



e3p

Biodiversity Metric Report

Renshaw House, Manchester

Reference: 81-561-R2-4

Date: May 2024



BIODIVERSITY METRIC REPORT

Renshaw House
Manchester

Prepared for:
Mia James Construction

Report Ref: 81-561-R2-4
Date Issued: 15/05/2024

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QUALITY ASSURANCE

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EXECUTIVE SUMMARY

Site Address	Renshaw House, 99 Plymouth Grove, Manchester M13 9LQ				
Co-ordinates	E 385327, N 396379				
Site Area	Approximately 0.13 ha				
Current Site Use	The site is currently in use as a university hall of residence and comprises two buildings, developed land; sealed surface, mixed scrub, modified grassland, introduced shrub, treelines and a hedgerow.				
Proposed Development	Development proposals include the demolition of the existing on-site buildings and the development of a seven-storey student accommodation block.				
Results	The biodiversity metric shows that the proposed development will result in a gain in habitat and hedgerow units as follows: <table><tr><td>Habitat Units</td><td>+0.25</td></tr><tr><td>Hedgerow Units</td><td>+0.13</td></tr></table> A 83.94% gain in habitat units and a 36.30% gain in hedgerow units will be incurred on-site as a result of the development. The trading rules of the metric have been satisfied, as habitats lost have been 'traded up'.	Habitat Units	+0.25	Hedgerow Units	+0.13
Habitat Units	+0.25				
Hedgerow Units	+0.13				
Conclusions and Recommendations	The proposed scheme and site plans show a total gain of 0.25 habitat units (+83.94%) and 0.13 hedgerow units (+36.30%) on-site as a result of the development. The trading rules have also been satisfied. As a gain over 10% has been achieved, and the trading rules have been satisfied, no further mitigation is required.				



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1. INTRODUCTION

1.1. BACKGROUND

E3P has been instructed by Mia James Construction to undertake a Biodiversity Metric Calculation at Renshaw House, Manchester, hereafter referred to as “the site”.

This report has been produced by Conor Evans BSc (Hons) MRes, Consultant Ecologist at E3P. Conor has experience undertaking Biodiversity Net Gain and Condition Assessments on a variety of projects across the UK.

This report should be read in conjunction with ‘Statutory Biodiversity Metric Calculation Tool – Renshaw House, Manchester.’

1.2. SITE LOCATION

The site is located in south-east Manchester. The site is accessed via Hyde Grove, which defines the south-east site boundary. Plymouth Grove runs adjacent to the north-east site boundary. Hyde Grove Chapel is located adjacent to the south-west site boundary. An NHS delivery and collections centre is located adjacent to the north-west site boundary. The wider landscape comprises commercial and residential buildings, hardstanding roads, scattered trees and amenity grassland. Swinton Grove Park is located approximately 110 m south-east of the site boundary. Whitworth Park is located approximately 550 m south-west of the site boundary. An active railway line is located approximately 950 m north-east of the site boundary at its nearest point. Please refer to Figure 1.1 for the approximate site location.

FIGURE 1.1 APPROXIMATE SITE LOCATION



1.3. OBJECTIVES

The objectives of the Biodiversity Metric are as follows:

- ✦ Identify percentage change in on-site habitat.
- ✦ Identify the number of habitat units lost/gained on-site; and
- ✦ Determine the need for a conservation offset payment or off-site habitat creation.



2. METHODOLOGY

2.1. BIODIVERSITY METRIC

The Department for Environment, Food and Rural Affairs' (DEFRA) Statutory Biodiversity Metric was used to undertake the metric calculation. The metric was undertaken following guidance as detailed within The Statutory Biodiversity Metric User Guide (DEFRA, 2024), the Statutory Biodiversity Metric Technical Supplement (DEFRA, 2024) and the Overview of Metric Changes (Natural England, 2024).

This metric was calculated by Conor Evans, Consultant Ecologist at E3P. Conor has attended internal training courses focusing on Biodiversity Net Gain and using the Biodiversity Metric Calculation Tool. Conor has also attended CIEEM webinars on The Statutory Biodiversity Metric for Mandatory Biodiversity Net Gain in England and Mandatory Biodiversity Net Gain: The Policy.

This metric was reviewed by Associate Director Celia Kenyon (née Barlow), BSc (Hons) MSc MEnvSc CEnv MCIEEM. Celia has undertaken a number of online training courses with CIEEM including 'Calculating and Using Biodiversity Units with Metric 2.0' and 'Biodiversity Net Gain Through Development'. Celia has also completed Condition Assessments on a number of sites across the UK and holds a Level 3 Field Identification Skills Certificate (FISC).

