

SYDNEY AVENUE PRELIMINARY ECOLOGICAL APPRAISAL

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SYDNEY AVENUE PRELIMINARY ECOLOGICAL APPRAISAL PLANNING APPLICATION BOUNDARY

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Executive summary

Manchester Airport Group (MAG) commissioned Jacobs UK Ltd to undertake a Preliminary Ecological Appraisal (PEA) and UK Habitat Classification Survey (UKHab) for the Scheme known as "Sydney Avenue", a development that will act as a bypass of Thorley Lane via a new proposed section of highway. The surveys and assessment were undertaken to identify and assess the ecological risks ahead of the Scheme, with the results used to inform the development Scheme application and identify the extent of further ecological requirements.

The primary purpose of the PEA was to establish an initial assessment of the baseline ecological conditions within the study area (including designated sites, habitats and potential protected / notable species) and help identify requirements for further survey / assessments both within and beyond the scope of ecological surveys originally established. The PEA included a desk study exercise and site-based surveys undertaken in July 2023.

The desk study identified one site of National importance (a site of Special Scientific Interest) within 2km of the Scheme. Greater Manchester Ecology Unit (GMEU) provided information of seven Sites of Biological Importance (SBI) within 2km of the Scheme. In total, the data search revealed the presence of three Habitats of Principal Importance (HoPI) within 2km of the Scheme, which included deciduous woodland, ponds and ancient woodland. Sunbank Wood & Ponds SBI contains ancient woodland and a pond cluster, Davenport Green Wood SBI is designated as ancient woodland and Big Wood SBI is designated due to its deciduous woodland. GMEU also provided records for protected and notable species, including bats, badger (*Meles meles*), great crested newt (*Triturus cristatus*) and a variety of birds, plants and invertebrates.

The site surveys included mapping of the habitats within the project boundary and a 50m buffer distance using UK Habitat Classification Survey (UKHab). A total of four broad habitat types comprising three level three, three level four and one level five UKHab categories have been identified within the survey area, with one HoPI present in the form of a native hedgerow. Habitats within the survey area offer opportunities for a variety of protected and notable species. The invasive species *Cotoneaster* (*cotoneaster spp.*) was observed within the survey area.

The PEA survey method also included a search for evidence of protected and notable species and to assess the suitability of the habitats to support protected and notable species. The survey area identified potential to support protected species through foraging and commuting, with no evidence of protected species within the survey area.

Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) will have to deliver at least 10% Biodiversity Net Gain (BNG) as of February 2024 (2025 for National Significant Infrastructure Projects). It is a requirement that BNG be measured using Defra's Statutory biodiversity metric and significant habitats will need to be secured for at least 30 years.

Recommendations for ecological mitigation, compensation and enhancement have been provided within this report.

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1. Introduction

1.1 Introduction

Jacobs UK Ltd (Jacobs) was commissioned by Manchester Airport Group (MAG) to undertake a range of ecological services for the proposed Sydney Avenue link road to Thorley Lane Scheme to establish the baseline of ecological data and provide recommendations for further surveys or recommendations.

This report presents the results of a Preliminary Ecological Appraisal (PEA) and protected species surveys undertaken on behalf of MAG in relation to the Scheme. The PEA includes a desk study and site-based surveys undertaken by Jacob's ecologist in July 2023.

1.2 Description of the Proposal

MAG continues to invest in its airport infrastructure. MAG are close to completion of the Manchester Airport Transformation Programme (MAN-TP), a £1.3bn investment programme that will transform passenger experiences and help attract yet more of the world's leading airlines. The transformation was first announced in 2015 with a 10-year vision to revolutionise the customer experience at the Northern hub and unlock the potential of its two full-length runways. The programme involves an extension, doubling the size of Terminal 2 (T2) and refurbishing the original terminal, including the construction of two new aircraft piers, creation of a state of the art baggage hall, installing next general scanners in a new security hall, additional retail and food and beverage outlets as well upgrading the airfield and taxiways to cater for next generation aircraft. It also includes the development of the landside road network to allow sufficient capacity and access to the terminal to drop off passengers, pick-up passengers as well as additional car parking.

In review of this landside road network, a traffic modelling exercise has been undertaken to review various parts of the road network and the impacts of increasing traffic numbers in the area following the opening of the full Terminal 2 following the completion of MAN-TP in 2025. This exercise has concluded the need for changes to the road network at the western end of T2. With the existing layout, the Sydney Avenue junction with Thorley Lane is anticipated to be over capacity with queues extending into the West End Roundabout and Palma Avenue, therefore blocking the forecourt exit. An optioneering exercise for solutions was undertaken and the option now progressed is for the closure of the existing short Sydney Avenue and construction of a new link road/carriageway from the western side of the existing West End roundabout and connecting into Thorley Lane via a new signal-controlled junction. The proposed project includes the following:

- A new carriageway from the West End Roundabout (where Palma Avenue and Sydney Avenue meet) via the existing Staff West Car Park to Thorley Lane (including a 3.0m wide shared footway/cycleway)
- Widening of Thorley Lane to accommodate a signal-controlled junction between the new carriageway and Thorley Lane
- The upgrade of the existing Thorley Lane junction with Runger Lane to a signalised junction.
- Creation of a 3m wide shared footway/cycleway on Thorley Lane.
- Closure of the existing Sydney Avenue carriageway from the West End Roundabout to Thorley Lane and associated retention and realignment of the existing footpaths and cycleway
- Creation of a new exit from the West End Roundabout into the existing Staff West car park

The planning application is limited to seeking planning permission for the creation of a new access from the northern end of the new road to the Thorley Lane carriageway. The extent of the planning application boundary and the extent of the project boundary are shown on the plan in Figure 1, Appendix A.

1.3 Aims & Objectives

The primary aim of this report is to provide baseline ecological information for the study area and to assess the collated data in conjunction with the relevant good practice survey guidance, planning policies and legislative framework, to inform the Scheme and provide recommendations for further surveys or mitigation. Specifically, the key objectives of this report are to:

- Identify all statutory and non-statutory designated sites of nature conservation within the relevant study area;

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- Record and categorise habitat types within the survey area using the UK Habitat Classification System (UKHAB Ltd, 2023));
- Identify Habitats of Principal Importance (HoPI) listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, irreplaceable habitats (e.g., ancient woodland) and Greater Manchester Biodiversity Action Plan habitats where present;
- Identify the potential for protected species or other species of conservation interest to be present within the study area;
- Provide an initial evaluation of the baseline ecological information within the study area based on the Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater Coastal and Marine Version 1.2 (CIEEM, 2018) and Design Manual for Roads and Bridges LA 108 Biodiversity (Highways England, 2020); and
- Identify any additional surveys that may be required to inform a robust ecological assessment, and provide recommendations for further surveys or mitigation.

2. Legislation and Planning Policy

This section briefly summarises the legislation, policy and related issues that are relevant to the main text of the report. The following text does not constitute legal or planning advice. The following local and national planning policy and both primary and European legislation relating to nature conservation and biodiversity status are considered of relevance to the current proposal.

2.1 Legislation

Many UK wildlife species and their habitats are protected by law and these species and habitats form a key consideration for defining methods for further assessment. The key pieces of legislation of potential relevance to the Scheme are presented in Table 2.1 below. A summary of legislation specific to protected species pertinent to this Scheme is presented in Appendix B.

