

Technical Note

Project MIX Manchester
Subject Preliminary Ecological Appraisal Technical Note
Project no 0061610
Date 18 October 2024

Revision	Description	Issued by	Date	Approved (signature)
02	Preliminary Ecological Appraisal Technical Note	EC	18/10/2024	AG

1 Introduction

This Technical Note has been prepared to summarise the findings of the UK Habitat Survey and Preliminary Roost Assessment (PRA) of the MIX Manchester Phase 1 Masterplan proposed development, hereafter referred to as the 'site'. It also provides broad recommendations for any further species surveys and mitigation measures which may be required as a result of the initial findings of the habitat survey undertaken on 17th September 2024.

This Technical Note is intended to support the design of the proposed development regarding the ecology of the site prior to planning submission. It is not intended to be submitted as part of the planning submission documents. A formal Ecological Impact Assessment (EclA) report or Environmental Statement (ES) Chapter (subject to the outcomes of EIA scoping) will need to be produced following the frozen design scheme and incorporation of any mitigation features, for the planning application.

An assessment of the baseline Biodiversity Net Gain (BNG) value of the site is included in this technical note, using the DEFRA statutory metric.

1.1 Site context

1.1.1 Existing conditions

The site is located just north of Manchester Airport, with a central OS Grid reference of SJ 81874 85875 (Figure 1-1). The eastern parcel of the site is situated on previously cleared land with recent grassland planting, tarmacked path, and scrub planting. The eastern parcel can be access via a footbridge at the south of the site boundary. The western parcel is currently being used as a carpark and is in frequent use. Enterprise Way separates the two parcels with pedestrian crossing allowing access to the western parcel from the east. The site is bordered to the north by Enterprise Way, Thorley Lane, a residential area, and Painswick Park Meadow, which is designated as a Site of Biological Importance (SBI). To the east, the site is adjacent to previously cleared land, while the A56 motorway and airport-related infrastructure lie to the south and west. The wider area features a mix of residential, commercial, industrial, and transportation infrastructure, primarily associated with the airport.

1.1.2 Proposed development

The Phase 1 Masterplan proposals will result in the clearance of land within the eastern parcel to accommodate the construction of a life sciences, innovation and advanced manufacturing campus, comprising offices, laboratories, mid-tech units, and MSCP. as well as surrounding landscaped areas. The proposed development will be submitted as a hybrid planning application.

