



e3p

Biodiversity Metric Report

Knowsley East Hub, Admin Road, Liverpool

Reference: 80-660-R2-2

Date: November 2022



BIODIVERSITY METRIC REPORT

Knowsley East Hub
Admin Road, Liverpool

Prepared for:
Redsun Projects Ltd.

Report Ref: 80-660-R2-2
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QUALITY ASSURANCE

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REMARKS	Final	Updated Landscape Plans	
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EXECUTIVE SUMMARY

Site Address	6 Admin Road, Liverpool, L33 7TX
Co-ordinates	E 343317, N 397769
Site Area	Approximately 1.09 ha
Current Site Use	The site comprised a brownfield site which had been colonised by grassland. Areas of amenity grassland, scattered trees and hardstanding were also present. Industrial and commercial units are present to the north, south and west. With residential properties present to the east of the site boundary beyond a commercial unit. Admin Road and South Boundary Road define the southern site boundary.
Proposed Development	Development proposals include the construction of a warehouse unit with associated infrastructure, car parking and landscaping.
Results	The biodiversity metric results show a gain of 0.26 habitat units. A 12.12% gain in habitat units will be incurred on-site as a result of development.
Conclusions and Recommendations	Additional species enhancements could be provided on-site, which could include bat and bird boxes and hedgehog houses.



Table of Contents

EXECUTIVE SUMMARY	2
1.INTRODUCTION	4
1.1. Background	4
1.2. Previous Surveys	4
1.3. Site Location	4
1.4. Objectives	5
2.METHODOLOGY	6
2.1. Biodiversity Metric	6
2.2. On-Site Habitat Baseline Data	6
2.3. Post Development Habitat Creation	6
2.4. Limitations	6
3.RESULTS	7
3.1. On-Site Baseline Condition Assessment Results	7
3.2. Habitat Retention	7
3.3. Habitat Creation Condition Assessment	8
3.4. Strategic Significance	9
3.5. Biodiversity Unit Result	9
4.CONCLUSIONS AND RECOMMENDATIONS	10
5.REFERENCES.....	11
APPENDIX I PHASE 1 HABITAT PLAN	12
APPENDIX II LANDSCAPE PLANS	13



1. INTRODUCTION

1.1. BACKGROUND

E3P has been instructed by Redsun Projects Ltd. to undertake a Biodiversity Metric Calculation at Knowsley East Hub, Admin Road, Liverpool, hereafter referred to as “the site”.

This report has been prepared by Associate Director Celia Barlow, BSc (Hons) MSc MEnvSc CEnv, MCIEEM. Celia holds both Class 1 bat and great crested newt Natural England Licences, Field Identification Skills Certificate (FISC) Level 3 and has key experience with amphibians and reptiles. Celia has undertaken a number of online training courses with CIEEM including ‘Calculating and Using Biodiversity Units with Metric 2.0’ and ‘Biodiversity Net Gain Through Development’.

This report should be read in conjunction with ‘Biodiversity Metric 3.1 Auditing and Accounting for Biodiversity Calculation Tool – Admin Road, Liverpool.xl’.

1.2. PREVIOUS SURVEYS

E3P undertook a Preliminary Ecological Appraisal on-site in April 2022 (report reference: 80-660-R1). The survey included a Condition Assessment of the on-site habitats. During the survey, the site was found to predominantly comprise poor semi-improved grassland with a small area of amenity grassland and hardstanding present, some scattered trees were located on and adjacent to the site.

1.3. SITE LOCATION

The site is located in a predominantly industrial and commercial area of Knowsley associated with Knowsley Industrial Estate. Admin Road defined the southern boundary with Gale Road defining the western boundary. Industrial Units are located on all aspects of the site, with residential housing present approximately 65 m to the east. Please refer to Figure 1.1 for the approximate site location.



FIGURE 1.1 APPROXIMATE SITE LOCATION



1.4. OBJECTIVES

The objectives of the Biodiversity Metric are to:

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

The findings of the calculation are detailed within this report, along with recommendations.



2. METHODOLOGY

2.1. BIODIVERSITY METRIC

Department for Environment, Food and Rural Affairs' (DEFRA) Biodiversity Metric 3.1 2022 version was used to undertake the metric calculation. The metric was undertaken following guidance as detailed within The Biodiversity Metric 3.1 User Guide (Natural England, 2022), the Biodiversity Metric 3.1 Technical Supplement (Natural England, 2022) and the Biodiversity Metric 3.1 – Summary of Changes (2022).

