

BIODIVERSITY NET GAIN DESIGN STAGE ASSESSMENT

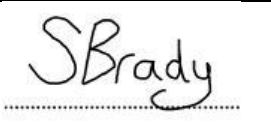
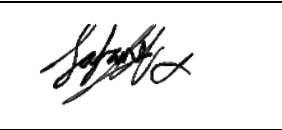
NOVEMBER 2024

JD Campus,
Hollins Brook Way,
Bury,
BL9 8RR

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



QUALITY MANAGEMENT

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CONTENTS

1	Executive Summary.....	4
2	Introduction	5
2.1	Scope.....	5
2.2	Site Context.....	5
2.3	Purpose of Report	5
2.4	Legislation and Policy.....	7
3	Methods	8
3.2	Site Mapping	8
3.3	The Biodiversity Metric 3.1.....	8
3.4	Habitat Scoring.....	9
3.5	Constraints to the Survey	11
4	Pre-Development Habitat Assessment	12
4.2	Area Habitats	12
4.3	Linear Hedgerow Habitats.....	15
5	Lost Habitats	16
5.1	Area Habitats	16
5.2	Linear Hedgerow Habitats.....	16
6	Pre-Development Habitat Summary.....	18
7	Post-Development Habitat Assessment.....	19
7.2	Area Habitats	19
7.3	Linear Hedgerow Habitats.....	20
8	Post-Development Habitat Summary	21
9	References	22
Appendix 1 – Baseline Habitat Map		
Appendix 2 – Primary and Secondary Codes		
Appendix 3 – Proposed Landscape Plan		

1 Executive Summary

- 1.1.1.1 JD Group is proposing to develop land at Hollins Brook Way, Bury (hereafter referred to as 'the site'). The proposals include the construction of one multi-purpose all weather pitch, a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping.
- 1.1.1.2 Urban Green has been appointed to carry out a Biodiversity Net Gain Design Stage Assessment to support a reserved matters application for the development of the site.
- 1.1.1.3 This assessment was conducted using the Biodiversity Metric 3.1 to calculate the pre-and post-development biodiversity habitat units of the site for the proposed development.
- 1.1.1.4 The current landscape proposals for the development of the site produce a 0.53 unit (25.71%) net gain in area habitats and a 0.03 unit (17.04%) net gain in linear hedgerow habitats.
- 1.1.1.5 The trading rules have not been satisfied due to insufficient compensation for the loss of bramble scrub habitat.

