

Document Title	Biodiversity Net Gain Design Stage Report
Prepared for	GLP Trows LLP and BDW Manchester
Prepared by	TEP - Warrington
Document Ref	8666.004

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Date	July 2024
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Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
1.1	14/10/22	IH	PB	Update following client feedback	Superseded
1.2	11/11/22	IH	PB	Update following receipt of final design	Superseded
1.3	25/11/22	IH	PB	Update to final version	Superseded
1.4	21/06/24	PB	PB	Update to Metric 4.0	Final

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- APPENDIX B: Condition Assessment Summary
- APPENDIX C: Associated Plans

Executive Summary

1. The Environment Partnership (TEP) were commissioned by GLP Trows LLP and BDW Manchester to undertake a Biodiversity Net Gain (BNG) feasibility assessment of Land Off Cowm Top located in Castleton, Rochdale; hereafter referred to as the "Site".
2. Habitat surveys and condition assessments were undertaken in May 2022 to inform this assessment. There are not considered to be any constraints to the surveys or condition assessments.
- 1.1 The updated development proposals within the site proposals plan (Ref: TRO1902_PP01_P4 Planting Plan and Schedule) have been used to inform this assessment, and Biodiversity Metric 4.0 has been used as the tool to calculate the net gain output.
3. The updated proposals would result in an overall net loss of -23.45. biodiversity units (-22.90%). Linear units would result in an overall net gain of 23.64 units (+387.62%).
4. The loss will be discussed with the LPA and GMEU on how this is best addressed.

2.0 Introduction

Background

- 2.1 The Environment Partnership (TEP) were commissioned by GLP Trows LLP and BDW Manchester to undertake a Biodiversity Net Gain (BNG) feasibility assessment of Land Off Cowm Top located in Castleton, Rochdale; hereafter referred to as the "Site".
- 2.2 The purpose of this design stage report is to provide detailed assessment on the BNG delivered for the proposed development in support of the full planning application.
- 2.3 The Biodiversity Metric 4.0 Calculation Tool has been used to assess the net gain output.

Site description

- 2.4 The central grid reference of the Site is SD 89126 10375. The Site covers an approximate area of 19.74ha, located in Castleton, in the borough of Rochdale. Cripple Gate Lane borders the site to the north, the A627(M) to the east, Trows Lane and the M62 beyond this to the south and residential development off Leander Drive to the west.
- 2.5 A site location plan is shown in Figure 1 below.

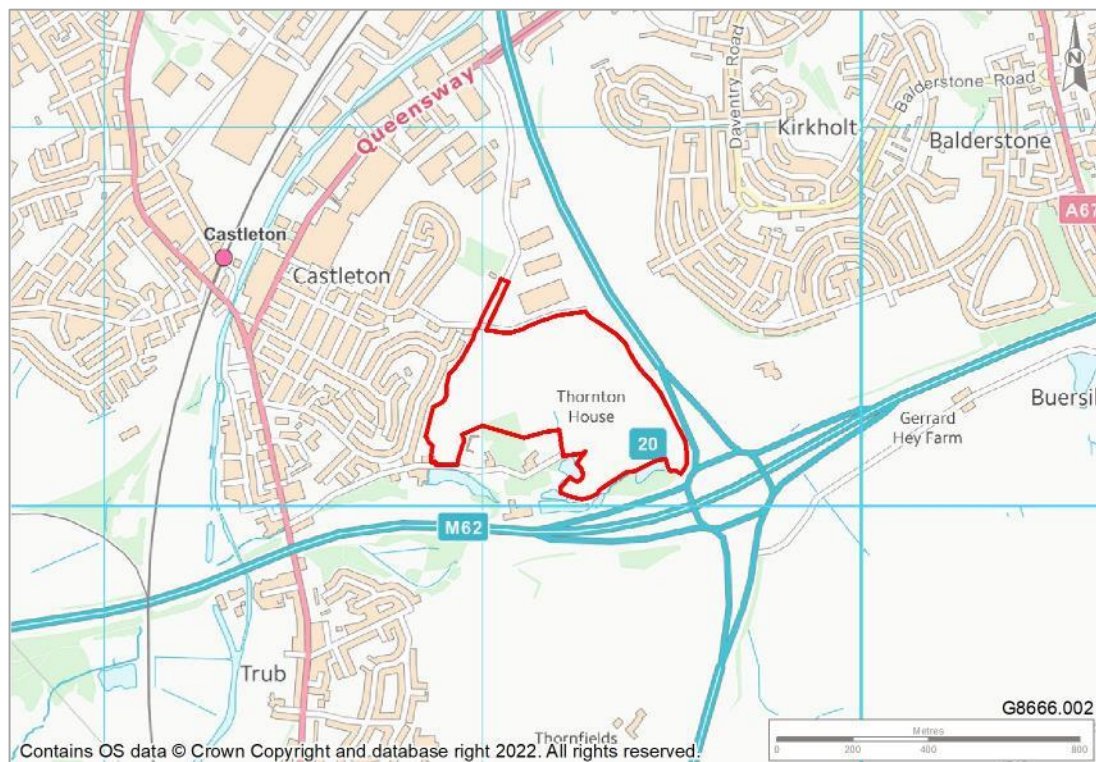


Figure 1: site location plan

Proposed development

- 2.6 The proposals are for the construction of up to 445 dwellings and associated infrastructure and Public Open Space (POS). Most of the central and eastern area of the site will be developed with residential dwellings with a significant green buffer present in the west of site. Proposals for the site are shown in the draft landscape proposals drawing (Ref: TRO1902_PP01_P4 Planting Plan and Schedule).

Relevant Policy and Legislation

National Policies

- 2.7 Paragraph 174(d) of the revised NPPF (2021) states that *"Planning policies and decisions should contribute to and enhance the natural and local environment by [...] minimising impacts on and providing net gains for biodiversity [...]"* The Government 25-year Environment Plan states that government will *"[...] embed environmental net gain principle for development"*.
- 2.8 In July 2019, the government issued revised planning practice guidance (NPPG) with details on how planners can implement "net environmental gain" requirements when assessing development proposals, including new advice on protecting wildlife.
- 2.9 Revised guidance recently published by the government says that net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. Net gain is an umbrella term for both biodiversity net gain and wider environmental net gain. It states: *"Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity"*.
- 2.10 In terms of measuring net gain, the guidance states that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. It goes on to state that *"[...] tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net gain outcome is expected to be achieved"*.
- 2.11 This report details the ecological surveys undertaken to establish a baseline position, and what the anticipated impacts are. In order to inform the biodiversity net gain assessment, the Biodiversity Metric 4.0 metric has been used.

Local Policies

- 2.12 Policy G7 - Increasing the value of biodiversity and geodiversity of the Rochdale Core Strategy (adopted 19th October 2016) states development in the borough should result in net gain. However, there is no current local policy relating specifically to BNG in the context of a required percentage net gain.
- 2.13 Places for Everyone, the Joint Development Plan for nine Greater Manchester councils including Rochdale Council and Policy JP-G 8: A Net Enhancement for Biodiversity and Geodiversity includes the following commitment to achieve a minimum 10% biodiversity net gain in section 8.63.

- 2.14 If our overall aims of a major net enhancement of biodiversity value and improved access to nature are to be achieved then all new development will have to play its part, each delivering a net gain in biodiversity. This could involve the protection and improvement of existing habitats, the creation of new ones, and/or the strengthening of connections between them. The Defra metric (DEFRA 3.0 or later) will be applied to new development proposals to calculate and demonstrate a measurable net gain in biodiversity of no less than 10%.

