal / management of Schedule 9 invasive, non-native plant species;
 - Installation of bat and invertebrate boxes; and
 - Inclusion of hedgehog passes (positioned to avoid directing animals toward roads) in any fencing to be installed.

5. Conclusion

- 5.1 This PEAR is based on a desk study and survey undertaken in February 2022, to assess the ecological constraints to the Scheme and to provide advice in respect of Scheme design, Site layout and / or Site investigation.
- 5.2 The following further surveys and / or mitigation, summarised in Table 4, are recommended to support a planning application.

Table 4. Summary of Recommendations

Feature	Recommendation	Timing
Invasive, non-native plant species	Implement an ISMP and fence off vegetation to ensure works do not affect invasive species.	N/A
Habitats	Avoid removing or impacting semi-natural habitats where possible, using suitable stand-off buffers during construction and fencing where appropriate.	N/A
Bats	If works are required on the single tree (TN1) categorised as offering low bat roost suitability, this will need to be soft felled following a method statement.	Any time of year
	If the smoking shelter (TN2) is required to be demolished a single emergence or re-entry survey will be required. If a roost is identified further surveys and a Natural England mitigation licence will be required.	May-September inclusive
Birds	Vegetation and buildings that may support breeding birds (e.g., woodland, trees and introduced shrub) which requires clearance should be removed outside of the nesting season (typically March to August, inclusive).	Nesting season is typically considered to be March to August inclusive
	If this is not possible, removal should be carried out within 24 hours of a nest search undertaken by a suitably experienced ecologist.	Any time of year
Hedgehog	Pre-works checks where removal of suitable habitat is required. Any animals found should be carefully moved to sheltered habitat (i.e. the woodland) beyond works areas, but as close as possible to where they were found.	N/A

Re-Survey of Site

- 5.3 Due to the mobility of animals and the potential for colonisation of the Survey Area, it is recommended that an updated ecological survey be undertaken prior to the redevelopment of this Site should this not occur within 12 months of the date of the Site survey (15th February 2022).

Appendix A Figures

A.1 Figure 1 – Phase 1 Habitat Plan



AECOM

PROJECT

Building 402, Manchester Airport

CLIENT

Threadneedle Curtis Ltd

CONSULTANT

AECOM Limited
1 New York Street
Manchester, M1 4HD
www.aecom.com

LEGEND

- Scheme Boundary - Building 402
- Target Note
- X Scrub - Scattered
- Broadleaved Parkland/scattered trees
- Introduced shrub (individual)
- Intact hedge - species-poor
- ||||| Fence
- Broadleaved woodland - semi-natural
- Cultivated/disturbed land - amenity grassland
- Introduced shrub (area)
- Buildings
- Hardstanding

NOTES

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ISSUE PURPOSE

FINAL

PROJECT NUMBER

60663052

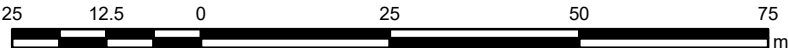
FIGURE TITLE

Phase 1 Habitat Plan

FIGURE NUMBER

60663052-ACM-402-XX-DR-EC-00001

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Appendix B Relevant Legislation and Planning Policy

B.1 Legislation

- 5.4 The UK is no longer a member of the European Union (EU). EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation. EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.
- 5.5 The Environment Act 2021 was passed in law across the UK in November 2021. The Act seeks to provide a post-Brexit legal framework for environmental governance and make provision improvements to the natural environment.
- 5.6 The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the *Conservation of Habitats and Species Regulations 2017* (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

B.2 Designated Sites

Sites of Special Scientific Interest

- 5.7 Under the *Wildlife and Countryside Act 1981* (as amended), it is an offence to carry out or permit to be carried out any operations likely to damage the Site of Special Scientific Interest (SSSI). These operations are listed in the SSSI notification.
- 5.8 Owners, occupiers, public bodies and statutory undertakers must give notice and obtain the appropriate consent under S.28 of the *Wildlife and Countryside Act 1981* (as amended), before undertaking operations likely to damage a SSSI.