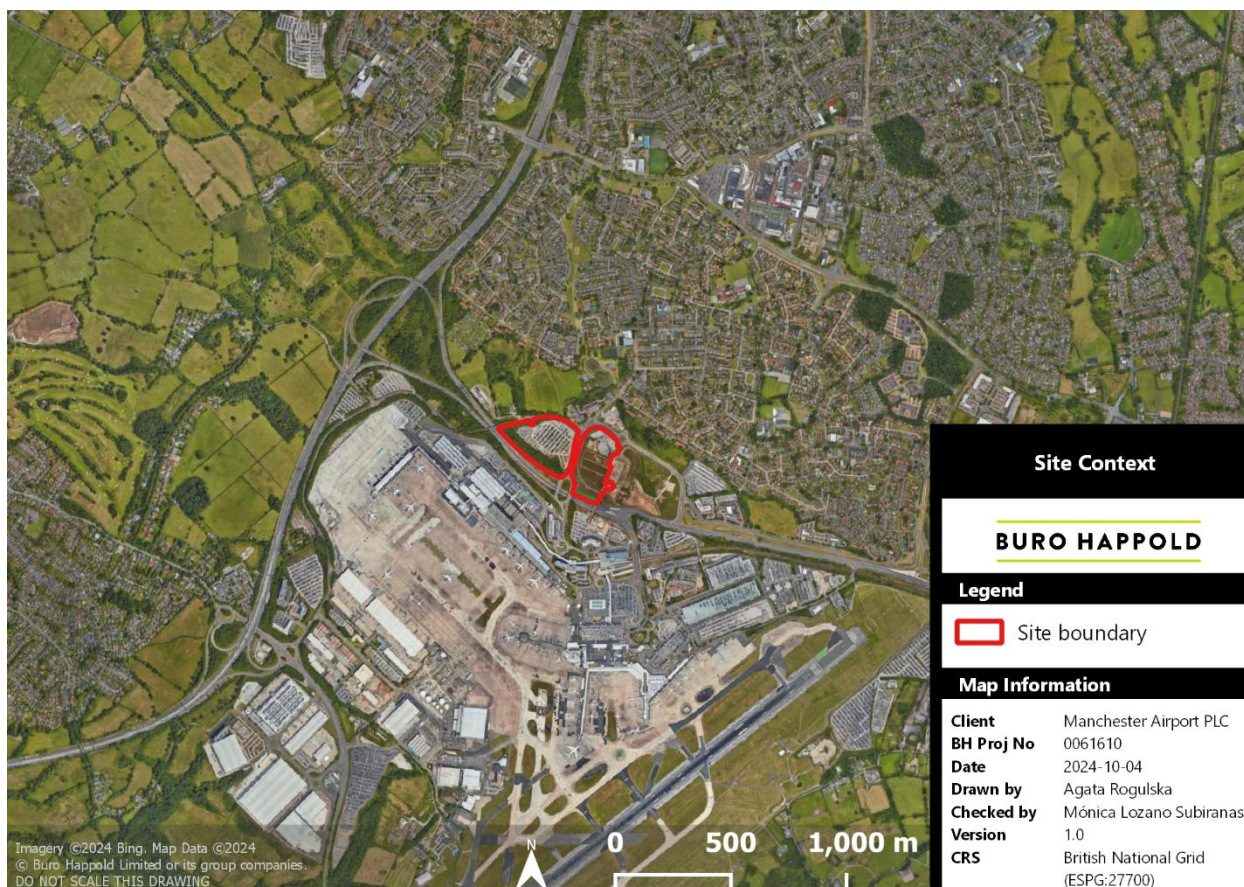


Figure 1-1 Site Location within the wider landscape

1.2 Methods

A UK Habitat Survey of the site was undertaken on the 17th September 2024 in accordance with published best practice guidance.¹ A habitat condition assessment of the habitats on site was carried out to undertake the Biodiversity Net Gain (BNG) calculations, where each habitat's condition was assessed using the Statutory Biodiversity Metric Condition Assessment Sheets.² The initial site visit also included a search for the presence or potential presence of protected and priority species. In addition, an external Preliminary Roost Assessment (PRA) was undertaken on all trees and built features on site for their potential to support roosting bats in accordance with best practice.³

Buro Happold completed a desk study comprising an ecological data search from the Greater Manchester Ecology Unit and Multi-Agency Geographic Information for the Countryside (MAGIC), to identify the presence of non-statutory designated sites and records of protected and priority species within 1 km of the site. The ecological data search was further extended to identify statutory designated sites, priority habitats and records of granted protected species licenses within 2 km of the site.

On site ecological features have been considered for their level of importance within a defined geographical context. Habitat types of European (International) conservation importance are listed on Annex I of the Habitat Directive. Habitat types that are considered priorities for conservation in England are listed as habitats of principal importance under section 41 of the Natural Environment and Rural Communities Act 2006. Locally important habitats on site were identified using the Greater Manchester Biodiversity Action Plan.⁴

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

² Department for Environment, Food & Rural Affairs (2023) Statutory biodiversity metric tools and guides. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

³ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.

⁴ Greater Manchester Biodiversity Action Plan. Available at https://gmlrc.org/projects/gm_bap/

1.3 Limitations

This technical note is based on the site boundary sent to Buro Happold via email on 12th October 2024. Any subsequent changes to the boundary may require a reassessment of the potential impacts of the proposed development, as well as the requirements for avoidance, mitigation, and enhancement.

Due to the density of the woodland area, the assessment could only be conducted from its edges, which limited the ability to assess for invasive species. Due to limited access to woodland, a full PRA could not be undertaken. A full PRA will be required if the proposed scheme will result in impacts to the woodland.

Botanical surveys are generally undertaken between spring and summer, taking into account habitat type, location and weather conditions. The site visit was undertaken 17th September 2024 which is still within the botanical survey window with most common plant species still identifiable. However, due to dry conditions on site, a full botanical survey and species list could not be completed. Therefore, some species may have been missed (including non-native invasive plants).

Some on site habitats, such as open mosaic habitat and grassland, require a detailed botanical survey to provide accurate habitat areas and habitat condition. As a detailed botanical survey could not be completed at the time of survey these habitat types have been given an approximate area. Further detailed botanical surveys are recommended to provide accurate habitat areas. Full details are provided below in section 3.4 Further Surveys.

2 Results

2.1 Designated sites

The desk study identified one statutory designated site within a 2 km radius of the site, the Cotterill Clough Site of Special Scientific Interest (SSSI), located 1.6 km from the site (Figure 2-1). Cotterill Clough SSSI comprises lowland mixed deciduous woodland and wet woodland and supports diverse bird populations and invertebrate communities.

One non-statutory designated site, Painswick Park Meadow, a Site of Biological Importance (SBI), was Identified within a 1 km radius, 185 m from the site boundary. Painswick Park Meadow is located within a commodity greenspace but is managed to the benefit of local wildlife.

Painswick Park Meadow features a diverse range of habitats, including neutral grassland, a pond, old hedgerows, and semi-natural broadleaved woodland. The grassland is species-rich, hosting various grasses and orchids, while the woodland includes trees like ash, oak, and silver birch. The site supports a variety of flora and fauna, including several UK Biodiversity Priority species, and is well-used by the public.

