



## Biodiversity Net Gain Assessment

The Langley Building, Wythenshawe Hospital Campus, M23 9QZ

Mr Luke Holden

| Status   | Issue | Name                                                                             | Date       |
|----------|-------|----------------------------------------------------------------------------------|------------|
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## Industry Guidelines and Standards

This report has been written with due consideration to:

- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management, Construction Industry Research and Information Association & Institute of Environmental Management and Assessment (2019). Biodiversity Net Gain – Good Practice Principles for Development.

## Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments, and measures for avoidance, mitigation, compensation, and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary, and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

## Executive Summary

Arbtech Consulting Limited was instructed by Mr. Luke Holden to undertake a Biodiversity Net Gain (BNG) Assessment at The Langley Building, Wythenshawe Hospital Campus, M23 9QZ (hereafter referred to as “the site”). The assessment was required to inform a planning application for a 2-story extension to The Langley Building (hereafter referred to as “the proposed development”).

The baseline habitat value of the site is 0.13 area-based habitat units with the proposed development resulting in a 33.26% net gain. The proposed development is therefore anticipated to surpass the minimum target of 10% biodiversity net gain and is compliant with legislation (Environment Act 2021).

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## 1.0 Introduction and Context

### 1.1 Background

Arbtech Consulting Limited was instructed by Mr Luke Holden to undertake a Biodiversity Net Gain (BNG) Assessment at The Langley Building, Wythenshawe Hospital Campus, M23 9QZ (hereafter referred to as “the site”). The assessment was required to inform a planning application for a 2-story extension to The Langley Building (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

This report should be read in conjunction with the following documents:

- Defra Statutory Biodiversity Metric.
- PEA Preliminary Ecological Appraisal (“PEA”; Arbtech, November 2023) for the site.

### 1.2 Site Location, Geology, and Landscape Context

The site is located at National Grid Reference SJ 80643 88204 and has an area of approximately 0.8554 ha comprising of developed land, sealed surface, and modified grassland. It is surrounded by an active hospital site with medical buildings, car parks, and busy roads. The wider landscape comprises built up area with buildings and roads. A site location plan is provided in Appendix 2.

### 1.3 BNG Informative

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. In order to achieve BNG, a project must be able to demonstrate that it has followed all 10 of the Principles of Biodiversity Net Gain (as outlined in the *British Standard 8683:2021 Process for Designing and Implementing Biodiversity Net Gain*).

The legalised Environment Act (2021) requires developments in England to demonstrate a measurable net gain in biodiversity and sets a target of a minimum of 10% BNG for all developments. It also stipulates that a management plan with a minimum 30-year term should be adopted to ensure biodiversity net gain can be delivered. The Environment Act (2021) is still in a transitional phase and is not expected to become mandatory until November 2023. However, the requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2021). Furthermore, BNG is a requirement of the Local Plan Name (adopted in 2022).

The DEFRA Statutory Metric is the widely accepted tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development in order to determine the overall change in biodiversity value as a result of the proposed development. The Biodiversity Metric has separate BNG assessments for areas of habitat, hedgerows, and watercourses.

The biodiversity value of a site should be maximised. However, it may not always be possible to achieve a 10% biodiversity net gain within a site and therefore the Statutory Metric also account for offsite habitat creation, where land is available. Alternatively, developers can seek to provide an agreed financial contribution to an appropriate third party (such as the Local Authority, the UK Government, or another landowner) to deliver the required biodiversity net gain elsewhere on their behalf.

## 2.0 Methodology

### 2.1 Baseline Biodiversity Value

The baseline BNG Calculation was informed by Preliminary Ecological Appraisal (PEA) (Arbtech, November 2023). A baseline habitat plan is provided in Appendix 3.

#### Habitat Classification

The PEA (Arbtech, November 2023) classified the habitats on site according to The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023).

#### Habitat Area/Length

The area or length of each habitat was calculated using QGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of a similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in the baseline), enhanced (i.e. improved condition), or lost (i.e. destroyed by proposed development).

Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Metric . Class sizes for urban trees are set out in Table 8-1 of the Statutory biodiversity metric: User Guide (Natural England, 2023).

#### Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory biodiversity metric condition assessments (Natural England, 2023).

#### Strategic Significance

Strategic significance was assigned for each habitat based upon a review of the following:

- Ecological value
- Function within the landscape
- Any site or habitat allocations under the Manchester City Council

## **2.2 Post Development Biodiversity Value**

The post development BNG Calculation was informed by the Proposed Development Plan (Appendix 1) which is included in Appendix 1. A post development habitat plan is provided in Appendix 4.

### **Habitat Classification**

Proposed habitats were translated to their equivalents in the UK Habitat Classification using The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023) and the information provided within the Proposed Development Plan.