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

2.2. ON-SITE HABITAT BASELINE DATA

The baseline data used to inform the condition assessment was collected on 20th April 2022 during the Preliminary Ecological Appraisal. The Biodiversity Metric 3.1 Habitat Condition Assessment Sheets with Instructions (Natural England 2022) was used to undertake the condition assessment.

On-site baseline habitats were measured off the Phase 1 Habitat Plan using QGIS. Scattered tree areas were detailed as the root protection areas as outlined in the Arboricultural Impact Assessment Report (report reference: 80-660-R3). Please see Appendix I for the Phase 1 Habitat Plan.

Phase 1 habitat types were translated into UKHab habitat types using the metrics Technical Data Translation Tool.

2.3. POST DEVELOPMENT HABITAT CREATION

The Planting Plan was used to measure habitat creation on-site (TPM Landscape, 2022, Drawing Reference 4141 201). The areas of proposed habitat were measured using AutoCAD from the DWG drawing. Tree measurements reflect the canopy cover of the trees to be retained as detailed within the Arboricultural Impact Assessment (E3P, 2022). Areas of proposed trees were measured using the urban tree helper.

Please see Appendix II for the Planting Plan.

2.4. LIMITATIONS

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



3. RESULTS

3.1. ON-SITE BASELINE CONDITION ASSESSMENT RESULTS

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

TABLE 3.1 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA (HA)	CONDITION ASSESSMENT	DESCRIPTION
BUILDINGS AND HARDSTANDING	Urban – Developed Land; Sealed Surface	0.1375	N/A	N/A
SCATTERED TREES	Urban – Urban Tree (T1, T2, T3, T4)	0.0303	Moderate	Passes 3 of 6 condition assessment criteria (Urban-Urban Tree). - The tree is native species - Micro habitats for birds, mammals and insects are present. - More than 20% of the tree canopy is oversailing vegetation.
POOR SEMI-IMPROVED GRASSLAND	Grassland – Modified Grassland	0.939	Poor	Fails essential criterion 1 as there are less than six species present per m2.
AMENITY GRASSLAND	Grassland – Modified Grassland	0.0168	Poor	Fails essential criterion 1 as there are less than six species present per m2.

3.2. HABITAT RETENTION

All areas of habitat will be removed within the site to facilitate development. Some scattered trees will be retained. Table 3.2 outlines the area of habitat to be retained.

TABLE 3.2 HABITAT RETENTION

HABITAT TYPE	HABITAT TYPE (UKHAB)	AREA (HA)	CONDITION
SCATTERED TREES	Urban – Urban Tree (T1, T2, T3, T4)	0.0303	Moderate



3.3. HABITAT CREATION CONDITION ASSESSMENT

A number of habitats are proposed within the site which are located outside of residential gardens and in areas of Public Open Space (POS). Table 3.3 shows the details of the target condition assessment and total areas of habitat creation. It has been assumed that there will be no significant delay in the creation of the proposed habitat features, as such the delay in starting habitat creation has been set to zero.

TABLE 3.3 HABITAT CREATION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION	DESCRIPTION/ TARGET TIME TO CONDITION
BUILDINGS	Urban; Developed Land; Sealed Surface	0.9989	N/A	N/A
HARDSTANDING/ HARDWORKS				
PROPOSED MEDIUM TREES	Urban- Urban Tree Broadleaved (x17)	0.6226	Poor	Target time to condition will be 10 years. The following condition criterion will be targeted: - The tree is a native species. - Individual trees automatically pass Criterion 2. - There is little evidence of adverse impacts on tree health. - Criterion 6: More than 20% of the tree canopy is oversailing vegetation beneath.
WILDFLOWER MEADOW MIX	Grassland- Other neutral grassland	0.0105	Poor	Target time to condition will be 2 years. The following criterion will be targeted: - Cover of bracken less than 20% and cover of scrub less than 5% - There is an absence of invasive non-native species.



HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION	DESCRIPTION/ TARGET TIME TO CONDITION
NATIVE SHRUB MIX	Heathland and shrub- Mixed Scrub	0.0480	Moderate	Time to target condition will be 5 years: The following condition criterion will be targeted: - There are at least three woody species. - There is a good age range. - There is an absence of invasive non-native species.
ORNAMENTAL PLANTING	Urban – Introduced Shrub	0.0303	N/A	Target time to condition will be one year.

3.4. STRATEGIC SIGNIFICANCE

The strategic significance was defined as 'Area not in local strategy, no local strategy'. The site comprises a brownfield site, colonised by grassland. Areas of amenity grassland, scattered trees and hardstanding were also present. Commercial units surrounded the site to the north-west, north, south, and west, with residential housing present to the east of the site boundary beyond a commercial unit, likely to have limited ecological value.

3.5. BIODIVERSITY UNIT RESULT

The headline results of the metric show a gain of 0.26 habitat units as a result of development. Table 3.4 shows the headline results detailed within the Biodiversity Metric.

TABLE 3.4 HEADLINE RESULTS

HEADLINE	CATEGORY	RESULT
TOTAL NET UNIT CHANGE	Habitat Units	+0.26
	Hedgerow Units	N/A
	River Units	N/A
TOTAL NET % CHANGE	Habitat Units	+12.12%
	Hedgerow Units	N/A
	River Units	N/A

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



4. CONCLUSIONS AND RECOMMENDATIONS

The proposed scheme and associated landscape plans show a total gain of 0.26 habitat units. A net gain of habitats will be incurred on-site as a result of development.

The Biodiversity Metric does not take account for additional species enhancements within the site, and to further increase the site's value for wildlife the following could be provided:

-  Hedgehog houses may be installed to enhance the site for hedgehogs.
-  Bat and bird boxes could be integrated into the proposed units or on retained trees.



5. REFERENCES

- ✦ E3P (2022). Preliminary Ecological Appraisal (80-660-R1-1).
- ✦ E3P (2022). Arboricultural Impact Assessment (80-660-R3-1).
- ✦ National Planning Policy Framework (2021). Ministry of Housing, Communities and Local Government.
- ✦ Natural England Joint Publication JP039. (2022). Biodiversity Metric 3.1 -Summary of Changes.
- ✦ Natural England Joint Publication JP039. (2022). The Biodiversity Metric 3.1. Auditing and Accounting for Biodiversity, Technical Supplement.
- ✦ Natural England Joint Publication JP039. (2022). The Biodiversity Metric 3.1. Auditing and Accounting for Biodiversity, User Guide.
- ✦ Natural England. (2022). The Biodiversity Metric 3.1. Auditing and Accounting for Biodiversity, Condition Assessment Sheets.
- ✦ TPM Landscape (2022). Planting Plan. Drawing Reference 4141 201.

END OF REPORT



APPENDIX I

PHASE 1 HABITAT PLAN

Key:

- Site boundary
- Palisade fence
- Scattered trees
- Log pile
- Rhododendron
- Field horsetail
- SI SI Poor semi-improved grassland
- Hardstanding
- A A Amenity grassland