Table 2.1 Relevant legislation

Legislation	Relevance to the Project
Environment Act 2021	The Environment Act 2021 was created to 'improve air and water quality, tackle waste, increase recycling, halt the decline of species, and improve our natural environment.' Amongst other things, the Act requires a minimum 10% biodiversity gain. This is expected to be mandatory for all projects in England from February 2024 where planning consent is required through the Town and Country Planning Act 1990 consenting regime. For Nationally Significant Infrastructure Projects (NSIPs), where the consenting regime is via a Development Consent Order (DCO) in accordance with the Planning Act 2008, biodiversity net gain is expected to be mandatory by no later than 2025. Biodiversity net gain must be calculated using a Biodiversity Metric (currently, Natural England's Biodiversity Metric 4.0). A net gain plan must be approved. Created, retained, and enhanced habitat must be secured for at least 30 years via obligations/conservation covenant.
The Invasive Alien Species (Enforcement and Permitting) Order 2019	This legislation transposes the EU Invasive Alien Species (IAS) Regulation into UK law (England and Wales only). The EU Regulation imposes strict restrictions on a list of species known as 'species of Union concern'. These are species whose potential adverse impacts are such that concerted action across Europe is required to manage their impact. The Invasive Alien Species (Enforcement and Permitting) Order 2019 includes 14 species (eight plant species and six animal species) identified as being widely spread in England and Wales and requiring management. Article 3 (2) of the Order makes it an offence to release or allow the escape into the wild any animal that is not ordinary resident in and is not a regular visitor to Great Britain in a wild state, or is included in Part 1 of Schedule 2. Article 3 (3) of the Order makes it an offence to plant or otherwise cause the growth in the wild, of any plant included in Part 2 of Schedule 2 of the Order. The Order amends the Wildlife and Countryside Act (WCA) 1981 (as amended) in respect of invasive non-native species.
Conservation of Habitats and Species Regulations 2017 (as amended) (abbreviated to Habitats Regulations 2017 [as amended])	The Habitats Regulations 2017 (as amended) and WCA 1981 (as amended) are pieces of domestic legislation that transpose the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Birds Directive (Council Directive 2009/147/EC) (known as the Nature Directives) into English law. Species of European (International) conservation importance are listed on Annexes II, IV and V of the Habitats Directive and Annex I of the Birds Directive. The Habitats Regulations 2017 (as amended) provide for the designation and protection of 'European sites' and the protection of 'European Protected Species' (EPS). The provisions also include a statutory requirement for competent authorities to undertake an Appropriate Assessment of the potential impacts of projects likely to have a significant effect on European sites.
Wildlife and Countryside Act	The WCA 1981 (as amended) includes provisions for important habitats to be designated and protected as Sites of Special Scientific Interest (SSSIs) and protects individual species and the places they use for shelter and protection. All birds, their nests, and eggs, are also protected.

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Legislation	Relevance to the Project
(WCA) 1981 (as amended)	Several protected/notable habitats and species listed within these pieces of legislation are likely to be present within the study area.
Natural Environment and Rural Communities (NERC) Act 2006	The Act places a statutory duty on all public bodies and statutory undertakers in England and Wales to have due regard to the conservation of biodiversity in all their functions. It also requires publication of a list of habitats and species of primary importance for the conservation of each country's biodiversity. These are often referred to as Biodiversity Action Plan (BAP) habitats / species or Habitats of Principal Importance (HoPI) / Species of Principal Importance (SoPI). Several HoPI and SoPI are likely to be present within the study area.
Countryside and Rights of Way (CROW) Act 2000	The Act increased protection for SSSIs and strengthened wildlife enforcement legislation. With regard to SSSIs, it includes provisions to extend powers for Statutory Nature Conservation Organisations (SNCOs) to enter into management agreements with landowners, and it extends the range of offences and increases the penalties for breaches of legislation. In particular, it provided for a new offence of reckless disturbance.
The Hedgerows Regulations 1997	These Regulations make provision for the protection of hedgerows in England and Wales on historical as well as ecological grounds, making it an offence in certain circumstances to remove a hedgerow without notifying the local planning authority. Hedgerows are present within the study area.
Wild Mammals Protection Act 1996	This Act makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering. Various mammal species will be present within the study area.
Protection of Badgers Act 1992	This Act protects badgers (<i>Meles meles</i>) and their setts. Badgers and their setts may be present within the study area.
The Eels (England and Wales) Regulations 2009	These Regulations seek to reverse the decline in European eel (<i>Anguilla anguilla</i>) numbers. They empower the Environment Agency and Natural Resources Wales to implement recovery measures in all freshwater and estuarine waters in England and Wales. The recovery measures aim to achieve 40% escapement of adult eels relative to escapement levels under pristine conditions; implement measures to reduce fishing pressures, improve access and habitat quality and reduce the impact of entrainment; provide for screening at water intakes and outfalls and ease passage at obstructions to migration. Numerous watercourses, some of which may be used by eels are present within the wider study area to the south.
Salmon and Freshwater Fisheries Act 1975 (as amended).	This Act seeks to protect salmon (<i>Salmo salar</i>) and trout (<i>Salmo trutta</i>) from commercial poaching, to protect migration routes, to prevent wilful vandalism and neglect of fisheries, ensure correct licensing and water authority approval. Numerous watercourses, some of which may be used by eels are present within the wider study area to the south.

2.2 Planning Policy

Several national and local policies are relevant to biodiversity and developments.

The key national and local planning policies of potential relevance to the Scheme include:

- National Planning Policy Framework 2021 (Ministry of Housing, Communities and Local Government [MHCLG], 2021).
- Manchester Core Strategy (Manchester City Council, 2012).
- Greater Manchester Biodiversity Action plan (Greater Manchester Biodiversity Project, 2009).

A summary of relevant planning policy in respect of this Scheme is presented within Appendix B.

3. Methodology

3.1 Desk study

An ecological desk study was completed in May 2023 in line with standard guidelines and current good practice, Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). This included obtaining relevant ecological information from statutory and non-statutory consultees to inform and collate the current baseline.

Ecological records were requested from Greater Manchester Ecology Unit (GMEU) in May 2023. Additionally, the Multi Agency Geographic Information for the Countryside (MAGIC) website was searched for any supplementary information. The age of the desk study records was assessed with professional judgement to determine the relevance of the record to the current Scheme.

The following baseline data were gathered for a 2km radius around the Scheme, extended to 10km for European or internationally designated sites:

- Records of statutory sites designated for nature conservation value including European Sites (comprising Special Areas of Conservation (SAC's), Special Protection Areas (SPAs) and Ramsar sites); and UK sites such as SSSI and National Nature Reserves (NNR);
- Records of non-statutory sites designated for nature conservation, e.g., Local Wildlife Sites (LWS);
- Records of notable habitats as listed in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006), and ancient woodland parcels;
- Records of legally protected species and notable species, including Species of Principal Importance (SoPI's) under the NERC Act (2006), locally rare and scarce species and European Protected Species (EPS); and,
- Records of invasive non-native species.

In addition, the study area has been informed by the Natural England Sites of Special Scientific Interest (SSSI) impact risk zones (IRZs) (Natural England, 2023). The IRZ is a GIS tool developed to make a rapid initial assessment of the potential risks posed by development proposals to SSSIs and associated SACs, SPAs and Ramsar sites. They define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of planning proposals which could potentially have adverse impacts. The Scheme falls within a development category (i.e., infrastructure) which requires further consideration of potential impacts and consultation with Natural England if any IRZs overlap the Scheme.

A search of ponds/waterbodies within a 250m radius of the Scheme was also carried out using a combination of aerial photography and OS mapping.

3.2 UK Habitat Classification Survey

A UK Habitat Classification survey (UKHab) assessment is a comprehensive habitat classification system which was developed due to changes over time in habitat categorisation, recording and analyses. It is good practice to map and classify habitats using standard habitat correspondence tables and covers terrestrial, freshwater and coastal ecosystems. The outputs from the assessment can then be used to complete further assessments such as Biodiversity Net Gain.

The UKHab survey was carried out on the 24th July 2023 within the project boundary for the Scheme, plus a 50m buffer. All habitats were described and mapped according to the UKHab guidance (UKHAB Ltd, 2023). Dominant and notable plant species were recorded, and relative abundance was expressed using the DAFOR scale: dominant, abundant, frequent, occasional and rare. Botanical taxonomic nomenclature follows the New Flora of the British Isles, Fourth Edition (Stace, 2019). The condition of all habitats (Good, Moderate, Poor and N/A) recorded in the survey area have been assessed in line with the Defra Statutory Biodiversity Net Gain Metric Condition Assessment Technical Annex (Defra, 2024).

In addition, the UKHab survey method was extended to include the recording of any evidence of protected and notable species and to assess the suitability of the habitats present to support protected and notable

species. This information was recorded as a target note (TN), where suitable. This approach is in accordance with the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). Target notes were made for any features which were too small to map or were of particular ecological interest.

Weather conditions on the day of survey were optimal – 18°C, dry, and low wind.

3.3 Survey limitations

Data supplied by records centres keep useful baseline information on the species that have been recorded within a local area and details of sites with nature conservation designations. This data often includes surveys undertaken by third parties on an 'ad hoc' basis. Absence of species records may not therefore indicate absence of that species from an area. For this reason, a preliminary ecological appraisal is always informed by both desk study and information gathered during field survey.

The original desk study data was requested for the Segregated Left Turn Lane (SGLL) PEA (Jacobs 2023), however as the Sydney Avenue Scheme is approximately 500m to the west of SGLL Scheme, the same dataset has been used and amended for the 500m difference.