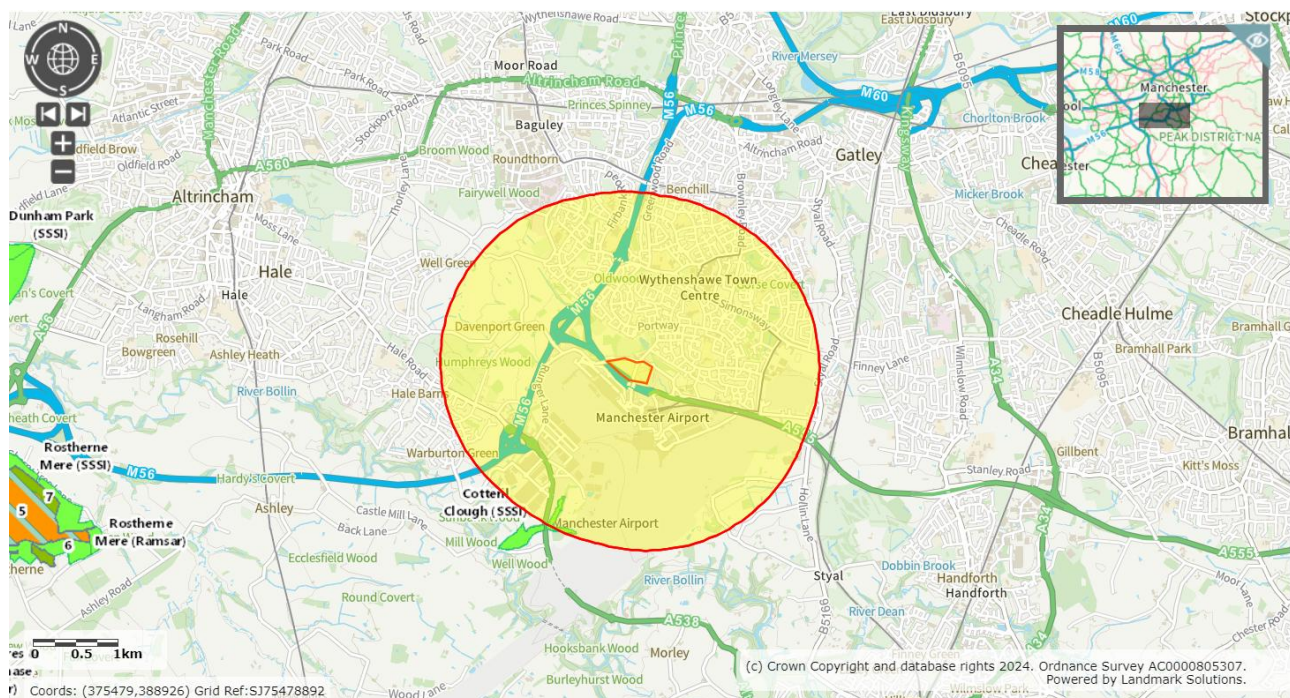


Figure 2-1 Statutory designated sites within 2km of the proposed site and in the wider landscape (source: Multi-Agency Geographic Information for the Countryside (MAGIC))

2.2 Protected and priority habitats and species

Habitats

The search on the MAGIC website identified a parcel of the priority ancient woodland habitat 900 m from the site (Figure 2-2). The priority habitat deciduous woodland was recorded on site, with the next closest parcel located 70 m to the north of the site. A parcel of open mosaic habitat was also returned in the data search 1.7 km northwest of the site.

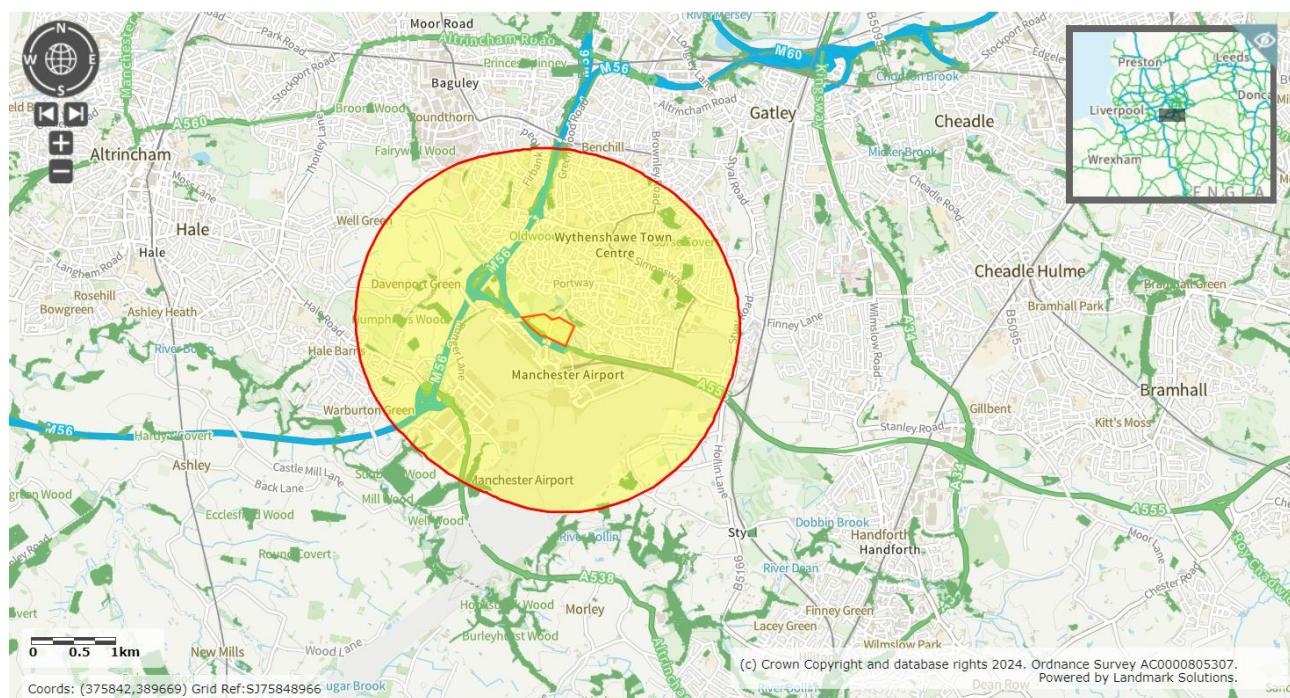


Figure 2-2 MAGIC map showing the location of priority broadleaved woodland on site (dark green polygons)

2.3 Field survey

2.3.1 Habitats

The site supports mixed woodland, broadleaved woodland, open mosaic habitat on previously developed land, mixed scrub, other neutral grassland, modified grassland, sparsely vegetated urban land, urban trees, ditch, developed land; sealed surface, and one small storage building. Details of these habitats are provided in Table 2-1 below.

