

Biodiversity Net Gain Assessment

Site at Carmoor Road

Manchester

November 2022

Prepared for: Tiger Development Limited

Report prepared by: Verity Webster BSc (Hons) MSc CEcol CMIEEM



EXECUTIVE SUMMARY

- On 27th September 2022 a Preliminary Ecological Appraisal was undertaken at the site at Carmoor Road, Manchester.
- The survey site comprises three buildings set within hard standing. There is a sycamore (*Acer pseudoplatanus*) on the southeast boundary adjacent to the garage.
- The Biodiversity Net Gain Assessment shows that following development there will be an overall net gain in biodiversity. The use of ground level planters, planting of trees and installation of biodiverse green roof will result in the enhancement of the site for biodiversity long-term. The proposals will result in a 24.34% net gain in Habitat Units and 100% increase in Hedgerow Units.

Verity Webster

Ecology and Protected Species Consultancy

Chorley, Lancashire; www.ecologyconsultant.co.uk; tel: 07917 852 401; Email: info@ecologyconsultant.co.uk



1.1 Application Site

- 1.1.1 This report details a Phase 1 Habitat Survey and Ecological Appraisal of land at 88-90 Carmoor Road, Manchester, M13 0FB. National grid reference SJ 8550 9595.
- 1.1.2 Tiger Development Limited commissioned Verity Webster Ltd to undertake a Biodiversity Net Gain Assessment in order to inform the proposals for the site.

1.2 Objectives

- 1.2.1 The objectives of the Biodiversity Net Gain Assessment are to determine:
- Potential for enhancement or compensation (offsetting) on the site for protected species, habitats of conservation interest and overall biodiversity with the aim of achieving 10% net gain in biodiversity.

1.3 Proposals

- 1.3.1 The proposals for the site comprise demolition of existing buildings and construction of purpose-built student accommodation with 172 beds in a mix of studio and cluster units alongside ancillary facilities and shared amenity space, site access and other associated works in a development of three to six storeys.

1.4 Ecologist

- 1.4.1 The Ecological Assessment was undertaken by Verity Webster. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management.
- 1.4.2 Verity has worked as an ecological consultant since 2007. She has undertaken Ecological Assessments and protected species surveys for a large variety of projects and schemes, producing the required impact assessment and subsequent mitigation schemes and method statements when necessary.



2. Site Location and Description

2.1 Site Location

- 2.1.1 The site is located within the development plan defined central area of Manchester. It sits just outside of the defined city centre, just beyond the Corridor Manchester sub-area of the city centre. It is also just outside of and within easy walking distance of the defined Oxford Road Corridor regeneration area. The Oxford Road Corridor is a focus for the University of Manchester teaching departments. The site is very close to the Manchester University NHS Foundation Trust hospitals on Upper Brook Street and Oxford Road.
- 2.1.2 Nearby Upper Brook Street is part of a high frequency bus route connecting Didsbury, universities and the city centre.
- 2.1.3 The site is not allocated for any specific use in the development plan.
- 2.1.4 Existing uses on the site includes a garage workshop and a building used previously as a private day nursery which is now vacant. None of the buildings are of any architectural merit or are subject to statutory protection. The nearest statutorily listed asset (Victoria Baths on Hathersage Road) is some distance away. The application site is not within a conservation area. It is situated some 250 metres north of Victoria Park conservation area.
- 2.1.5 There are limited trees on-site and adjacent to the site. An arboricultural impact assessment and arboricultural management strategy are submitted with the planning application.
- 2.1.6 The site is located immediately south of a community centre managed by the West Indian Organisations Co-ordinating Committee (WIOCC). The immediate area comprises a mix of residential and commercial uses, including offices and other Class E uses. Opposite the site is the Octagon office building, a private car park and an electricity sub-station. The Octagon is a multi-level office building of significant scale and massing. To the north and west of the site is the Liberty Park student accommodation. To the south are the rear of commercial uses fronting Hathersage Road. St Mary's Hospital occupies a significant site to the west side of Upper Brook Street. Layout, scale and massing locally is varied but it is generally to a suburban scale and relatively low-rise.
- 2.1.7 Carmoor Road is subject to parking restrictions, limiting parking to resident permit holders or a three hour stay. There are a number of parking bays to the north side of Autumn Street.
- 2.1.8 The site is entirely within flood zone 1 (lowest probability of flooding). The site is not in an air quality management area.
- 2.1.9 There are small areas of green space within the vicinity, including Whitworth Park, approximately 550m to the west, and a mosaic of amenity space within the residential area approximately 150m to the south (See Figure 2).
- 2.1.10 The closest, and most substantial area of green space is located approximately 700-800m to the south, associated with Birchfields Park and Platt Fields Park, an area of grassland with trees and a waterbody.