Aims of this report

- 2.15 The aims of this report are to:
- Set out the methods used to assess the habitat baseline of the Site;
 - Set out the methods and assumptions used to assess the post development habitat scoring of the Site;
 - Assess the BNG that is delivered as a result of the site design and offsetting required;
 - Demonstrate how the BNG good practice principals for development have been addressed; and
 - Set out the requirement for a 30-year management and monitoring plan.
- 2.16 A Landscape Management Plan will also be required as part of the post development landscaping which can be secured under a suitably worded condition.

3.0 Methods

- 3.1 The existing habitat information was gathered for the site by TEP in May 2022. Full details are provided within the following technical reports:

- Ecological Desk Study - TEP, March 2022, Ref: 8666.001
- Ecological Assessment - TEP, May 2022, Ref: 8666.002

Survey Methods

Desk Study

- 3.2 A search of existing information relating to protected species, habitats of conservation priority and designated sites was undertaken in March 2022. Sources included Rochdale Council, Greater Manchester Ecology unit, Natural England and MAGIC Map websites. The search extended 2km from the site boundary for non-statutory designated sites, protected species and priority species and habitats. Information regarding statutory protected sites within the wider area (up to 10km) was also collected. Relevant local planning policies were also identified to inform the assessment.

Phase 1 Habitat Survey/UK Habitat Classification Survey

- 3.3 A habitat survey was initially carried out by Senior Ecologist Lizi Pimlott (ACIEEM, FISC Level 3) on 11th January 2019. The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC 2010¹) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2017²). The method records the habitat types present within and immediately surrounding the site, based on the JNCC descriptions. Plant species were identified in accordance with Stace (2010) and recorded as target notes using the DAFOR scale.
- 3.4 Following the provision of the revised red line site boundary an updated site walkover was undertaken on 8th January 2020 by Ecologist Cameron Campbell (FISC Level 3). A further survey to confirm that the results of previous assessments were still valid was undertaken by Principal Ecologist Ian Holland (ACIEEM, FISC 4) in May 2022.
- 3.5 The May 2022 survey was carried out in accordance with the Phase 1 habitat survey assessment methods (JNCC, 2010)³/UK Habitat Classification User Manual (2020)⁴, and the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017)⁵. Habitat types were mapped and dominant vegetation species noted. Presence of invasive species were also recorded.

¹ JNCC 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

² CIEEM 2017. Guidelines for Preliminary Ecological Appraisal.

³ JNCC 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

⁴ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User

Manual Version 1.1 at <http://www.ukhab.org/>

⁵ CIEEM 2017. Guidelines for Preliminary Ecological Appraisal.

Condition Assessment

- 3.6 Condition assessment surveys of the area-based and linear based habitats present pre-development were undertaken by a suitably experienced ecologist, Ian Holland (FISC Level 4) in May 2022. The condition assessments were undertaken using guidance presented in the Biodiversity Metric 4.0 - Technical Supplement⁶.

BNG Assessment

- 3.7 The Site has been re-assessed using Biodiversity Metric 4.0 in line with the user guide⁷ and technical supplement provided, was undertaken by TEP ecologist in June 2024.
- 3.8 Biodiversity Metric 4.0 is a tool designed to enable developers to measure the change in biodiversity across their site. It determines if there will be net gain, net loss or no net loss of biodiversity following completion of their development and any subsequent management regime.
- 3.9 In order to calculate the change in biodiversity across the site, a site survey is undertaken by a suitably qualified ecologist to determine the habitats present on site, their location, size, and condition. This information is then digitised and the resulting information fed into Biodiversity Metric 4.0.
- 3.10 The principles of biodiversity net gain as set out in the Biodiversity Net Gain Good Practice Guidelines⁸ have been considered throughout this process as discussed in Section 7.0.

Determining Strategic Significance

- 3.11 Strategic significance was determined through a thorough desktop review of local planning policy and other relevant documentation. The desk-based assessment provides full details of local policy and legislation covering the site. This includes Rochdale Core Strategy (adopted 19th October 2016), Rochdale Unitary Development Plan (adopted June 2006), Supplementary Planning Document (SPD) for Biodiversity and Development and the Environment and Ecology layer of MappingGM, Greater Manchester's online mapping tool:

(https://mappinggm.org.uk/gmodin/?lyrs=v_gmeu_lnrns_opportunities#os_maps_light/17/53.42239/-2.27028).

- 3.12 The site is now an adopted housing allocation in Places for Everyone.
- 3.13 With respect to the Greater Manchester Local Nature Recovery Strategy (LNRS) opportunities layer on MappingGM, the site is identified either as having grassland or tree planting opportunities.

⁶ STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A 2021. Biodiversity metric 3.0: Auditing and accounting for biodiversity – Technical Supplement. Natural England.

⁷ STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A 2021. Biodiversity metric 3.0: Auditing and accounting for biodiversity – User Guide. Natural England.

⁸ CIEEM, IEMA & CIRIA (2019). Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide.

- 3.14 As a result all grassland, scrub and woodland baseline habitats are allocated to High strategic significance. With respect to post-development habitats, similarly all grassland and woodland habitats are allocated to High strategic significance as they will fall within the grassland and tree planting opportunity areas.

Post-Development Calculations

- 3.15 Post development calculations have been based on the Draft Landscape Masterplan (Ref: TRO1902_PP01_Planting Plan and Schedule).
- 3.16 Target condition has been assessed based on the number of criteria which can reasonably be achieved for each habitat type, considering management opportunities and levels of public access.

Limitations

- 3.17 No limitations were encountered. Full access for baseline surveys was possible and these were undertaken in the appropriate season (mid-April and early October). Grasslands were rank or lightly grazed enabling accurate assessment of species composition and number per metre squared.

4.0 Baseline conditions

Important Ecological Features

- 4.1 There are three internationally designated wildlife sites within 10km of the site:
- Rochdale Canal Special Area of Conservation (SAC) - 0.6km west and designated for its aquatic plant assemblage;
 - South Pennine Moors SAC - 7.1km northeast and designated for its European dry heath, blanket bog, and woodland habitats; and
 - South Pennine Moors Phase 2 Special Protection Area (SPA) - 7.1km northeast and designated for its breeding bird assemblage.
- 4.2 There is one nationally designated wildlife site within 2km of the site. Rochdale Canal Site of Special Scientific Interest (SSSI) is located 0.6km west and designated for its aquatic plant assemblage.
- 4.3 There is one locally designated wildlife site within 1km of the site:
- Hopwood woodland local Nature Reserve (LNR) - 1.72km south and designated for its diverse aquatic flora including floating water plantain.
- 4.4 There are seven non-statutory locally designated wildlife sites within 2km. the closest to site is A627M by Tandle Hill located 30m east of site. This is designated for its diverse plant species.
- 4.5 Information from the desk study and site survey indicate that parcels of deciduous broad-leaved woodland adjacent to the south site boundary are designated as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- 4.6 No irreplaceable habitats were identified on site.