2 Introduction

2.1 Scope

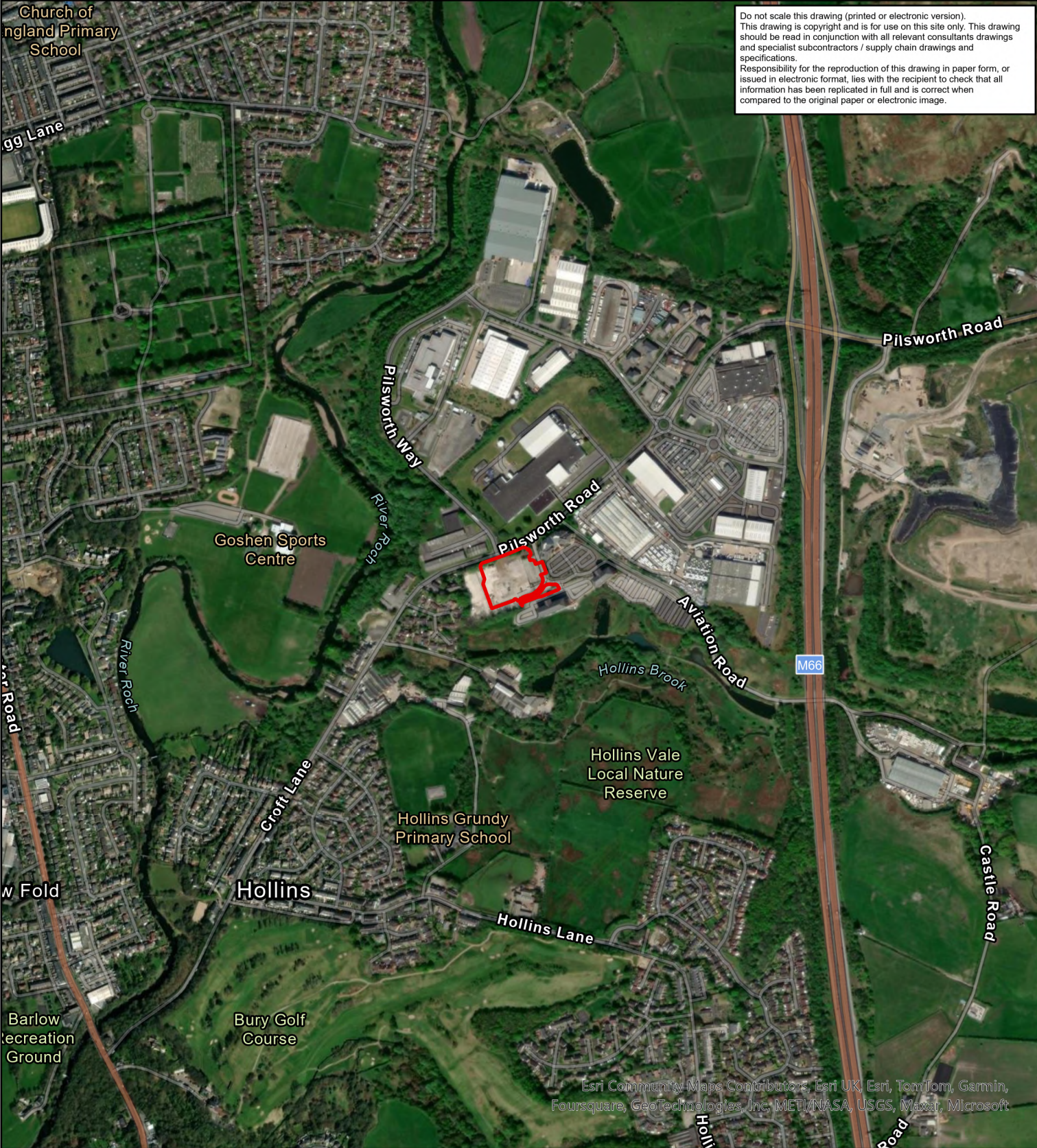
- 2.1.1.1 Urban Green has been instructed by JD Group to carry out a Biodiversity Net Gain Assessment at land at Hollins Brook Way, Bury (hereafter referred to as ‘the site’) and produce findings in a report.
- 2.1.1.2 The proposals include the construction of one multi-purpose all weather pitch, a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping.

2.2 Site Context

- 2.2.1.1 The site is located at National Grid Reference SD 81523 08675 and comprises a total area of approximately 1.04ha (see Figure 1).
- 2.2.1.2 The site is located on the rural-urban fringe of Bury, which is located approximately 2.5km north-west of the site. Pilsworth Industrial Estate is present immediately to the north-east and east of the site, comprising office blocks and commercial retail outlets. Hollins Vale Local Nature Reserve immediately borders the south of the site. Hollins Brook and the River Roch are present close to the site, located approximately 100m south and 200m west of the site, respectively.

2.3 Purpose of Report

- 2.3.1.1 The report has been produced to document the methods, results and conclusions of a Biodiversity Net Gain 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; and
 - Calculate the overall change in biodiversity score from pre- to post-development habitats (measured as habitat units).



Legend: Red Line Boundary		0.85 Kilometers		N URBAN GREEN A: Ground Floor, The Tower, Deva City Office Park, Trinity Way, Manchester M3 7BF T: +44 (0) 161 312 3131 weareurbangreen.co.uk
Client: JD Sports		Issue: 01	Figure: 01	
Project: JD Campus		Scale @ A4 1:10,000		
Title: Site Context		Approved by: CL	Checked by: OJ	
Drawing Ref: UG_1466_SITE_CONTEXT		Author: CL	Date: 10/09/2024	