2.2. ON-SITE HABITAT BASELINE DATA

The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology (DEFRA, 2024) was used to undertake the condition assessment. The methodology follows The Statutory Biodiversity Metric Draft User Guide (DEFRA, 2024).

The baseline data used to inform the condition assessment was collected on 15th November 2023 during a Preliminary Ecological Appraisal of the site by E3P (report reference: 81-561-R1). Please see Appendix I for the UKHab Habitat Map.

On-site baseline habitats were measured off the UKHab Habitat Plan using QGIS. The area for scattered trees was calculated using the Tree Helper calculator within the metric.

2.3. POST-DEVELOPMENT HABITAT CREATION

The Landscape Layout – Ground Floor by TPM Landscape (2024) (drawing reference: 4623-101D) was used to measure proposed habitat creation on-site. The Landscape Layout – Roof Floor by TPM Landscape (2024) (drawing reference: 4623-102B) was used to measure the proposed green roof creation on-site. The areas of proposed habitat were measured using QGIS from the PDF drawing. The area for scattered trees was calculated using the Tree Helper calculator within the metric.

Please see Appendix II for the Post-Development Plan, Appendix III for the Proposed Ground Floor Plan and Appendix IV for the Proposed Roof Plan.

2.4. LIMITATIONS

Some areas on the site are double counted, including root protection zones and areas of habitat, where overlap is shown. This means areas of habitat pre- and post-development do not total to the same area.



3. RESULTS

3.1. ON-SITE BASELINE CONDITION ASSESSMENT RESULTS

Table 3.1 shows the details of the habitat condition assessment used for input into the metric calculation tool.

TABLE 3.1 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	CONDITION ASSESSMENT	DESCRIPTION
GRASSLAND – MODIFIED GRASSLAND	0.0597	Poor	Fails Criterion A which is essential for achieving Moderate or Good condition: <i>There are 6-8 vascular plant species per m² present, including at least 2 forbs.</i>
HEATHLAND AND SHRUB – MIXED SCRUB	0.0116	Poor	Passes 2 of 5 condition assessment criteria: - The parcel represents a good example of its habitat type – the appearance and composition of the vegetation closely matches its UKHab description; at least 80% of scrub is native; there are at least three native woody species; no single species comprises more than 75% of the cover (except hazel (<i>Corylus avellana</i>), common juniper (<i>Juniperus communis</i>), sea buckthorn (<i>Hippophae rhamnoides</i>) or box (<i>Buxus sempervirens</i>), which can be up to 100% of cover). - There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.
URBAN – DEVELOPED LAND; SEALED SURFACE (BUILDINGS)	0.0291	N/A - Other	N/A



HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	CONDITION ASSESSMENT	DESCRIPTION
URBAN – DEVELOPED LAND; SEALED SURFACE (HARDSTANDING)	0.0314	N/A - Other	N/A
INDIVIDUAL TREES – URBAN TREE	0.0163 (1 x medium tree)	Moderate	Passes 4 of 6 condition assessment criteria: - The tree is a native species (or at least 70% within the block are native species). - The tree canopy is predominantly continuous, with gaps in canopy cover making <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion). - 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. - More than 20% of the tree canopy area is oversailing vegetation beneath.



HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	CONDITION ASSESSMENT	DESCRIPTION
HEDGEROWS AND LINES OF TREES – NATIVE HEDGEROW (H1)	0.0276	Moderate	No more than 4 failures in total and does not fail both attributes in more than one functional group: - Over 1.5 m average height along length. - Over 1.5 m average width along length. - Gap between ground and base of canopy less than 0.5 m for over 90% of length. - Gaps make up <10% of total length and no canopy gaps over 5 m. - Over 90% of hedgerow is free of invasive non-native plant species. - Over 90% of the hedgerow is free of damage caused by human activities.
HEDGEROWS AND LINES OF TREES – LINE OF TREES (TL1)	0.0263	Moderate	Passes 4 of 5 condition assessment criteria: - At least 70% of trees are native species. - Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being over 5 m wide. - One or more trees has veteran features and/or ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark. - At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.



HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	CONDITION ASSESSMENT	DESCRIPTION
HEDGEROWS AND LINES OF TREES – LINE OF TREES (TL2)	0.0354	Moderate	Passes 3 of 5 condition assessment criteria: - At least 70% of trees are native species. - Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being over 5 m wide. - At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.

3.2. ON-SITE HABITAT RETENTION

Table 3.2 shows the details of the on-site habitats to be retained as a result of the development. Please refer to Appendix II for the Post Development Habitat Plan for locations of retained habitats.