On-Site Baseline

- 4.7 The site comprised a large area of poor semi-improved neutral grassland which was lightly grazed, with smaller areas of marshy grassland and tall ruderal vegetation. Scattered and dense scrub was also present as were small sections of continuous bracken. Woodland lies adjacent too, and partially falls within, the site and two lines of trees were present at field boundaries. The site is split into separate fields by a mix of fencing and intact/defunct hedgerows.
- 4.8 Full details of the conversion from Phase 1 habitat to the UK Habitat Classification along with the results of the condition assessment are provided in the Assessor Comments column within the completed Biodiversity Metric 4.0 (Appendix A). A summary of the condition assessment criteria scores are provided in Appendix B. The following drawings are provided in Appendix C:
- G8666.008 Baseline UK Habitat Plan
 - G8666.009B Proposed UK Habitat Plan

5.0 Post Development Habitats

On-Site Proposed Design

- 5.1 Details regarding post-development are displayed in the Draft Planting Plan Drawing (Ref: TRO1902_PP01_P4 Planting Plan and Schedule) included in Appendix C:
- 5.2 The development footprint will require extensive earthworks to create a level, developable parcel and therefore all habitat creation to the east and centre of the site, associated with primarily housing and small amounts of open green space to the boundaries, will be on newly created land. In the west of site, the main POS (an extensive green space, running north to south along the western boundary), will be enhanced, including retained grassland and scrub habitats, to provide additional habitat units. There will still be some habitat loss in this western POS area however to allow for construction of the new road and footpath.
- 5.3 Full details of the conversion from the masterplan to the UK Habitat classification along with the target condition are provided in the Assessor Comments within the completed Biodiversity Metric 4.0 (Appendix A). The following drawings are provided in Appendix C:
 - G8666.009B Proposed UK Habitat Plan

6.0 BNG Metric

- 6.1 A biodiversity assessment has been undertaken, using the Biodiversity Metric 4.0 calculator to quantify the change in biodiversity units for the planning application area between the pre-development baseline and post-development retained, enhanced and created habitats.

Summary of Biodiversity Impact

- 6.2 Detailed results of the assessment are provided in the Biodiversity Metric 4.0 in Appendix A. The headline results, taken from the metric, are provided in Figure 1.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-23.45		
	Hedgerow units	23.64		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-22.90%		
	Hedgerow units	387.62%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	102.43	112.68	33.70
Hedgerow units	10.00%	6.10	6.71	0.00
Watercourse units	10.00%	0.00	0.00	0.00

Figure 2: Headline Results from Biodiversity Metric

- 6.3 Based on the details available, the results indicate a net loss of 22.90% for area-based habitats, a net gain of 387.62% for linear habitats/hedgerows.
- 6.4 Upon input of proposed habitats detailed in the post development landscaping scheme, into the metric, there remains a net loss of habitats on site. Discussions are being undertaken with the LPA and GMEU on how this will be addressed.
- 6.5 The habitat trading rules, which state whether habitats must be traded for one of the same distinctiveness or one of the same or higher distinctiveness, have not been met. This is due mainly in part to the loss of grassland and scrub within the site for development.

7.0 Implementation, Management and Monitoring

- 7.1 This BNG assessment has been undertaken for a full planning application. Currently the site is at a net loss of -22.90% for habitats. The applicants are in discussions with the LPA and GMEU on how this is best addressed.
- 7.2 A detailed 30-year management and monitoring plan should be conditioned for the site and will include a specific management plan which will cover the chosen enhancement area and will aim to achieve the specific target condition for each habitat, based on the Biodiversity Metric 4.0 condition criteria. The plan will include the methods and reporting processes to be used for monitoring the success of habitat enhancement and creation along with options for remedial intervention, where needed, if a habitat is not achieving its targeted condition. Roles and responsibilities, along with financial and legal requirements will also be included.

8.0 BNG Good Practice Principles for Development

8.1 An appraisal of the scheme against the ten good practice principles is set out in Table 1 below.

Table 1: Appraisal against Good Practice Principles

Good Practice Principle	Commentary
1. Apply the mitigation hierarchy	Where the site does not require significant earth movement to create a development platform, primarily along the western site boundary, the habitats have been retained and where possible enhanced. All habitats to be lost will ultimately be mitigated for either on or off site.
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	No irreplaceable habitats or protected areas will be lost or affected by this application.
3. Be inclusive and equitable	GMEU are to be engaged on this scheme and this section will be fully updated once consultation has been completed.
4. Address risks	A 30-year management plan will be produced which will dictate the management schedule required to hit the target conditions and will detail mitigation measures should, during monitoring, it become clear that the site is not currently achieving its required condition.
5. Make a measurable Net Gain contribution	The net loss will be discussed with the LPA and GMEU as to how this will be addressed.
6. Achieve the best outcomes for biodiversity	The enhancement of retained habitats and creation of new habitats within the POS along the west of site will enhance connectivity and strengthen this important strategic wildlife corridor for the area. The net loss will be discussed with the LPA and GMEU as to how this will be addressed.

Good Practice Principle	Commentary
7. Be additional	There are no existing nature conservation outcomes on the site. Therefore, the enhancement of retained habitats and creation of new habitats within the POS along the west of site and their management for biodiversity for the next 30 years add value to this strategic wildlife corridor.
8. Create a Net Gain legacy	The net loss will be discussed with the LPA and GMEU as to how this will be addressed.
9. Optimise sustainability	All new SUDs ponds on site have been designed to be vegetated features and will be planted with meadow mixtures suitable for infrequent inundation which will provide green spaces for uses other than purely water storage.
10. Be transparent	This report provides a transparent method for the BNG assessment ensuring that all stakeholders can follow the process through.

APPENDIX A: Biodiversity Metric 4.0

(provided as a separate document)

APPENDIX B: Condition Assessment Summary

Metric Reference	Phase 1 definition	UKHAB definition	Condition
1	Bracken	Bracken	Condition Assessment N/A
2	Poor semi-improved grassland	Modified grassland	Moderate
3	Poor semi-improved grassland	Modified grassland	Moderate
4	Poor semi-improved grassland	Modified grassland	Moderate
5	Poor semi-improved grassland	Modified grassland	Moderate
6	Poor semi-improved grassland	Modified grassland	Moderate
7	Poor semi-improved grassland	Modified grassland	Moderate
8	Modified neutral grassland	Modified grassland	Poor
9	Poor semi-improved grassland	Modified grassland	Moderate
10	Marshy Grassland	Other neutral grassland	Poor
11	Marshy Grassland	Other neutral grassland	Poor
12	Marshy Grassland	Other neutral grassland	Poor
13	Tall ruderal vegetation	Other neutral grassland	Poor
14	Tall ruderal vegetation	Other neutral grassland	Poor
15	Dense continuous scrub	Bramble scrub	Condition Assessment N/A
16	Dense continuous scrub	Bramble scrub	Condition Assessment N/A
17	Dense continuous scrub	Gorse scrub	Moderate
18	Dense continuous scrub	Gorse scrub	Moderate
19	Dense continuous scrub	Gorse scrub	Moderate
20	Dense continuous scrub	Mixed scrub	Moderate
21	Dense continuous scrub	Mixed scrub	Moderate
22	Dense continuous scrub	Mixed scrub	Poor
23	Hard standing	Developed land; sealed surface	N/A - Other
24	Bare ground and ephemeral	Vacant/derelict land/ bareground	Moderate
25	Bare ground	Vacant/derelict land/ bareground	Poor
26	semi-natural broad-leaved woodland	Other woodland; broadleaved	Moderate
27	semi-natural broad-leaved woodland	Other woodland; broadleaved	Moderate
Hedgerow Reference	Phase 1 definition	UKHAB definition	Condition
H1	Species-poor intact hedge	Native Hedgerow	Good
H2	Species-poor defunct hedge	Native Hedgerow	Good
H3	Species-poor defunct hedge	Native Hedgerow	Good
H4	Species-poor defunct hedge	Native Hedgerow	Moderate
H5	Species-poor hedge and trees	Native Hedgerow with trees	Good
H6	Species-poor intact hedge	Native Hedgerow	Good
H7	Species-poor defunct hedge	Native Hedgerow	Good

