

BIODIVERSITY NET GAIN DESIGN STAGE ASSESSMENT

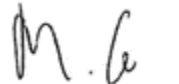
April 2023

**137 The Rock,
Bury,
BL9 0ND**

**U R B A N
G R E E N**



QUALITY MANAGEMENT

Project No.:	UG1947			
Project:	The Rock			
Location:	137 The Rock, Bury, BL9 0ND			
Title:	Biodiversity Net Gain Design Stage Assessment			
Document Type:	BNG	Issue No.:	01	
Date:				
Prepared By:	Sarah Child	Signature:		Qualifications: Biodiversity Net Gain Consultant, MSc, QCIEEM
Checked By:	Shannon Brady	Signature:		Qualifications: Biodiversity Net Gain Consultant, MSc, QCIEEM
Checked By:	Max Grindle	Signature:		Qualifications: Assistant Ecologist, BSc, QCIEEM
Revision Status:				
Rev:	Date:	Issue/Purpose/Comment:	Prepared:	Checked:
02	18/04/2023	Aligning with updated landscape plans	SC	SB

NON-TECHNICAL EXECUTIVE SUMMARY

This Biodiversity Net Gain Assessment has been prepared by Urban Green on behalf of 21 Living Limited to support a planning application to develop 137 The Rock, Bury (hereafter referred to as ‘the site’). The proposals include the development of 13 apartments, with associated hard and soft landscaping.

Urban Green have been appointed to complete a Biodiversity Net Gain Design Stage Assessment in order to assess the change in value to the environment provided by the proposed development.

The Assessment was conducted using the Biodiversity Metric 4.0 to calculate the pre-and post-development biodiversity habitat units of the site for the proposed development. The results of this calculation are summarised in the following table:

	Habitat Unit Change					On-site post development	Net change in Biodiversity	
	On-site baseline	Retained	Lost	Enhanced	Created		Habitat units	%
Area Habitat Units	0	0	0	-	+0.03	0.03	+0.03	+100
Linear Hedgerow Units	-	-	-	-	+0.17	0.17	+0.17	+100

Overall, this development is expected to produce a net gain of 0.03 area habitat units (+100%) and a net gain of 0.17 linear hedgerow units (+100%). Overall, it demonstrates that the post-development habitats on site will provide more ecological benefit to wildlife than the habitats currently found on site and the development is in line with the relevant National Planning Policy Framework and Local Planning Policies. The development also satisfies the trading rules.

To ensure that the habitats proposed as part of the post-development design of this site reach the condition detailed within this report and the full gain in value to the environment is achieved by this site, a long-term management plan (usually 30 years) is recommended.

CONTENTS

1	Introduction	1
1.1	Background to the Scheme.....	1
1.2	Site Context.....	1
1.3	Purpose of this Report	2
1.4	Planning Context.....	2
1.4.1	National Policy	2
1.4.2	Local Policy.....	2
1.5	Good Practice Principles	3
2	Methods	5
2.1	Sources of Information	5
2.2	Desk Study.....	5
2.3	Site Mapping	6
2.3.1	Existing Habitat (Baseline).....	6
2.3.2	Post-Development Habitats.....	6
2.4	The Biodiversity Metric 4.0.....	7
2.5	Habitat Scoring	7
2.5.1	Minimum Mapping Units (MMU).....	7
2.5.2	Baseline Units.....	7
2.5.3	Post-Development.....	8
2.6	Constraints to the Survey	9
3	Baseline Habitat Assessment.....	10
3.1	Area Habitats	10
3.1.1	1) Urban – Building (u1b5 90).....	10
3.1.2	2) Urban – Other developed land (u1b6 17).....	10
4	Retained Habitats	12
4.1	Area Habitats	12
5	Lost Habitats	13
5.1	Area Habitats	13
6	Pre-Development Unit Summary	14

7	Habitat Creation.....	15
7.1	Area Habitats	15
7.1.1	1) Grassland – Modified Grassland	15
7.1.2	2) Urban – Introduced Shrub	16
7.1.3	3) Urban – Urban Tree.....	16
7.1.4	4) Urban – Developed Land; Sealed Surface	17
7.1.5	5) Urban – Buildings (Developed Land; Sealed Surface)	17
7.1.6	6) Urban – Vegetated Gardens	17
7.2	Linear Hedgerow Habitats	17
7.2.1	1) Hedgerow – Native Hedgerow.....	17
8	Post-Development Summary and Conclusion	19
9	References	20

Appendix 1 - Pre-development Habitat Map

Appendix 2 - Primary and Secondary Codes

Appendix 3 - Proposed Landscape Plan

1 Introduction

1.1 Background to the Scheme

This Biodiversity Net Gain Assessment has been prepared by Urban Green on behalf of 21 Living Limited to support a planning application to develop 137 The Rock, Bury (hereafter referred to as ‘the site’). The proposals include the redevelopment of the onsite building, including associated demolition, to facilitate the development of 13 residential units with associated hard and soft landscaping.