The UK Habitat Classification survey identified two priority habitats on site including broadleaved woodland and open mosaic habitat on previously developed land (OMHPDL). These are both listed as priority habitats under Section 41 of the NERC Act 2016.

All habitats recorded on site during the UK Habitats Classification survey are illustrated in Figure 2-3 and described in

Table 2—1.



Figure 2-3 Baseline habitats map

Table 2—1 Habitats identified on site and their description

Primary Habitat Codes	Secondary Code	Geographic level of importance	Description / notes	Value (Distinctiveness)	Condition	Aim to retain and protect
Other woodland; mixed	W1h	Local	An area of dense, mixed but predominantly broadleaved woodland located in the western corner of the site (W-1). The species present include maple (<i>Acer</i> sp.),	Medium	Moderate	Yes

Primary Habitat Codes	Secondary Code	Geographic level of importance	Description / notes	Value (Distinctiveness)	Condition	Aim to retain and protect
			oak (<i>Quercus</i> sp.), poplar (<i>Populus</i> sp.), dogwood (<i>Cornus</i> sp.), hawthorn (<i>Crataegus</i> sp.), walnut (<i>Juglans</i> sp.), cherry (<i>Prunus</i> sp.), rose (<i>Rosa</i> sp.), willow (<i>Salix</i> sp.), Scotch pine (<i>Pinus sylvestris</i>), and ivy (<i>Hedera</i> sp.).			
Other broadleaved woodland	W1g	Local	An area of dense broadleaved woodland (W-2) comprising species such as birch (<i>Betula</i> sp.), beech (<i>Fagus</i> sp.), walnut (<i>Juglans</i> sp.), sweet chestnut (<i>Castanea sativa</i> sp.), horse chestnut (<i>Aesculus hippocastanum</i> sp.), willow (<i>Salix</i> sp.), ash (<i>Fraxinus</i> sp.), cherry (<i>Prunus</i> sp.), dogwood (<i>Cornus</i> sp.), and ivy (<i>Hedera</i> sp.).	Medium	Moderate	Yes
Open mosaic habitat on previously developed land	U1f	National	There is an area (0.447 ha) of open mosaic habitat on previously developed land (OMH-1 and OMH-2) on site. The habitat is abandoned, with many areas of bare ground and loose substrate. There are pools present. The area includes sections colonized by different stages of early successional vegetation. The species mix includes horseweed (<i>Erigeron canadensis</i>), moss spp. (<i>Bryophyta</i> spp.), willowherb (<i>Chamaenerion angustifolium</i>), sorrel (<i>Rumex acetosa</i>), chamomile (<i>Matricaria chamomilla</i>), foxtail grass (<i>Alopecurus</i> spp.), plantain (<i>Plantago</i> spp.), common vetch (<i>Vicia sativa</i>), white clover (<i>Trifolium repens</i>), red clover (<i>Trifolium pratense</i>), bird's-foot trefoil (<i>Lotus corniculatus</i>),	High	Good; moderate	Yes

Primary Habitat Codes	Secondary Code	Geographic level of importance	Description / notes	Value (Distinctiveness)	Condition	Aim to retain and protect
			yarrow (<i>Achillea millefolium</i>), oxeye daisy (<i>Leucanthemum vulgare</i>), broom (<i>Cytisus scoparius</i>), sedge spp. (<i>Carex</i> spp.), and plantain (<i>Plantago</i> spp.). The condition of OMH-1 was found to be good. The habitat shows varied vegetation structure, providing opportunities for insects, birds, and bats to live and breed. There is a diverse range of flowering plants and an absence of invasive species. Furthermore, the habitat shows spatial variation, forming a mosaic of early successional communities. OMH-2 was assessed to be in moderate condition as the vegetation structure was less varied and species diversity was lower.			
Mixed scrub	H3h	Local	An area of mixed scrub along the ditch (S-M1) is in poor condition, with buddleia present. An area of mixed scrub dominated by broom (<i>Cytisus</i> sp.) in the south of the site (S-M2) was assessed to be in moderate condition.	Medium	Moderate (SM-1); poor (SM-2)	Yes
Other neutral grassland	G3c	Local	A large area of other neutral grassland, in moderate condition, features a mix of native grasses and forbs. The area has been left unmanaged in recent years.	Medium	Moderate	Yes
Modified grassland	G4	Negligible	A species-poor, narrow stretch of modified grassland habitat runs along Enterprise Way.	Low	Moderate	No
Sparsely vegetated urban land	U1f	Negligible	Abandoned, previously developed land with sparse vegetation cover.	Low	Poor	No