### **Habitat Area/Length**

The area or length of each proposed habitat was calculated using QGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in the baseline), enhanced (i.e. improved condition), or newly created.

Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Metric. Class sizes for urban trees are set out in Table 8-1 of the Statutory biodiversity metric: User Guide (Natural England, 2023).

### **Habitat Condition**

The target habitat condition for each proposed habitat was determined and assessed using the Temporal Multipliers Tool and the Enhancement Temporal Multipliers Tool included in the Statutory Metric spreadsheet as well as the relevant condition assessment sheets found in the Statutory biodiversity metric: user guide (Natural England, 2023). This is based on the assumption that a 30-year management plan will be adopted for the site.

### **Strategic Significance**

Strategic significance was assigned for each proposed habitat based upon a review of the following:

- Likely ecological value
- Function within the landscape
- Any site or habitat allocations under the Manchester City Council

## **2.3 Limitations**

No limitations have been identified.

### 3.0 Results

#### 3.1 Baseline Habitats

Table 1 details the baseline habitats present within the site along with their area/length, condition, and strategic significance. A full condition assessment for each habitat (where relevant) is provided in Appendix 5a.

Table 1: Baseline Biodiversity Value

| Habitat                              | Area / Length | Description                                                                                                                                                                                                                                                                                                                                              | Condition Assessment                                                        | Strategic Significance                                                                           |
|--------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Developed land, sealed surface – u1b | 0.8024 ha     | The site contains the Langley building, which is a brick-built structure, with a gently sloping, corrugated metal roof.<br>There are two small garages present in the northern section of the site.<br>The site is dominated by a significant area of hardstanding, primarily used for access and car parking throughout the site.                       | N/A                                                                         | Low strategic significance and not known to be included in any Local Plan.                       |
| Modified grassland – g4              | 0.0530 ha     | Throughout the site, there are small sections of modified grassland. The sward of these areas is extremely species poor and the areas are subject to routine mowing, resulting in an average height of approximately 7cm. These areas are dominated by perennial ryegrass, with frequent Yorkshire fog, creeping buttercup, dandelion, and white clover. | Poor.<br><br>The grassland has low species diversity and is overly managed. | Low strategic significance and not known to be included in any Local Plan.                       |
| Individual tree                      | 0.0041 ha     | One small ornamental tree that is manged and has no ecological features.                                                                                                                                                                                                                                                                                 | Poor.<br><br>Heavily pruned with no ecological features.                    | Medium strategic significance and ecologically desirable but not included in the local strategy. |

### 3.2 Post Development Habitats

Table 2 details the post development habitats present within the site along with their area/length, condition, and strategic significance. An assessment of the anticipated condition for each habitat (where relevant) is provided in Appendix 5b, which is based on the assumption that a 30-year management plan will be implemented for the site. The proposed development will result in the loss of existing modified grassland.

Table 2: Post Development Biodiversity Value

| Habitat                              | Area / Length                           | Description                                                                                                                                                        | Target Condition                                                                                      | Strategic Significance                                                                           |
|--------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Developed land, sealed surface – u1b | 0.3323 ha retained<br>0.4874 ha created | A two-story extension to the existing building and additional parking will be created.                                                                             | N/A                                                                                                   | Low strategic significance and not known to be included in any Local Plan.                       |
| Modified grassland – g4              | 0.0112 ha retained<br>0.0203 ha created | Modified grassland will be created with the same species composition and managed and the baseline habitat.                                                         | Poor<br><br>The grassland will have low species diversity and will be heavily managed                 | Low strategic significance and not known to be included in any Local Plan.                       |
| Vegetated garden – u1d               | 0.0044 ha created                       | Small areas of garden will be created by planting ornamental shrubs.                                                                                               | N/A                                                                                                   | Low strategic significance and not known to be included in any Local Plan.                       |
| Individual trees                     | 0.0041 ha retained<br>0.0244 ha created | 6 ornamental trees are to be planted within areas of modified grassland. It is recommended that these be hazel, common juniper or alder to support local wildlife. | Poor<br><br>These trees will be planted as saplings and be managed.                                   | Medium strategic significance and ecologically desirable but not included in the local strategy. |
| Native hedgerow – h2a                | 93.49m                                  | It is recommended that these trees be a range of species including, hawthorn, blackthorn, dog rose, elder, or sea buckthorn .                                      | Poor<br><br>These hedgerows will be heavily managed with a low species composition.                   | Medium strategic significance and ecologically desirable but not included in the local strategy  |
| Ornamental hedgerows – h2b           | 117.53m                                 | These will be ornamental shrubs planted in an area of modified grassland.                                                                                          | Poor<br><br>These will have a very low species composition and include non-native ornamental species. | Low strategic significance and not known to be included in any Local Plan.                       |

### ***3.3 Change in Biodiversity Value of the Site***

Full details are provided in the Defra Biodiversity Metric 4.0. The headline results are presented in Appendix 6.