TABLE 3.2 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	CONDITION ASSESSMENT
INDIVIDUAL TREES - URBAN TREE	0.0163 (1 x medium tree)	Moderate
HEDGEROWS AND LINES OF TREES – NATIVE HEDGEROW (H1)	0.0172	Moderate



HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	CONDITION ASSESSMENT
HEDGEROWS AND LINES OF TREES - LINE OF TREES (TL1)	0.0198	Moderate

3.3. ON-SITE HABITAT ENHANCEMENT CONDITION ASSESSMENT

Table 3.3 shows the details of the on-site habitats to be enhanced as a result of the development. An area of mixed scrub in the north-west of the site is to be retained and enhanced from poor to moderate condition. Please refer to Appendix II for the Post-Development Habitat Plan for locations of enhanced habitats.

TABLE 3.3 ON-SITE HABITAT ENHANCEMENT CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
EXISTING MIXED SCRUB TO BE RETAINED AND ENHANCED	Heathland and Shrub – Mixed Scrub	0.0031	Moderate	5 years	Passes 3 of 5 condition assessment criteria: ✦ The parcel represents a good example of its habitat type – the appearance and composition of the vegetation closely matches its UKHab description; at least 80% of scrub is native; there are at least three native woody species; no single species comprises more than 75% of the cover (except hazel, common juniper, sea buckthorn or box, which can be up to 100% of cover). ✦ There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of



HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
					suboptimal condition make up less than 5% of ground cover.  The scrub has a well-developed edge with scattered scrub and tall grassland and/or forbs present between the scrub and adjacent habitat.

3.4. ON-SITE HABITAT CREATION CONDITION ASSESSMENT

Habitats have been proposed within the site based on the Landscape Layout – Ground Floor (TPM Landscape, 2024a) and the Landscape Layout – Roof Layout (TPM Landscape, 2024b). Table 3.4 shows the details of the target condition assessment and total areas of habitat creation. It has been assumed that there will be no significant delay in the creation of the proposed habitat features, as such the delay in starting habitat creation has been set to zero.

TABLE 3.4 HABITAT CREATION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
BUILDING	Urban – Developed Land; Sealed Surface (Buildings)	0.0501	N/A	N/A	N/A
HARD LANDSCAPE	Urban – Developed Land; Sealed Surface (Hardstanding)	0.0282	N/A	N/A	N/A



HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
ORNAMENTAL WILDLIFE FRIENDLY PLANT	Urban – Introduced Shrub	0.0122	N/A	1 year	N/A
NATIVE SHRUB MIX	Heathland And Shrub – Mixed Scrub	0.0171	Moderate	5 years	Passes 3 of 5 condition assessment criteria: ✚ The parcel represents a good example of its habitat type – the appearance and composition of the vegetation closely matches its UKHab description; at least 80% of scrub is native; there are at least three native woody species; no single species comprises more than 75% of the cover (except hazel, common juniper, sea buckthorn or box, which can be up to 100% of cover). ✚ There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover. ✚ The scrub has a well-developed edge with scattered scrub and tall grassland and/or forbs present between the scrub and adjacent habitat.
BIODIVERSE LAWN	Grassland – Modified Grassland	0.0097	Moderate	4 years	Passes 4 of 7 condition assessment criteria: ✚ There are 6-8 vascular plant species per m² present, including at least 2 forbs.



HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
					- Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens). - Cover of bracken (<i>Pteridium aquilinum</i>) is less than 20%. - There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).
SOFT LANDSCAPE (AS PER LANDSCAPE LAYOUT – ROOF FLOOR)	Urban – Biodiverse Green Roof	0.0074	Moderate	5 years	Passes 2 of 4 condition assessment criteria: - The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year. - Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife cover less than 5% of the total vegetated area.
TREES IN SOFT LANDSCAPE	Individual Tree – Urban Tree	0.0611 (10 small trees)	Moderate	27 years	Passes 4 of 6 condition assessment criteria: - The tree is a native species (or at least 70% within the block are native species). - The tree canopy is predominantly continuous, with gaps in canopy cover making <10% of total area and no individual



HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
					gap being >5 m wide (individual trees automatically pass this criterion). - 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. - More than 20% of the tree canopy area is oversailing vegetation beneath.
EVERGREEN HEDGEROW	Hedgerows and Lines of Trees – Non-Native and Ornamental Hedgerow	0.0154	Poor	1 year	Condition automatically set by metric.
NATIVE HEDGEROW MIX	Hedgerows And Lines of Trees – Species-Rich Native Hedgerow	0.0484	Moderate	5 years	No more than 4 failures in total and does not fail both attributes in more than one functional group: - Over 1.5 m average height along length. - Over 1.5 m average width along length. - Gap between ground and base of canopy less than 0.5 m for over 90% of length. - Gaps make up <10% of total length and no canopy gaps over 5 m.