Vegetated areas adjacent to Thorley Lane and Runger Lane junction were not accessed due to Private land ownership and health and safety concerns. As no Traffic Management measures were available, surveyors did not access the northern verge of Thorley Lane. This limitation is not anticipated to affect the results of the survey.

4. Results

4.1 Site Context

The Scheme is set within a predominantly urbanised landscape, comprising of highways, Manchester Airport and associated buildings, carparks, roads and grassland verges. The survey area itself comprises broadleaved woodland, hard standing carpark, grass verges, and walkways. Playing fields, a large pond and open grassland are present to the east of the Scheme. Residential and agricultural fields dominate the wider landscape.

4.2 Desk Study

4.2.1 Statutory Designated Sites

The desktop assessment revealed one statutory designated site, Cotteril Clough SSSI, within 2km of the Scheme. Additionally, the Scheme falls within Natural England IRZ for this SSSI. No other IRZs for other designated sites were identified. Table 4.1 below provides further detail of the SSSI and reason for designation.

Table 4.1 Statutory Designated Sites

Site	Designation	Location and distances		Reasons for designation
International / European designates sites within 5km				
N/A	N/A	N/A	N/A	N/A
National designated sites within 2km				
Cotteril Clough	SSSI	Approximately 1.7km south.	The site is notified for its ancient and semi-natural woodland that are described as three distinct woodlands including silver birch (<i>Betula pendula</i>), pedunculate oak (<i>Quercus robur</i>), situated on the plateau edge. Ash (<i>Fraxinus excelsior</i>) and wych elm (<i>Ulmus glabra</i>) dominate the steep valley sides with a species rich ground flora including ramsons (<i>Allium ursinum</i>), dog's mercury (<i>Mercurialis perennis</i>), bluebells (<i>Hyacinthoides non-scripta</i>), wood anemone (<i>Anemone nemorosa</i>), lesser celandine (<i>Ficaria verna</i>) and black bryony (<i>Tamus communis</i>). The valley includes species preferable to damper soils including alder (<i>Alnus glutinosa</i>), and willow species (<i>Salix</i> sp). The woodlands are known to support various bird assemblages.	

4.2.2 Non-Statutory Designated Sites

The desktop assessment revealed seven non-statutory designated sites within 2km of the Scheme. Information on these sites are provided in Table 4.2.

Table 4.2 Non-statutory Designated Sites

Site Name	Designation	Area (ha)	Location and distances from Scheme	Reasons for designation
Davenport Green Wood (h41_1)	SBI	3.5	Approximately 150m west (Grid Ref: SJ814863).	The site is notified for its ancient semi-natural woodland which supports SoPI bird species such as song thrush (<i>Turdus philomelos</i>), dunnoek (<i>Prunella modularis</i>), bullfinch (<i>Pyrrhula</i>

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Site Name	Designation	Area (ha)	Location and distances from Scheme	Reasons for designation
				<i>pyrrhula</i>), lesser spotted woodpecker (<i>Dendrocopos minor</i>) and lesser redpoll (<i>Acanthis cabaret</i>).
Painswick Park Meadow (f45_1)	SBI	1.1	Approximately 275m northeast (Grid Ref: SJ814863).	The site is notified for its semi-natural grassland with associated pond and old hedgerows, semi-natural broadleaved woodland and scrub. The habitats support Species of Principal Importance (SoPI) starling (<i>Sturnus vulgaris</i>) and house sparrow (<i>Passer domesticus</i>) as well as other common bird species.
Ponds at Davenport Green (h51_3)	SBI	34.1	Approximately 800m north west (Grid Ref: SJ 799869).	The site is notified for its cluster of ponds and associated terrestrial habitat including marsh, grassland, hedgerows and streams. The ponds support the largest known population of great crested newts in Trafford together with other amphibians, aquatic invertebrates and a range of plant species.
Sunbank Wood & Ponds (f14_1)	SBI	23.7	Approximately 1.9km south (Grid Ref: SJ799840).	The site is notified for its priority habitats such as ancient woodland, hedgerows and ponds which supports several notable flora and fauna including sweet woodruff (<i>Galium odoratum</i>) and giant bellflower (<i>Campanula latifolia</i>), great crested newts, invertebrates and bird assemblages both breeding and wintering.
Big Wood (f28_3)	SBI	7.6	Approximately 2km east (Grid Ref: SJ833862).	The site is notified for its series of small woodlands with a stream and a pond within a residential area. The woodland forms part of Greater Manchester Biodiversity Habitat which supports several bird species including great spotted woodpecker, jay (<i>Garrulus glandarius</i>), long-tailed tit (<i>Aegithalos caudatus</i>), blackcap (<i>Sylvia atricapilla</i>), nuthatch (<i>Sitta europaea</i>), treecreeper (<i>Certhia familiaris</i>). Breeding sparrowhawk (<i>Accipiter nisus</i>) and dunnoek have also been recorded.
Cotteril Clough (f16_3)	SBI	11.4	Approximately 2km south (Grid Ref: SJ805839).	The site form part of Cotteril Clough SSSI and is notified for its ancient woodland with a very species rich flora, supporting county rarities and uncommon plants. The habitat supports over 156 plants including rare moschatel (<i>Adoxa moschatellina</i>), primrose (<i>Primula vulgaris</i>), wood dog violet (<i>Viola riviniana</i>), early purple

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Site Name	Designation	Area (ha)	Location and distances from Scheme	Reasons for designation
				orchid (<i>Orchis mascula</i>) and toothwort (<i>Cardamine concatenata</i>) as well as 183 species of fungi. The site also supports large assemblages of birds including priority species such as lesser woodpecker (<i>Dryobates minor</i>), song thrush, and bullfinch. Siskin (<i>Spinus spinus</i>), fieldfare (<i>Turdus pilaris</i>), redwing (<i>Turdus iliacus</i>), woodcock (<i>Scolopax rusticola</i>) and goldcrest (<i>Regulus regulus</i>) are winter visitors. Great crested newts (<i>Triturus cristatus</i>) and a diverse assemblage of aquatic and terrestrial invertebrates are also present.
Ponds near Manchester Airport Runway (f19_3)	SBI	4.1	Approximately 2km south (Grid Ref: SJ808839).	The site is notified for its ponds, grassland and scrub supporting breeding population of great crested newts, common frog (<i>Rana temporaria</i>) and smooth newts (<i>Lissotriton vulgaris</i>). The ponds also support moorhen (<i>Gallinula chloropus</i>), willow warbler (<i>Phylloscopus trochilus</i>) and common whitethroat (<i>Sylvia communis</i>). Snipe (<i>Gallinago gallinago</i>) has been recorded during the winter months.

4.2.3 Habitats of Principal Importance

A search of the MAGIC database revealed the presence of two HoPI within 2km of the Scheme. The habitats and approximate locations are listed in Table 4.3 below.

Table 4.3 Habitats of Principal Importance within a 2km radius of the Scheme

Priority habitat	Description / Location
Deciduous woodland	Deciduous woodland is located within the project boundary, and in 25 other blocks within 2km.
Ancient woodland	There are three individual ancient woodland blocks within 2km of the project boundary. The closest ancient woodland is Davenport Green Wood SBI, 200m west of the Scheme, with the other two blocks of ancient woodland belonging to Sunbank Wood and Ponds SBI approximately 1.9km south.

In addition, a search of aerial imagery revealed hedgerows, ponds and unnamed watercourses within the study area. The majority of hedgerows are likely to qualify as HoPI and certain ponds may also meet the criteria for HoPI but are not shown as priority habitats on the MAGIC database.

4.2.4 Protected Species

The GMEU desk study data returned the following species records for the 2km study area, including invasive non-native species (INNS) which are summarised in Table 4.4 below.

