

BIODIVERSITY IMPACT ASSESSMENT

MELLAND HIGH SCHOOL,
GORTON, MANCHESTER

NOVEMBER 2021



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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2021 by Bowker Sadler Architecture to carry out a Biodiversity Impact Assessment of a site at Melland High School, Gorton, Manchester (O.S. grid reference: SJ 88520 94886 – see Figure 1). The proposed application site currently comprises areas of bare ground, amenity grassland, introduced shrub, intact hedgerows and scattered trees. The site is surrounded by residential and commercial development.
- 1.2 A Biodiversity Impact Assessment is required to provide a measurement of the changes in biodiversity and demonstrate if the site will be in net gain or net loss as a result of the proposed development.

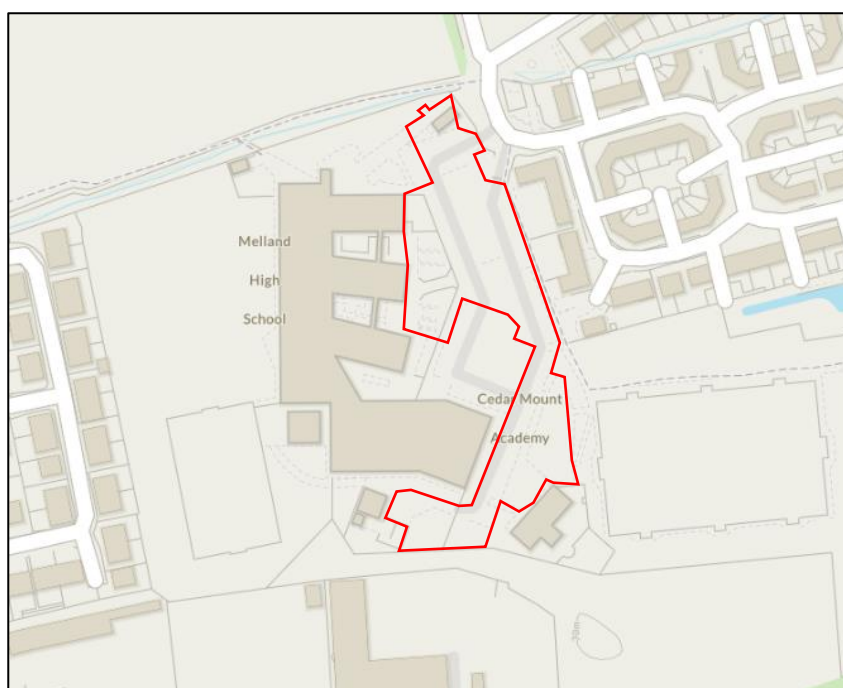


Figure 1 showing the location of the redline boundary

Description of Development

- 1.3 The site will be the subject of a planning application for the extension of the existing school building and changes to the associated access and parking areas.

Biodiversity in Planning

- 1.4 Biodiversity is a material consideration, and Local Planning Authorities (LPAs) have a requirement to consider biodiversity and protected species when determining planning applications. Section 15 of the National Planning Policy Framework (July 2021) gives specific reference to minimising the impacts of development on biodiversity. Local and Neighbourhood plans also provide guidance towards protecting and enhancing biodiversity, including priority habitats and notable species.

2.0 METHODOLOGY

Phase 1 Habitat Survey

- 2.1 A Phase 1 Habitat survey was undertaken to JNCC standards (JNCC, 2010). The site was walked, and each habitat was assigned a Phase 1 habitat category. Species lists were taken at locations of botanical interest. All botanical nomenclature follows Stace, 2019. The survey was carried out on the 13th October 2021 by Ben Crossthwaite (Senior Ecologist).
- 2.2 There were no constraints to the survey of the site. All habitats were accessible and all plants identifiable.