Primary Habitat Codes	Secondary Code	Geographic level of importance	Description / notes	Value (Distinctiveness)	Condition	Aim to retain and protect
Urban trees		Local	Ten young planted trees.	Medium	Poor	Yes
Ditch	R1g	Local	Approximately 95 m ditch (D-1) with cobblestone walls with little vegetation encroachment into the ditch. Non-native buddleia is present on the banks. The ditch is not linked to a watercourse and does not require a MoRPh 5 survey.	Medium	Poor	No
Developed land; sealed surface	U1b	Negligible	Includes a car park, and pathways on site.	Very low	N/A	No
Buildings	U1b5	Negligible	One small storage building constructed from metal with metal roof.	Very low	N/A	No

2.3.2 Species

Bats

The data search identified a number of bat species records within 1 km of the site. The most recent and closest records included the common pipistrelle (*Pipistrellus pipistrellus*) adjacent to the site, the soprano pipistrelle (*Pipistrellus pygmaeus*) 140 m from the site, the noctule bat (*Nyctalus noctula*) 160 m from the site, Daubenton's bat (*Myotis daubentonii*) 260 m from the site, and the whiskered bat (*Myotis mystacinus*) 320 m from the site.

No bat roosts or evidence of roosting bats were identified during the PRA of the site. All individual trees on the site lacked characteristics suitable for bat roosting, such as crevices, cracks, holes, cankers, or dense ivy coverage, and therefore had negligible or low potential for roosting bats. The small storage building within the site boundary was also deemed to lack features suitable for roosting bats. However, due to the very dense woodland, a complete assessment of this area for roosting potential was not possible.

The on site habitats, especially the woodland area, may support foraging and commuting bats, offering connectivity through the site and to the wider landscape, for example to the nearby Painswick Park Meadow SBI.

Birds

The data search returned records of protected and priority bird species within 1km of the site, including spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*), bullfinch (*Pyrrhula pyrrhula*), dunnock (*Prunella modularis*), house sparrow (*Passer domesticus*), and bullfinch (*Pyrrhula pyrrhula*). However, no evidence of nesting birds, such as old nests or typical nesting activity, was recorded during the survey.

All birds, including more common species, are likely to use the habitats on site (woodland, mixed scrub, open mosaic habitat on previously developed land, other neutral grassland) and habitats surrounding the site for nesting and foraging.

Other species

The mixed scrub and OMHPDL on site are suitable for many common reptile species. However, the desk study found no records of any reptile species within 1 km of the site in the past 10 years. Additionally, poor connectivity with other suitable habitats in the wider landscape makes the presence of reptiles on site unlikely.

Records from the desk study indicate the presence of European hedgehogs (*Erinaceus europaeus*) within 1 km of the site. The European hedgehog is listed as a species of principal importance under Section 41 of the NERC Act 2006 and receives limited protection under the Wild Mammals (Protection) Act 1996. On site habitats such as woodland, grassland, and scrub provide suitable environments for hedgehogs.

No evidence of other protected or priority species was found during the survey.

2.4 Biodiversity Net Gain baseline habitats

The baseline metric calculations for the site is provided in the Appendix of this document. In summary, the value of baseline habitats in biodiversity units calculated using the Statutory Biodiversity Metric is as follows:

- Other broadleaved woodland; mixed (1.838 ha) - 16.91 units
- Other broadleaved woodland (0.176 ha) – 1.62 units
- Open mosaic habitat on previously developed land (0.447 ha) – 7.37 units
- Mixed scrub (0.162 ha) – 1.10 units
- Other natural grassland (2.796 ha) – 22.37 units
- Modified grassland (0.356 ha) – 0.71 units
- Sparsely vegetated urban land (ruderal/ephemeral) (0.727 ha) – 1.45 units
- Urban trees (0.0407 ha) – 0.16 units
- Ditch (0.095 km) – 0.30 units

The total number of baseline biodiversity units equals **51.99**, which includes 51.69 habitat units and 0.30 watercourse units. To meet the 10% net gain target, a total of **56.86 units** are required to be provided in habitat creation and enhancement.

Please note that units have been calculated using approximated habitat areas. A detailed botanical survey is required to provide more accurate habitat areas and confirm the extent of the OMHPDL. Units stated above should be used as a guideline and update BNG calculations will be required following the completion of the botanical survey.

3 Recommendations

The proposed development will likely impact open mosaic habitat. Open mosaic habitat is a Habitat of Principal Importance and are protected the Natural Environment and Rural Communities (NERC) Act 2006 which places a duty on public bodies to have regard to the conservation of biodiversity, including habitats and species of Principle Importance. Details of legislation relevant to the site can be found in the Appendix.

Other broadleaved woodland on site is considered a locally important habitat and is listed within the Greater Manchester Biodiversity Action Plan. In addition, other woodland; mixed, mixed scrub and ditches are of site level importance due to the importance to protected species. Where feasible, these habitats should be retained and protected.

3.1 Biodiversity Net Gain and design considerations

BNG is mandatory within the Environment Act 2021 and is a key consideration in planning and is a requirement within the National Planning Policy Framework.

Achieving a 10% gain in biodiversity will become more challenging if any semi-natural habitats are set to be lost. It is worth noting that habitats of medium distinctiveness (woodland, mixed scrub, other neutral grassland, trees, and ditch), if not retained, will need to be replaced with the same broad habitat of equal or higher distinctiveness. Habitats of high distinctiveness (OMHPDL), if not retained, will need to be replaced with the same habitat.

However, design considerations should aim to avoid as much habitat loss as possible in accordance with the BNG mitigation hierarchy (see Figure 3-1).