Locally Designated Sites

- 5.9 Local Wildlife Sites (LWS) / Sites of Biological Importance (SBI) are sites with 'substantive nature conservation value'. They are defined areas, identified and selected for their nature conservation value, based on important, distinctive and threatened habitats and species within a region.
- 5.10 They are usually selected by the relevant Wildlife Trust, along with representatives of the local authority and other local wildlife conservation groups.
- 5.11 The LWS / SBI selection panel, select all sites that meet the assigned criteria, unlike SSSIs, which for some habitats are a representative sample of sites that meet the national standard. Consequently, many sites of SSSI quality are not designated and instead are selected as LWSs / SBIs. Consequently, LWSs / SBIs can be amongst the best sites for biodiversity.

B.3 Protected Species

Bats / Great Crested Newt

- 5.12 These species, known as European Protected Species, are protected under Regulation 43 of the 2017 Regulations as amended by the 2019 Regulations. This makes it an offence to deliberately capture, injure or kill an animal; deliberately disturb an animal; or damage or destroy a breeding site or resting place used by an animal.
- 5.13 Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing. Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of

hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong.

- 5.14 Where development works are at risk of causing one or more of the offences listed above, a mitigation licence from Natural England can be obtained to facilitate the works that would otherwise be illegal.
- 5.15 These species are also protected under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended). This makes it an offence to intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb an animal in such a place.
- 5.16 Lower levels of disturbance not covered by the *Conservation of Habitats and Species Regulations 2017* remain an offence under the *Wildlife and Countryside Act 1981* although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.

Nesting Birds

- 5.17 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended), with some species afforded greater protection under Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended). In addition to the protection from killing or taking that all birds receive, Schedule 1 birds and their young must not be disturbed at the nest.
- 5.18 There are no licensing purposes that explicitly cover development activities affecting wild birds.

Badger

- 5.19 Badgers and their setts are protected under the *Protection of Badgers Act 1992* (as amended). This makes it an offence to wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in its sett.
- 5.20 It is not illegal to carry out disturbance activities near setts that are not occupied, i.e. those that do not show signs of current use.
- 5.21 Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England. Licences for activities involving watercourse maintenance, drainage works or flood defences are issued under a separate process.
- 5.22 When assessing the requirement for a licence in respect of development, Natural England¹² state that badgers are relatively tolerant of moderate levels of noise and activity around their setts, and that a low or moderate level of apparent disturbing activity at or near to badger setts does not necessarily disturb the badgers occupying those setts.
- 5.23 Licences are normally not granted from December to June inclusive (the badger breeding season) because dependent cubs may be present within setts.

B.4 Species and Habitats of Principal Importance for the Conservation of Biodiversity

- 5.24 Section 40 of the Natural Environment & Rural Communities Act (NERC) 2006 sets out the duty for public authorities to conserve biodiversity in England.
- 5.25 Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in Section 41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.
- 5.26 The 'England Biodiversity List' is used as a guide for 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.

¹² Interpretation of 'Disturbance' in relation to badgers occupying a sett, Natural England (2009)

B.5 Invasive, Non-native Plant Species

- 5.27 Under the Wildlife and Countryside Act 1981 (as amended), it is an offence to plant or otherwise cause these species to grow in the wild.
- 5.28 Any contaminated soil or plant material is classified as controlled waste and should be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with section 34 of the *Environmental Protection Act 1990*.

B.6 Planning Policy

National Planning Policy Framework, 2019

- 5.29 The National Planning Policy Framework (NPPF) sets out the Governments planning policies for England and how these are expected to be applied by Local Authorities within their Local Development Frameworks (LDF). Chapter 15 of the NPPF '*Conserving and enhancing the natural environment*' sets out the requirements to consider biodiversity in planning decisions.

Local Planning Policy

- 5.30 The Manchester Core Strategy¹³, which was adopted on 11th July 2012 and covers the 2012 – 2027 period, provides details of two policies which relate to ecology and nature conservation, these are:
- Policy EN 15 – Biodiversity and Geological Conservation; and,
 - Policy EN 9 – Green Infrastructure.