#### **Areas of Habitat**

The baseline habitat value of the site is 0.12 units, comprising 0.12 units of modified grassland and developed land, sealed surface (no units).

The post development habitat value of the site is 0.17 units, comprising the creation of buildings and hardstanding (no value), the created modified grassland (0.04 units), created vegetated gardens (0.01 units) and individual trees (0.08 units) as well as the retained modified grassland (0.02 units).

This results in a net change in biodiversity of 33.26% (i.e. a net gain).

#### **Areas of Hedgerow.**

The baseline hedgerow value of the site is 0 with no hedgerows being present.

The post development hedgerow value of the site is 0.34 units, comprising the creation native hedgerows (0.25 units) and ornamental hedgerows (0.09 units).

This results in a net change in biodiversity cannot be calculated due to the starting units being 0.

## **4.0 Recommendations to Deliver BNG**

### ***4.1 Discussion***

The current proposed plan results in a 33.26% net gain in habitat units. This is more than the 10% target of biodiversity net gain.

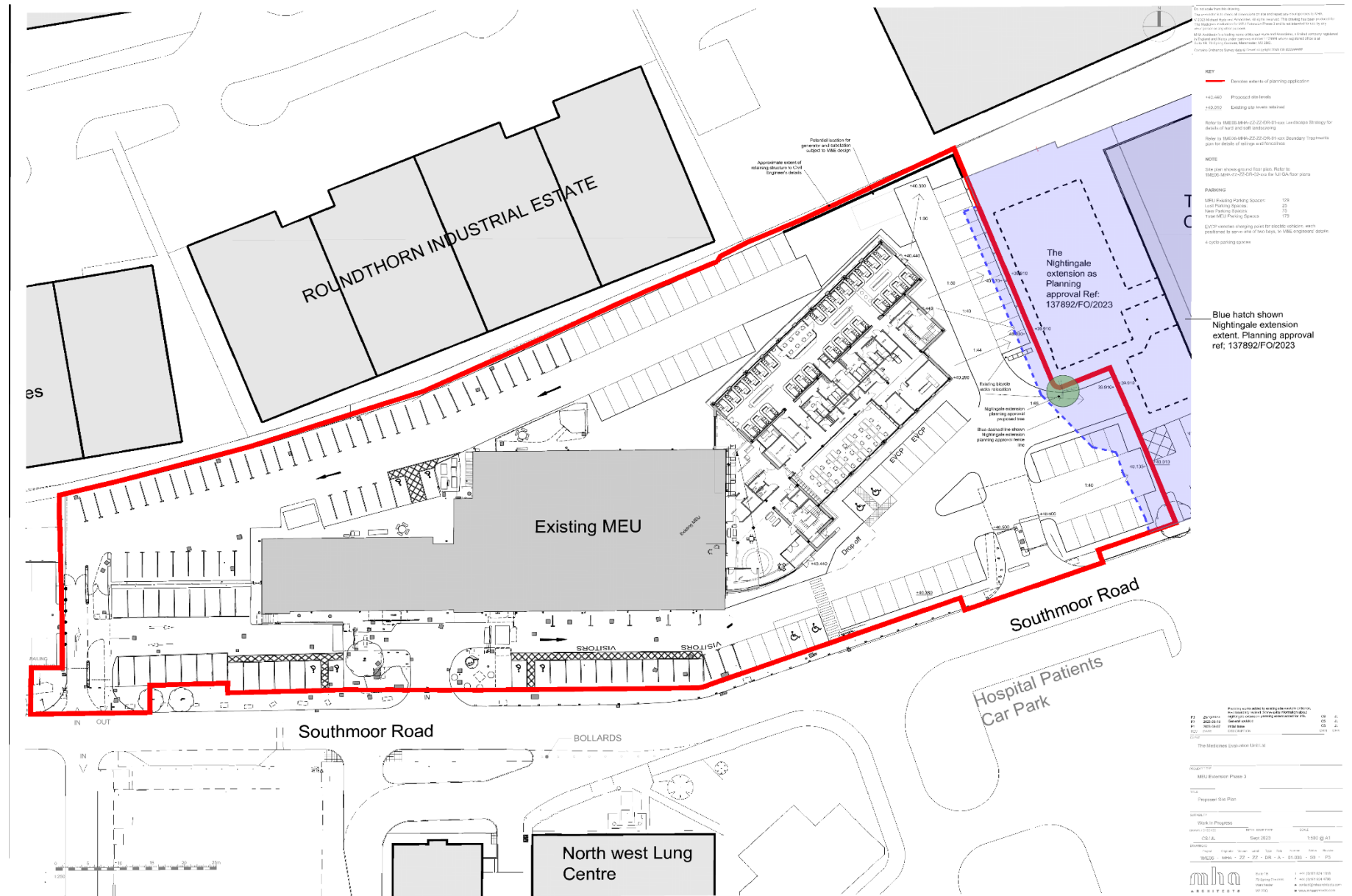
### ***4.2 Post Development***

A Biodiversity Net Gain (BNG) Management Plan must be produced for the site. This should include recommendations for the implementation, management, and monitoring of the site for at least 30 years.