Urban Green have been appointed to complete a Biodiversity Net Gain Design Stage Assessment in order to assess the change in value to the environment provided by the proposed development.

The author of the report is Biodiversity Net Gain Consultant, Sarah Child. Sarah has experience providing consulting services in Biodiversity Net Gain for a range of development schemes, both residential and commercial, across the UK.

1.2 Site Context

The site is located at National Grid Reference SD 80736 11028 and comprises a total area of approximately 0.036ha (see Figure 1).

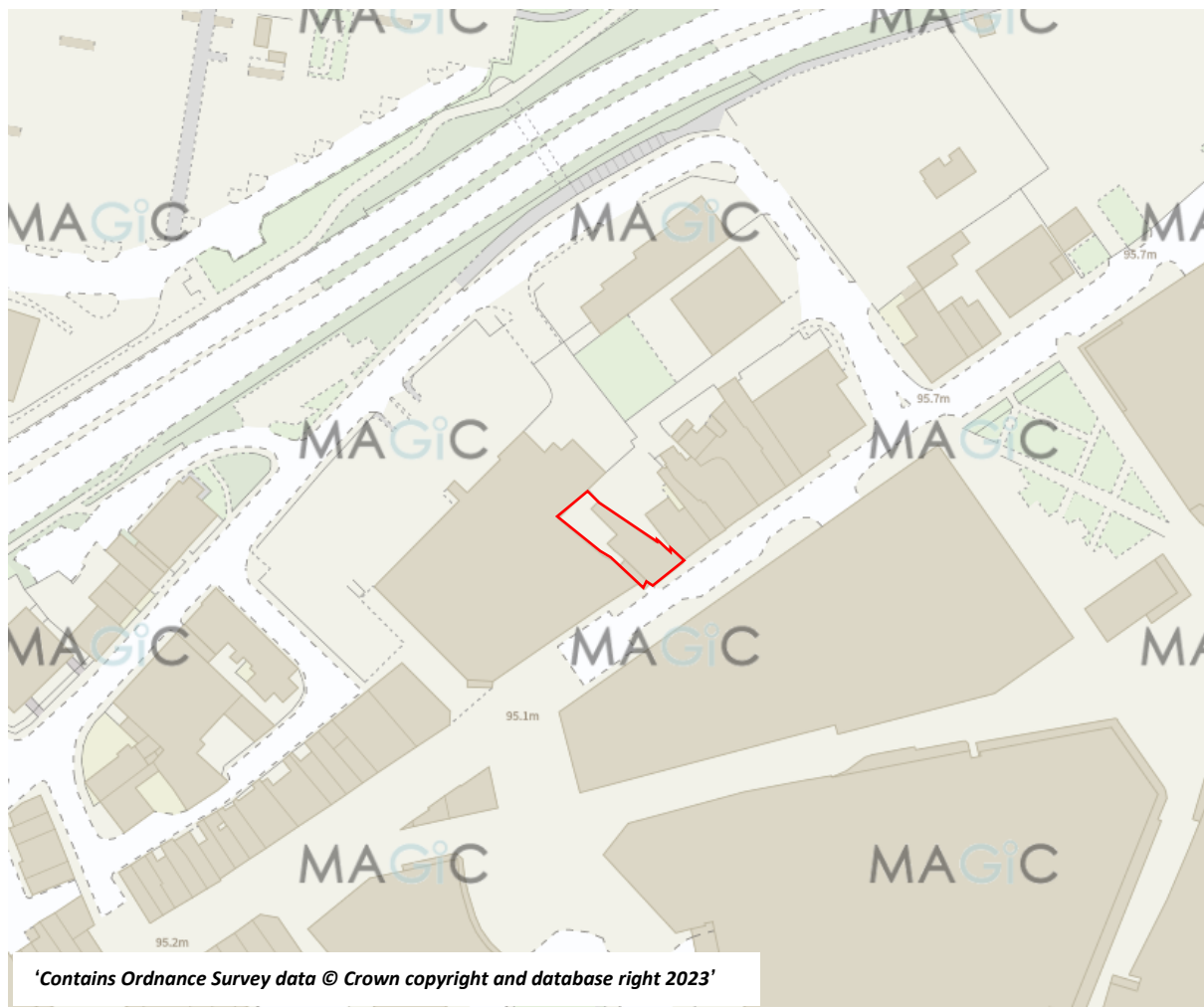


Figure 1 – Site Extent

The site is located in a dense urban zone within Bury town centre, approximately 550m northeast of Bury Bolton Street train station, for which the associated railway runs to the north and south. The site is bound on all sides by commercial developments, with a road adjacent to the south. A churchyard containing a parcel of broadleaved woodland is present approximately 200m west of the site, connected to broadleaved woodland bordering the northern and southern aspects of Peel Way. The River Irwell is present approximately 735m to the northwest, with a large expanse of open grassland/broadleaved woodland mosaic adjacent to the river at its closest point to the site.