DEFRA Biodiversity Metric 3.0 Calculation

- 2.3 Biodiversity net gain was calculated using the DEFRA Metric 3.0 Auditing and accounting for biodiversity calculation tool.
- The onsite habitat baseline calculations are measured on MapInfo GIS software using the Phase 1 Habitat map.
 - The Phase 1 habitat classifications are translated to UK Habitat Regulations using the translation tool in the Biodiversity Metric.
 - All habitat conditions are based on the condition assessments listed in the DEFRA 3.0 habitat condition assessment sheets excel document.
 - The strategic significance is determined by deciding if the habitat is desirable within the location and seeing if it is identified within a local strategy.
 - The areas to be retained or enhanced habitats are calculated using the Proposed Landscaping Masterplan.
 - The site proposed habitats and associated scores are calculated using measurements and habitat information provided by Saville Landscape Design, as well as over-laying site plans onto the MapInfo GIS software and taking area measurements.
- 2.4 The change in biodiversity is calculated by subtracting the baseline unit values from the post-development values of the habitat types. This is combined with any off-site gains or losses to give a final Biodiversity Unit Value for the scheme.

Personnel and Timing

- 2.5 Ben Crossthwaite carried out the calculations and assessment in November 2021, based on the results of the aforementioned Phase 1 Habitat Survey and the proposed landscape plans and areas provided by Saville Landscape Design (See Appendix A). Ben is an experienced ecologist and trained in biodiversity impact assessment.

3.0 RESULTS

- 3.1 The following calculations are based on the landscape proposals and the Phase 1 Habitat map, located at Appendix A and B. The baseline habitats and their condition assessments, are based on the Phase 1 Habitat Survey of the site.

Existing Habitats

- 3.2 See Appendix C, D and E for the results of the Baseline Unit calculations.

Baseline Habitat Units – On Site

Amenity Grassland

- 3.3 This habitat exists as small areas across the site. This habitat is categorised as Grassland – Modified Grassland under the UK Habitat Regulations. The area of amenity grassland is measured at 0.13ha.

- 3.4 The condition of the modified grassland is considered poor. The grassland failed Condition Assessment Criteria 1, 2, 4 and 5. The grassland is species-poor and regularly mown with evidence of damage from footfall and cars, resulting in areas of bare ground.

Bare Ground

- 3.5 This is the most abundant habitat on site and consists of the access road, carpark space, delivery access and yard, access paths and outdoor play/education areas. This habitat is categorised as Urban – Developed Land: Sealed Surface under the UK Habitat Regulations. The area of this habitat is 0.58ha. This is a habitat with no condition assessment, strategic importance or distinctiveness.

Introduced Shrub

- 3.6 This habitat is located across the site as small shrub beds. This habitat is categorised as Urban – Introduced Shrub under the UK Habitat Regulations. The areas of Introduced Shrub have a total measurement of 0.06ha. This habitat is automatically assigned ‘poor’ condition by the metric calculator.

Building

- 3.7 This habitat is present in the form of a bicycle shelter in the northern part of the site. This habitat is categorised as Urban - Developed Land: Sealed Surface under the UK Habitat Regulations. The building has an area of 0.006ha. This is a habitat with no condition assessment, strategic importance or distinctiveness.

Scattered Trees

- 3.8 This habitat is located across the site, particularly in the proposed construction zone. This habitat is categorised as Urban – Urban Tree under the UK Habitat Regulations. The areas of the Urban Trees were calculated using the Urban Tree Helper within the DEFRA 3.0 metric tool, and total 0.013ha. The number of 29 small trees was used to calculate the area.

- 3.9 The condition of the urban trees is considered poor. The urban trees failed Condition Assessment Criteria 2, 3, 5 and 6. The urban trees do not form a continuous tree canopy, the trees are all of a juvenile age, do not provide micro habitats for fauna species and are not adjacent to other vegetation and do not over sail vegetation beneath.

Baseline Habitat Units – Off-site

Amenity Grassland

- 3.10 This habitat is located on the periphery of a large sports field. This habitat is categorised as Grassland – Modified Grassland under the UK Habitat Regulations. The area of amenity grassland is measured at 0.041ha.
- 3.11 The condition of the modified grassland is considered poor. The grassland failed Condition Assessment Criteria 1, 2, 4 and 5. The grassland is species-poor and regularly mown with evidence of damage from footfall, resulting in areas of bare ground.