APPENDIX C: Associated Plans

G8666.008 Baseline UK Habitat Plan

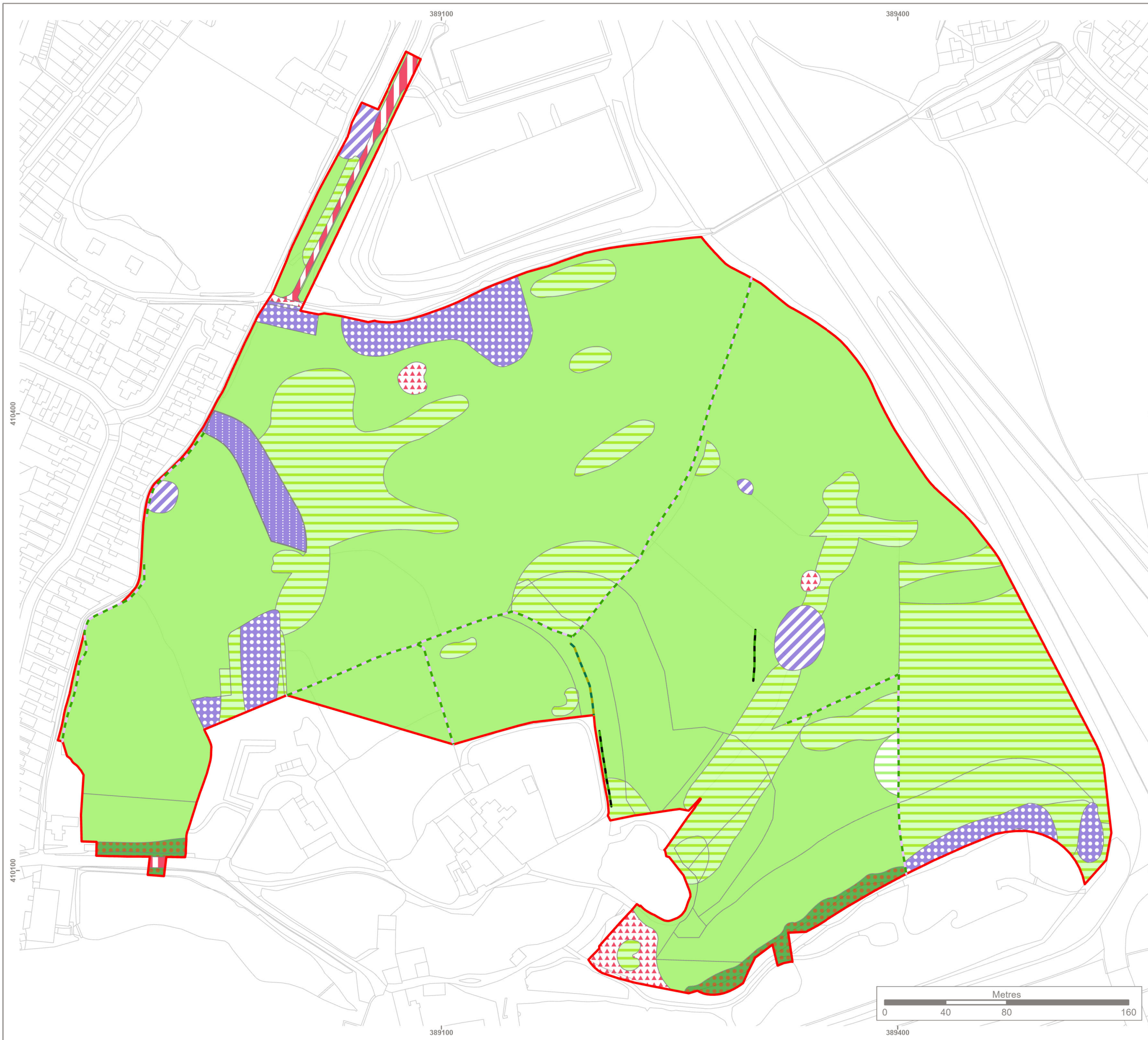
G8666.009B Proposed UK Habitat Plan

G8666.010 Existing Habitat Condition and Strategic Significance

G8666.011B Proposed Habitat Condition and Strategic Significance

G8666.012B Habitat Impact

TRO1902_PP01_P4 Planting Plan and Schedule

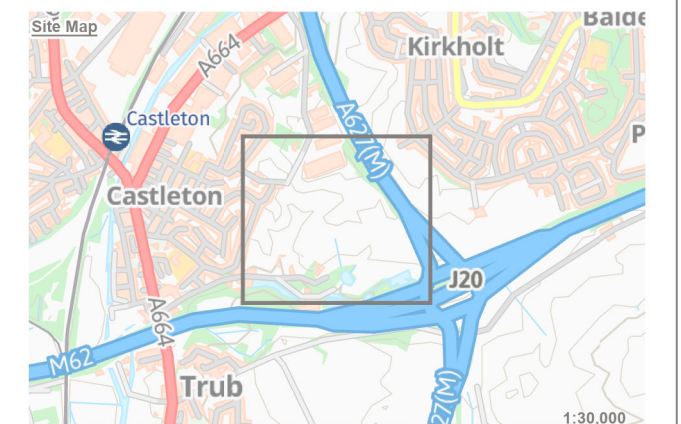


KEY

- Site boundary
- Hedgerows**
 - Native hedgerow
 - Native Hedgerow with trees
 - Line of Trees
- Grassland**
 - Bracken
 - Modified grassland
 - Other neutral grassland
- Heathland and Shrub**
 - Bramble scrub
 - Gorse scrub
 - Mixed scrub
- Woodland and Forest**
 - Other woodland, broadleaved
- Urban**
 - Developed land, sealed surface
 - Vacant/derelict land/bareground

Note:
The locations of habitats and habitat features are indicative.

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Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Crown Top, Rochdale

Title
Existing UK Habitat Plan

Drawing Number
G8666.008

Drawn	Checked	Approved	Scale	Date
JK	MK	IH	1:2,500 @ A3	10/11/2022



KEY

- Site boundary

Proposed tree planting

Species-rich native hedgerow

Reedbeds

Modified grassland

Other neutral grassland
- Woodland and Forest

Other woodland, broadleaved

Artificial unvegetated, unsealed surface

Developed land, sealed surface

Introduced shrub

Vegetated garden

Site boundary

Note:
The locations of habitats and habitat features are indicative.