HABITAT TYPE (LANDSCAPE LAYOUT)	HABITAT TYPE (UKHAB)	AREA (HA) / LENGTH (KM)	TARGET CONDITION	TIME TO TARGET CONDITION	DESCRIPTION
					Over 90% of hedgerow is free of invasive non-native plant species. Over 90% of the hedgerow is free of damage caused by human activities.



3.5. STRATEGIC SIGNIFICANCE

The site is not noted within Manchester City Council's Local Development Framework, therefore the strategic significance was defined as 'Area not in local strategy, no local strategy'. The site comprises buildings, colonised hardstanding, mixed scrub, amenity grassland, treelines and a hedgerow. Due to the poor quality of the habitats on-site and the developed nature of the surrounding areas, the site is not anticipated to have significant ecological value.

3.6. BIODIVERSITY UNIT RESULT

The headline results of the metric show a gain of 0.25 habitat units and 0.13 hedgerow units as a result of development. Table 3.5 shows the headline results detailed within the Biodiversity Metric.

TABLE 3.5 HEADLINE RESULTS

HEADLINE	CATEGORY	RESULT
TOTAL NET UNIT CHANGE	Habitat Units	+0.25
	Hedgerow Units	+0.13
	Watercourse Units	N/A
TOTAL NET % CHANGE	Habitat Units	+83.94%
	Hedgerow Units	+36.30%
	Watercourse Units	N/A

The trading rules of the metric have been satisfied as habitats lost have been 'traded up'.



4. CONCLUSIONS AND RECOMMENDATIONS

The proposed scheme and site plan show a total gain of 0.25 habitat units (+83.94%) and 0.13 hedgerow units (+36.30%) will be incurred on-site as a result of the development. As a gain over 10% has been achieved, and the trading rules have been satisfied, no further mitigation is required.



5. REFERENCES

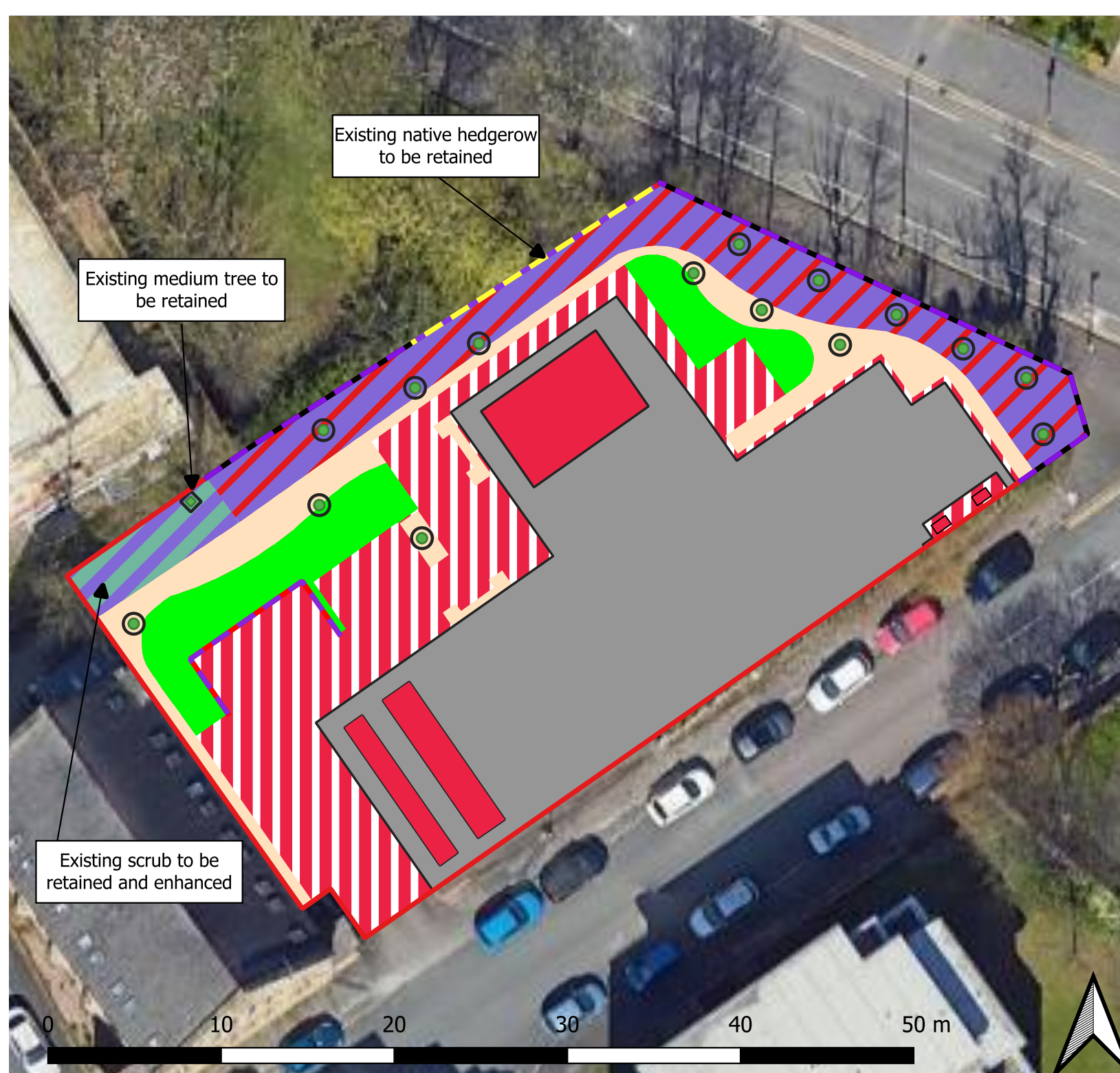
- ✿ Department for Environment, Food & Rural Affairs (2024). The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.
- ✿ Department for Environment, Food & Rural Affairs (2024). The Statutory Biodiversity Metric User Guide.
- ✿ E3P (2023). Preliminary Ecological Appraisal – Renshaw House, Manchester. Report reference: 81-561-R1.
- ✿ James Royston (2023). Arboricultural Impact Assessment – Hyde Grove, Manchester. Report reference: 231010 AIA.
- ✿ Manchester City Council (2012). Manchester’s Local Development Framework – Core Strategy Development Plan Document.
- ✿ Natural England (2024). Overview of Metric Changes: March 2023 – February 2024.
- ✿ TPM Landscape (2024a). Renshaw House Manchester – Landscape Layout – Ground Floor. Drawing reference: 4623-101D.
- ✿ TPM Landscape (2024b). Renshaw House Manchester – Landscape Layout – Roof Floor. Drawing reference: 4623-102B.