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Table 4.4 Protected species, plants and Invasive non-native species

Species and Species Groups	Status (Importance)	Desk Study Data Overview	Distance from the Scheme
Badger	PBA	GMEU returned two records of badger setts and ten records of badger field signs or sightings.	The closest record from 2013 of a sett is 1.9km south within Sunbank Wood.
Bats	EPS, WCA, S41, SoPI (site)	GMEU returned 156 records of bats. Of these, nineteen were confirmed roosts, 114 were activity records and 24 were other records. Eight species were recorded: • Brown long-eared bat (<i>Plecotus auritus</i>) • Common pipistrelle (<i>Pipistrellus pipistrellus</i>) • Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>) • Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) • Daubenton's bat (<i>Myotis daubentonii</i>) • Noctule (<i>Nyctalus noctula</i>) • Whiskered bat (<i>Myotis mystacinus</i>) • Myotis bat sp.,	The two nearest roost records are for common pipistrelle 1.8km northeast (SJ831862). The nearest records of activity are for common, soprano pipistrelle and noctule bats 820m north (SJ819862).
Other mammals	S41	GMEU returned twelve records of hedgehog (<i>Erinaceus europaeus</i>).	Closest record of hedgehog from 2022 is 300m north (SJ822862).
Birds	WCA S.41 BoCC Red/Amber (Site)	GMEU returned of 74 records for 17 species including: Dunnock (8) Herring gull (<i>Larus argentatus</i>) (4) House sparrow (19) Skylark (<i>Alauda arvensis</i>) (2) Song thrush (6) Spotted flycatcher (<i>Muscicapa striata</i>) (1) Starling (<i>Sturnus vulgaris</i>) (19) Willow tit (<i>Poecile montanus</i>) (2) Peregrine (<i>Falco peregrinus</i>) (2) Hobby (<i>Falco Subbuteo</i>) (1) Bullfinch (8) Black redstart (<i>Phoenicurus ochruros</i>) (1) Lapwing (<i>Vanellus vanellus</i>) (1) Linnet (<i>Linaria cannabina</i>) (4)	Various locations within 2km of the Scheme.

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Species and Species Groups	Status (Importance)	Desk Study Data Overview	Distance from the Scheme
		Ring ouzel (<i>Turdus torquatus</i>) (1) Common redpoll (<i>Acanthis flammea</i>) (1) Grasshopper warbler (<i>Locustella naevia</i>) (1)	
Barn owl (<i>Tyto alba</i>)	WCA BoCC Red/Amber (Site)	GMEU returned two records of barn owl.	Closest record approximately 1.8km west and south.
Kingfisher (<i>Alcedo atthis</i>)	WCA BoCC Red/Amber (Site)	GMEU returned one record of kingfisher.	Closest record approximately 1.8 south.
Great crested newts GCN	EPS WCA	GMEU returned forty-four records of GCN from 1988. Three of those records are within the last ten years.	The closest record of GCN is within the ponds of Cotteril SBI 2km south.
Other amphibians	S41 SoPI (Site)	GMEU returned one record of common toad (<i>Bufo bufo</i>).	Single record from 2019 is 1.5km west.
Terrestrial invertebrates	S41 SoPI (Site)	GMEU returned two records of cinnabar moth (<i>Tyria jacobaeae</i>) and one record of shoulder-striped wainscot (<i>Leucania comma</i>).	Closest record of cinnabar moth is 1.5km northeast (SJ826865) and 2km southwest for shoulder-striped wainscot.
Notable flora	EPS, WCA, S41	GMEU returned one record of bee orchid (<i>Ophrys apifera</i>).	Closest record of bee orchid is 1km west (SJ800860).

The MAGIC database search returned several records of EPSL within a 2km radius. Details are present in Table 4.5 below.

Table 4.5 Granted European Protected Species Mitigation Licence applications within 2km of the Scheme

Licence reference and start / end date	Species	Grid reference	Approximate distance from Scheme	Approved impact of licence
2015-9463-EPS-MIT 06/05/2015 30/09/2020	Common pipistrelle Natterer's Bat Soprano Pipistrelle Whiskered bat	SJ81708571	800m east	Destruction of a resting place
EPSM2013-6330 03/10/2013 30/09/2016	Common pipistrelle	SJ80508479	1.3km south	Destruction of a resting place
2014-1676-EPS-MIT 11/07/2014 01/02/2015	Brown long-eared bat	SJ79708550	1.3km south west	Destruction of a resting place

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Licence reference and start / end date	Species	Grid reference	Approximate distance from Scheme	Approved impact of licence
2018-36880-EPS-MIT 20/09/2018 30/04/2019	Common pipistrelle	SJ79788508	1.5km south west	Destruction of a resting place
EPSM2010-2659 19/01/2011 31/07/2018	GCN	SJ82068502	1.5kmm southeast	Destruction of a breeding site
EPSM2009-731 01/04/2009 30/09/2009	GCN	SJ80618529	900m south	Destruction of a breeding site Destruction of a resting place
2019-38962-EPS-MIT-1 11/06/2019 31/03/2021	GCN	SJ80398531	1km south	damage of a resting place destruction of a resting place
2019-38962-EPS-MIT-2 04/09/2020 31/03/2021	GCN	SJ80398531	1km south	damage of a resting place destruction of a resting place
EPSM2009-663 27/02/2009 30/09/2009	GCN	SJ80598510	1.2km south	N/A
2015-8152-EPS-MIT 13/04/2015 31/03/2024	GCN	SJ80408450	1.7km south	damage of a resting place destruction of a resting place
EPSA2012-5275 30/05/2013 31/03/2024	GCN	SJ80408450	1.7km south	impact on a breeding site damage of a resting place destruction of a resting place
2015-8152-EPS-MIT-1 06/03/2017 30/06/2024	GCN	SJ80408450	1.7km south	damage of a resting place destruction of a resting place
2015-8152-EPS-MIT-2* 06/03/2017 30/06/2024	GCN	SJ80408450	1.7km south	damage of a resting place destruction of a resting place
2015-8152-EPS-MIT-3	GCN	SJ80408450	1.7km south	damage of a resting place

Licence reference and start / end date	Species	Grid reference	Approximate distance from Scheme	Approved impact of licence
17/06/2019 30/06/2024				destruction of a resting place

4.3 UK Habitat Classification Survey

The following section describes all habitats identified within the survey area below in Table 4.6. UKHab codes for the habitat are given in brackets. A total of four broad habitat types comprising three level three, three level four and one level five UKHab categories have been identified within the survey area.

Table 4.6 UK Habitat Types

Broad habitat type	UK Habitat classification
Grassland	Modified grassland (UKHab g4) lvl3
Woodland and forest	Other broadleaved woodland (w1g) lvl4
Heathland and shrub	Native Hedgerow (UKHab h2a) lvl3
	Dense scrub (UKHab h3) lvl3
Urban	Other Developed land (UKHab u1b6) lvl5
	Built linear features (UKHab u1e) lvl4
	Sparsely vegetated urban land (UKHab u1f) lvl 4

4.3.1 Habitat descriptions

Habitat descriptions are provided below and detailed habitat condition assessment sheets are provided in Appendix C.

A. Grassland

Modified grassland (UKHAB g4) Secondary codes- 108 (Frequently mown)

There are multiple areas of amenity grassland running parallel to Thorley Lane and the Sydney Avenue roundabout, located to the east of the Scheme. These had been recently mown and are likely to be managed frequently.

All parcels of amenity grassland share similar species composition and characteristics. The majority of the sward included: frequent perennial rye grass (*Lolium perenne*) and red clover (*Trifolium pratense*); occasional common field speedwell (*Veronica persica*), common cat's-ear (*Hypochaeris radicata*), greater plantain (*Plantago major*); rare creeping buttercup (*Ranunculus repens*), bird's-foot trefoil (*Lotus corniculatus*), dandelion (*Taraxacum officinale*), selfheal (*Prunella vulgaris*) and creeping cinquefoil (*Potentilla reptans*).

The g4 modified grassland has been assessed to be of good condition, due to meeting five criteria within the condition assessment. This is due to an absence of invasives, the presence of 6-8 vascular plants, less than 5% damage, cover of bare ground is less than 10% and cover of bracken is less than 20%.

B. Woodland & forest

Other broadleaved woodland (UKHAB w1g) Secondary codes- 29 (plantation)

Other broadleaved woodland is present throughout the project boundary, bordering Thorley Lane and the car park. The woodland is comprised of immature trees, which are self-sown with a small amount of planting evidence (uniform trees and tree guards still present). A vast majority of trees are similar in age and structure. The canopy is mostly abundant with field maple (*Acer campestre*), ash (*Fraxinus excelsior*), and hazel

(*Corylus avellana*), with other occasional species including dogwood (*Cornus sanguinea*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), dog-rose (*Rosa canina*), prunus sp. elder (*Sambucus nigra*), silver birch (*Betula pendula*), and alder (*Alnus glutinosa*), and rare pedunculate oak (*Quercus robur*) and rowan (*sorbus aucuparia*).

The understorey and ground flora in areas adjacent to the footpath through the woodland consisted of frequent ivy (*Hedera helix*), nettle (*Urtica dioica*), saplings of the above mentioned species, with occasional wood-avens (*Geum urbanum*) and rare yellow flag iris (*Iris pseudacorus*), hedge mustard (*Sisymbrium officinale*), herb-Robert (*Geranium robertianum*), bramble (*rubus fruticosus* agg.) and teasel (*Dipsacus sylvestris*).