2.2 Site and Habitat Description

- 2.2.1 The survey site comprises three buildings set within hard standing. There is a sycamore (*Acer pseudoplatanus*) on the southeast boundary adjacent to the garage.
- 2.2.2 The nursery (Structure D) lies on the northern edge of the site, whilst to the south and southwest lie the three structures (Structures A, B and C) of the MOT centre. Carmoor Road runs along the northeast boundary of the site.

The Buildings

The Nursery

- 2.2.3 The Nursery is part 3-storey and part 2-storey, with a complex, slate pitched roof, partially hipped and cross-pitched. The main body of the building is 3-storey with a hipped, roof. The roof is boarded beneath where it overhangs at the eaves. There is a pitched dormer window at the front (northeast). The extensions to the northwest have both a hipped roof and a cross-pitched roof. They have wooden fascias around the roof eaves. There are flat-roofed dormer windows on the northwest elevation. The windows are a mix of both wooden and UPVC.
- 2.2.4 Internally, the only loft void is located in the main body of the building. The void is small, approximately 1.5m to the apex and boarded. The roof appears to be lined beneath with felt. The remainder of the roof is likely either lined with felt or boarded beneath the slates.

The MOT Centre

- 2.2.5 The MOT Centre is composed of three structures. Structure A is the main garage. This is constructed of brick with a pitched, asbestos roof. The roof is single skin, supported by a metal frame. Internally the building is open to the roof.
- 2.2.6 Structure B is a long outbuilding constructed of brick with a pitched corrugated metal roof. The roof is single skin, with skylights, supported by a metal frame.
- 2.2.7 Structure C is an outbuilding constructed of brick with part a pitched roof and part a flat roof both of corrugated metal with skylights. The roof is single skin and supported by a metal frame.



The northeast elevation (front) of the Nursery (2020)



The northeast and southeast elevation of Structure A of the MOT Centre (2020)