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Site Map

B	UK habitats update.	OH	PB	29/07/2024
A	UK habitats update.	MK	IH	24/11/2022
Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

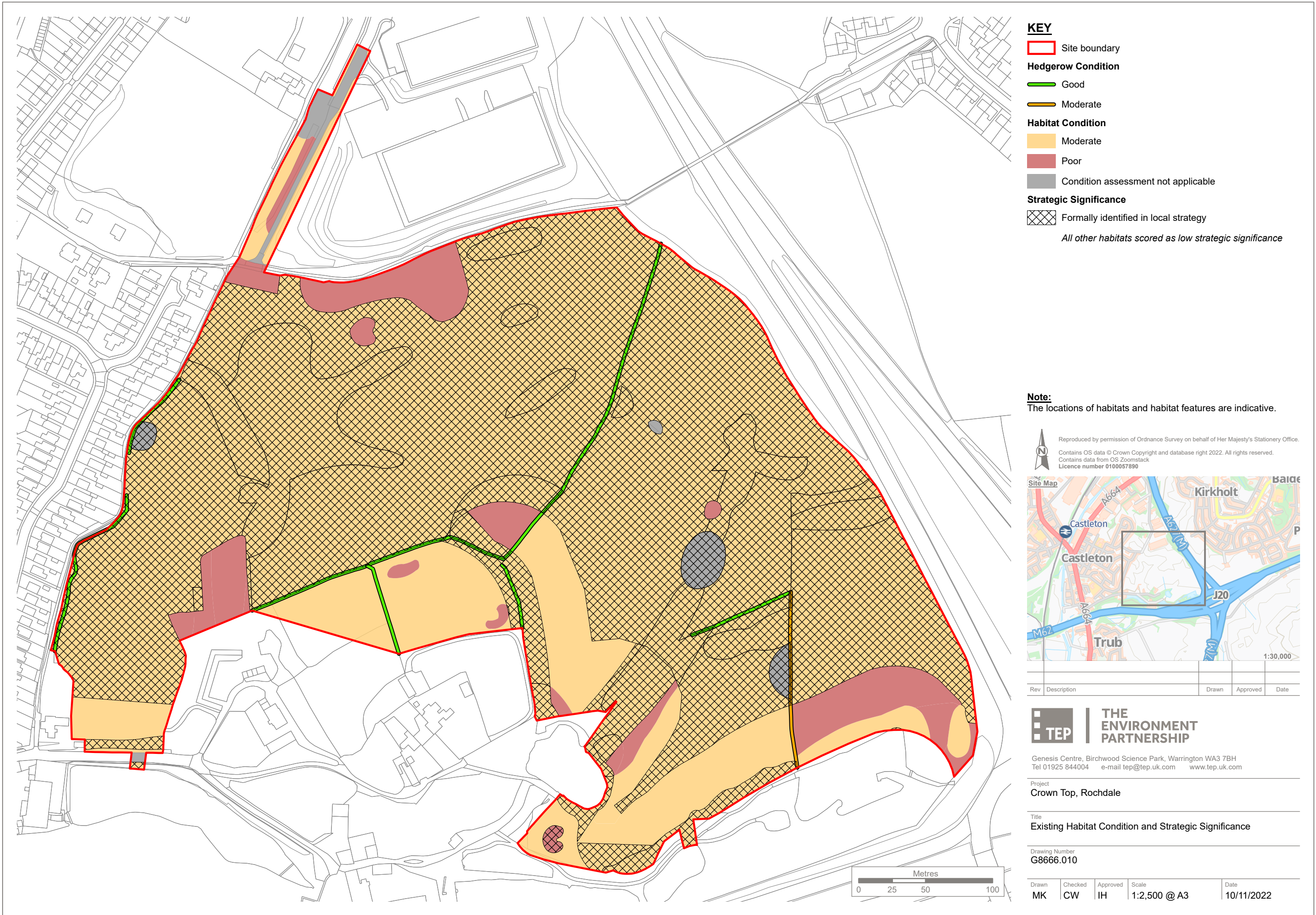
401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

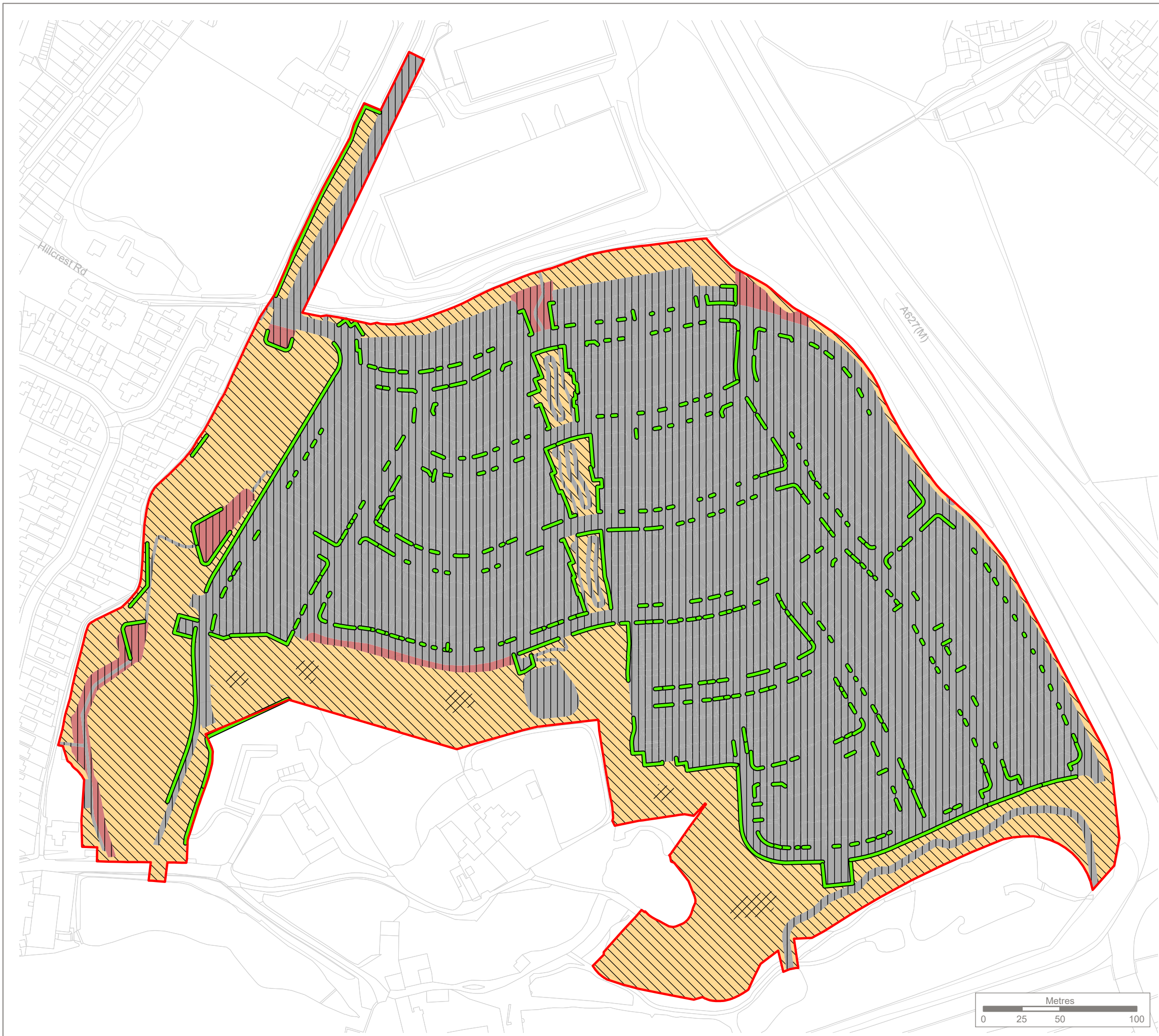
Project
Crown Top, Rochdale

Title
Proposed UK Habitat Plan

Drawing Number
G8666.009B

Drawn	Checked	Approved	Scale	Date
MK	CW	IH	1:2,500 @ A3	29/07/2024





KEY

Site boundary

Hedgerow Condition

Good

Habitat Condition

Moderate

Poor

Condition assessment not applicable

Strategic Significance

Formally identified in local strategy

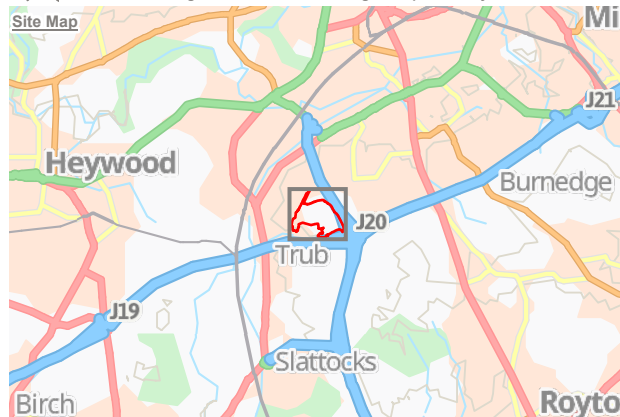
Location ecologically desirable but not in local strategy