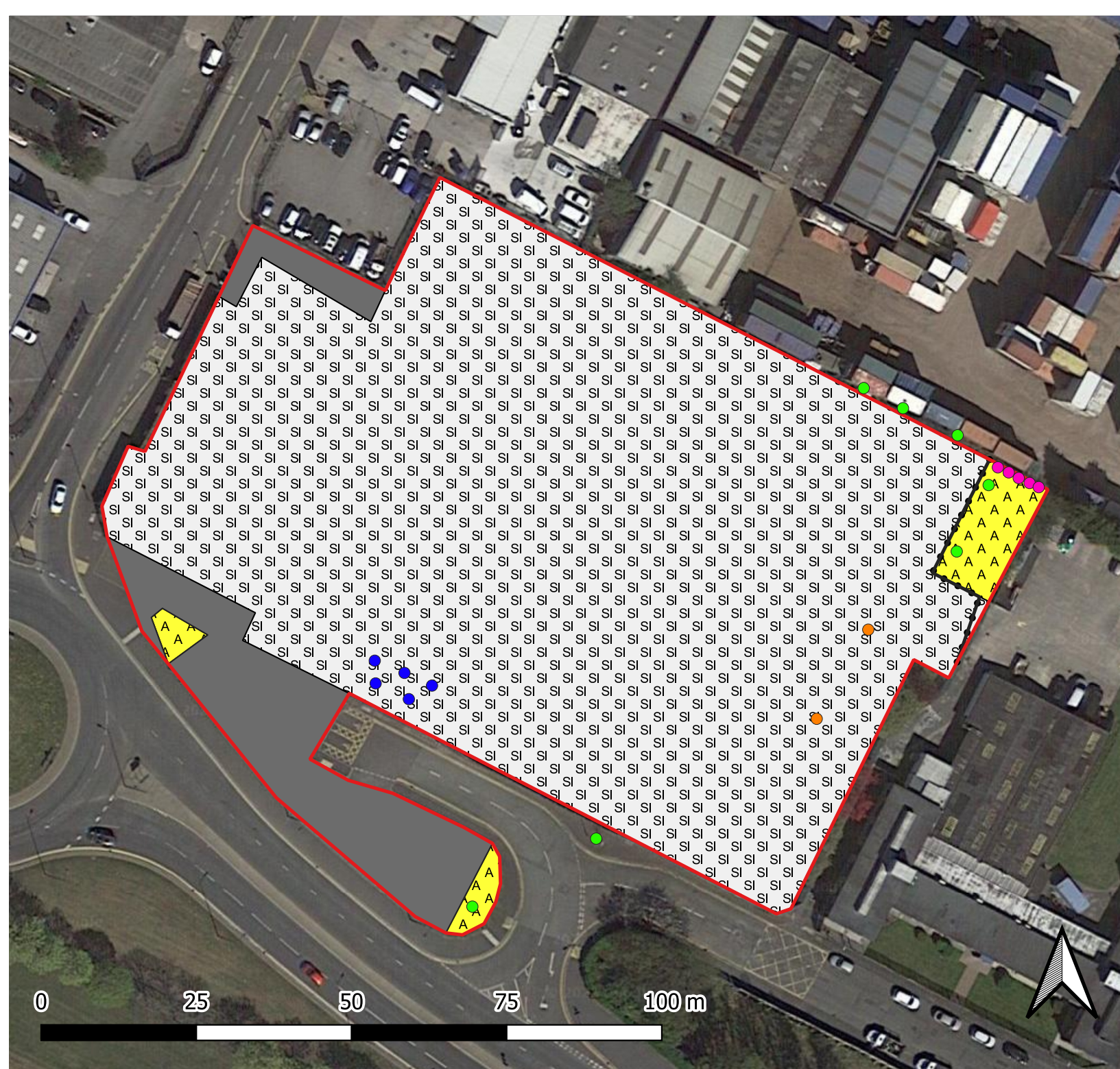
Notes

Issue: 1	Revision: 1	Date: 22/04/2022	Drawn: LT	Authorised: CB
Client: Redsun Projects Ltd			Job No. 80-660	Date: 22/04/2022
			Drawing No. 80-660-001	Scale: 1:1400 @A4
Job title: Admin Road, Liverpool			Drawing title: Phase 1 Habitat Plan	