## 5.0 Bibliography

- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- CIEEM-CIRIA-IEMA (2019) Biodiversity Net Gain – Good Practice Principles for Development.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit.  
[http://jncc.defra.gov.uk/PDF/pub10\\_handbookforphase1habitatsurvey.pdf](http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf)
- Natural England (2023). Statutory biodiversity metric calculation tool (macro disabled)
- Natural England (2023).
- Natural England (2023). Statutory biodiversity metric condition assessments.
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

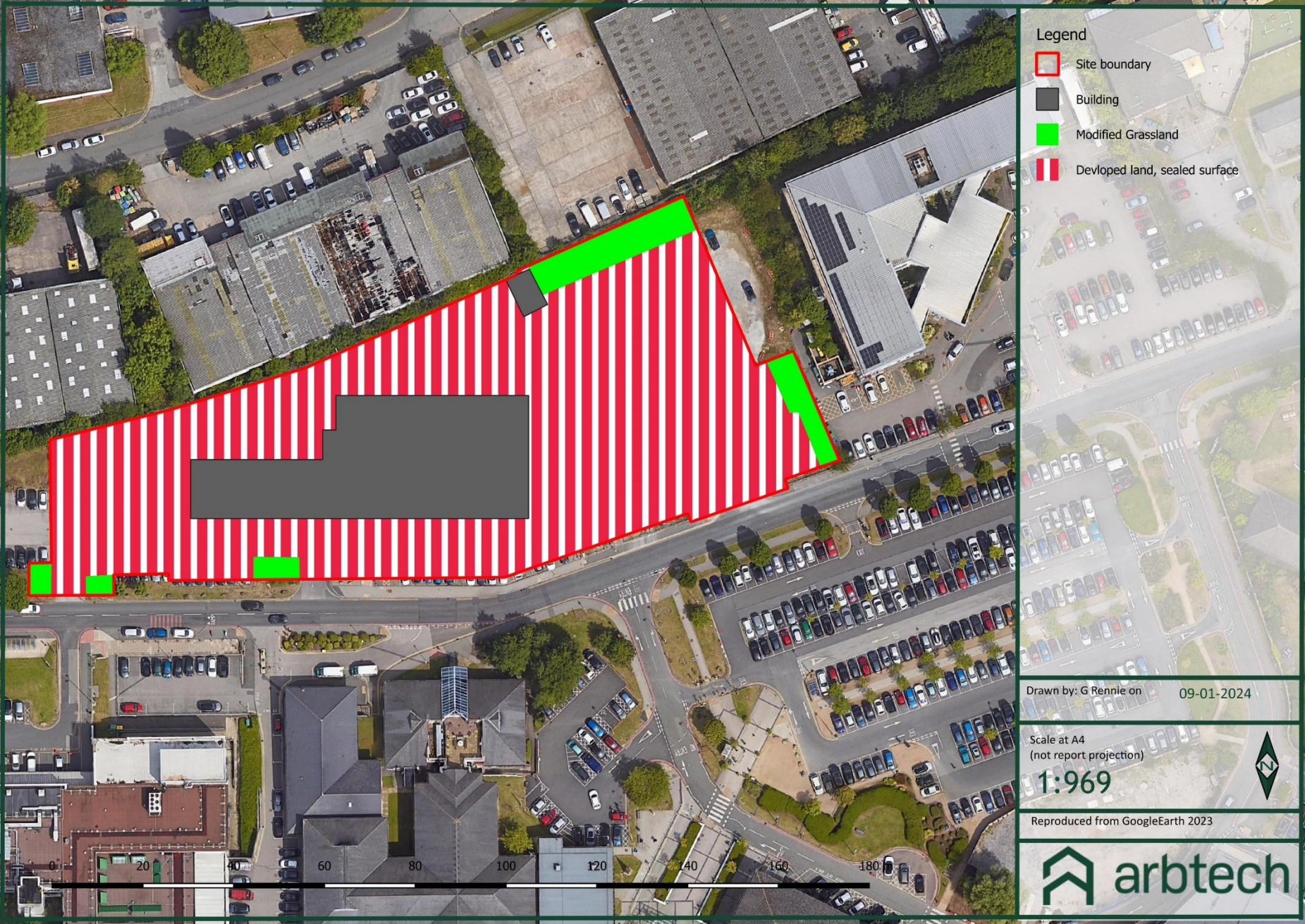
## Appendix 1: Proposed Development Plan