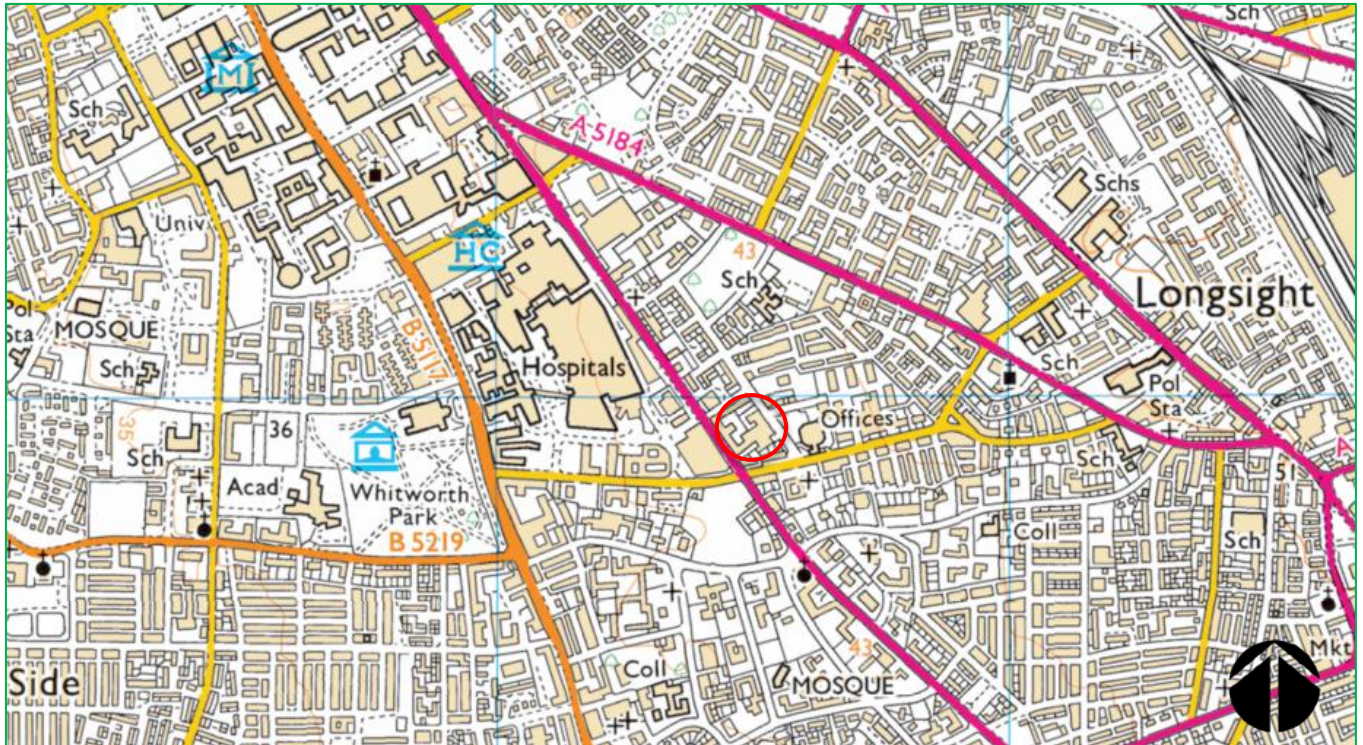
The northeast elevation (front) of the Nursery (2022)



The northeast and southeast elevation of Structure A of the MOT Centre (2022)



Figure 1: Ordnance Survey Map Showing the Location of the Proposed Development Site.