END OF REPORT



APPENDIX I

UKHAB HABITAT PLAN



Key:

- Red Line Boundary
- Native hedgerow (Retained)
- Non-native and ornamental hedgerow (Proposed)
- Species-rich native hedgerow (Proposed)
- Medium urban tree (Retained)
- Small Urban Tree (Proposed)
- Biodiverse green roof (Proposed)
- Ground level planters
- Mixed scrub (Enhanced)
- Introduced shrub (Proposed)
- Mixed scrub (Proposed)
- Modified grassland (Proposed)
- Buildings (Proposed)
- Developed land; sealed surface (Proposed)

Notes

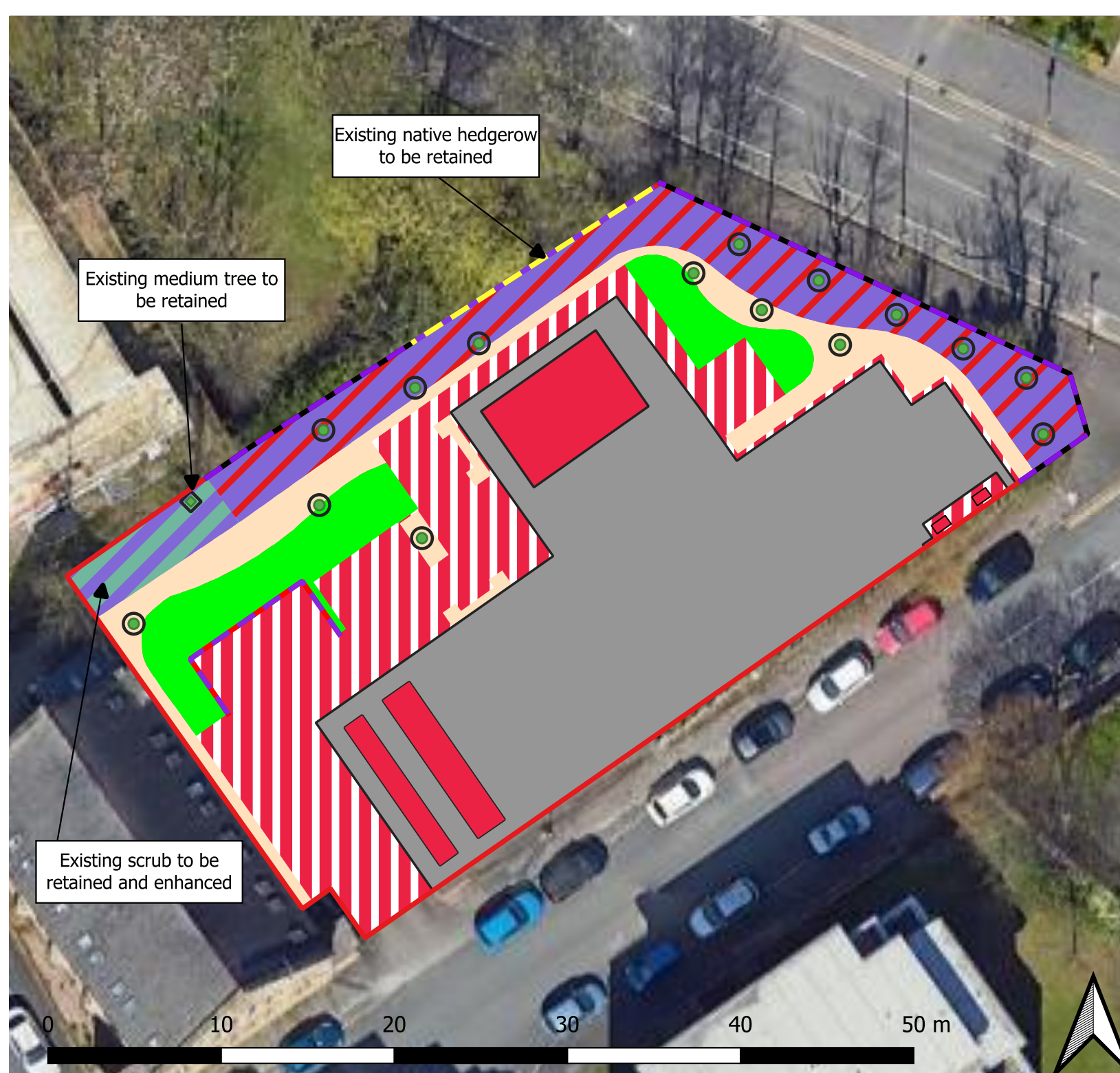
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Job title: Renshaw House, Manchester			Drawing title: Post-Development Habitat Plan	



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APPENDIX II POST-DEVELOPMENT HABITAT PLAN



Key:

- Red Line Boundary
- Native hedgerow (Retained)
- Non-native and ornamental hedgerow (Proposed)
- Species-rich native hedgerow (Proposed)
- Medium urban tree (Retained)
- Small Urban Tree (Proposed)
- Biodiverse green roof (Proposed)
- Ground level planters
- Mixed scrub (Enhanced)
- Introduced shrub (Proposed)
- Mixed scrub (Proposed)
- Modified grassland (Proposed)
- Buildings (Proposed)
- Developed land; sealed surface (Proposed)

Notes

Issue: 1	Revision: 3	Date: 14/05/2024	Drawn: CE	Authorised: CK
Client: Mia James Construction			Job No. 81-561	Date: 14/05/2024