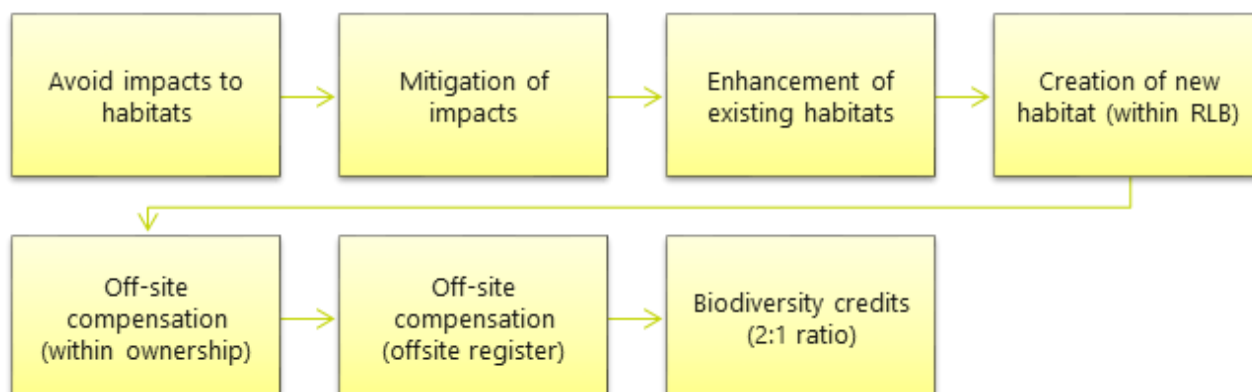


Figure 3-1 Biodiversity Net Gain Diagram

Impacts to high distinctiveness and medium distinctiveness habitat should be avoided, where possible, through design. If these habitats cannot be retained, then the loss of the habitat will need to be compensated for through enhancement and habitat creation. The Defra metric has specific 'trading rules' for specific habitats that ensure that proportionate compensation is applied to habitats based on habitat distinctiveness. For example, high value habitats such as woodland, cannot be replaced for larger areas of lower value habitat such as grassland. The trading rules for the habitat on site are as follows:

- High distinctiveness (Open mosaic habitat on previously developed land): Losses must be replaced with area habitat units of the same habitat type.
- Medium Distinctiveness (Other woodland; Other broadleaved woodland mixed, scrub, Other neutral grassland, ditch, and urban trees): Losses must be replaced by area habitat units of either medium band habitats within the same broad habitat type or, any habitat from a higher band from any broad habitat type.
- Low Distinctiveness (Modified grassland, sparsely vegetated urban land): Losses must be replaced with an area habitat unit of the same or higher band

On site design recommendations

It is recommended that the impacts to these habitats are identified in the initial stages of the design stage to allow for retention, enhancement and compensation measures to be addressed within the project design. High distinctiveness habitats such as open mosaic habitat can be difficult to mitigate within the scheme and therefore it is advised that impacts to the habitat are identified as soon as possible so that compensation measures can be effectively addressed.

The proposed development will likely impact open mosaic habitat on previously developed land. If it is not possible to avoid or significantly reduce impacts on this habitat during the development, a similar habitat should be created. Ideally, this should be done on site; if not, it should be as close to the site as possible. Given the transient nature of open mosaic habitats on developed land, creating a like-for-like habitat may not be feasible. However, biodiverse green roofs can mimic OMHPDL if designed in a way that provides features that replicate OMHPDL habitat such as, diversity of botanical species, varying substrate depths, exposed areas of bare ground and water features. If the habitat cannot be preserved in situ or recreated, offsetting off-site will be required. However, this approach would not satisfy the trading rule of the metric. A detailed approach of how OMHPDL can be compensated will need to be agreed with GMEU which may include on site compensation, offsetting or combination of both.

Habitat enhancement opportunities include enhancing retained woodland and mixed scrub habitats. In addition, habitat creation can be incorporated into the scheme. New habitat could include urban tree planting, wildlife ponds and creation of biodiverse green roofs.

All new and enhanced habitats on site will need to be managed for 30 years, including the establishment of a habitat management plan and monitoring schedule to ensure that on site habitats will reach and be maintained at target condition.

Offsetting options

To achieve the necessary BNG units biodiversity units can be purchased from the market, which involves buying credits that represent the creation or enhancement of habitats elsewhere, ensuring that the overall biodiversity impact of the development can achieve the 10% requirement. Off-site biodiversity gains can be achieved through several methods: purchasing non-statutory biodiversity units from habitat banks, buying statutory biodiversity credits from the government, or securing off-site gains through legal agreements to ensure they are maintained for at least 30 years.

3.2 Protected species

Bats

In the UK, all bat species and their roosts are legally protected under both domestic and international legislation. This includes the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017. It is illegal to deliberately capture, injure, or kill a bat as well as to disturb them or damage their breeding or resting sites. Activities that could result in harm to bats or their habitat will require a licence from Natural England. This comprehensive legal framework aims to ensure the conservation of bat populations across the UK.

Due to the lack of features suitable for roosting bats and the urban nature of the site, the buildings and individual trees on site have been identified as having 'negligible potential' to support roosting bats. Therefore, in accordance with the most recent best practice guidance, further surveys are not required for the buildings and trees present on site. However, if the development impacts the woodland area, further bat surveys will be required.