Ordnance Survey Map 1:25000

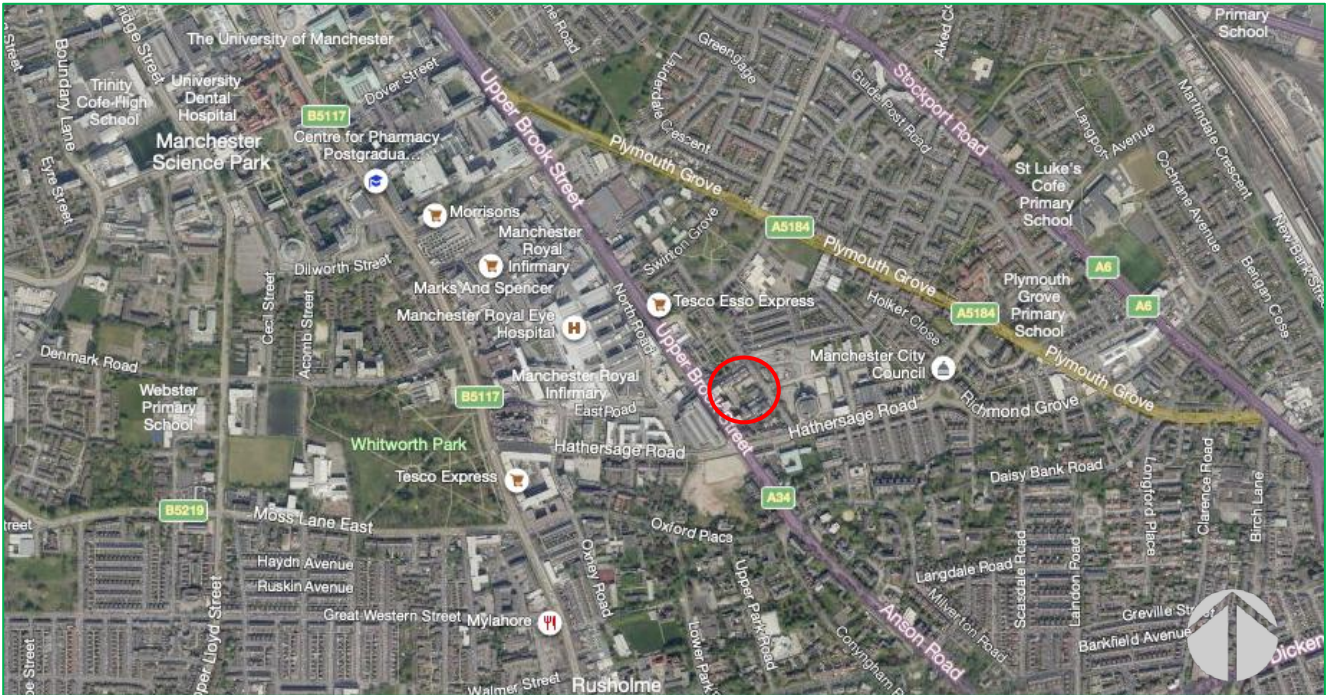
Key:



Survey site



Figure 2: Aerial Image of the Survey Site in Relation to the Surrounding Habitats



From Bing Maps

250m

Key:



Survey site



Figure 3: The Survey Site



From Bing Maps

10m

Key

- Survey Site Boundary
- MOT Centre (Buildings A, B and C)
- Nursery (Building D)



3. Legislation

3.1 Planning Policy and Legislation

- 3.1.1 Under the NERC Act 2006, planning authorities are obliged to make sure that they have all the information on the presence of protected species on site before they make a decision on the planning permission.
- 3.1.2 The National Planning Policy Framework (NPPF) encourages Local Planning Authorities to conserve and enhance biodiversity.

Chapter 15, Para 174 of NPPF states: *"The planning system should contribute to and enhance the natural and local environment by:*

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils....*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".*

Para 175 states: *"Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries."*

Para 179 identifies that plans should do the following to protect and enhance biodiversity and geodiversity:

- a) "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- b) Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and peruse opportunities for securing measurable net gains for biodiversity."*

Para 180 states that *"when determining planning applications, local authorities should apply the following principles:*

- a) if significant harm to biodiversity from a development cannot be avoided...,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 result in the loss of deterioration of irreplaceable habitats (such as ancient woodland or ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensatory strategy exists; and*
- d) Development whos primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*



Para 182 states “the presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.”

- 3.1.3 The local planning authority has a responsibility, therefore, to obtain all information regarding the potential for protected species on a site prior to making a decision about a proposal.