			Drawing No. 005	Scale: 1:300 @ A4
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APPENDIX III

LANDSCAPE LAYOUT –

GROUND FLOOR



LEGEND
HARD LANDSCAPE

- Proposed Block Paving For Footpath
Mix of light grey and buff colour
- Proposed High Quality Flag Paving For Seating Area
Light grey colour
- Proposed Block Paving For Vehicle Access
Buff colour
- Proposed Trim Sett (2 Row) For Seating Area and Footpath
Dark Grey colour
- Proposed Trim Sett (4 Row) For Driveway
Dark Grey colour
- Proposed Gravel
Loose Round Pebbles

FURNITURE

- Proposed Picnic Table
- Proposed Pergola
To provide shelter from rain
- Proposed Bench
- Proposed Coffee Table with Seat Cube
- Proposed Bike Rack
- Proposed Moving Planter
800mm high steel through planter with Castor

BOUNDARY TREATMENTS

- Proposed Metal Fence
Refer to Architect's drawing
- Proposed Metal Fence with Pedestrian Gate
Refer to Architect's drawing

LEVELS

- +41.731 Existing Level
Refer to Topo drawing for more info
- +41.731 Proposed Level

ECOLOGY ENHANCEMENT

- Proposed Hedgehog Houses
Indicative position only. Exact location to be advised by Ecologist.
- Proposed Bird Boxes
Indicative position only. Exact location to be advised by Ecologist.
- Proposed Bat Boxes
Indicative position only. Exact location to be advised by Ecologist.