The woodland is immature in age, with a few exceptions of mature Scots pine (*Pinus sylvestris*), and semi-mature silver birch trees. A large percentage of the woodland is native with multiple areas of cotoneaster (*Cotoneaster* spp.) invasive non-native shrubs present next to the footpaths. There is no sign of grazing/human impact and less than 20% of the woodland had open space. There is little to no standing deadwood and no signs of enrichment.

The w1g other broadleaved woodland is assessed to be of poor condition, scoring 23 out of a possible 39. This is due to multiple poor scores in the condition indicators, with invasives present (*Cotoneaster* spp.), no coppice regrown, no recognisable woodland NVC plant community and no veteran trees present, along with other indicator assessment scores.

C. Heath and shrub

Native hedgerow (UKHab h2a) Priority habitat. secondary codes 108 (frequently mown), 116 (falled hedgerow)

There is one native hedgerow present within the project boundary, running along the northern edge of Thorley Lane for approximately 160m, adjacent to a car park outside of the project boundary for the Scheme. The composition of the hedgerow is made up of frequent mature willow (*salix* sp.), maple, prunus spp., hazel and hawthorn species.

The ground flora leading up to the hedgerow forms part of g4 modified grassland as described in section A.

The h2a native hedgerow has been assessed to be of good condition, meeting all the criteria on the condition assessment form. The hedgerow is taller and wider than 1.5m average along its length, the gap between the ground and base of canopy is less than 0.5m for 90% of its length, and any gaps within the hedgerow make up less than 10% of its total length. There is over 1m of undisturbed ground with perennial herbaceous vegetation for over 90% of its length, and there is more than 20% cover of the area of undisturbed ground containing plant species indicative of nutrient enrichment. There are no invasive species present within the hedgerow, with no damage present to the hedgerow from human activities.

Dense Scrub (UKHab h3) secondary codes 201 (young trees – planted)

There are multiple areas of dense scrub present within the project boundary, with multiple sections present within the car park central to the site, and two areas present on the eastern edge of the car park bordering the g4 modified grassland and w1g6 other broadleaved woodland.

The dense scrub is made up of dogwood (*Cornus sanguinea*), with the sections of dense scrub present within the car park containing planted tree species including ash and field maple.

The h3 dense scrub has been assessed to be of poor condition, meeting only two criteria under the condition assessment sheet (an absence of invasive plants), and a mixture of ages of plants present.

D. Urban

Other developed land (UKHab u1b6) secondary codes 804 (car park), 800 (road)

There is a car park central to the Scheme containing areas of dense scrub, separated from the area of woodland and modified grassland via a fence.

Thorley Lane runs in the north of the Scheme, merging into Runger Lane and carrying on in a south-westerly fashion outside of the project boundary. Thorley Lane adjoins the Sydney Avenue roundabout to the south-east of the Scheme.

Certain habitats do not require a condition assessment due to their very low distinctiveness.

Built linear features (UKHab u1e)

Multiple pavements and footpaths run throughout the site and along the south of Thorley lane.

Certain habitats do not require a condition assessment due to their very low distinctiveness.

Sparsely Vegetated urban land (UKHab u1f) secondary code 81 (ruderal)

A small area of sparsely vegetated urban land is present within the project boundary running along the southern edge of the w1g other broadleaved woodland to the west of the car park. This u1f sparsely vegetated land continues outside of the project boundary running adjacent and in-between the woodland strip and airport itself. This area had frequent ruderal species including teasel, rosebay willowherb (*Chamerion angustifolium*), spear thistle (*Cirsium vulgare*), bramble, oxeye daisy (*Leucanthemum vulgare*), ragwort (*Senecio jacobaea*), sorrel (*Rumex acetosa*), and other smaller species including frequent dandelion, nettle, red clover and tree saplings of oak and hazel.

The u1f sparsely vegetated urban land has been assessed to be of good condition, meeting all criteria. This is due to a varied vegetation structure containing flowering species and no invasive species.

4.4 Protected and notable Species

4.4.1 Amphibians (including great crested newt)

The vegetated areas of the site and the adjacent habitats within and beyond the survey area offer potential terrestrial habitat for amphibians including great crested newt. However, there are no waterbodies present within the survey area, with the closest waterbodies 800m to the west and east. The site is isolated from these waterbodies via the airport, multiple roads and the M56 motorway, which will all act as barriers to dispersal for any amphibians within these waterbodies. Given the distance and relative location of ponds great crested newt are considered to be likely absent from the site. Common toads travel significantly greater distances from their breeding ponds and are less averse to crossing roads, and as such are considered to be potentially present within areas of the woodland.

4.4.2 Badger

The Scheme is within a heavily built urban environment with major highways and roads surrounding which limits the likelihood of badgers being present. However, the woodland within the survey area is considered suitable for badger sett creation, but lacks suitable open grassland, arable fields and linear corridors to support foraging badgers. A badger survey was undertaken, and no evidence of badger activity was recorded within the survey area. It is considered unlikely that badgers are utilising the habitats within the Scheme footprint.

4.4.3 Bats

A bat roost potential survey of trees was conducted and no potential roosting habitats were found. No buildings or structures were present within the survey area. The habitats present, namely the woodland, may support low suitability foraging and commuting habitat for bats, given the location is within a heavily built urban environment with transport infrastructure (Manchester Airport & M56 etc) likely causing significant disturbance. Therefore, species (if present) are predicted to be species which are more tolerant to disturbance such as common pipistrelle.

4.4.4 Otter and water vole

There are no habitats to support otter or water vole within the survey area and there are no records of otter or water vole within 2km. These species are absent from the survey area and are not considered further within this report.

4.4.5 Other mammals

The woodland, scrub and grassland habitat may support foraging / resting and hibernation opportunities for other mammals, such as European hedgehog.

4.4.6 Breeding birds

The survey area provides suitable nesting opportunity for tree and scrub nesting bird species. Additionally, the grassland and scrub offer foraging habitat for common and widespread bird species.

4.4.7 Reptiles

Although the habitats within the survey area such as the woodland edge may superficially appear to offer opportunities to support common reptile species the Scheme is isolated and has limited on and offsite connectivity. There are no records of reptiles within the 2km study area. Reptiles are considered to be absent from the Scheme and are not considered further within this report.

4.4.8 Terrestrial and aquatic invertebrates

The habitats comprising the Scheme are unlikely likely to support notable invertebrate assemblages/ populations given its urbanised environment and the nature of the habitats present. The woodland is dominated by immature and semi mature trees species, with no mature specimens present. There is a poor structure to the woodland with very dense areas of vegetation, with poor ground flora present with no open areas and minimal dead wood. The modified grassland habitat is intensely managed. The habitats within the Scheme are likely to support common and widespread invertebrates only.

4.4.9 Notable Flora

The habitats within the survey area are unlikely to support notable plant species and no notable species were recorded during the survey.

4.4.10 Invasive species

An unknown species of cotoneaster was recorded within the woodland and car park in multiple locations along the footpath. These were within the project boundary for the Scheme, and are shown in Figure 1 and located at the following OS Grid references (east to west): SJ 80909 86081, SJ 80940 86091, SJ 81076 86104, SJ 81148 86083, SJ 81133 86097, and SJ 81143 86067.

No other invasive species were recorded during the survey.

5. Evaluation

5.1 Designated Sites for Nature Conservation

5.1.1 Statutory Designated Sites

There are no European designated sites within 10km of the Scheme and there is one national designated site within 2km of the Scheme, Cotteril Clough SSSI, which is assessed as being of National importance for biodiversity.

5.1.2 Non-Statutory Designated Sites

There are seven non-statutory designated sites within 2km of the Scheme. Three designated sites are within 1km of the Scheme, including Park Wood SBI, Ponds at Davenport Green SBI and Davenport Green Wood SBI. Ponds are present within the Ponds at Davenport Green SBI, and as Ancient woodland forms part of the Davenport Green Wood SBI, these are evaluated as of National importance. Park Wood SBI is considered of County importance.

5.2 Habitats

5.2.1 Desk study

The desk study found that deciduous woodland, HoPI, is present within the project boundary and 50m buffer for the Scheme. No other notable habitats were present within the project boundary and 50m buffer. As this habitat is present in the survey area, it has been evaluated as part of the field survey section.

5.2.2 Field Survey

Table 5.1 below provides an evaluation of all the habitat types present within the survey area (up to 50m from the Scheme). Much of the survey area was dominated by other broadleaved woodland and habitats of limited botanical / ecological value such as built environment and modified grassland, with a small area of ruderal vegetation. These habitats are not considered to be of ecological importance.