4. Methodology

4.1 Biodiversity Net Gain Assessment

- 4.1.1 Biodiversity Offsetting was developed by Defra. The pilots of the study were first published in 2012.
- 4.1.2 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units.
- 4.1.3 *The Biodiversity Offsetting Pilots: Guidance for Developers* (Defra, 2012) details the original metric for calculating biodiversity loss or gain as a result of development proposal.
- 4.1.4 *The Biodiversity Metric 3.1* JP039 (*Natural England, 2022) and the associated guidance (*Natural England, 2022) was used to assess the habitat condition and calculate potential change in biodiversity within the survey site.
- 4.1.5 The calculation of change in biodiversity units has been based upon areas provided in the following documents:
- Site Plan – Proposed. Drawing no. LHA-10-ZZ-DR-A-PL-003. Carmoor Road for Tiger Developments Ltd. Lechler Hayes Architects
 - Level 01 Plan Drawing no. LHA-A-SK-011. Rev. P03. Carmoor Road for Host Student Housing Management (UK) Ltd. Lechler Hayes Architects
 - Level 03 Plan Drawing no. LHA-A-SK-013. Rev. P03. Carmoor Road for Host Student Housing Management (UK) Ltd. Lechler Hayes Architects
 - Level 04 Plan. Drawing no. LHA-A-SK-014. Rev. P03. Carmoor Road for Host Student Housing Management (UK) Ltd. Lechler Hayes Architects
 - Level 05 Plan. Drawing no. LHA-A-SK-015. Rev. P03. Carmoor Road for Host Student Housing Management (UK) Ltd. Lechler Hayes Architects

*Natural England 2022: <http://publications.naturalengland.org.uk/publication/6049804846366720>



5. Biodiversity Net Gain Assessment

5.1 Baseline condition and potential impacts on Biodiversity

Offsetting and the Biodiversity Calculator

5.1.1 The baseline condition of the habitat and the predicted change as a result of the proposals has been assessed with the use of the Biodiversity Offset principals.

5.1.2 Biodiversity offsetting principal: What is it?

“Using the biodiversity offsetting approach means that an offset provider delivers quantifiable amount of biodiversity benefit to offset the loss of the biodiversity resulting from the development. The losses and gains are measured in the same way, even if the habitats concerned are different. In the biodiversity offsetting pilot, the measurement is done in ‘**biodiversity units**’, which are the product of the **size of an area**, **the distinctiveness** and **the condition** of the habitat it comprises. The assessment of biodiversity units lost and gained can be calculated” (Defra, 2012).

5.1.3 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units. The current calculator is known as Biodiversity Metric 3.1 (Natural England, 2022).

5.1.4 This quantitative assessment will be considered in relation to the other qualitative ecological functions of the site in order to assess the impact (i.e. functionality for protected species), but is a useful tool to show predicted or potential loss of habitat, change in condition and enhancement (net gain).

Habitat Types

5.1.5 There are two baseline habitat types on site that will be impacted by the works:

- **Developed land; sealed surface – Hard standing and buildings.**
- **Urban Tree – The individual sycamore.**

Distinctiveness of the Habitat

5.1.6 Under the Biodiversity Calculator principals each habitat is categorised into a distinctiveness band.

5.1.7 The distinctiveness of the habitat is based upon parameters such as species richness, diversity, rarity (at local, regional, national and international scales) and the degree to which a habitat supports species rarely found in other habitats (Treweek *et al*, 2010)

- **Developed Land; sealed surface has VERY LOW distinctiveness** as the habitat has negligible conservation value.



- The Urban Tree has **MEDIUM** distinctiveness as the habitat is widespread, but of moderate conservation value.

Habitat Condition Assessment

5.1.8 The condition of each habitat can be categorised as low, moderate or good and is based upon a set of criteria in the Habitat Condition Assessment Sheets of The Biodiversity Metric 3.1.

5.1.9 The urban tree is considered to have **Moderate Condition** as it passes 3 of 6 criteria.

Table 1: Condition Assessment taken from Habitat Condition Assessment Sheets Biodiversity Metric 3.1