Local Biodiversity Action Plans

- 5.31 The Greater Manchester BAP is the Local Biodiversity Action Plan (LBAP) relevant to the Scheme. It has been developed by a wide partnership of organisations and individuals and supports the actions needed to safeguard and enhance local wildlife and habitats.
- 5.32 The Greater Manchester BAP lists all the Priority Habitats and Species identified as threatened and requiring conservation action; these include 10 species / species groups (e.g. farmland birds) and nine habitats, in addition to those listed nationally. The species and habitats directly relevant to the Site include:
- **Species:** all bat species, black redstart and farmland birds; and,
 - **Habitats:** Grasslands, urban managed greenspace (including amenity grassland) and native woodlands.

¹³ Manchester Core Strategy. Accessed February 2022 at https://secure.manchester.gov.uk/downloads/download/5672/core_strategy

Appendix C Methodology

C.1 Desk Study

Background Records Search

- 5.33 The preliminary ecological assessment includes a desk study to obtain background records relevant to the Scheme. The data obtained provides contextual information for the scope of field surveys, to aid the evaluation of field survey results, and to provide supplementary information where complete field survey coverage is not possible.
- 5.34 The Study Area is dependent upon the nature, timing and scale of the Scheme, as well as the location of the Site and the surrounding landscape. These variables all contribute to what is referred to as the Zone of Influence (Zoi) of the Scheme, which is the area over which ecological features may be affected by biophysical changes because of the works and associated activities.
- 5.35 Due to the proximity and similarity of the Sites, records from a recent AECOM PEAR¹⁴ were utilised to inform this PEAR. In December 2021 Greater Manchester Local Records Centre (GMLRC) was contacted to obtain the following ecological data:
- Records of non-statutory designated sites within 2 km of the Site boundary; and
 - Records of legally protected and notable species (fauna and flora) within 2 km of the Site boundary, including Species of Principal Importance for the Conservation of Biodiversity listed under Section 41 of the Natural Environment & Rural Communities Act 2006 in the England Biodiversity List¹⁵.
- 5.36 The Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) was reviewed for the following information:
- Designated sites of nature conservation importance (statutory sites only) within 2 km of the Site.
 - Notable habitats within 2 km of the Site, these being areas of ancient woodland (reduced to 1 km) and 'Habitats of Principal Importance for the Conservation of Biodiversity' included in the England Biodiversity List¹⁶.

Great Crested Newt Pond Search

- 5.37 Ordnance Survey maps and the *Where's the Path* website (<https://wtp2.appspot.com/wheresthepath.htm>) have been used to identify the presence of water bodies within 250 m of the Site boundary, in order to help establish if the land within and immediately surrounding the Site could be used by great crested newts. This species can use suitable terrestrial habitat up to 500 m from a breeding pond¹⁷, though there is a notable decrease in great crested newt abundance beyond 250 m from a breeding pond¹⁸.

C.2 Field Survey

- 5.38 The preliminary ecological assessment includes a walkover survey of the Survey Area (all land within the Site), broadly following the Phase 1 habitat survey methodology as set out in Joint Nature Conservation Committee guidance (JNCC, 2010)¹⁹. This survey method records information on habitat types and is 'extended' to record any evidence of and potential for protected or notable species to be present. Plant names recorded during the survey follow Stace (2010)²⁰.

¹⁴ MAG Argosy Building 305 Preliminary Ecological Appraisal Report, AECOM, 2022

¹⁵ Section 40 of the Natural Environment & Rural Communities Act 2006 requires that The Secretary of State has drawn up, in accordance with Section 41 of the Act and in consultation with Natural England, a list of habitats and species of principal importance for the conservation of biodiversity in England that is known as the [England Biodiversity List](#)

¹⁶ Section 40 of the Natural Environment & Rural Communities (NERC) Act 2006 requires that The Secretary of State has drawn up, in accordance with Section 41 of the Act and in consultation with Natural England, a list of habitats and species of principal importance for the conservation of biodiversity in England that is known as the [England Biodiversity List](#)

¹⁷ Great Crested Newt Mitigation Guidelines (English Nature, 2001).