1.3 Purpose of this Report

This report has been produced to document the methods, results and conclusions of a BNG Design Stage Assessment that was undertaken on site. The advice herein is based on both desk and field-based studies and intends to fulfil the following purposes:

- Ensure the core principles of Biodiversity Net Gain including the mitigation hierarchy are applied;
- Identify the baseline habitats present on site (pre-development), assess the condition and provide an indication of the ecological value of those habitats;
- Identify the post-development habitats present on site, assess the possible target condition and provide an indication of the likely importance of those habitats;
- Calculate the overall change in biodiversity score from pre- to post-development habitats (measured as habitat units).

1.4 Planning Context

1.4.1 National Policy

Biodiversity Net Gain means leaving biodiversity in a better state than it was before. As part of the Government's 25 Year Environment Plan, this requirement is being introduced and mandated for all developments as of November 2023. Biodiversity Net Gain is underpinned by Schedule 14 of the Environment Act, 2021:

This Schedule makes provision for grants of planning permission in England to be subject to a condition to secure that the biodiversity gain objective is met.

This is supported by Paragraph 174 of the National Planning Policy Framework (NPPF):

Planning policies and decisions should contribute to and enhance the natural and local environment by inter alia:

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Upon Biodiversity Net Gain becoming mandatory, all new planning applications (with specific exemptions) must demonstrate a minimum 10% uplift in biodiversity value via development. The assessment method will be standardised using the most recent Natural England Biodiversity Metric (current version 4.0) which measures the biodiversity value of a site in habitat units, categorised into area, linear hedgerow and watercourse habitats. A 10% net gain in all categories is required.

1.4.2 Local Policy

The local plan for Bury recognises the requirements laid out within the NPPF and acknowledges the net gain requirements discussed within Greater Manchester ‘Places for Everyone’ plan, published in 2021.

Policy JP-G 9 of the Places for Everyone plan, relating to biodiversity and geodiversity, states:

Development will be expected to:

a. Follow the mitigation hierarchy of:

- i. Avoiding harm to biodiversity, particularly where it is irreplaceable, and including consideration of alternative sites where appropriate, then
- ii. Mitigating (within the local area) any harm to biodiversity, then
- iii. Compensating (within the local area) for any remaining harm to biodiversity

b. Avoid fragmenting or severing connectivity between habitats;

c. Achieve a net gain in biodiversity

d. Make appropriate provision for long-term management of habitats and geological features connected to the development; and

e. Provide robust evidence in accordance with relevant government and other guidance, including field surveys wherever development of ‘best and most versatile’ agricultural land is proposed or to establish the status of the land within the Agricultural Land Classification system.

Whilst off-site habitat enhancement and creation required as part of the mitigation hierarchy (or to achieve a measurable net gain in biodiversity of no less than 10%) should be local to the site regard should be had to supporting strategic biodiversity priorities and initiatives.

Additionally, Greater Manchester Combined Authority (GMCA) have produced guidance relating to Biodiversity Net Gain within the 10 GM boroughs and set out a 10% target (GMCA, 2021):

The minimum level of Biodiversity Net Gain is considered to be achieved when the biodiversity units for the habitats (for example, area based habitats, rivers and/or hedges) impacted by the development is increased by 10% or more after the development. If the calculations indicate that a net gain will not be delivered at this stage, either the design should be updated or additional areas for habitat compensation identified (either onsite or outside the development boundary).

1.5 Good Practice Principles

To ensure holistic development that makes a lasting positive change to the site’s biodiversity, the Good Practice Principles as detailed in Biodiversity Net Gain: Good Practice Principles for Development (Baker *et al.*, 2019) must be followed. Key principles include:

- Following the ‘Mitigation Hierarchy’:
 - Avoid impacts on biodiversity
 - Minimise impacts on biodiversity

- Compensate for biodiversity losses on site
 - Compensate for biodiversity loss off site
- Avoid irreplaceable habitats and losing biodiversity that cannot be offset elsewhere;
- Address risks including difficulty and time of habitat creation and enhancement;
- Make a measurable net gain contribution calculated with a suitable metric with limitation and assumptions clearly identified;
- Achieve the best outcome for biodiversity creating lasting long-term benefits that exceed current expectations.

2 Methods

2.1 Sources of Information

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
MAGIC website (www.magic.gov.uk)	04/04/2023	Locations of statutory designated sites within 1km of the site boundary. Locations of the designated sites within the National Site Network (Ramsar, SAC and SPA) within 5km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Natural England (https://designatedsites/.naturalengland.org.uk/)	04/04/2023	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	04/04/2023	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Greater Manchester Local Biodiversity Action Plans	04/04/2023	Species and habitats which are given special conservation status at the local level.
Main River Map (Environment Agency)	04/04/2023	The main river map shows which rivers in England are designated as ‘main rivers’. Other rivers are called ‘ordinary watercourses’.
The Biodiversity Metric 4.0 Natural England Publications (http://nepubprod.appspot.com/publication/6049804846366720)	04/04/2023	The Biodiversity Metric 4.0, including the tool itself, user guides and reference documentation associated with the tool.