Condition Sheet: URBAN TREES Habitat Type			
UKHab Habitat Type(s)			
Urban - Urban tree			
Site name/location	Site at Carmoor Road	Onsite/offsite	Onsite
Central grid reference of habitat	SJ 0550 9595	Unique polygon reference	
Limitations (if applicable)		Metric 3.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	Metric 3.1 used
Habitat Description			
Single Sycamore Tree			
Covers the following topographical formations most commonly found in urban areas¹: Individual Trees: Young trees over 75mm in diameter measured at 1.5m from ground level and individual semi-mature and mature trees of significant stature and size that dominate their surroundings whose canopies are not touching but that are in close proximity to other trees. Perimeter Blocks: Groups or stands of trees within and around boundaries of land, former field boundary trees incorporated into developments, individual trees in gardens whose canopies overlap continuously Linear Blocks: Lines of trees along streets, highways, railways and canals whose canopies may or may not overlap continuously.			
Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
1	The tree is a native species (or more than 70% within the block are native species).	Y	Sycamore (<i>Acer pseudoplatanus</i>) is sometimes considered native and so will be for the purposes
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y	
3	The tree is mature ² or veteran ³ (or more than 50% within the block are mature ² or veteran ³).	N	
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	Y	
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	N	The tree is immature and lacks features such as loose bark, cracks and fungi
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	N	The tree oversails hard standing
Number of criteria passed			3
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Passes 5 or 6 of 6 criteria		Good (3)	
Passes 3 or 4 of 6 criteria		Moderate (2)	Yes
Passes 0, 1 or 2 of 6 criteria		Poor (1)	
Suggested enhancement interventions to improve condition score			



5.2 Achieving Biodiversity Net Gain (Biodiversity Offsetting)

- 5.2.1 The EU is committed to halt the loss of biodiversity and the degradation of ecosystem services by 2020. The Biodiversity Strategy sets out 6 targets and 20 specific actions geared towards this overall objective. Action 7 is to ensure no net loss of biodiversity and ecosystem services.
- 5.2.2 The 'mitigation hierarchy' is included with current planning policy, aiming to halt the loss of biodiversity. The National Planning Policy Framework, consolidating planning guidance states that *'if significant harm cannot be avoided, adequately mitigated, or as a last resort, compensated for, planning permission should be refused'*.
- 5.2.3 Defra's biodiversity offsetting pilot was developed to address this requirement and ensure development, economic growth and biodiversity conservation are compatible (British Ecological Society, 2013)
- 5.2.4 Biodiversity net gain, as a good practice principal, has been developed by Ciria, CIEEM and IEMA (2016). At the very least developments should aim for no net loss as part of the proposals.
- 5.2.5 Table 2 shows the distinctiveness and condition of the habitats on site at baseline (prior to development), with associated Biodiversity Units for existing habitats. Table 3 shows the loss of Biodiversity Units following the development for habitats. The urban tree is considered 'lost' as a result of the proposals. Therefore, all new habitats will be created and the net gain will not be a result of enhanced existing habitat.
- 5.2.6 Table 4 and 5 shows the Biodiversity Units created as a result of the creation of new habitat types and the creation of additional species rich hedgerow.
- 5.2.7 Note that hedgerows, being linear, are treated differently to 'area' or habitat units. Units calculated for linear features are separate.
- 5.2.8 Table 6 shows the overall net change in Biodiversity Units as a result of the development and creation of new habitat.
- 5.2.9 Note that the tables are created from the Biodiversity 3.1 auditing and accounting for biodiversity calculation tool.



Area habitats created

5.2.10 All new habitats will be created with an aim to reach 'good' condition.

5.2.11 The area of the urban trees was based upon the 'small class' of urban tree in Table 7-2 of the Biodiversity Metric 3.1 User Guide.

5.2.12 The following habitats are to be created on site:

- **Ground level planters**
- **Urban trees (eight trees in the courtyard and one street tree).**
- **Biodiverse green roof**

5.2.13 The biodiverse green roof will meet the criteria within the Biodiversity Metric 3.1 Habitat Condition Assessment Sheet:

A varied vegetation structure - a single ecotone such as grass or sedum will not account for more than 80% of the habitat area.

A diverse range of flowering plant species including non-native sedums.

A varied depth of 80-150mm with at least 50% of the 150mm area planted and seeded with wildflowers and sedums and with additional microhabitats including sand piles and log piles.