Within the survey area is a native hedgerow, which is a HoPI and is of County importance. The area of other broadleaved woodland running parallel to Thorley Lane is also of County importance. Other habitats within the area are of less than local importance.

Table 5.1 Evaluation of habitat types recorded within the survey area

Broad habitat type	UK Habitat classification	Evaluation
Grassland	Modified grassland (UKHab g4)	Less than local
Woodland and forest	Other broadleaved woodland (w1g)	County
Heathland and shrub	Native Hedgerow (UKHab h2a)	County
	Dense scrub (UKHAB h3)	Less than local
Urban	Other Developed land (UKHab u1b6)	Less than local
	Built linear features (UKHAB u1e)	Less than local
	Sparsely vegetated urban land (UKHAB u1f)	Less than local

5.3 Species

The survey area offers some limited potential for protected / notable species (refer to section 4.3). The survey area offers foraging and commuting opportunities for common bat species although no bat roost potential was identified during the PEA. The survey area offers nesting and foraging opportunities for common bird species. The bat and bird populations associated with the Site are considered to be of Site to Local

importance. No evidence of badger was found during the PEA and this species is considered unlikely to utilise the site. Habitat suitability assessments identified no / negligible opportunities for other protected species including otters, water vole, reptiles and great crested newt.

6. Conclusion and recommendations

6.1 Designated Sites

There are no European statutory designated sites for wildlife within 5km of the Scheme. There is one national designated site within 2km of the Scheme, Cotteril Clough SSSI, which is assessed as being National importance for biodiversity. The Scheme falls within the Natural England SSSI Impact Risk Zone for this SSSI and the development type (infrastructure-road construction) is listed within the criteria for potential impacts. Therefore, Natural England will need to be consulted. Owing to the local nature of the proposed works and limited changes in traffic once the works are complete, the construction and operation of the site would not have any significant effects on air quality (EIA Screening Report, Jacobs 2023b), therefore air quality impacts can be discounted. Given the small-scale nature of the Scheme, the distance and relative location of the Scheme (the SSSI is located 1.6km south of the Scheme, beyond the highly urbanised area of Manchester Airport and associated developments) and the reason for designation (primarily designated for its woodland and grassland habitat and associated botanical interest but also noted to support notable bird and invertebrate fauna), the Scheme would not result in significant impacts on the integrity of the SSSI or its qualifying features.

6.2 Non-Statutory Designated Sites

Seven non-statutory designated sites ranging from Less than Local to County importance were identified within 2km of the Scheme. These sites are largely designated for their habitats, botanical interest and associated bird populations. Given the reasons for designation, the small-scale nature of the Scheme, the nature and relative location of the Scheme within a highly urbanised environment, no impacts to such sites are anticipated.

6.3 Habitats

A total of four broad habitat types comprising three level three, three level four and one level five UKHab categories have been identified within the survey area, with two being of County importance (Native hedgerow and other broadleaved woodland). This is due to them being HoPI.

6.3.1 Native Hedgerow

The hedgerow to the north of Thorley Lane is a HoPI. Due to the hedgerow being a HoPI, it is deemed to be of County importance, and should be retained where possible. Under current Scheme design, this hedgerow is not to be affected. As such, good practice should be followed to avoid indirect impacts to the hedgerow, with root protection zones and a suitable buffer implemented to avoid such impacts. Additionally, appropriate pollution prevention measures should be implemented during the construction phase which can be outlined within a Construction Environment Management Plan (CEMP).

If the native hedgerow is to be removed, a dedicated hedgerow survey and assessment under The Hedgerow Regulations 1997 will be required.

6.3.2 Woodland

The other broadleaved woodland is a HoPI and is of County importance, and should be retained where possible. If removal is required to facilitate the Scheme, the loss/impact should be kept to a minimum wherever possible. All retained trees should be protected via a tree protection zone in accordance with BS5837:2021 standard to prevent damage during the construction phase. Any loss of this habitat should be compensated for by replanting new trees on site of similar species composition as the existing woodland, as determined through a biodiversity net gain assessment.

The scrub, remaining grassland and urban habitat types are valued at less than local, and as such offer minimal ecological value.

6.4 Protected and Notable Species

GMEU returned numerous records for a range of taxa within 2km of the survey area. Additionally, the UKHab survey identified few habitats which may support protected and notable species such as bats and nesting birds.

6.4.1 Amphibian

The woodland may support terrestrial opportunities for amphibians located within the local area, however no waterbodies are present within the survey area or 50m buffer, with the closest waterbody 800m west and east of the project boundary for the Scheme, and the nearest desk study record for GCN being 900m south. Due to the isolated nature of the survey area due to surrounding infrastructure and distance to breeding habitat, no impacts to amphibians are anticipated.

6.4.2 Badger

No evidence of badger was found during the habitat survey and no evidence of badger was recorded during the badger survey. The desk study records returned two confirmed setts approximately 1.9km south of the Scheme. The woodland may provide sett creation opportunity and sub-optimal foraging grounds. However, given the Scheme is within a heavily built urban environment with limited (safe) connectivity to suitable habitat for badger, it is considered highly unlikely badger utilise the survey area. Nevertheless, badger is a highly mobile species and may move into the survey area at any time. Therefore, it is recommended that a pre-construction badger sett check is undertaken by a suitable qualified ecologist 72 hours prior to the commencement of any construction activities.

6.4.3 Bats

The habitats comprising the survey area provide foraging and commuting opportunities for bats. Numerous records of bats were returned, with the closest activity records being 820m north of the Scheme and the closest roost record was 1.8km north-east of the Scheme. A ground roost potential survey was undertaken and no potential roosts were found during the survey.

Foraging and commuting bats may still be present within the areas of the proposed Scheme. Therefore, night work should be avoided, wherever possible, to reduce the risk of disturbance impacts to, foraging and commuting bats. Any proposed lighting installation should be undertaken in accordance with Guidance Note 08/18; Bats and artificial lighting in the UK (Bat Conservation Trust, 2018).

6.4.4 Birds

The woodland and scrub habitat provide suitable nesting opportunities for common and widespread species that are associated with such habitats. Evidence of nests were recorded during the survey and a few bird species were recorded during the field survey. Additionally, numerous records of birds were returned for the wider 2km study area (see section 4.1). The Scheme is likely to result in minor loss of woodland and scrub habitat, particularly to the southeast which has the potential to negatively impact on nesting birds.

It is recommended that GI works and initial construction activities (including all vegetation clearance) are undertaken outside of the nesting bird season (March – September inclusive) to avoid the risk of committing an offence. If such timescales cannot be accommodated, a check for the presence of active nests should be carried out by a suitably qualified ecologist, no longer than 24 hours prior to clearance works. Should active nests be identified an appropriate buffer zone should be implemented until chicks have fledged and the nests have naturally disbanded.

6.4.5 Invasive species

Cotoneaster species was recorded within the survey area. Some species of cotoneaster are listed on Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to '...plant or otherwise cause the species to grow in the wild'. This includes spreading or transferring contaminated soil from one area to another.

If works are proposed within the general area of such invasive species, the area should be demarcated with a fence to prevent spreading the plant and / or contaminated soil. Invasive plant species should be subject to removal / control with the aim to eradicate the invasive species from the area. This should be undertaken in accordance with specialist advice.

6.5 Biodiversity Net Gain

Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) will have to deliver at least 10% biodiversity net gain from 12 February 2024 (2025 for NSIPs). BNG must be calculated using a Defra Statutory Biodiversity Metric. A net gain plan must be approved. Created, retained and enhanced habitat must be secured for at least 30 years via obligations/conservation covenant.

The MAG internal requirements for BNG are currently being developed and opportunities are being explored to contribute towards BNG.

In accordance with the mitigation hierarchy, the Scheme will be designed to avoid impacts and to mitigate and provide compensation for biodiversity losses wherever possible. Given the constrained space, it is envisaged that high quality habitat creation and / or enhancement will be required within the wider MAG estate to achieve BNG targets. If a 10% net gain cannot be achieved on-site / within the MAG estate, the acquisition of additional land or purchase of biodiversity units may be required.