Area/compensation not in local strategy/no local strategy

Note:
The locations of habitats and habitat features are indicative.



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Site Map

B	UK habitats update.	OH	PB	29/07/2024
A	UK habitats update.	MK	IH	24/11/2022
Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

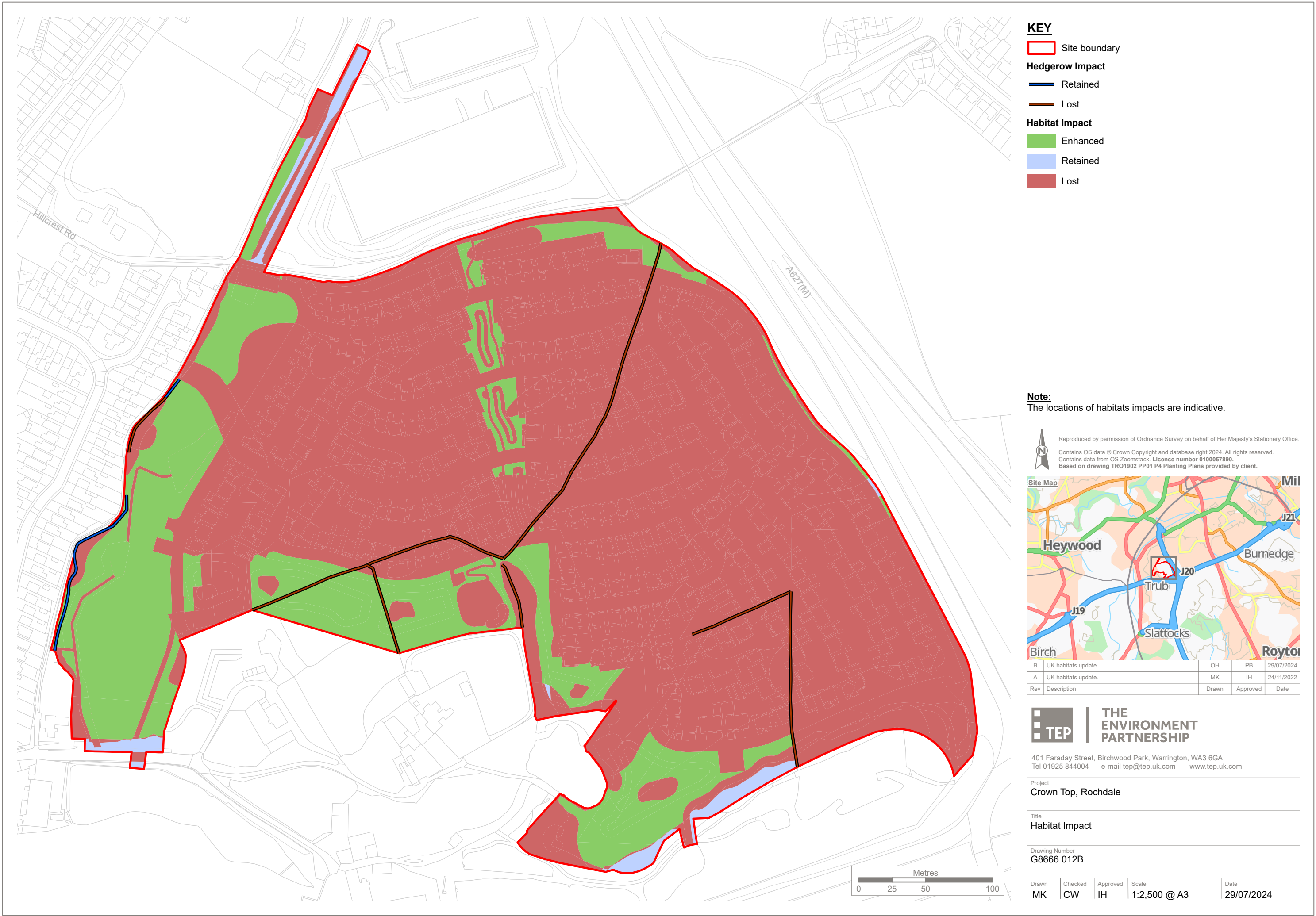
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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Crown Top, Rochdale

Title
Proposed Habitat Condition and Strategic Significance

Drawing Number
G8666.011B

Drawn MK	Checked CW	Approved IH	Scale 1:2,500 @ A3	Date 29/07/2024
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KEY

Site boundary

Hedgerow Impact

Retained

Lost

Habitat Impact

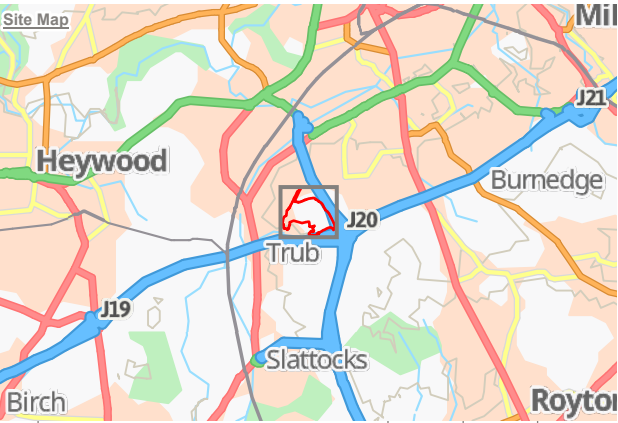
Enhanced

Retained

Lost

Note:
The locations of habitats impacts are indicative.

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B	UK habitats update.	OH	PB	29/07/2024
A	UK habitats update.	MK	IH	24/11/2022
Rev	Description	Drawn	Approved	Date



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Project
Crown Top, Rochdale

Title
Habitat Impact

Drawing Number
G8666.012B

Drawn	Checked	Approved	Scale	Date
MK	CW	IH	1:2,500 @ A3	29/07/2024



SPECIFICATION NOTES

1. General

This plan to be read in conjunction with the following documents:

- PGLA Planting Plan Drawings PP01 SERIES
- Arboricultural and Ecology Reports and the Drainage Strategy
- And any other supporting information

2. General Landscaping

Existing levels to be preserved around retained existing trees and vegetation. Existing trees and vegetation to be retained are to be protected in accordance with BS5837:2012 during construction. Proposed planting under existing trees subject to sufficient space in root areas.