Baseline Hedgerow Units – On Site

Intact Hedgerow

- 3.12 Intact, species-poor, well-maintained hedgerows are located in and around the construction area of the site, often following fence lines. This habitat is categorised as Native Hedgerow under the UK Habitat Regulations. The total length of the hedgerows is calculated to be 0.072km.
- 3.13 The condition of the native hedgerow is considered to be good. The native hedgerows failed Condition Assessment Criteria A2 and C1. The average height of the hedgerows is >1.5m and there is no vertical gappiness exceeding 0.5m from the ground to the first leafy growth for >90% of the hedgerows lengths. There is no horizontal gappiness of the woody component of the hedgerows >1m for >90% of the hedgerow lengths. There is no species present, indicative of nutrient enrichment of the soils for <20% of the hedgerow length and no invasive or neophyte species present. >90% of the hedgerow and associated undisturbed ground is free of damage caused by humans.

Baseline River Units

- 3.14 There are no aquatic habitats on site, therefore no river units.

Proposed Habitats

- 3.15 See Appendix F, G and H for the proposed habitat and hedgerow unit calculations.

Retained Habitats

Amenity Grassland

- 3.16 0.059ha of the 0.13ha of amenity grassland on site is proposed to be retained.

Bare Ground

- 3.17 The area of bare ground proposed to be retained is 0.53ha of the 0.58ha currently present on site.

Introduced Shrub

- 3.18 The areas of introduced shrub on site total 0.06ha, of which 0.041ha is proposed to be retained.

Building

- 3.19 The existing bike shelter measuring approximately 0.006ha is proposed to be retained as part of the proposals.

Scattered Trees

- 3.20 0.0085ha of the 0.013ha of scattered trees are proposed to be retained.

Habitat Unit Creation – On Site

Urban – Developed land; Sealed Surface

- 3.21 The proposals include areas of hardstanding and a building, calculated to be approximately 0.114ha. Both hardstanding and the building are classified as Urban - Developed land; sealed surface in the UK Habitat Regulations. These are habitats with no strategic importance or distinctiveness.

Urban – Introduced Shrub

- 3.22 Areas of 'ornamental shrub' are proposed across the site which is Urban – Introduced Shrub in the UK Habitat Regulations. The proposed final condition is moderate and will take 1 year to achieve providing 0.01 habitat units.

Grassland – Modified Grassland

- 3.23 Areas of amenity grassland are proposed as part of the landscape plan covering approximately 0.001ha. The proposed final condition for this habitat is poor due to the location of the grassland and regular management. This will take 1 years to achieve and provide 0 habitat units.

Urban – Street Tree

- 3.24 6 trees are proposed to be planted as part of the soft landscaping across the site. Using the street tree helper this covers an area of 0.0027ha. This is calculated at providing 0.01 habitat

units and will have a proposed final condition of moderate, which will take 27 years to achieve the desired condition.

Habitat Unit Creation – Off-site

Heathland and Shrub – Mixed Scrub

- 3.25 An area of native mixed scrub is proposed on the peripheries a large amenity grassland playing field. This habitat has a target condition of moderate and a time to target condition of 5 years. The area of native mixed scrub will provide 0.3habitat units.

Urban – Street Tree

- 3.26 As part of the area of native mixed scrub off-site, 9 trees are proposed to be planted offering 0.01 habitat units. This habitat has a condition target of moderate, which will take 27 years to achieve the desired condition.

Hedgerow Unit Creation – Off-Site

Native Species Rich Hedgerow

- 3.27 The native, species-rich hedgerow is proposed a short distance off-site measuring 0.068km and offers 0.52 hedgerow units. The hedgerow is proposed to be planted along the peripheries of an area of amenity grassland, running adjacent to a fence and brook. The target condition is moderate, and this will be achieved in 5 years.

4.0 ASSESSMENT

HABITAT UNITS

- 4.1 The baseline habitat units on site are calculated to be 0.44. 0.24 Habitat units will be retained as part of the proposals.
- 4.2 The baseline habitat units for the off-site location are 0.08.
- 4.3 The proposed habitats on site, post development, are calculated to provide 0.26 habitat units. The proposed habitats off-site, post development, are calculated to provide 0.32 habitat units. The Biodiversity Impact Assessment shows an increase of 0.06 habitat units which achieves 13.37% biodiversity net gain.

HEDGEROW UNITS

- 4.4 The baseline hedgerow units on-site are proposed to be 0.48 hedgerow units.
- 4.5 The proposed hedgerow units off-site, are calculated to provide 0.52 units, which provides 10.17% net gain in hedgerow units.

RIVER UNITS

- 4.6 No habitats categorised under the River Units within the DEFRA 3.0 Metric are located on the existing site, or form part of the sites proposals/mitigation.