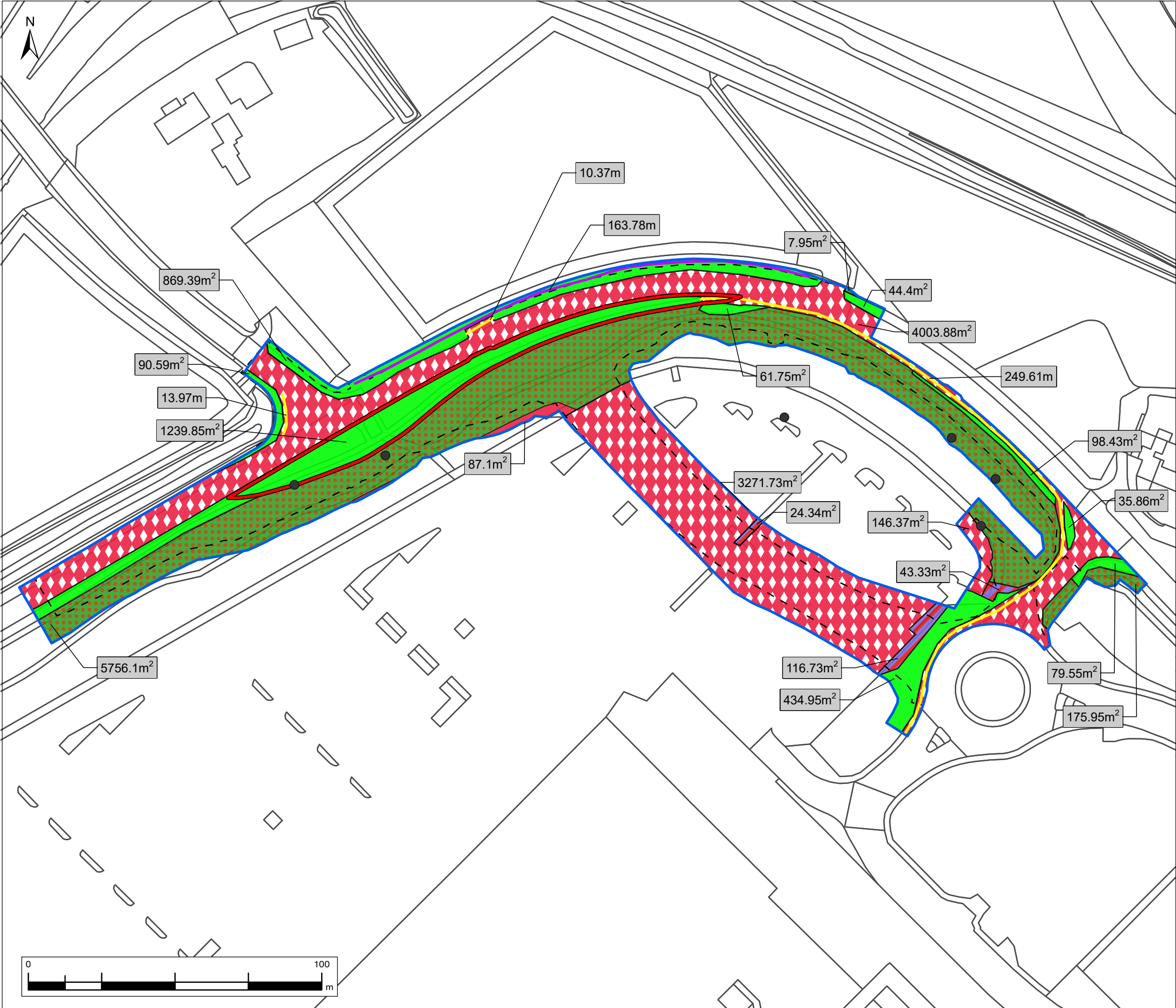
The principle of additionality in respect of calculating BNG will need to be fully considered. That is, only those actions that would have not otherwise occurred should be included within biodiversity net gain calculations. If biodiversity targets cannot be achieved on site / within the MAG estate or through the acquisition of off-site areas, the purchase of biodiversity net gain credits via an approved Scheme may be required.

7. References

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Appendix A. Figures

Figure 1: Extended UK Habitats Classifications Map



Legend

- Project Boundary
- Planning Application Boundary
- Approximate Alignment Footprint

UK Habitats

- g4 - Modified grassland
- h3 - Dense scrub
- u1b6 - Other developed land
- u1f - Sparsely vegetated urban land
- w1g - Other woodland, broadleaved

UK Habitats (Linear Features)

- h2a - Hedgerow (priority habitat)
- u1e - Built linear features
- Cotoneaster spp.*

Habitat Code	Secondary Code	Condition
g4	108 - Frequently mown	Good
h2a	108 - Frequently mown; 116 - Flailed hedgerow	Good
h3	201 - Young trees (planted)	Poor
u1b6	800 - Road; 804 - Car park	n/a
u1f	81 - Ruderal	Good
w1g	29 - Plantation	Poor

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C2 - Internal

3.0	30/04/2024	Update per Client Comments	TM	JC	BF	NL
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Drawing Title: Preliminary Ecological Appraisal Extended UK Habitats Classifications Map

Drawing No. MT2RSYDN-MAN.LG.00.ZZ-JAC-G-DE-LAND-0001	Drawing Status: S4 - For Stage Approval
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FIGURE 1

Appendix B. Legislation and Policy

Legislation relating to European Protected Species (e.g. bats and great crested newt)

European Protected Species and their resting places (e.g., bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017 (as amended).

The Habitats Regulations 2017 (as amended) and WCA 1981 (as amended) are pieces of domestic legislation that transpose the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Birds Directive (Council Directive 2009/147/EC) (known as the Nature Directives). Species of European (International) conservation importance are listed on Annexes II, IV and V of the Habitats Directive and Annex I of the Birds Directive. The Habitats Regulations 2017 were amended in 2018 and again on 1st January 2021 when the Conservation of Habitats and Species (Amendment) EU Exit Regulations 2019 were adopted following the United Kingdom officially leaving the European Union. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended).

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to sale, possession and control of wild animals listed in Schedule 5.

Under the Conservation of Habitats and Species Regulations 2017 (as amended) it is an offence to:

- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or;
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;
 - to significantly affect the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal; or,
- Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Several species, including great crested newt and several species of bat, are listed as a Species of Principal Importance (SoPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

European Protected Species Mitigation Licensing (e.g. great crested newts and bats)

Where it is likely that the Scheme would result in contravention of this legislation, a EPS mitigation licence would be required to allow the works to proceed. As part of this process, the application must meet 'three tests' for licensing under the Conservation of Habitats and Species Regulations 2017 (as amended). Planning guidance and recent case law also require the Local Planning Authority (LPA) to address these three tests when deciding whether to grant planning permission. The three tests are as follows:

- Regulation 55 (2) (e) states that a derogation license can only be issued for preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- Regulation 55 (9) (a): that there is no satisfactory alternative; and
- Regulation 55 (9) (b): that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species, smooth newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*) receive limited protection through section 9(5) only which makes selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

The Wildlife and Countryside Act (WCA) 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. All bird species are protected under elements of Section 1 of the Act and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally takes, damages or destroys the nest of any wild bird included in Schedule ZA1 (for specific birds that reuse their nests)
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird; and,

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (e.g. peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), little ringed plover (*Charadrius dubius*) and black redstart (*Phoenicurus ochruros*)) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

Several bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Legislation relating to badger

Badgers (*Meles meles*) are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett; and,
- Disturb a badger when it is occupying a sett.

These provisions have implications for construction or preparation works undertaken in the vicinity of an active sett and may be confounded by distance from the sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable, then a licence may need to be obtained from Natural England before any works commence.

Legislation relating to invasive plant species

Several non-native invasive plant species such as Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), Japanese rose (*Rosa rugosa*), variegated yellow archangel (*Lamium galeobdolon*), rhododendron (*Rhododendron ponticum*) and Japanese knotweed (*Reynoutria japonica*) are

listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to '...plant or otherwise cause the species to grow in the wild'. This includes spreading or transferring contaminated soil from one area to another.

Estate Managers and landowners have a duty to pro-actively treat knotweed outbreaks. Under the Natural Environment and Rural Communities Act 2006 (NERC), subsection 14ZA (1), makes it is an offence to sell, offer or expose for sale, or to have in one's possession or transport for the purpose of sale, any Schedule 9 animal or plant or anything from which such an animal or plant can be propagated, including rhizomes of Japanese knotweed. Under subsection 14ZA (2) it is also an offence to publish or cause to be published any advertisement for the purchase or sale of these animals and plants.

The Environmental Protection Act 1990 (EPA 1990) contains several legal provisions concerning controlled waste. Any Japanese knotweed contaminated soil or plant material that is intended for discard is likely to be classified as controlled waste.