3. Preparation of Planting Beds

- Rubbish, concrete, metal, glass, decayed vegetation are to be removed and disposed of off site.
- Stones with the largest dimension exceeding 40mm are to be removed from planting beds and disposed of off site.
- Substances injurious to plant growth including subsoil, rubble, fuel and lubricants should be removed and disposed of off site.
- Remove any existing weed growth.
- Areas of large root are to be grubbed up without undue disturbance of surrounding soil and adjacent areas.
- All site preparation, planting and maintenance to comply with BS 4429

4. Topsoil

Imported topsoil to be a good quality loam to BS 3882:2015. All topsoil areas shall be thoroughly cultivated by hand or suitable machinery to the full depth of the topsoil layer, incorporating ameliorant's as specified and/or as indicated by analysis and/or as directed by the Landscape Architect. Hand cultivation's shall be carried out to achieve the required finish on areas where machine cultivation is impossible i.e. adjacent to kerbs, manholes and footpath junctions etc. Surplus plant matter, rubbish and surface stones having any dimension greater than 25 mm shall be collected and removed from the site. Existing topsoil to be stripped and re-used if suitable as per specification. All work to be carried out in line with BS 3882:2015 and DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009).

5. Plants

General plant stock to conform to BS 3936, advanced nursery stock and planting to BS 4428. Plants shall be first class examples of their species or variety, free from all pests and diseases, with good fibrous root systems and materially undamaged (refer to relevant sections of BS3936 rts 1-4 'Specification of Nursery Stock'). All planting operations to be in general compliance with BS4428: 1989 'Code of Practice for general landscape operations (excluding hard surfaces)'. Carry out all planting while soil and weather conditions are suitable. Do not plant during periods of frost or strong winds. Plant only during the following periods:

- Container grown and root ball plants: At any time if ground and weather conditions are favourable. Ensure that adequate watering and weed control is provided
- Bare Root stock to be planted November to March.

All plants to be planted in cultivated planting beds at densities shown in plant schedule, in pits of min. size 0.3m x 0.3m x 0.3m deep so as to accommodate full root spread, backfilled with 80% clean topsoil and 20% compost and 20g granular fertilizer. All shrub beds to be in min. 450mm good quality, well prepared topsoil.

See Plant Schedule for species palette. Bed composition, arrangement and setting-out to be approved by Landscape Architect before work commences. Topsoil depth to be 450mm for shrub planting and 150mm for grass.

Native Hedgerow - Stock to be planted in double rows, 5 per linear metre. Trees to be protected with a 600mm spiral rabbit guard and staked. To be kept free of weeds during establishment using secured mulch matting. Bare root plants to be notch planted to depth of root collar in accordance with BS4428.

6. Trees

Trees shown on plan to be planted with species as labelled or similar approved. Do not substitute species, variety and form or reduce the specified number/density of plants without prior agreement. Note sizes shown are minimum. All trees to be planted in pits 2m x 2m x 1m deep, backfilled with 80% clean topsoil with 15% peat free tree and shrub planting compost and 5% Tree Growth Enhancer 'GroChar', including 100g granular fertilizer. Base of pit to be filled with a Terram Geotextile layer on 150mm drainage layer consisting of 20mm nominal size free draining pea gravel. Water-in heavily after planting and surface bark chippings 75mm depth. All trees to be triple staked with timber cross bar and soft ties. Any necessary tree works are to be carried out by an approved tree surgeon to BS 3998. All trees to be protected with 600mm spiral rabbit guard.

Trees planted in grass lawn to be set in bare earth squares 1m diameter around tree trunk with bark mulch to 75mm depth after planting. All work to be carried out in line with BS 3882:2015 and DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009).

7. Mulch

General purpose mulch prepared in accordance with PAS 100. All planting areas and tree pits to be mulched with 75mm (settled depth) bark mulch. Sample of mulch to be approved by Landscape Architect.

8. Grass

Turfing and seeding shall be carried out during appropriate seasons and while soil and weather conditions are suitable for the relevant operations. Hand tools shall be used around trees, plants and in confined spaces where it is impractical to use machinery. The soil shall be weed free prior to turfing. Turf shall be laid on prepared, levelled soil (minimum 150mm depth) in the areas indicated on the drawings and laid in accordance with BS 3969:1998+A1:2013.

9. Replacement of trees and vegetation

The contractor shall replace all plants/trees that have failed to thrive (show growth or display foliage) during the growing season after planting (including plants damaged during maintenance operations). Replacements to match original specification or similar size/species approved by the Landscape Architect. In particular, if any of the boundary vegetation, including those marked for retention, are to be replaced with similar size and species if they die within 5 years.

PLANTING SCHEDULE

POS TREES

Qty	Code	Name	Grth	Height cm	Specification
16	Ac	Acer campestre	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
3	Ae	Aesculus hippocastanum	14-16	400-450	RB 3x; Extra heavy standard; clear stem minimum 200cm; 5 breaks
81	Bp	Betula pendula	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
47	Cb	Carpinus betulus	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
5	Fs	Fagus sylvatica	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
26	Pi	Pinus sylvestris	NA	300-350	Leader with laterals; feathered to the base
56	Pa	Prunus avium	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
16	Pp	Prunus padus	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
50	Qr	Quercus robur	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
19	Sa	Sorbus aucuparia	14-16	400-450	RB 3x; Extra heavy standard; clear stem minimum 200cm; 5 breaks
18	Tc	Tilia cordata 'Greenspire'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
337		Total trees			

PLOT TREES (Within Highway strip - Under private management) Barratt Traditional Character Area

Qty	Code	Name	Grth	Height cm	Specification
31	Bf	Betula albosinensis 'Fascination'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
38	Pg	Prunus 'Snow Goose'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
15	Pr	Prunus chandiclar 'Redspire'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
22	SaL	Sorbus aria 'Lutescent'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
106		Total trees			

PLOT TREES (Within Highway strip - Under private management) DWH Character Area

Qty	Code	Name	Grth	Height cm	Specification
28	Ac	Acer campestre 'Pacific Sunset'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
37	Cf	Carpinus betulus 'Frans Fontaine'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
23	Ps	Prunus 'Spiral'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
88		Total trees			

PLOT TREES (Within Highway strip - Under private management) Contemporary Character Area

Qty	Code	Name	Grth	Height cm	Specification
30	Ap	Acer platanoides 'Emerald Green'	14-16	400-450	RB 3x; Extra heavy standard; clear stem minimum 200cm; 5 breaks
12	Ab	Amelanchier 'Bartram'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
14	Bu	Betula utilis jacquemontii	14-16	400-450	RB 3x; Semi-mature; clear stem minimum 200cm
33	Ls	Liquidambar styraciflua 'Lane Roberts'	14-16	400-450	RB 3x; Semi-mature; clear stem minimum 200cm
4	Mb	Malus baccata 'Street Parade'	14-16	400-450	RB 3x; Heavy Standard; clear stem minimum 200cm; 5 breaks
93		Total trees			

HEDGES

Length (Lin M)	No. Of Plants	Code/Species	Size in cm	Root / Pot size	Final Height	Density / Spacing
464	1856	H1 / Fagus sylvatica	80-100	7.5L Pot	1.2m	4no. Linear m
653	1959	H2 / Prunus lusitanica	100-120	7.5L Pot	1.2m	3no. Linear m
512	2048	H3 / Elaeagnus ebbingei	80-100	7.5L Pot	1.2m	4no. Linear m