5.0 SUMMARY

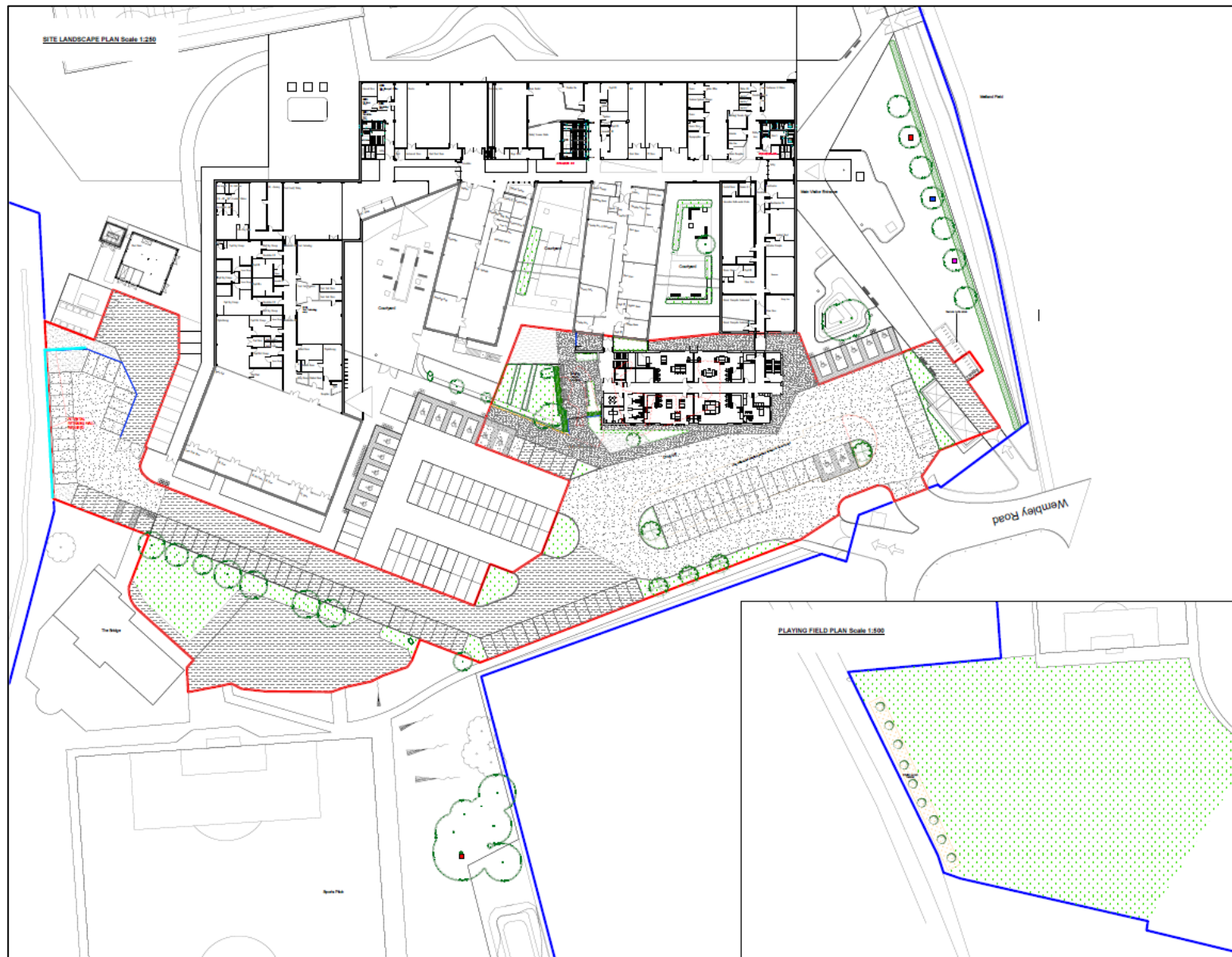
HABITAT UNITS

- 5.1 The proposed development Melland High School, Gorton, in its current site layout and delivering the proposed mitigation, will provide an increase of 0.06 habitat units which equates to 13.37% biodiversity net gain. This is predominantly achieved through the mitigation measures proposed off-site, within the school campus, which include the planting of an area of native mixed scrub and trees. Tree and shrub planting is proposed across the application site, also contributing to the site's mitigation.