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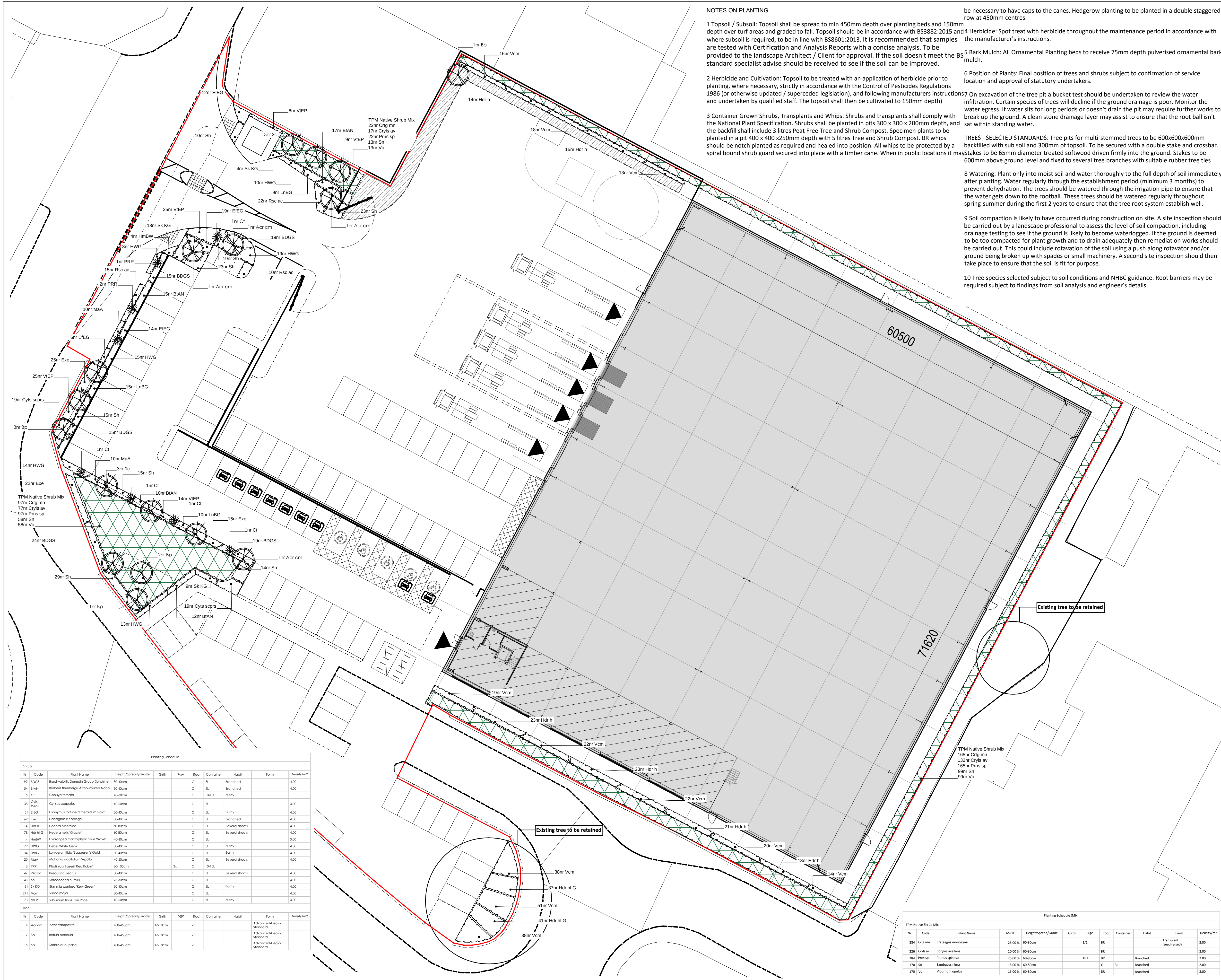
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APPENDIX II

LANDSCAPE PLANS

The background of the page is composed of several geometric shapes. A large, dark orange triangle points downwards from the top right. Below it, a lighter orange shape forms a wide, shallow 'V' or valley. The bottom left corner is filled with a dark orange triangle that contains a fine, light-colored grid pattern.