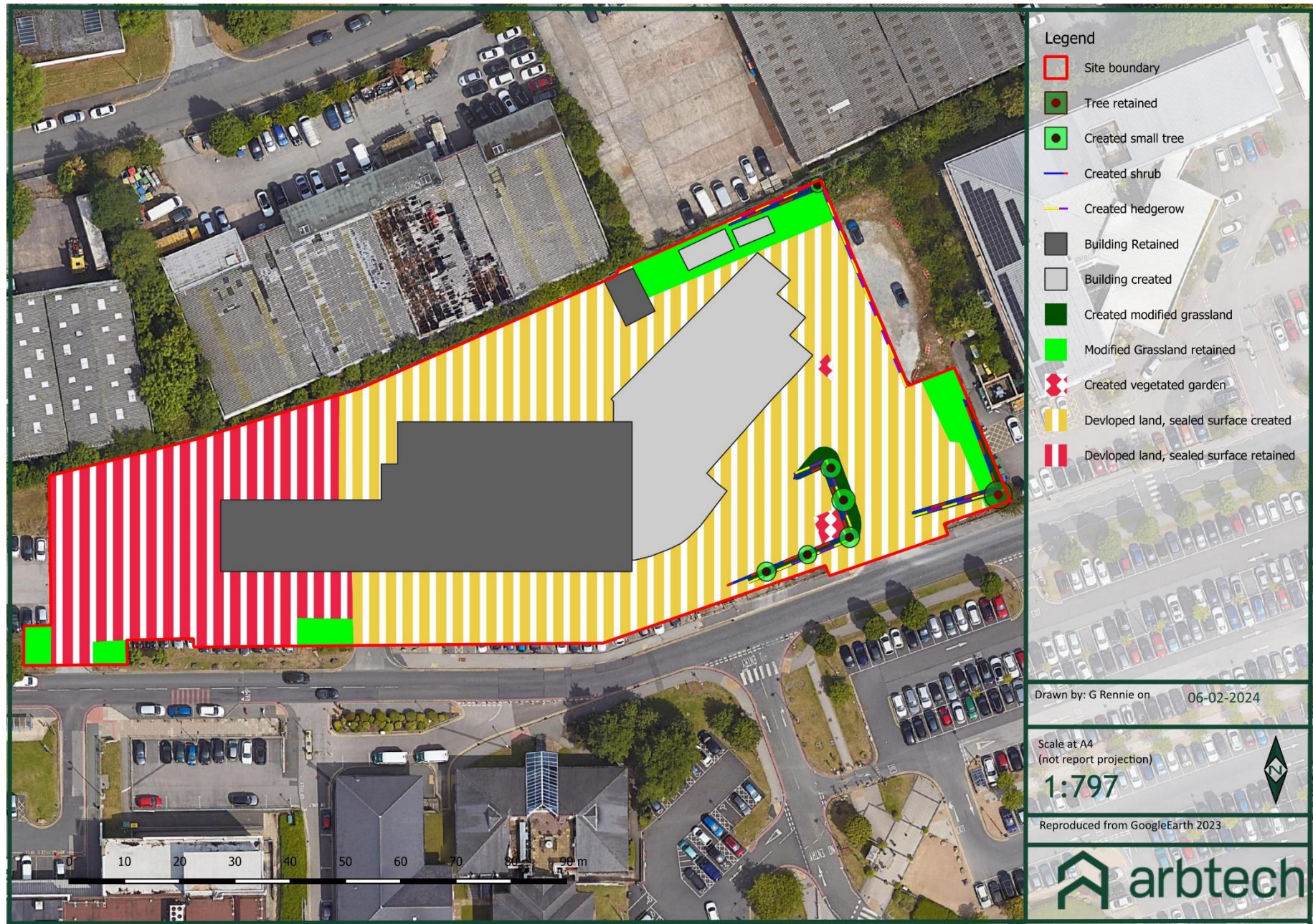
Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