SOFT LANDSCAPE

- Existing Trees to be Retained
Trees to be retained and protected in line with BS5837:2012. Please refer to Arboricultural Survey by James Royston Arboriculture Ltd for more information.
- Existing Native Hedgerow to be Retained and Enhanced
- Existing Mixed Scrub to be Retained and Enhanced
- Existing Trees to be Removed
- Proposed Semi Mature Trees In Soft Landscape
Semi-mature, 20-25cm girth, min. 6m height.
- Proposed Garden Trees In Soft Landscape
Heavy Standard, 12-14cm girth, 3.5-4m height or Multi-stem, 2-2.5m in 50L container.
- Proposed Ornamental Wildlife Friendly Plant
Proposed shrubs and flowering herbaceous plants to be planted as 3-5L pots at 3-5 per sq.m. with individual specimen shrubs.
- Proposed Native Scrub Mix
Bare root stock, 60-80cm, planted at 2m2, in groups of 3-5 Plants. To be protected with spiral guards where necessary.
- Proposed Native Hedgerow Mix
Instant native hedge mix, 120-150cm high, to be supplied in 90 litre troughs which are 100cm long x 30cm deep by 30cm wide. To have at least 5 native species, and at least 3 of them to be woody species such as Crataegus monogyna, Acer campestre, Corylus avellana and Euonymus europaeus. To be supplied by Evergreen Hedging or similar approved.
- Proposed Evergreen Hedgerow
100-120cm high, to be planted in 10L container with 3 per lin. m.
- Proposed Biodiverse Lawn
To be WFG20 Eco Species Rich Lawn, supplied by Germinal or similar approved. To be 80:20 mix of grasses & native wildflowers.

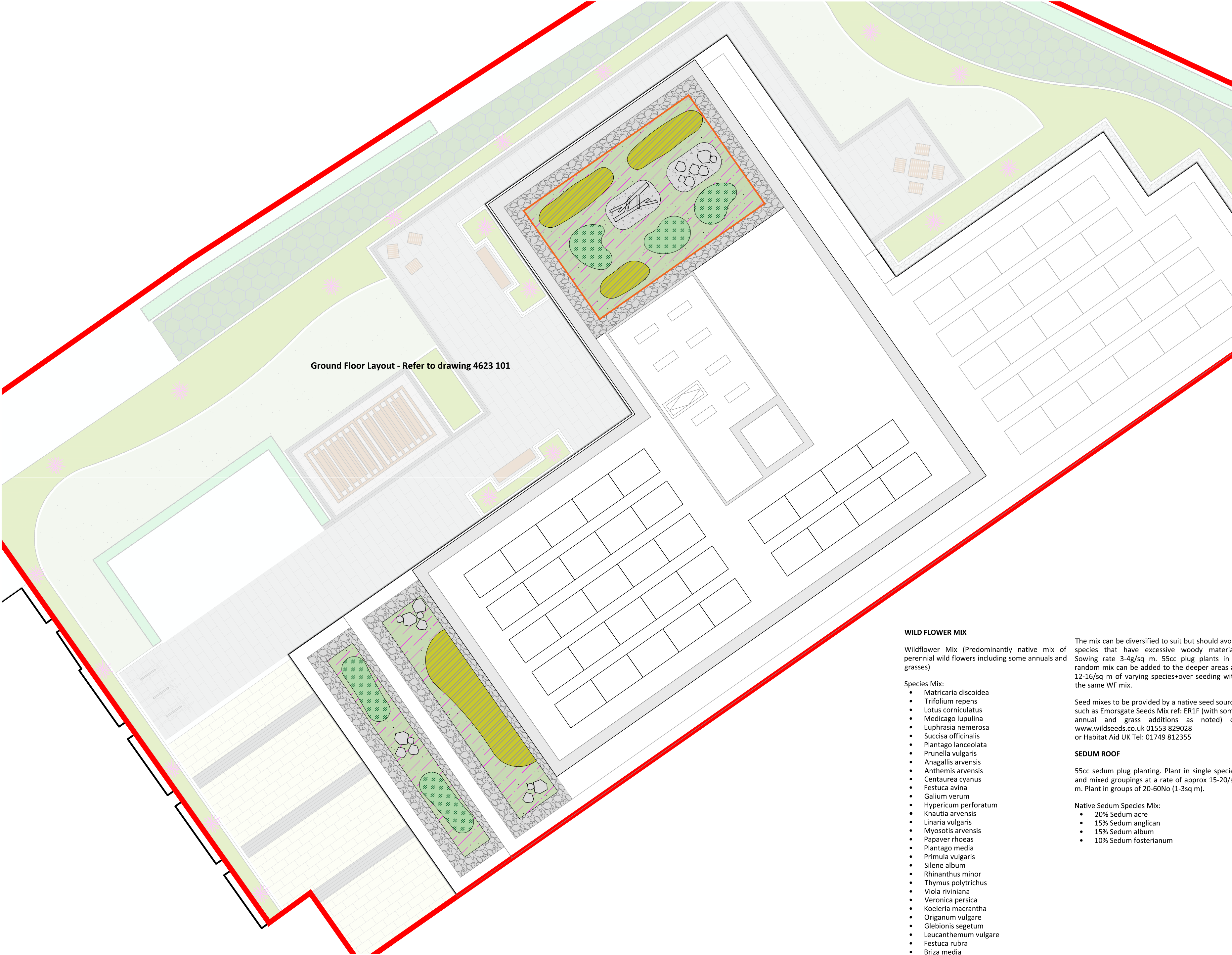
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REVISION NOTES			
Rev	By	Description	Date
D	JW	Tree size amended	09.05.24
C	JW	Updated in line with arb's comments	08.05.24
B	JW	Updated in line with latest layout	07.05.24
A	JW	Updated in line with ecologist's comments	15.04.24