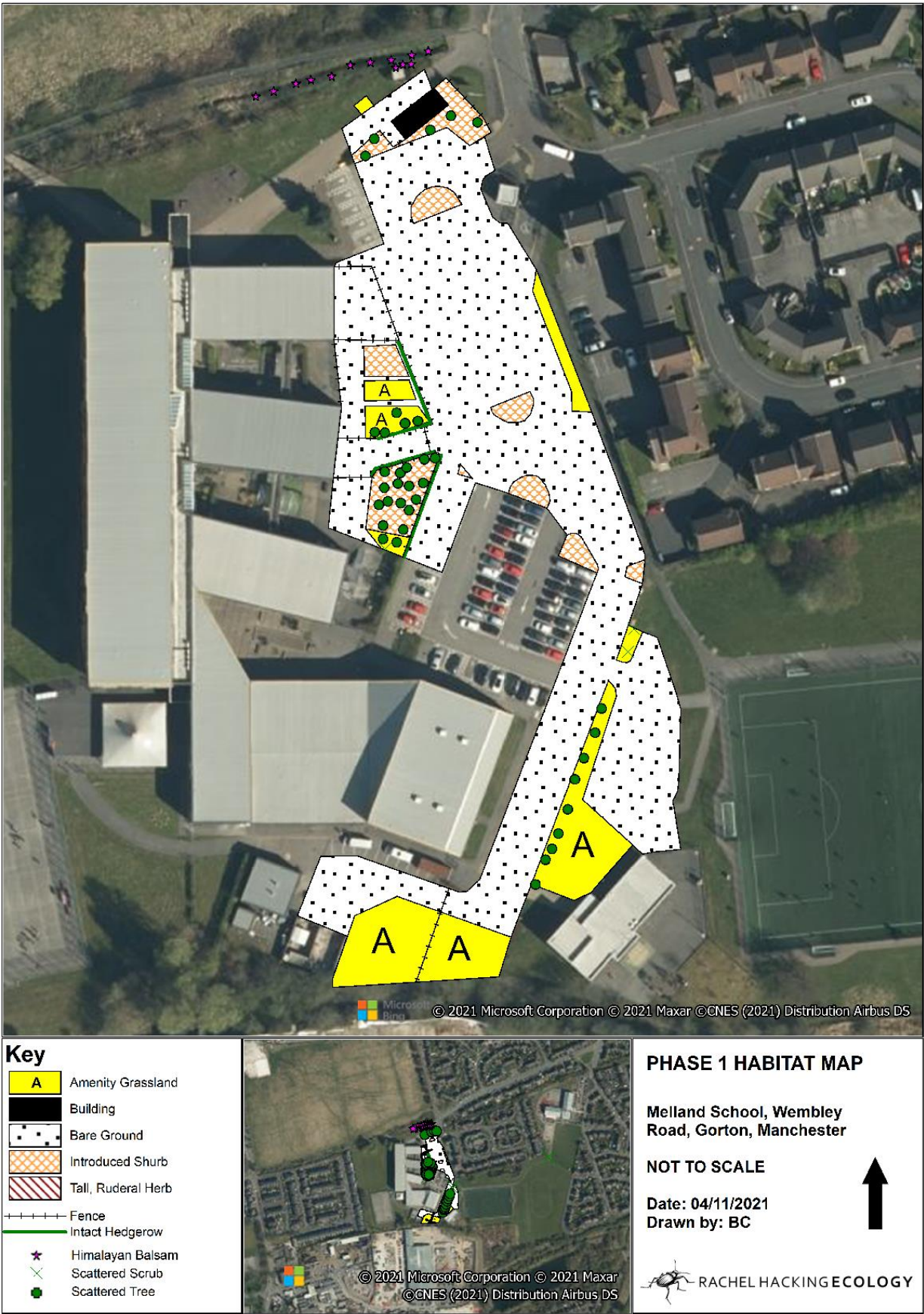
HEDGEROW UNITS

- 5.2 The site in its current layout and design, results in the addition of 0.05 hedgerow units which is 10.17% biodiversity net gain in hedgerow units. This is due to the planting of a native, species-rich hedgerow off-site, within the school campus.
- 5.3 The development scheme provides biodiversity net gain in both habitat and hedgerow units. It is considered the loss of the existing habitats is adequately mitigated for by the creation of higher value habitats.