The Environmental Protection (Duty of Care) regulations 1991 also imposes a 'duty of care' on persons concerned with controlled waste, which includes any materials incorporating Japanese knotweed including soil, grass cuttings, general wastes and ash arising from the burning of knotweed. The duty applies to any person, who produces, imports, carries, keeps, treats or disposes of controlled waste. Failure to appropriately dispose of any material containing Japanese knotweed may lead to prosecution under Section 33 and 34 of the EPA 1990 and Section 14 (2) of the Wildlife & Countryside Act 1981 (as amended).

If knotweed stands are to be treated with herbicides, The Control of Pesticides Regulations (1986) applies. These regulations require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. If pesticides are to be used in or near to a watercourse, the Environment Agency should be contacted, and approval must be sought (application to use herbicides in or near water).

Waste leaving the site must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal. Waste must be transferred to an authorised person, who is either a registered waste carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

Additional legislation regarding the transport of Japanese knotweed contaminated materials is covered by the Hazardous Waste Regulations 2005 (HWR 2005). This contains provisions about the handling and movement of hazardous waste. Consignment notes must be completed when any hazardous waste is transferred, which includes details about the hazardous waste properties and any handling requirements. Untreated Japanese knotweed is not classed as hazardous waste, but material containing knotweed which has been treated with certain herbicides, may be classified as hazardous waste.

If any waste soil or knotweed is sent for landfill either before or after treatment, it must go to a landfill that is authorised to receive it.

National Planning Policy Framework

Chapter 15 (Conserving and enhancing the natural environment) of the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021) sets out the Government's planning policies and principles for habitats and biodiversity and how these should be applied. It sets out the need to consider the following (paraphrased).

- Protecting and enhancing valued landscapes, geological conservation interests and soils.
- Recognising the wider benefits of ecosystem services.
- 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, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- Preventing both 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.

- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Local Planning Policy and Biodiversity

Local Authorities have a requirement to consider biodiversity and geological conservation issues when determining planning applications under the following planning policies.

Manchester Core Strategy (2012-2027)

The GM Core Strategy sets out the land use planning policies of the Greater Manchester borough and states the following under Policy EN 15 in regard to 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 to:

- Sites with international or national designations for their biodiversity value. Manchester contains one Site of Special Scientific Interest (SSSI) (Cotteril Clough); there is a Special Area of Conservation (SAC) and an SSSI just over the border in Oldham (both on the Rochdale Canal within Oldham);
- other sites of biodiversity value, including Sites of Biological Importance (SBIs) and Local Nature Reserves (LNRs); Manchester currently has 35 SBIs (including the Rochdale and Ashton Canals) and 7 LNRs; priority habitats found within Manchester, as listed in the Manchester Biodiversity Strategy and included in the Greater Manchester Biodiversity Action Plan (GM BAP);
- protected and priority species, as listed in the Manchester Biodiversity Strategy and included in the Greater Manchester Biodiversity Action Plan (GM BAP);
- sites that are recognised for their geological importance;
- the Council's objective to protect and conserve the City's existing trees and woodlands and the aim for a net increase in trees across the City.

Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-Site or adjacent to the Site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate, with reference to:

- the Manchester Biodiversity Strategy, which provides further details of priority habitats within Manchester and opportunities for biodiversity enhancement including corridors such as the Mersey, Medlock and Irk river valleys, the canals and disused railway lines and areas of managed greenspace particularly in parks;
- the Green Infrastructure Framework for Greater Manchester, which encompasses an ecological framework that seeks to guide and inform habitat creation and repair, 200 12 Objective 6 Environment Manchester City Council | Manchester Core Strategy 2012 to 2027 including identifying large 'biodiversity opportunity areas' including the Moston Brook Corridor and Knutsford Vale;
- the Open Space, Sport & Recreation Study, which identifies areas where there is a deficit of natural and semi-natural greenspace, opportunities for green corridors and other linkages;
- Manchester's Climate Change Action Plan;
- the Strategic Flood Risk Assessment (SFRA) for Manchester;
- the Habitats Regulations Assessment (HRA) for Manchester, which gives detailed consideration to Special Areas of Conservation (SACs), including the Rochdale Canal SAC just outside the district boundary;
- the River Basin Management Plan for the North West; and
- the Manchester Tree Strategy.

Any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal, assessed against other LDF policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and/or compensation.

Development should wherever possible seek to maintain, enhance or restore existing geology”.

Greater Manchester (GM) Biodiversity Action Plan

The Greater Manchester Biodiversity Action plan (GM BAP) aims to promote the conservation, protection and enhancement of biological diversity in Greater Manchester. The aims and targets of the plan target the following habitats: various types of grassland, ancient/species-rich hedgerows, woodlands, lowland heath, managed greenspace, reedbeds, rivers, canals and ponds.

Additionally, the plan also states particular species of concern locally within GM and include great crested newt, water vole, brown hare, pipistrelle bats, eight protected bird species, floating water plantain, grass-wrack pondweed, and the black poplar.

Appendix C. Habitat Condition Assessments

Modified Grassland (g4)

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	Y	6-8 vascular plant species per m ²
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N	Regularly mown, uniform sward height.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	No scrub
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y	No physical damage
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Y	Bare ground minimal
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y	No bracken

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G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Y	No invasive non-native species
Essential criterion achieved (Yes or No)			Y
Number of criteria passed			6
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	Y	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		

Other Broadleaved Woodland (w1g)

Condition Assessment Criteria						
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	Notes (such as justification)
A	Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.	2	Two age classes

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B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in less than 40% of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .	2	Some browsing pressure
C	Invasive plant species	No invasive species ³ present in woodland.	<i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, and other invasive species ³ <10% cover.	<i>Rhododendron</i> or cherry laurel present, or other invasive species ³ ≥10% cover.	2	Cotoneaster present
D	Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.	3	Six native tree species plus native shrub species
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native ⁵ .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native ⁵ .	<50% of canopy trees and <50% of understory shrubs are native ⁵ .	3	Predominantly native
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space ⁶ . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted ⁷ .	21 - 40% of woodland has areas of temporary open space ⁶ .	<10% or >40% of woodland has areas of temporary open space ⁶ . But if woodland <10ha has <10% temporary open space, please see Good category ⁷ .	3	Woodland less than 10ha
G	Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .	1	No observable regeneration

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		coppice regrowth.				
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback ⁹ .	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	2	Some tree mortality
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.	1	No recognisable woodland ground flora community
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .	2	Two storeys
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	1	No veteran trees
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	1	Limited deadwood

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M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground ¹⁴ .	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground ¹⁴ .	1	High levels of disturbance
Total Score (out of a possible 39)					24	
Condition Assessment Result				Condition Assessment Score	Result Achieved	
Total score >32 (33 to 39)				Good (3)	Poor	
Total score 26 to 32				Moderate (2)		
Total score <26 (13 to 25)				Poor (1)		

Native hedgerow (h2a)

Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)		Criteria - the minimum requirements for 'favourable condition'	Criteria description	Criterion passed (Yes or No)	Notes (such as justification)
Core groups - applicable to all hedgerow types					
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	Y	Greater than 1.5m tall

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A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Y	Greater than 1.5m wide
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y	No gaps
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	Y	No gaps
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden	Y	Buffer strip present

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			footpaths, poached ground etc. can limit available habitat niches.		
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	Y	Limited signs of nutrient enrichment
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Y	No invasive or neophyte species
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	Y	No excess damage

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees			
Category	Category Requirements	Metric Score	

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Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3	
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2	
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1	
Score achieved:		3	

Dense scrub (h3)

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	N	Not a recognisable community
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	Y	Varied ages present

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C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Y	No invasive or suboptimal condition species
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	N	No developed edge
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	No clearings
Number of criteria passed			2
Condition Assessment Result (out of 5 criteria)		Condition Assessment Score	Score Achieved x/√
Passes 5 criteria		Good (3)	
Passes 3 or 4 criteria		Moderate (2)	
Passes 2 or fewer criteria		Poor (1)	Y

Sparsely vegetated urban land (u1f)

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all urban habitat types :			
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	Y	Varied structure
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	Y	Variety of beneficial species
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Y	No invasive non-native species and limited detrimental species

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Essential criteria relevant for habitat type achieved (Yes or No)			Y
Number of criteria passed			3
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	
Results for habitats requiring assessment of 3 core criteria only (all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs):			
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C.	Good (3)	Y	
• Passes 2 of 3 core criteria; OR • Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)		
• Passes 0 or 1 of 3 core criteria.	Poor (1)		