2.2 Desk Study

A desk-based study using MAGIC was performed to identify any priority habitats, and statutory or non-statutory sites in the area using a 1km radius.

The site does not fall within the Green Belt or within any statutory or non-statutory sites. There were no statutory or non-statutory designated sites within a 1km radius of the site. However, the site does fall within the Impact Risk Zone for two Sites of Special Scientific Interest (SSSI), summarised in Table 2.

Table 2 – Impact Risk Zones of Statutory Sites

Designated Site	Approx. Distance from Site	Details
Rochdale Canal SSSI	7.5km east	A 20km section of the Rochdale Canal which has been partially restored and contains important habitats for submerged aquatic plant and emergent vegetation, including floating plantain (<i>Luronium natans</i>), a nationally scarce SAC species, and nine species of pond weed (<i>Potamogeton</i> sp.).
West Pennine Moors SSSI	6km north-west	A 7,615.5ha area comprising three district areas of moorland and forms part of the main Pennine range of uplands. The area includes ten nationally important features such as blanket bogs, acid grasslands and neutral hay meadows.

There were no UK Priority Habitats present on site, however there were four areas of Priority Habitat Deciduous Woodland within 1km of the site (Table 3).

Table 3 – Priority Habitats within 1km of the site

Priority Habitat	Approx. Distance from Site	Details
Deciduous Woodland	760m north-west	Adjacent to Woodhill Fold and along the River Irwell
Deciduous Woodland	800m west	Adjacent to the River Irwell
Deciduous Woodland	940m south-east	Within Openshaw Park
Deciduous Woodland	990m north-west	N/A

2.3 Site Mapping

2.3.1 Existing Habitat (Baseline)

A Preliminary Roost Assessment (PRA) was carried out on site on 13th February 2023 by Assistant Ecologist Max Grindle, BSc, QCIEEM. The site was confirmed to be comprised of a building and hardstanding during the PRA, therefore a full field survey was not deemed necessary (Urban Green, 2023a).

Habitat types were identified and recorded using the Coreo habitat mapping application (version V1.1) which utilises UKHab classifications (Butcher *et al.* 2020). Habitat types were based on the UKHab guidance provided and the assessor's best judgment while using these guidelines. These habitats were subsequently mapped using ESRI ArcGIS Pro software, and habitat areas and lengths were calculated to demonstrate habitats within the proposed development and the surrounding area. The baseline habitat map is displayed in Appendix 1. Secondary codes were also used to provide additional information which is not covered by the primary code allocated to the habitat; a full list of primary and secondary codes used within this assessment can be found in Appendix 2.

2.3.2 Post-Development Habitats

The planning layout as provided by Ollier Smurthwaite Architects (2022) (see Appendix 3) was provided in PDF and DWG format. Landscapes did not include soft landscaping details or planting plans, therefore

assumptions were made for the purposes of this report. The DWG file was used to calculate areas of the proposed landscapes.

2.4 The Biodiversity Metric 4.0

The BNG calculation was undertaken utilising The Biodiversity Metric 4.0 from Natural England (full calculation available Urban Green, 2023b) using the pre- and post-development habitats.

The calculation was performed by a technically competent and experienced person as detailed in British Standard BS8683 - Suitably qualified person – definition in BS8683:2020.

The Biodiversity Metric 4.0 uses habitat features as a proxy measure for capturing the value and importance of nature. The metric considers the size, ecological condition, location and proximity to nearby ‘connecting’ features. The metric enables assessments to be made of the present and forecast future biodiversity value of a site.

2.5 Habitat Scoring

The Biodiversity Metric 4.0 supplies reference documents and user guides to accurately evaluate and assess the different habitats on site. The methodology for the baseline and post development calculations are demonstrated in the following sections.

2.5.1 Minimum Mapping Units (MMU)

The UKHab classification system can be applied at various levels – fine scale, suitable for smaller sites, and large scale, used for broader landscapes. The fine scale level, which acknowledges areas of minimum 25m² and lengths of 5m, is considered appropriate for this site.

2.5.2 Baseline Units

To assess the quality of a habitat, and therefore calculate the units scored, the Biodiversity Metric 4.0 utilises three scoring factors detailed as follows:

Condition

The condition of a habitat is assessed utilising the Condition Sheets provided for each habitat type. These list positive indicators for each habitat and indicate how many of these indicators need to be present to meet certain thresholds of condition. These condition sheets can be found in Biodiversity Metric 4.0 Technical Annex 1 (Natural England, 2023). Condition sheets used within this assessment for pre- and post-development habitats are **Grassland (Low)** and **Urban Tree** (Table 4).