## Appendix 4: Post Development Habitat Plan



## Appendix 5a: Habitat Condition Assessment Sheets - Baseline

| Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|
| UK Habitat Classification (UKHab) Habitat Type(s)                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Grassland - Modified grassland                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Site name and location                                                                                                                                                                                                                                                                                                                                | M23 9QZ                                                                                                                                                                                                                                                                       | On-site or off-site                              | Onsite                                                     |
| Limitations (if applicable)                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                               | Survey reference (if relating to a wider survey) |                                                            |
| Grid reference                                                                                                                                                                                                                                                                                                                                        | SJ 80643 88204                                                                                                                                                                                                                                                                | Habitat parcel reference                         | Baseline/retained                                          |
| Habitat Description                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Throughout the site there are small section of modified grassland. The sward of these areas is extremely species poor and the areas are subject to routine mowing, resulting in an average height of approximately 7cm. These areas are dominated by perennial ryegrass, with frequent Yorkshire fog, creeping buttercup, dandelion and white clover. |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Condition Assessment Criteria                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                               | Criterion passed (Yes or No)                     | Notes (such as justification)                              |
| A                                                                                                                                                                                                                                                                                                                                                     | There are 6-8 vascular plant species per m <sup>2</sup> present, including at least 2 forbs (this may include those listed in Footnote 1). <b>Note - this criterion is essential for achieving Moderate or Good condition.</b>                                                | no                                               | Five plant species identified                              |
| 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.                                                               | No                                               | Sward height is not varied with majority being 7cm         |
| C                                                                                                                                                                                                                                                                                                                                                     | Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.<br>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. | No                                               | No scrub on site                                           |
| 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.                       | No                                               | Area borders a car park and is heavily used a trodden      |
| E                                                                                                                                                                                                                                                                                                                                                     | Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) <sup>2</sup> .                                                                                                                                         | Yes                                              | areas of bare ground are found across all parcels on site. |
| F                                                                                                                                                                                                                                                                                                                                                     | Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.                                                                                                                                                                                                                 | Yes                                              | No bracken found on site.                                  |
| G                                                                                                                                                                                                                                                                                                                                                     | There is an absence of invasive non-native plant species <sup>3</sup> (as listed on Schedule 9 of WCA <sup>4</sup> ).                                                                                                                                                         | Yes                                              | No invasive species found on site                          |
| Essential criterion achieved (Yes or No)                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Number of criteria passed                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Condition Assessment Result (out of 7 criteria)                                                                                                                                                                                                                                                                                                       | Condition Assessment Score                                                                                                                                                                                                                                                    | Score Achieved x/7                               |                                                            |
| Passes 6 or 7 criteria including passing essential criterion A                                                                                                                                                                                                                                                                                        | Good (3)                                                                                                                                                                                                                                                                      |                                                  |                                                            |
| Passes 4 or 5 criteria including passing essential criterion A                                                                                                                                                                                                                                                                                        | Moderate (2)                                                                                                                                                                                                                                                                  |                                                  |                                                            |
| Passes 3 or fewer criteria;<br>OR<br>Passes 4 - 6 criteria (excluding criterion A)                                                                                                                                                                                                                                                                    | Poor (1)                                                                                                                                                                                                                                                                      | x                                                |                                                            |

## Appendix 5b: Habitat Condition Assessment Sheets - Proposed

| Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|
| UK Habitat Classification (UKHab) Habitat Type(s)                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Grassland - Modified grassland                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Site name and location                                                                                                                                                                                                                                                                                                                                                          | M23 9QZ                                                                                                                                                                                                                                                                       | On-site or off-site                              | Onsite                                                     |
| Limitations (if applicable)                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                               | Survey reference (if relating to a wider survey) |                                                            |
| Grid reference                                                                                                                                                                                                                                                                                                                                                                  | SJ 80643 88204                                                                                                                                                                                                                                                                | Habitat parcel reference                         | Created                                                    |
| <b>Habitat Description</b>                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| Throughout the site there will be small section of modified grassland. The sward of these areas are likely to be extremely species poor and the areas will be subject to routine mowing, resulting in an average height of approximately 7cm. These areas will be dominated by perennial ryegrass, with frequent Yorkshire fog, creeping buttercup, dandelion and white clover. |                                                                                                                                                                                                                                                                               |                                                  |                                                            |
| <b>Condition Assessment Criteria</b>                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                               | <b>Criterion passed (Yes or No)</b>              | <b>Notes (such as justification)</b>                       |
| A                                                                                                                                                                                                                                                                                                                                                                               | There are 6-8 vascular plant species per m <sup>2</sup> present, including at least 2 forbs (this may include those listed in Footnote 1). <b>Note - this criterion is essential for achieving Moderate or Good condition.</b>                                                | no                                               | species composition will be the same as the baseline       |
| 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.                                                               | No                                               | Swward height will be the same as baseline                 |
| C                                                                                                                                                                                                                                                                                                                                                                               | Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.<br>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. | No                                               | No scrub will be planted on site                           |
| 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.                       | No                                               | Area borders a car park and will be heavily used a trodden |
| E                                                                                                                                                                                                                                                                                                                                                                               | Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) <sup>2</sup> .                                                                                                                                         | Yes                                              | areas of bare ground will likely occur due to regular use  |
| F                                                                                                                                                                                                                                                                                                                                                                               | Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.                                                                                                                                                                                                                 | Yes                                              | No bracken to be planted on site                           |
| G                                                                                                                                                                                                                                                                                                                                                                               | There is an absence of invasive non-native plant species <sup>3</sup> (as listed on Schedule 9 of WCA <sup>4</sup> ).                                                                                                                                                         | Yes                                              | No invasive species to be on site                          |
| <b>Essential criterion achieved (Yes or No)</b>                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                               | No                                               |                                                            |
| <b>Number of criteria passed</b>                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                               | 3                                                |                                                            |
| <b>Condition Assessment Result (out of 7 criteria)</b>                                                                                                                                                                                                                                                                                                                          | <b>Condition Assessment Score</b>                                                                                                                                                                                                                                             | <b>Score Achieved x4</b>                         |                                                            |
| Passes 6 or 7 criteria including passing essential criterion A                                                                                                                                                                                                                                                                                                                  | Good (3)                                                                                                                                                                                                                                                                      |                                                  |                                                            |
| Passes 4 or 5 criteria including passing essential criterion A                                                                                                                                                                                                                                                                                                                  | Moderate (2)                                                                                                                                                                                                                                                                  |                                                  |                                                            |
| Passes 3 or fewer criteria;<br>OR<br>Passes 4 - 6 criteria (excluding criterion A)                                                                                                                                                                                                                                                                                              | Poor (1)                                                                                                                                                                                                                                                                      | x                                                |                                                            |