¹⁸ Natural England. An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt (ENRR576) <http://publications.naturalengland.org.uk/publication/134002>.

¹⁹ Joint Nature Conservation Committee (2010) *Handbook for Phase 1 habitat survey - a technique for environmental audit*.

²⁰ Stace, C E (2010) *New Flora of the British Isles*, 3rd edition. Cambridge University Press.

5.39 During the walkover survey, the following protected or notable species are considered:

- **Badger:** the survey involves searching for signs of badger activity including setts, tracks, snuffle holes and latrines, following the methodology detailed in *Scottish Badgers (2018)*²¹ and Harris et al (1989)²²;
- **Bats:** the survey involves searching for potential roosting sites for bats within trees and structures (such as buildings, bridges or underground features such as mines) and categorising the suitability of those trees or structures to support roosting bats (negligible to high, or confirmed roost), in accordance with Bat Conservation Trust (BCT) guidance (2016)²³;
- **Birds:** the survey involves assessing the potential of habitats within the Survey Area to support breeding, wintering or migrating birds, either individually notable species or assemblages of both common and rarer species;
- **Great crested newt:** the survey involves assessing the potential of habitats within the Survey Area to support great crested newt, following English Nature (2001)²⁴ and Froglife (2001)²⁵ guidance;
- **Protected or Notable species of plants:** the survey involves recording protected or notable plant species;
- **Other notable species:** the survey involves assessing the potential of habitat within the Survey Area to support other Notable Species, such as hedgehog, brown hare, polecat or common toad;
- **Non-native invasive plant species:** the survey involves recording evidence of the presence of invasive plants listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) and subject to strict legal control.

C.3 Limitations and Assumptions

- 1.2 Records obtained as part of the desk study provide some indication of the presence of certain species. They do not, however, represent a definitive inventory of all species present within the Study Area. The inclusion of a species, or conversely the absence of a species does not necessarily mean that species remains present or absent beyond the time of that record. Due to utilising records from a recent PEAR, some records within 2km of the Site may have been missed, however, due to the proximity and similarity of the Sites it is not considered a significant limitation. Additionally, species records were not obtained for two relatively small areas within the southeast and southwest of the Study Area no closer than 1.3 km from the Site, beyond the River Bollin where the border between Greater Manchester and Cheshire lies. This would have required additional data to be sourced from Record (the Local Biological Records Centre serving Cheshire, Halton, Warrington and Wirral) and it was considered proportionate to omit this based on the distance from the Site and the additional cost for the data
- 1.3 The Phase 1 habitat survey was conducted outside the optimal period to confidently identify habitats and plant species, however, given the relatively simple nature of the habitats within the Survey Area, all habitats were identified appropriately, and additional habitat surveys would not provide any additional benefit beyond the identification of a small number of more plant species. Therefore, there are no significant constraints to the assessment.

²¹ Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

²² Harris, S. Cresswell, P. and Jefferies, D. (1989). *Surveying Badgers*.

²³ Collins, J.(ed) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edition). The Bat Conversation Trust. London.

²⁴ English Nature (2001). *The Great Crested Newt Mitigation Guidelines*.

²⁵ Froglife (2001). *The Great Crested Newt Conservation Handbook*.

Appendix D Target Notes and Photographs

Target Note (TN) Reference / Feature

Photograph

TN 1 – Mature oak tree with low bat roost suitability



TN 2 – Small shelter with low bat roost suitability



Target Note (TN) Reference / Feature

Photograph

Example of Cotoneaster species adjacent to Site



Building 402



Building 401



Target Note (TN) Reference / Feature

Photograph

Example of amenity grassland within the Survey Area.



Semi-natural woodland within the Survey Area.



Species poor hedge row and introduce shrub on Site's north boundary



Perimeter fence



Target Note (TN) Reference / Feature

Photograph

Carpark