Table 4 – Conditions Sheets for Habitat Assessment

Condition Sheet	Habitats Assessed
Area Habitats	
Grassland (Low)	Modified Grassland
Urban Tree	Urban Tree

Distinctiveness

The distinctiveness of each habitat is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat. Table 5 provides the basis of the distinctiveness assessment for habitats.

Table 5 – Distinctiveness Assessment

Distinctiveness Categories		
Category	Scores	Description
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog.
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens.
Medium	4	Semi-natural habitats not classed as a Priority Habitat.
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub.
Very Low (hedgerow)	1	Lowest biodiversity value possible e.g. non-native and ornamental hedgerow
Very Low (area habitats)	0	Little or no biodiversity value e.g. hard standing or sealed surface.

Strategic Significance

The idea of strategic significance works at a landscape scale. It gives additional unit value to habitats that are in preferred locations for biodiversity and other environmental objectives. Strategic significance utilises published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such as Nature Recovery Areas, local biodiversity plans, National Character Area 14 objectives and green infrastructure strategies (see Table 6).

Overall, the site has not been identified within local documentation and does not contain any priority habitats, therefore, all baseline habitats and proposed habitats have been allocated a low strategic significance.

Table 6 – Strategic Significance Assessment

Strategic Significance Categories	
Category	Score
High strategic significance High potential & within area formally identified in local policy	1.15
Medium strategic significance Good potential but not in area defined in local policy	1.1
Low Strategic Significance Low potential and not in area defined in local policy	1

2.5.3 Post-Development

Post-development habitats are subject to the same condition assessments as baseline habitats, based on information provided by the proposed landscape layout and planting proposals (Appendix 3). Two additional factors are considered within post-development landscapes which are detailed below.

Temporal Multiplier

For post development habitat creation or enhancement, a risk multiplier will be automatically applied by the tool to account for the period of diminished ecological value while the habitat reaches the targeted post development condition. This time and therefore risk multiplier differs between habitat types, if the habitat is being created or enhanced and how the habitat is to be managed. The predetermined multiplier is based on the average time to meet targeted condition assuming good practice principles and appropriate management strategies are applied.

Difficulty Multipliers

A risk multiplier will be automatically applied by the tool to account the 'difficulty' of habitat-specific enhancement or creation. There are two separate difficulty multipliers assigned to each habitat, one for creation and one for enhancement/restoration, recognising that the technical challenges will not necessarily be the same for both.

2.6 Constraints to the Survey

Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

Best possible effort was made during the mapping process to ensure that the habitat map accurately represents the area of habitats present on site. Some margin of error is possible due to the continuous and difficult to define nature of habitat boundaries, however this margin of error has been minimised using professional opinion of two experienced ecologists and up to date aerial imagery. As such this is not expected to be a significant constraint and affect the overall Biodiversity Net Gain Calculation provided within this report.

3 Baseline Habitat Assessment

Baseline habitat condition was assessed following the methodology outlined in Section 2.4. Habitat descriptions and the results of this assessment are provided below. The habitats have been given reference numbers for clarity regarding in-text and the metric calculation (Urban Green, 2023b) illustrates the numerical data.

3.1 Area Habitats

3.1.1 1) Urban – Building (u1b5 90)

There was one building present on site which was a disused commercial property. The property featured pitched roofing, layered over three separate floors, and an underpass to a rear courtyard (see Section 3.1.2). Buildings are classified as developed land; sealed surface, which has a predetermined condition score of **N/A** within the metric.



Photograph 1 – Building and underpass

3.1.2 2) Urban – Other developed land (u1b6 17)

The rest of the site comprised a hardstanding courtyard to the rear of the property. This area appeared unmanaged and featured some emergent buddleja (*Buddleja sp.*) which had begun to grow through the tarmac, some of which had been recently cut down. Hardstanding is classified as developed land; sealed surface, which has a predetermined condition score of **N/A** within the metric. The buddleja growth has been classified using a secondary code for ruderal/ephemeral growth.



Photograph 2 – Hardstanding courtyard with buddleja growth

4 Retained Habitats

Using the Biodiversity Metric 4.0, the habitat units of the pre-development habitats to be retained were calculated.

4.1 Area Habitats

Under the current landscape proposals, a section of the building will be retained and converted into residential units. Table 7 shows a summary of the area habitat to be retained and the corresponding area and unit score.

Table 7 – Retained Area Habitat Units

Habitat	Total Area (ha)	Total Units	Area Retained (ha)	Units Retained
1) Urban – Developed land; sealed surface	0.024	0	0.016	0

5 Lost Habitats

Using the Biodiversity Metric 4.0, the habitat units of the pre-development habitats to be lost were calculated.

5.1 Area Habitats

The courtyard and a section of the existing building will be lost to accommodate for the development. Table 8 shows a summary of the area habitat and the corresponding area (ha) and unit score to be lost on site, along with planned mitigation.