## Appendix 5c: Condition Assessment Sheets – Recommended

| Condition Sheet: INDIVIDUAL TREES Habitat Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                         |                                                         |                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Individual trees (description applied to the urban or rural environment):</b><br>Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                         |                                                         |                                                                                                                                        |
| <b>Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only):</b><br>Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies must overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category. |                                                                                                                                                                                                                                                                                         |                                                         |                                                                                                                                        |
| <b>Site name and location</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | M23 9QZ                                                                                                                                                                                                                                                                                 | <b>On-site or off-site</b>                              | On site                                                                                                                                |
| <b>Limitations (if applicable)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                         | <b>Survey reference (if relating to a wider survey)</b> |                                                                                                                                        |
| <b>Grid reference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SJ 80643 88204                                                                                                                                                                                                                                                                          | <b>Habitat parcel reference</b>                         | Recommended                                                                                                                            |
| <b>Condition Assessment Criteria</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                         | <b>Criterion passed (Yes or No)</b>                     | <b>Notes (such as justification)</b>                                                                                                   |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | The tree is a native species (or at least 70% within the block are native species).                                                                                                                                                                                                     | Yes                                                     | The tree will be a native species                                                                                                      |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 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).                                                                                         | Yes                                                     | Individual tree planted                                                                                                                |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | The tree is mature (or more than 50% within the block are mature).                                                                                                                                                                                                                      | No                                                      | Tree will be a sapling                                                                                                                 |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. | No                                                      | Tree will be planted on an area of modified grassland that is heavily managed                                                          |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.                                                                                                                                                     | No                                                      | No niches present due to the tree being young                                                                                          |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | More than 20% of the tree canopy area is oversailing vegetation beneath.                                                                                                                                                                                                                | No                                                      | The canopy will be small due to it being a sapling and a small tree. Areas of bare ground will also be present in the grassland below. |
| Number of criteria passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                         | 2                                                       |                                                                                                                                        |
| <b>Condition Assessment Result (out of 6 criteria)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Condition Assessment Score</b>                                                                                                                                                                                                                                                       | <b>Score Achieved x/□</b>                               |                                                                                                                                        |
| Passes 5 or 6 criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Good (3)                                                                                                                                                                                                                                                                                |                                                         |                                                                                                                                        |
| Passes 3 or 4 criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Moderate (2)                                                                                                                                                                                                                                                                            |                                                         |                                                                                                                                        |
| Passes 2 or fewer criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Poor (1)                                                                                                                                                                                                                                                                                | x                                                       |                                                                                                                                        |
| Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                         |                                                         |                                                                                                                                        |

## Appendix 6: Headline BNG Results – Proposed Development

The Defra Biodiversity Metric 4.0 is provided as a separate Excel spreadsheet.