The proposed scheme will need to consider the impacts of artificial lighting on existing or newly created habitats that are suitable foraging and commuting bats and the more sensitive habitats on site (open grassland, ponds, scrub areas and woodland). A wildlife sensitive lighting strategy should be produced to identify the ecological receptors and sensitive areas and show how artificial lighting will be managed on site to ensure that dark corridors and important bat habitats can be maintained post-development.

Any artificial light spillage from the proposed development should not exceed the baseline levels across the site. In the key wildlife habitats, artificial light levels should remain below 1 lux.

A range of mitigation techniques are available to reduce lighting levels associated with new developments including:

- Implementation of dark buffer zones adjacent to sensitive habitats and features,
- Selection of luminaires without UV elements and upward light spill,
- Use of warm white LEDs with reduced blue light components and a peak wavelength higher than 550nm,
- Use of bollard and low-level downward directional luminaires,
- Minimising column heights to reduce light spill,
- Using soft- and hard-landscaping to screen sensitive habitats,
- Use of timers, motion-sensors and if necessary, shields, cowls, baffles, louvres, and hoods to reduce light spill,
- Glazing treatments on windows if necessary, and
- Dimming and part-night lighting near sensitive habitats and features.

Birds

In the UK, all wild birds, their nests, and eggs are protected under the Wildlife and Countryside Act 1981. This legislation makes it illegal to intentionally kill, injure, or take any wild bird, as well as damage or destroy their nests while they are in use or being built. Additionally, certain species, known as Schedule 1 birds, receive extra protection, making it an offence to disturb them while they are nesting.

If vegetation clearance is required to facilitate the development, it should be undertaken outside the bird nesting season (March-August inclusive). Where avoidance of the bird nesting season not feasible, a suitably experienced ecologist should carry out a nesting bird check no more than 48 hours before vegetation removal. If an active nest is found, this would need to be protected throughout the works with a suitable buffer area as defined by the ecologist, until the chicks have fledged, and the nest is no longer in use.

Where appropriate, bird nesting features can be created on site to provide new nesting and foraging habitats for birds. In particular, urban tree and hedgerow/ scrub planting can provide both foraging and nesting opportunities for birds. In addition, (depending on the targeted species) affixing of nesting boxes to the side of buildings can provide additional bird nesting opportunities.

Other species

Reptiles are protected under the Wildlife and Countryside Act 1981, which makes it illegal to intentionally kill or injure them. Although it is unlikely that common reptile species will be present on site presence cannot be scoped out entirely. Due to this low risk, further reptile surveys are not advised and, instead it is advised precautionary measures can be included within a CEMP which will be detailed in the EcIA. However, this approach should be agreed with the local planning ecologist to ensure due diligence has been undertaken.

Hedgehogs are protected under the Wildlife and Countryside Act 1981 and the Wild Mammals Protection Act 1996, which prohibits cruel treatment. Hedgehog have been recorded within 1 km of the site. In addition, the site supports suitable habitat for hedgehog, therefore precautionary measures will need to be taken during any habitat clearance to avoid harm to hedgehog. As with reptile, precautionary measures can be included within a CEMP.

Where possible, suitable hedgehog habitat can be created on site. Habitats such as scrub and hedgerow can provide shelter and connectivity to other suitable habitats in the wider site. In addition, open habitats, such as grassland can provide suitable foraging habitats for hedgehog.

Badgers and their setts are protected by the Protection of Badgers Act 1992, making it illegal to harm or disturb them or their habitats. No badger setts were identified on site during the initial site walkover. However, there was limited access to woodland areas and the presence of badgers within the redline boundary cannot be scoped out entirely. If woodlands are to be impacted by the proposed scheme, an additional walkover of the woodland should be carried out, access permitting.

3.3 Further surveys/actions

Detailed botanical surveys

As stated in the 1.4 Limitations, section, a detailed botanical survey could not be completed at the time of the Preliminary Ecological Appraisal site visit due to unfavourable site conditions. Therefore, a detailed botanical site visit is required.

A detailed botanical survey will be used to determine priority habitat areas which will help inform future Biodiversity Net Gain assessments and ensure that the correct level of Biodiversity Net Gain compensation measures is applied to the proposed scheme and form the baseline to identify how priority habitat will be impacted by the proposed scheme.

The open mosaic habitat on previously developed land (OMH-1 and OMH-2 in Figure 2-3) within the site is listed as priority habitats under Section 41 of the NERC Act 2006. This habitat will be affected by the site's development. According to the National Planning Policy Framework (NPPF, 2021), local planning authorities should "promote the conservation, restoration, and enhancement of priority habitats."

The detailed botanical survey will focus on open mosaic habitats and grassland on site. The recommended survey period for a detailed botanical survey for open mosaic habitat and grassland is between May to August.

Once the detailed botanical survey has been completed and the areas of open mosaic on site has been established, it is recommended that the local planning ecologist should be contacted to discuss how the open mosaic habitat can be effectively addressed within the proposed scheme.