Table 8 – Lost Area Habitats

Habitat Parcel Reference	Total Area (ha)	Total Units	Area lost (ha)	Units lost	Planned Mitigation
1) Urban – Developed land; sealed surface	0.024	0	0.008	0	This habitat offers no ecological benefit therefore mitigation is not necessary
2) Urban – Developed land; sealed surface	0.013	0	0.013	0	
Total	0.037	0	0.020	0	-

6 Pre-Development Unit Summary

Using the Biodiversity Metric 4.0, the habitat units of the existing site habitats were calculated; the habitat units to be retained within site development were calculated; and the habitat units that are anticipated to be lost in site development were calculated.

The results of these calculations are presented in Table 9.

Table 9 – Pre-Development Unit Summary

	On-site baseline	Retained	Lost
Area Habitat Units	0.00	0.00	0.00

7 Habitat Creation

7.1 Area Habitats

Soft landscapes, including species mixes, have not been produced for this development. Therefore, suggested planting schemes have been provided within this report, however these may be subject to change, although this is not expected to impact the habitat classifications or final net gain.

7.1.1 1) Grassland – Modified Grassland

An area of modified grassland will be created within the new communal garden in the centre of the site. This grassland is expected to contain a low species richness, containing predominantly amenity grasses such as perennial ryegrass (*Lolium perenne*) or red fescue (*Festuca rubra*). The grassland will also be heavily managed by mowing, resulting in a low sward height, and potentially damaged through use as amenity space by residents.

Table 10 - Condition Assessment for Modified Grassland

Classification within Landscape Designs	Grass				
UK Hab Classification	Modified Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1.	There are 6-8 vascular plant species per m2 present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	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.	Fail	Condition Criteria 6.	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Pass
Condition Criteria 3.	Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass	Condition Criteria 7.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Condition Criteria 4.	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage	Fail			

		from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.				
Condition	Poor	Passes 4 of 7 criteria but fails essential criteria 1				
Distinctiveness	Low					
Time to Target Condition	1 year					
Difficulty of Creation	Low					

7.1.2 2) Urban – Introduced Shrub

Beds of ornamental shrubs will be planted within beds around the periphery of the courtyard. Species will predominantly be small, non-native shrubs, such as hebe (*Hebe spp.*), dianthus (*Dianthus spp.*) or lavender (*Lavandula spp.*), and ornamental grasses such as fountain grass (*Pennisetum alopecuroides*) or sedge grass (*Carex spp.*). Introduced shrub has a predetermined condition score of **N/A** within the metric.

7.1.3 3) Urban – Urban Tree

A single urban tree will be planted within the modified grassland at the centre of the courtyard. The tree is expected to be a small, native species, such as silver birch (*Betula pendula*) or bird cherry (*Prunus padus*).

Table 11 – Condition Assessment for Urban Tree

Classification within Landscape Designs		New Tree				
UK Hab Classification		Urban tree				
Condition Sheet		Urban tree				
Condition Criteria 1.		The tree is a native species (or more than 70% within the block are native species).	Pass	Condition Criteria 4.	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Pass
Condition Criteria 2.		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).	Pass	Condition Criteria 5.	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Fail
Condition Criteria 3.		The tree is mature (or more than 50% within the block are mature).	Fail	Condition Criteria 6.	More than 20% of the tree canopy area is oversailing vegetation beneath.	Pass
Condition	Moderate	Passes 4 of 6 criteria				
Distinctiveness		Medium				

Time to Target Condition	27 years
Difficulty of Creation	Low

7.1.4 4) Urban – Developed Land; Sealed Surface

A paved pathway around the courtyard will be created, as well as paved entrances to the ground floor apartments. Hard surfacing is categorised as developed land; sealed surface and has a predetermined condition of **N/A** within the metric.

7.1.5 5) Urban – Buildings (Developed Land; Sealed Surface)

A new residential building containing three apartments will be built to the north of the site. Buildings are categorised as developed land; sealed surface which has a predetermined condition of **N/A** within the metric.

7.1.6 6) Urban – Vegetated Gardens

The three apartments to the north of the proposed development feature private gardens to the rear, containing paved areas, introduced shrub flowerbeds and hedgerow. Private gardens are classified as vegetated garden within the metric.

7.2 Linear Hedgerow Habitats

7.2.1 1) Hedgerow – Native Hedgerow

Approximately 50m of native hedgerow will be created around the periphery of the courtyard and around the grassland to the centre of the site, buffering the development from neighbouring commercial properties and providing privacy within the courtyard. The hedgerow will likely be formed from one native species, such as beech (*Fagus sylvatica*) or wild privet (*Ligustrum vulgare*).