NOTES ON PLANTING

- 1 Topsoil / Subsoil: Topsoil shall be spread to min 450mm depth over planting beds and 150mm depth over turf areas and graded to fall. Topsoil should be in accordance with BS3882:2015 and where subsoil is required, to be in line with BS8601:2013. It is recommended that samples are tested with Certification and Analysis Reports with a concise analysis. To be provided to the landscape Architect / Client for approval. If the soil doesn't meet the BS standard specialist advise should be received to see if the soil can be improved.
- 2 Herbicide and Cultivation: Topsoil to be treated with an application of herbicide prior to planting, where necessary, strictly in accordance with the Control of Pesticides Regulations 1986 (or otherwise updated / superceded legislation), and following manufacturers instructions and undertaken by qualified staff. The topsoil shall then be cultivated to 150mm depth)
- 3 Container Grown Shrubs, Transplants and Whips: Shrubs and transplants shall comply with the National Plant Specification. Shrubs shall be planted in pits 300 x 300 x 200mm depth, and the backfill shall include 3 litres Peat Free Tree and Shrub Compost. Specimen plants to be planted in a pit 400 x 400 x 250mm depth with 5 litres Tree and Shrub Compost. BR whips should be notch planted as required and healed into position. All whips to be protected by a spiral bound shrub guard secured into place with a timber cane. When in public locations it may be necessary to have caps to the canes. Hedgerow planting to be planted in a double staggered row at 450mm centres.
- 4 Herbicide: Spot treat with herbicide throughout the maintenance period in accordance with the manufacturer's instructions.
- 5 Bark Mulch: All Ornamental Planting beds to receive 75mm depth pulverised ornamental bark mulch.
- 6 Position of Plants: Final position of trees and shrubs subject to confirmation of service location and approval of statutory undertakers.
- 7 On excavation of the tree pit a bucket test should be undertaken to review the water infiltration. Certain species of trees will decline if the ground drainage is poor. Monitor the water egress. If water sits for long periods or doesn't drain the pit may require further works to break up the ground. A clean stone drainage layer may assist to ensure that the root ball isn't sat within standing water.
- TREES - SELECTED STANDARDS: Tree pits for multi-stemmed trees to be 600x600x600mm backfilled with sub soil and 300mm of topsoil. To be secured with a double stake and crossbar. To be 65mm diameter treated softwood driven firmly into the ground. Stakes to be 600mm above ground level and fixed to several tree branches with suitable rubber tree ties.
- 8 Watering: Plant only into moist soil and water thoroughly to the full depth of soil immediately after planting. Water regularly through the establishment period (minimum 3 months) to prevent dehydration. The trees should be watered through the irrigation pipe to ensure that the water gets down to the rootball. These trees should be watered regularly throughout spring-summer during the first 2 years to ensure that the tree root system establish well.
- 9 Soil compaction is likely to have occurred during construction on site. A site inspection should be carried out by a landscape professional to assess the level of soil compaction, including drainage testing to see if the ground is likely to become waterlogged. If the ground is deemed to be too compacted for plant growth and to drain adequately then remediation works should be carried out. This could include rotavation of the soil using a push along rotavator and/or ground being broken up with spades or small machinery. A second site inspection should then take place to ensure that the soil is fit for purpose.
- 10 Tree species selected subject to soil conditions and NHBC guidance. Root barriers may be required subject to findings from soil analysis and engineer's details.

LEGEND

SOFT LANDSCAPE

- Existing Trees to be retained
- Proposed Trees
Advanced Heavy Standard, 16-18cm girth, 400-450cm high.
- Proposed Shrubs
Proposed shrubs and flowering herbaceous, 3-5L pots at 3-5 per m² to be punctuated with specimen shrubs in 10-15L pots
- Proposed Native Shrub Mix
To be a mix of native planting, 3-5L pots at 3-5 per m² in groups of 5-10.
- Proposed Wildflower Meadow Mix
To be Emorsgate EM2 Standard General Purpose Meadow Mix, supplied by Emorsgate or similar approved. Sowing rate 4g/m².

GENERAL NOTES

- This drawing is the copyright of TPM Landscape Ltd and cannot be reproduced in any form without the consent of the company.
- This drawing is to be read in conjunction with detail landscape drawings, details and specification.
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- The insertion of any firm or proprietary brand on this drawing is an indication of the class or quality required and does not exclude the use of alternative materials that are equal in performance, quality and appearance, provided that they have been approved in writing by the Landscape Architect.
- The Contractor is responsible for accurately ascertaining the position of underground services and responding to all relevant service easement requirements.
- All dimensions are in millimetres unless stated otherwise, for the purposes of construction this drawing must not be scaled and only written dimensions used. Written and scaled dimensions to be checked on site, any discrepancies reported prior to work commencing. IF IN DOUBT PLEASE ASK.
- All work and materials are to be in accordance with the relevant British Standards and Code of Practice.
- All Proprietary products are to be used strictly in accordance with the manufacturer's instructions and details.

REVISION NOTES

Rev	By	Description	Date
D	TS	Updated with comments	24/11/22
C	TS	Updated with additional trees	24/11/22
B	TS	Updated in line with latest layout	23/11/22
A	AJ	Updated in line with latest layout	04/11/22

Client
Langton Development Services

Project
Knowsley East Hub

Description
Planting Plan

Status
For Approval

Scale @ A1
1:250

Drawn
AJ

Checked
KP

Date
24.11.22

Job number
4141

Drawing number
201

Revision
D