Biodiversity Net Gain assessment

A full BNG assessment will be required to inform the planning application and requirements. The scope of work covers the following:

- Liaison with the landscape architect, architect and other members of the design team to incorporate meaningful biodiversity mitigation and enhancement measures and other NbS to aim to achieve a net gain in biodiversity.
- Undertake up to six variations of the Biodiversity Net Gain calculations using the Statutory Biodiversity Metric. Calculations will be based on the results of the habitat survey to identify the baseline value of the site and the proposed landscape designs and biodiversity provisions within the developed scheme. Detailed landscape plans will be required from the appointed landscape architect to be able to undertake the post-development calculations.
- Production of a BNG assessment report that will detail the methodology, results (including habitat conditions) and the calculations process whilst summarising the results and proposed net gain score as a result of the proposed development. This includes a pre-development baseline plan and post-development habitat plan where appropriate.
- Completion of a draft Biodiversity Net Gain Plan following the UK Government issued template.
- Exploration of off-site or offsetting options are not covered by this scope which would be subject to a separate proposal.

Appendix 1: Legislation and Policy Considerations

Natural Environment and Rural Communities (NERC) Act (2006)

Section 40 of the NERC Act 2006 places a duty on all public authorities in England to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A list of habitats and species of Principal Importance in England, drawn up under Section 41, is used by local and regional authorities implementing their biodiversity duty.

The Environment Act 2021

The Environment Act has now been adopted and includes mandatory BNG requirements, which came into force 12th February 2024. All developments are required to achieve a minimum of 10% gain in biodiversity post-development.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the primary piece of legislation in England and Wales for protecting wildlife in England and Wales. This legislation makes it illegal to deliberately take, kill or injure a protected wild animal, or to intentionally, or recklessly, disturb such an animal in its place of shelter, or to damage, destroy or obstruct access to places of shelter.

Wild Mammals Protection Act 1996

The Wild Mammals (Protection) Act 1996 is a crucial piece of legislation in the UK that safeguards wild mammals from acts of cruelty. This act makes it an offence to intentionally cause unnecessary suffering to any wild mammal through actions such as mutilating, kicking, beating, crushing, drowning or asphyxiating. Violations of this act can result in significant penalties, including fines and imprisonment.

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 is a key piece of legislation in the UK that provides comprehensive protection for badgers and their setts. It is illegal to kill, injure, or take a badger, and to interfere with their setts, which includes damaging, destroying, or obstructing access to them. The act was introduced in response to the high levels of persecution badgers faced, aiming to safeguard these animals from harm. Licences can be issued for certain activities, such as scientific research or necessary development work, but these are strictly regulated. Violations of the act can result in significant penalties, including fines and imprisonment.

National Planning Policy Framework (Ministry of Housing, Communities, and Local Government) (December 2023)

The revised National Planning Policy Framework (NPPF), published in July 2018 and updated in December 2023, sets out the Government's planning policies for England and how these should be applied. The revised NPPF continues to stress the importance of the local authority contribution to improving and protecting the environment through development of a systematic approach to enhancing biodiversity, minimising waste and pollution, and mitigation/adaptation to climate change impacts.

Chapter 15 requires that local planning authorities, when considering planning applications, should aim to conserve and enhance biodiversity by applying the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest

- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶⁷ and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Planning Practice Guidance 2014 (MHCLG, updated 2019)

Planning Practice Guidance (PPG) Objective 3- Planning, Policy and Partnerships key priorities state:

- *'Biodiversity should be embedded into Manchester City Council's policies to help protect and enhance nature'.*
- *'Strong working relationships must be established with partners delivering against climate change, health and wellbeing, and air quality to ensure new and effective collaboration in the city'.*
- *'Long-term funding opportunities for the recovery of nature in Manchester must be identified, particularly through the planning and development process'*

Manchester City Council Core Strategy 2012-2027 (MCC, 2012)

Policy EN 15 Biodiversity and Geographical Conservation states:

'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,'

'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.'

Places for Everyone Joint Development Plan (Adopted March 2024)

The Places for Everyone (PfE) Plan is the joint development plan for nine Greater Manchester districts and forms part of the statutory development plan for each authority. The plan includes strategic policies to protect, restore and enhance natural assets, green infrastructure, ecological networks and biodiversity across Greater Manchester, with a requirement for new development to contribute positively to nature recovery and ecosystem resilience.

Key biodiversity-relevant policies include:

- Policy JP-G2: Green Infrastructure Network. This policy establishes a strategic, multi-functional green infrastructure network across Greater Manchester, including river valleys, wetlands, mosslands, uplands, woodland and urban greenspaces. Development must protect and enhance this network and ensure that green and blue infrastructure is integrated into site design.
'The protection and enhancement of these key strategic green infrastructure assets is complemented by a suite of policies to protect and enhance our network of green infrastructure, including protecting and enhancing sites of ecological value.'
- Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity. This policy requires all development to deliver a net enhancement of biodiversity and geodiversity, including improving the quantity, quality and connectivity of habitats. The policy prioritises safeguarding designated biodiversity sites, priority habitats, species, woodland, wetland and peatland, and preventing fragmentation of ecological networks.
'A net enhancement of biodiversity and geodiversity across our boroughs will be sought through increasing the quality, quantity, extent and diversity of priority habitats and species and improving connectivity to support our ecological networks.'

The policy also requires measurable improvements using recognised tools (e.g., Defra metric) and long-term management of habitats.

'Development must avoid net loss of biodiversity or geodiversity and provide measurable net gains... delivering long-term management for habitats and geological features.'

PfE embeds nature recovery within broader environmental goals, including climate resilience, green infrastructure access and natural capital enhancement.

'We are seeking to protect our most valuable green spaces and improve them by delivering a net gain in biodiversity assets.'

Appendix 2: Defra Metric Calculations