Table 12 – Condition Assessment for Native Hedgerow

Classification within Landscape Designs	Hedge				
UK Hab Classification	Native Hedgerow				
Condition Sheet	Hedgerow				
A1. Height	>1.5 m average along	Pass	C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	Fail
A2. Width	>1.5 m average along length	Fail	C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass	D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.	Pass

B2. Gap – hedge canopy continuity		Gaps make up <10% of total length and No canopy gaps >5 m.	Pass	D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Fail
Condition	Moderate	Passes 5 of 8 criteria and no criteria category has more than 1 failure.				
Distinctiveness	Medium					
Time to Target Condition	5 years					
Difficulty of Creation	Low					

8 Post-Development Summary and Conclusion

Using the Biodiversity Metric 4.0, the habitat units of the proposed and created habitats were calculated; the habitat units to be retained within site development were calculated; and the habitat units that are anticipated to be lost in site development were calculated.

The results of these calculations are presented in the Table 13.

Table 13 – Post Development Biodiversity Net Gain Calculation

	Habitat Unit Change					On-site post development	Net change in Biodiversity	
	On-site baseline	Retained	Lost	Enhanced	Created		Habitat units	%
Area Habitat Units	0	0	0	-	+0.03	0.03	+0.03	+100
Linear Hedgerow Units	-	-	-	-	+0.17	0.17	+0.17	+100

As illustrated in Table 13, this development is expected to produce a net gain of 0.03 area habitat units (+100%) and a net gain of 0.17 linear hedgerow units (+100%). Overall, it demonstrates that the post-development habitats on site will provide more ecological benefit to wildlife than the habitats currently found on site and the development is in line with the relevant National Planning Policy Framework and Local Planning Policies. The development also satisfies the trading rules.

To ensure that the habitats proposed as part of the post-development design of this site reach the condition detailed within this report and the full gain in value to the environment is achieved by this site, a long-term management plan (usually 30 years) is required. This length of management plan is required due to the complex nature of the habitats to be enhanced/created on site and the high value they will provide to the environment.

9 References

- Baker, J., Hoskin, R. and Butterworth, T. (2019). Biodiversity net gain. Good practice principles for development: A practical guide.
- Bury Council (2018). Bury Local Plan. Topic Paper 7 – Natural Environment.
- Bury Council (2023) *Cadcorp SIS webmap 9, WebMap*. Available at: <https://maps.bury.gov.uk/externalwebmap/Map.aspx?MapName=PA> (Accessed: January 17, 2023).
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). *UK Habitat Classification – Habitat Definitions V1.1*
- eCountability Ltd. (2018). UK Habitat Classification (Professional Edition).
- Greater Manchester Combined Authority (2021a). GMCA Biodiversity Net Gain: Guidance for Greater Manchester.
- Greater Manchester Combined Authority (2021b). *Places for Everyone*. Available at: <https://www.greatermanchester-ca.gov.uk/media/4838/places-for-everyone.pdf> (Accessed: April 2023).
- JNCC (2010). Handbook for Phase One Habitat Survey – 2010 Edition. England Field Unit, Nature Conservancy Council. Reprinted JNCC.
- Natural England (2023a). The Biodiversity Metric 4.0 - Calculation Tool.
- Natural England (2023b). The Biodiversity Metric 4.0 - Technical Supplement.
- Natural England (2023c). The Biodiversity Metric 4.0 - User Guide.
- Ollier Smurthwaite Architects (2022). A750_P_203A-PROPOSED EXTERNAL WORKS PLAN.
- Stace, C. (2010). *New Flora of the British Isles*. 3rd ed. Cambridge: Cambridge University Press.
- Urban Green (2023a). UG_1947_ECO_PRA_01
- Urban Green (2023b). UG_1947_ECO_BNG_CALC_02.

APPENDIX 1 - PRE-DEVELOPMENT HABITAT MAP

U R B A N
G R E E N

Do not scale this drawing (printed or electronic version).
This drawing is copyright and is for use on this site only. This drawing should be read in conjunction with all relevant consultants drawings and specialist subcontractors / supply chain drawings and specifications.
Responsibility for the reproduction of this drawing in paper form, or issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.

Legend

- Red line boundary
- Other developed land
- Building



A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF

T: +44 (0) 161 312 3131
weareurbangreen.co.uk

Client: **21 Living**

Project: **The Rock,
Bury**

Title: **UKHAB Habitat Map**

Issue: **02**

Drawn: CL	Checked: SC	Approved: SB
---------------------	-----------------------	------------------------

Project: UG1947	Scale @ A3: 1:100	Date: 18/04/2023
---------------------------	-----------------------------	----------------------------

Dwg No: UG_1947_ECO_HM_02	Revision: 02
-------------------------------------	------------------------