APPENDIX A - Proposed Landscaping and Planting Plan Courtesy of Saville Landscape Design (344-01)



APPENDIX B – Phase 1 Habitat Survey Map



APPENDIX C – Baseline Habitat Unit Calculation – On Site

Elland School, Gorton, Manchester															
A-1 Site Habitat Baseline															
Condense / Show Columns				Condense / Show Rows											
Main Menu				Instructions											
		Habitats and areas			Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline	Retention category biodiversity value					
Ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Strategic significance	Total habitat units		Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost	
1	Urban	Developed land, sealed surface	0.58	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00		0.53		0.00	0.00	0.05	0.00
2	Urban	Developed land, sealed surface	0.006	V.Low	N/A - Other		Compensation Not Required	Check Data		0.006				0.00	0.00
3	Urban	Introduced shrub	0.06	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.12		0.041		0.08	0.00	0.02	0.04
4	Urban	Urban Tree	0.013	Medium	Poor	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required.	0.06		0.0085		0.04	0.00	0.00	0.02
5	Grassland	Modified grassland	0.13	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.26		0.059		0.12	0.00	0.07	0.14

APPENDIX D – Baseline Habitat Unit Calculation – Off-site

Elland School, Gorton, Manchester															
D-1 Off Site Habitat Baseline															
Condense / Show Columns				Condense / Show Rows											
Main Menu				Instructions											
Habitats and areas				Habitat distinctiveness	Habitat condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline	Retention category biodiversity value						
Baseline ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost	
1	Grassland	Modified grassland	0.041	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.08			0.00	0.00	0.04	0.08	

APPENDIX E – Baseline Hedgerow Unit Calculation

B-1 Site Hedge Baseline								
Condense / Show Columns			Condense / Show Rows					
Main Menu			Instructions					
UK Habitats - existing habitats				Habitat distinctiveness	Habitat condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Baseline ref	Hedge number	Hedgerow type	Length KM	Distinctiveness	Condition	Strategic significance		Total hedgerow units
1		Native Hedgerow	0.072	Low	Good	Location ecologically desirable but not in local strategy	Same distinctiveness band or better	0.48

APPENDIX F – Proposed Habitat Unit Calculation – On Site

Elland School, Gorton, Manchester

A-2 Site Habitat Creation

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Check Areas - Area of development footprint and habitat creation exceeds the area of habitats lost

Post development/ post intervention habitats									
Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty	Habitat units delivered
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of creation	
Urban	Developed land; sealed surface	0.06	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00
Urban	Developed land; sealed surface	0.054	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00
Urban	Introduced shrub	0.007	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.01
Grassland	Modified grassland	0.001	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.00
Urban	Urban Tree	0.0027	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	27	Low	0.01

APPENDIX G – Proposed Habitat Unit Calculation – Off-site

Elland School, Gorton, Manchester										
D-2 Off Site Habitat Creation										
Condense / Show Columns		Condense / Show Rows								
Main Menu		Instructions								
Post development/ post intervention habitats										
Broad Habitat	Proposed habitat	Area ha	Distinctiveness	Condition	Strategic significance	Temporal risk multiplier		Difficulty	Spatial risk multiplier	Habitat units delivered
					Strategic significance	Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of creation	Spatial risk category	
Heathland and shrub	Mixed scrub	0.041	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	5	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.30
Urban	Urban Tree	0.0041	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	27	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.01

APPENDIX H – Proposed Hedgerow Unit Calculation – Off-site

Elland School, Gorton, Manchester												
E-2 Off Site Hedge Creation												
Condense / Show Columns				Condense / Show Rows								
Main Menu				Instructions								
		Proposed habitats		Habitat distinctiveness	Habitat condition	Strategic significance	Spatial risk multiplier		Temporal multiplier		Difficulty risk multiplier	Hedge units delivered
Baseline ref	New hedge number	Habitat type	Length KM	Distinctiveness	Condition	Strategic significance	Spatial risk category		Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of creation	
1		Native Species Rich Hedgerow	0.068	Medium	Moderate	Within area formally identified in local strategy	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss		Standard time to target condition applied	5	Low	