5.2.14 A suitable habitat management plan to facilitate this development will be implemented.

Hedgerow (linear) habitats created

5.2.15 Creation of 37m of new native species hedgerow will ensure a net gain in hedgerow units. The desirable condition is 'good'. However, due to the nature of the site, the hedgerow is considered likely to only achieve 'moderate' condition. The creation of hedgerow will increase the heterogeneity of the site and provide opportunities for nesting and foraging birds, foraging bats, amphibians and small mammals, as well as providing a wildlife corridor. Hedgerows are a Habitat of Principle Importance under the NERC Act, 2006.



Table 2: Showing the biodiversity unit calculation at baseline level (prior to development) for the area of habitat at the site.

Baseline (prior to development)				
Habitat Type	Distinctiveness	Condition	Hectares	Biodiversity Units
Urban – Urban Tree	Medium	Moderate	0.0366	0.29
Urban – Developed Land; Sealed Surface	V. Low	NA	2100	0.00
Total units				0.29

Table 3: Showing the number of biodiversity units lost and retained as a result of the proposals for area habitat

Following Development: Change in biodiversity Units					
Habitat Type	Distinctiveness	Condition	Hectares	Area Lost	Biodiversity Units Lost
Urban – Urban Tree	Medium	Moderate	0.0366	0.0366	-
Total units					- 0.29

Table 4: shows the biodiversity calculation for the number of biodiversity units as result of habitat creation

Following Development: Enhancement for Biodiversity Units					
Habitat Type	Distinctiveness	Condition to achieve	Hectares	Time to target condition (years)	Biodiversity Units delivered
Ground Level Planters	Low	N/A	0.0065	1	0.01
Urban Tree	Medium	Good	0.0369	27	0.11
Biodiverse Green Roof	Medium	Good	0.0424	10	0.24
Developed Land; Sealed Surface	Very Low	N/A	0.55	0	0.00
Total units					0.36



Table 5: shows the biodiversity calculation at for the number of biodiversity units as result of creation of new hedgerow

Following development: Requirement for linear habitat creation					
Habitat Type	Distinctiveness	Condition	Linear km	Time to target condition (Years)	Biodiversity Units delivered
Native Hedgerow	Low	Good	0.037	12	0.12
				Total units	0.12

Table 6: Shows the change in biodiversity Units following development

Following Development: Change in biodiversity Units	
HABITAT (AREA) BIODIVERSITY UNITS (BASELINE)	0.29
Habitat Biodiversity Units Lost	-0.29
Units remaining after loss	0.00
HEDGEROW BIODIVERSITY UNITS (BASELINE)	0.00
Hedgerow Units Lost	-0.00
Hedgerow Units remaining after loss	0.00
BIODIVERSITY CHANGE IN HABITAT UNITS FROM BASELINE	0.36
PERCENTAGE CHANGE IN HABITAT UNITS	24.34%
BIODIVERSITY CHANE IN HEDGEROW (LINEAR) UNITS FROM BASELINE	0.12
PERCENTAGE CHANGE IN HEDGEROW (LINEAR) UNITS	100%



Percentage Change in Biodiversity Units

5.2.16 Table 6 shows there will be a 24.34% increase in Habitat Units and a 100% increase in Hedgerow Units at the site at Carmoor Road following the implementation of the proposed habitat creation.

5.2.17 This reflects the significant change in baseline, with the creation of habitat types including biodiverse green roof and urban trees.

5.2.18 The habitat trading requirements have been achieved.

5.3 Biodiversity Net Gain Conclusion

5.3.1 If the proposals are implemented it is evident that there will be an overall net gain in biodiversity at the site at Carmoor Road, Manchester which is considered likely to be of benefit to the local flora and fauna at a site level and at a landscape level, creating a habitat stepping stone within the wider area.

5.3.2 The new habitats will take between 1-27 years to establish and reach target, however, and so it will be necessary for the areas to be appropriately managed during this time.