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

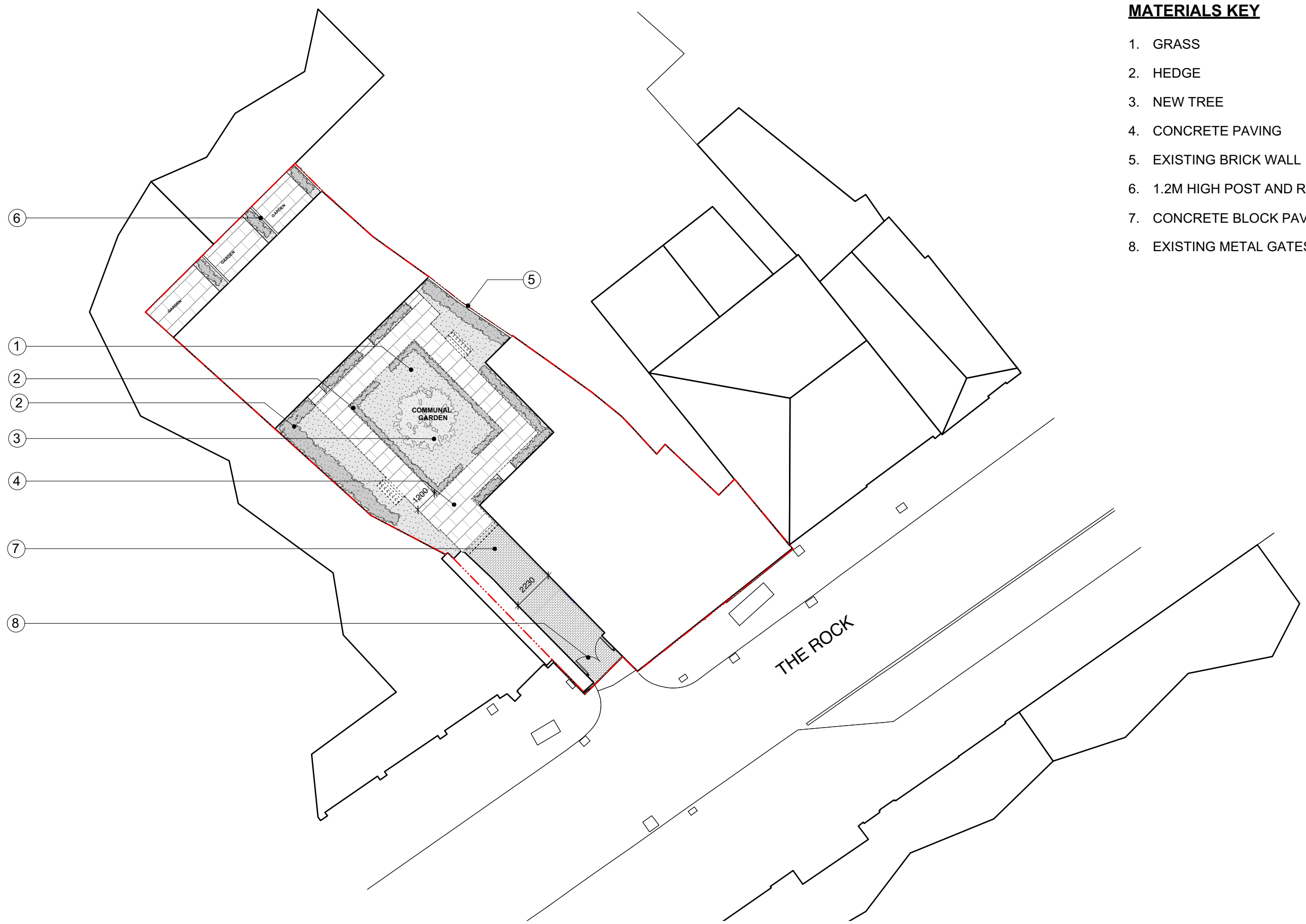
Appendix 2 - Primary and Secondary Codes

Hierarchical code	Code	Definition
Primary Code	u1b5	Buildings
	u1b6	Other developed land
Secondary Code	17	Ruderal/ephemeral
	90	Commercial building

The background of the entire page is a topographic map with orange contour lines on a white background. The lines are of varying thickness and form irregular, organic shapes that cover the entire area.

APPENDIX 3 – PROPOSED LANDSCAPE PLAN

U R B A N
G R E E N



MATERIALS KEY

- 1. GRASS
- 2. HEDGE
- 3. NEW TREE
- 4. CONCRETE PAVING
- 5. EXISTING BRICK WALL
- 6. 1.2M HIGH POST AND RAIL FENCE
- 7. CONCRETE BLOCK PAVING
- 8. EXISTING METAL GATES



PROPOSED EXTERNAL WORKS PLAN
1:200 @ A3

137 The Rock



© Copyright Ollier Smurthwaite Architects

PLANNING

REVISION	DATE	DESCRIPTION

CLIENT: 21 LIVING	
PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT	
ADDRESS: 137 THE ROCK, BURY	
DRAWING TITLE: PROPOSED EXTERNAL WORKS PLAN	
SCALE: 1:200 @A3	DATE: APRIL 2023
DRAWING NO: A750_P_203A	

OLLIER SMURTHWAITE ARCHITECTS

40 King Street, Manchester, M2 6BA
T 0161 883 0838
F 0161 883 0839
E mail@olliersmurthwaite.com