SHRUBS - Barratt Traditional Character Area 880m2 Total

Shrub bed composition to be laid out and agreed with Landscape Architect prior to planting

Qty	Abbrev.	Name	Rate / m2	Height	Container Size	Specification
528	Abelia	Abelia grandiflora	4	40-60	7.5L	Bushy; 3 breaks
352	Choisy	Choisy 'ternata'	4	40-60	7.5L	Bushy; 4 breaks
352	Hebe	Hebe rakaiensis	4	40-60	7.5L	Bushy; 5 breaks
352	Lavandula	Lavandula angustifolia 'Hidcote'	4	40-60	7.5L	Bushy; 5 breaks
440	Pachysandra	Pachysandra Terminalis	5	30-40	5L	Bushy; 5 breaks
660	Sarcococca	Sarcococca confusa	5	30-40	5L	Bushy; 6 breaks
352	Skimmia	Skimmia x japonica 'Rubella'	4	40-60	7.5L	Bushy; 3 breaks
704	Viburnum	Viburnum davidii	4	40-60	7.5L	Bushy; 3 brks

SHRUBS - DWH Character Area 887 m2 Total

Shrub bed composition to be laid out and agreed with Landscape Architect prior to planting

Qty	Abbrev.	Name	Rate / m2	Height	Container Size	Specification
355	CHO TER	Choisy 'ternata'	4	40-60	7.5L	Bushy; 4 breaks
355	HEB ORM	Hebe 'Great Orme'	4	40-60	7.5L	Bushy; 5 breaks
355	HEB RAK	Hebe rakaiensis	4	40-60	7.5L	Bushy; 5 breaks
355	PHI MAN	Philadelphus 'Manteau d'hermine'	4	40-60	7.5L	Branched; 4 breaks
532	PHO ROB	Photinia Red Robin	4	40-60	7.5L	bushy; 5 breaks
444	SAR CON	Sarcococca confusa	5	30-40	5L	Bushy; 6 breaks
665	SKI KEW	Skimmia x confusa 'Kew Green'	4	40-60	7.5L	Bushy; 3 breaks
710	VIB DAV	Viburnum davidii	4	40-60	7.5L	Bushy; 3 brks

SHRUBS - Barratt Contemporary Character Area 863m2 Total

Shrub bed composition to be laid out and agreed with Landscape Architect prior to planting

Qty	Abbrev.	Name	Rate / m2	Height	Container Size	Specification
173	Buxus	Buxus sempervirens	4	40-60	7.5L	Bushy; 6 breaks
345	Choisy	Choisy 'Aztec Pearl'	4	40-60	7.5L	Bushy; 5 breaks
345	Deschampsia	Deschampsia cespitosa goldau	7	30-40	5L	Bushy; 6 breaks
216	Hebe	Hebe x hybrid 'White Lady'	5	30-40	5L	Bushy; 6 breaks
216	Hebe	Hebe pinguifolia 'sutherlandii'	5	30-40	5L	Bushy; 6 breaks
518	Hydrangea	Hydrangea arborescens 'Annabelle'	4	40-60	7.5L	Branched; 3 breaks
216	Pachysandra	Pachysandra Terminalis	5	30-40	5L	Bushy; 6 breaks
129	Phormium	Phormium 'Sundowner'	1	60-80	10L	Triple crown - Place as single in bed away from paths
345	Pittosporum	Pittosporum tenuifolium 'Tom thumb'	4	40-60	7.5L	Bushy; 5 breaks
345	Skimmia	Skimmia x confusa 'Kew Green'	4	40-60	7.5L	Bushy; 3 breaks
345	Spiraea	Spiraea japonica 'Little princess'	4	40-60	7.5L	Bushy; 6 breaks

Wildflower and Grassland Meadow Planting Outside of Plots

Code	Area (m2)	Seed Mix Specification	Sowing Rate (g/m2)
WFM1	39,369	Emorsgate EM3 Special General Purpose Meadow Mixture	Suppliers recommendations - 2g/m2
GM1	4,094	General Amenity Grass	Suppliers recommendations -

MNH - Mixed Native Hedge

Total Length On Site 1535 Lin m

No. of Plants	% Mix	Species	Size in cm	Root Cond.	Density	Specification
7675	MNH	Mixed Native Hedge				
1151	15	Crataegus monogyna	60-90	B	5/m	Transplant (seed-raised), 1+1
1151	15	Corylus avellana	60-90	B	5/m	Transplant (seed-raised), 1+1
1151	15	Ilex aquifolium	40-60	2L	5/m	Leader with laterals
384	5	Lonicera periclymenum	60-80	2L	5/m	Cane; several breaks
768	10	Malus sylvestris	60-90	B	5/m	Transplant (seed-raised), 1+1
768	10	Prunus spinosa	60-90	B	5/m	Transplant (seed-raised), 1+1
384	5	Rosa arvensis	60-90	B	5/m	Transplant (seed-raised), 1+1
384	5	Rosa canina	60-90	B	5/m	Transplant (seed-raised), 1+1
768	10	Sambucus nigra	60-90	B	5/m	Transplant (seed-raised), 1+1
768	10	Viburnum opulus	60-90	B	5/m	Transplant (seed-raised), 1+1

Pond Marginal and Reed Planting

Code	Area (m2)	Seed Mix Specification	Sowing Rate (g/m2)
Wet	3261	Emorsgate EM8 Meadow mixture for ponds	Suppliers recommendations - 4g/m2
Dry	4895	Emorsgate EP1 Pond edge mixture	Suppliers recommendations - 4g/m2
R1	545	Phragmites australis - Plug Plants	Suppliers recommendations - 4 plug plants per m2

NWP - Native Woodland Planting (random mix 1 per m2)

Total Area On Site (m2)

7330

Qty	% Mix	Name	Size cm	Root Cond.	Density / Spacing	Specification
733	10	Betula pendula	60-90	B	1/m2	Transplant (seed-raised), 1+1
733	10	Corylus avellana	60-90	B	1/m2	Transplant (seed-raised), 1+1
1100	15	Crataegus monogyna	60-90	B	1/m2	Transplant (seed-raised), 1+1
367	5	Ilex aquifolium	40-60	2L pot	1/m2	Leader with laterals
733	10	Sorbus aucuparia	60-90	B	1/m2	Transplant (seed-raised), 1+1
733	10	Prunus avium	60-90	B	1/m2	Transplant (seed-raised), 1+1
367	5	Prunus spinosa	60-90	B	1/m2	Transplant (seed-raised), 1+1
1100	15	Quercus robur	60-90	B	1/m2	Transplant (seed-raised), 1+1
367	5	Rosa canina	60-90	B	1/m2	Transplant (seed-raised), 1+1
1100	15	Viburnum opulus	60-90	B	1/m2	Transplant (seed-raised), 1+1

P4	16.07.24	Updated to optimise BNG	PGG
P3	11.06.24	Updated to Revised Planning Layout	PGG
P2	20.10.22	Updated to Ecology + Barratt comments	KLJ
P1	19.09.22	Initial Issue	KG

Rev	Date	Description	Initials
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Client	BARRATT HOMES & DWH
Project	COWM TOP LANE, CASTLETON
Description	PLANTING PLANS, SCHEDULE & SPECIFICATION NOTES
Status	FOR PLANNING
Scale	Drawn
NTS	Checked
Job number	KLJ
TRO1902	PGG
	PP01.00
	P4
	SEPT 2022
	Revision
	P4

Original size 100mm @ A1



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