Client	Mia James
Project	Renshaw House Manchester
Description	Landscape Layout - Ground Floor
Status	For Approval
Scale @ A2	1:200
Drawn	JW
Checked	MW
Date	27.03.24
Job number	4623
Drawing number	101
Revision	D

APPENDIX IV LANDSCAPE LAYOUT – ROOF PLAN



Ground Floor Layout - Refer to drawing 4623 101

WILD FLOWER MIX

Wildflower Mix (Predominantly native mix of perennial wild flowers including some annuals and grasses)

Species Mix:

- Matricaria discoidea
- Trifolium repens
- Lotus corniculatus
- Medicago lupulina
- Euphrasia nemerosa
- Succisa officinalis
- Plantago lanceolata
- Prunella vulgaris
- Anagallis arvensis
- Anthemis arvensis
- Centaurea cyanus
- Festuca ovina
- Galium verum
- Hypericum perforatum
- Knautia arvensis
- Linaria vulgaris
- Myosotis arvensis
- Papaver rhoeas
- Plantago media
- Primula vulgaris
- Silene album
- Rhinanthus minor
- Thymus polytrichus
- Viola riviniana
- Veronica persica
- Koeleria macrantha
- Origanum vulgare
- Glebionis segetum
- Leucanthemum vulgare
- Festuca rubra
- Briza media

The mix can be diversified to suit but should avoid species that have excessive woody material. Sowing rate 3-4g/sq m. 55cc plug plants in a random mix can be added to the deeper areas at 12-16/sq m of varying species-over seeding with the same WF mix.

Seed mixes to be provided by a native seed source such as Emorsgate Seeds Mix ref: ER1F (with some annual and grass additions as noted) or www.wildseeds.co.uk 01553 829028 or Habitat Aid UK Tel: 01749 812355

SEDUM ROOF

55cc sedum plug planting. Plant in single species and mixed groupings at a rate of approx 15-20/sq m. Plant in groups of 20-60No (1-3sq m).

Native Sedum Species Mix:

- 20% Sedum acre
- 15% Sedum anglican
- 15% Sedum album
- 10% Sedum fosterianum

LEGEND

SOFT LANDSCAPE



Proposed Wild Flower Mix
Wildflower Mix (Predominantly native mix of perennial wild flowers including some annuals and grasses).



Proposed Native Sedum Plug Plants
Native Sedum Plants in shallow 80mm substrate depth.



Proposed Wild Flower / Grasses Plug Plants
To be added at 150mm depths of extensive substrate.



Proposed Pebbles Margin
Placed to perimeter of podium garden. Size: 20/40mm dia. Colour: Blend of grey and brown.



Proposed Gravel
Locally sourced rubble, gravel, spoil mixed with lightweight substrate (aggregate 25mm to dust).



Proposed Deadwood
Native deadwood logs, 1m x 100-200mm dia.



Proposed Boulders
200-300mm dia only where stone piles indicated.



Proposed Aluminum Edging
Variation: Rigid Finish: Anodic Bronze. To be AluExcel by Kinley or similar approved.

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REVISION NOTES

Rev	By	Description	Date
B	JW	Updated in line with latest layout	14.05.24
A	JW	Updated in line with latest layout	07.05.24

Client

Mia James

Project

Renshaw House Manchester

Description

Landscape Layout - Roof Floor

Status

For Approval

Scale @ A2	Drawn	Checked	Date
1:100	JW	MW	27.03.24
Job number	Drawing number	Revision	
4623	102	B	

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