|                                                                                                          |                   |                        |                                                   |
|----------------------------------------------------------------------------------------------------------|-------------------|------------------------|---------------------------------------------------|
| Wythenshawe Hospital                                                                                     |                   | Return to results menu |                                                   |
| Headline Results                                                                                         |                   |                        |                                                   |
| Scroll down for final results ▲                                                                          |                   |                        |                                                   |
| On-site baseline                                                                                         | Habitat units     | 0.11                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| On-site post-intervention<br>(Including habitat retention, creation & enhancement)                       | Habitat units     | 0.11                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| On-site net change<br>(units & percentage)                                                               | Habitat units     | 0.01                   | 4.95%                                             |
|                                                                                                          | Hedgerow units    | 0.00                   | 0.00%                                             |
|                                                                                                          | Watercourse units | 0.00                   | 0.00%                                             |
| Un-site net gain is less than target set ▲                                                               |                   |                        |                                                   |
| Off-site baseline                                                                                        | Habitat units     | 0.00                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| Off-site post-intervention<br>(Including habitat retention, creation & enhancement)                      | Habitat units     | 0.00                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| Off-site net change<br>(units & percentage)                                                              | Habitat units     | 0.00                   | 0.00%                                             |
|                                                                                                          | Hedgerow units    | 0.00                   | 0.00%                                             |
|                                                                                                          | Watercourse units | 0.00                   | 0.00%                                             |
| Combined net unit change<br>(Including all on-site & off-site habitat retention, creation & enhancement) | Habitat units     | 0.01                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| Spatial risk multiplier (SRM) deductions                                                                 | Habitat units     | 0.00                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| FINAL RESULTS                                                                                            |                   |                        |                                                   |
| Total net unit change<br>(Including all on-site & off-site habitat retention, creation & enhancement)    | Habitat units     | 0.01                   |                                                   |
|                                                                                                          | Hedgerow units    | 0.00                   |                                                   |
|                                                                                                          | Watercourse units | 0.00                   |                                                   |
| Total net % change<br>(Including all on-site & off-site habitat retention, creation & enhancement)       | Habitat units     | 4.95%                  | Total net gain achieved is less than target set ▲ |
|                                                                                                          | Hedgerow units    | 0.00%                  |                                                   |
|                                                                                                          | Watercourse units | 0.00%                  |                                                   |
| Trading rules satisfied?                                                                                 | Yes ✓             |                        |                                                   |
| Unit Type                                                                                                | Target            | Baseline Units         | Units Required                                    |
| Habitat units                                                                                            | 10.00%            | 0.11                   | 0.12                                              |
| Hedgerow units                                                                                           | 10.00%            | 0.00                   | 0.00                                              |
| Watercourse units                                                                                        | 10.00%            | 0.00                   | 0.00                                              |
| Unit Deficit                                                                                             |                   |                        |                                                   |
| 0.01                                                                                                     |                   |                        |                                                   |
| No additional hedgerow units required to meet target ✓                                                   |                   |                        |                                                   |
| No additional watercourse units required to meet target ✓                                                |                   |                        |                                                   |

## Appendix 6: Headline BNG Results – Recommended

The Defra Biodiversity Metric 4.0 is provided as a separate Excel spreadsheet.

### Recommended Development

Wythenshawe Hospital

Headline Results

Scroll down for final results ▲

Return to results menu

|                                                                                                          |                   |        |        |
|----------------------------------------------------------------------------------------------------------|-------------------|--------|--------|
| On-site baseline                                                                                         | Habitat units     | 0.11   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| On-site post-intervention<br>(Including habitat retention, creation & enhancement)                       | Habitat units     | 0.12   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| On-site net change<br>(units & percentage)                                                               | Habitat units     | 0.02   | 16.87% |
|                                                                                                          | Hedgerow units    | 0.00   | 0.00%  |
|                                                                                                          | Watercourse units | 0.00   | 0.00%  |
| Off-site baseline                                                                                        | Habitat units     | 0.00   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| Off-site post-intervention<br>(Including habitat retention, creation & enhancement)                      | Habitat units     | 0.00   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| Off-site net change<br>(units & percentage)                                                              | Habitat units     | 0.00   | 0.00%  |
|                                                                                                          | Hedgerow units    | 0.00   | 0.00%  |
|                                                                                                          | Watercourse units | 0.00   | 0.00%  |
| Combined net unit change<br>(Including all on-site & off-site habitat retention, creation & enhancement) | Habitat units     | 0.02   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| Spatial risk multiplier (SRM) deductions                                                                 | Habitat units     | 0.00   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| FINAL RESULTS                                                                                            |                   |        |        |
| Total net unit change<br>(Including all on-site & off-site habitat retention, creation & enhancement)    | Habitat units     | 0.02   |        |
|                                                                                                          | Hedgerow units    | 0.00   |        |
|                                                                                                          | Watercourse units | 0.00   |        |
| Total net % change<br>(Including all on-site & off-site habitat retention, creation & enhancement)       | Habitat units     | 16.87% |        |
|                                                                                                          | Hedgerow units    | 0.00%  |        |
|                                                                                                          | Watercourse units | 0.00%  |        |
| Trading rules satisfied?                                                                                 | Yes ✓             |        |        |

| Unit Type         | Target | Baseline Units | Units Required | Unit Deficit |
|-------------------|--------|----------------|----------------|--------------|
| Habitat units     | 10.00% | 0.11           | 0.12           | 0.00         |
| Hedgerow units    | 10.00% | 0.00           | 0.00           | 0.00         |
| Watercourse units | 10.00% | 0.00           | 0.00           | 0.00         |

No additional area habitat units required to meet target

No additional hedgerow units required to meet target

No additional watercourse units required to meet target