2.4 Legislation and Policy

- 2.4.1.1 This report supports a reserved matters application for which outline planning was approved prior to the implementation of mandatory Biodiversity Net Gain.
- 2.4.1.2 Bury Council is currently moving forward with a new Local Plan for Bury. The existing local plan was not available for review at the time of writing.
- 2.4.1.3 In March 2024, Bury Council adopted the Greater Manchester Places for Everyone plan. Policy JP-G8 (A Net Enhancement of Biodiversity and Geodiversity) states:

Development will be expected to:

a. Follow the mitigation hierarchy of:

i. Avoiding significant harm to biodiversity, particularly where it is irreplaceable, through consideration of alternative sites with less harmful impacts, then

ii. Adequately mitigating any harm to biodiversity, then

iii. Adequately compensating for any remaining harm to biodiversity

b. Avoid fragmenting or severing connectivity between habitats;

c. Achieve a measurable net gain in biodiversity of no less than 10%

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

e. Where appropriate, development should: mitigate air pollution impacts on Manchester Mosses SAC; mitigate urban edge, functionally linked land and recreation disturbance impacts on the South Pennine Moors SAC/SPAs; and assess and potentially mitigate boat movement, water pollution, and light spillage and shading impacts on the Rochdale Canal SAC; and

f. Development proposals should be informed by the findings and recommendations of the appropriate biodiversity/ecological assessment(s) in the PfE evidence base and/or any updated or appropriate biodiversity/ecological assessments submitted as part of the planning application process.

- 2.4.1.4 A draft Biodiversity Strategy for Bury details the requirement for Bury to adopt and deliver Biodiversity Net Gain and the mechanisms required to deliver this effectively.

- 2.4.1.5 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).

3 Methods

- 3.1.1.1 The Biodiversity Net Gain Assessment and Report follows the user guidance produced by Department for Environment, Food & Rural Affairs (2024a) and the good practice methodology as detailed within the *Biodiversity Net Gain: Good Practice Principles for Development* (Baker, et al., 2019).

3.2 Site Mapping

3.2.1 Existing Habitats

- 3.2.1.1 The site was subject to a field survey on the 19th August 2024, by Shannon Brady, Senior Biodiversity Net Gain Consultant, and Olivia Jones, Assistant Ecologist. The weather conditions were 17°C, scattered clouds (4/8 oktas), with wind speed 3 Beaufort scale.
- 3.2.1.2 Plant species were identified and recorded, flora species listed as protected in the Wildlife and Countryside Act 1981 (as amended) and species which are indicators of important and/or uncommon habitats, were searched for during the survey. Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the Wildlife and Countryside Act 1981 and the Invasive Alien Species (Enforcement and Permitting) Order 2019 were also searched for during the field survey.
- 3.2.1.3 Habitat types were identified and recorded using the Coreo habitat mapping application (V2.0) which utilises UKHab classifications (Butcher et al., 2023). Habitat types were based on the UKHab guidance provided and the assessor's best judgment while using these guidelines. Habitats were identified using primary codes and additional secondary codes have been used to record further information regarding various aspects of the site.
- 3.2.1.4 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. A summary of primary and secondary codes can be found in Appendix 2.
- 3.2.1.5 Based on aerial imagery, previous survey data for the site and discussion with contractors, it is apparent that the site has recently been cleared of vegetation. As this clearance occurred after January 2020, following the Biodiversity Metric 3.1 User Guidance (Natural England, 2022a), the habitats and their conditions prior to clearance must be used as the baseline value for the site. The previous PEA (Urban Green, 2022) and AIA (Urban Green, 2023) have been used to inform the habitat classification and condition.

3.2.2 Post-Development Habitats

- 3.2.2.1 The design layout, as provided by CW Studio (see Appendix 3), was provided in PDF and DWG format, detailing planting mixes and the areas of the proposed habitats. These were used to categorise the proposed habitats to inform the assessment.

3.3 The Biodiversity Metric 3.1

- 3.3.1.1 The BNG calculation was undertaken utilising The Biodiversity Metric 3.1 from the Department for Environment, Food & Rural Affairs, using data obtained from the field surveys.

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

3.4 Habitat Scoring

- 3.4.1.1 The Biodiversity Metric 3.1 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.

3.4.2 Minimum Mapping Units (MMU)

- 3.4.2.1 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.

3.4.3 Baseline Units

- 3.4.3.1 To assess the quality of a habitat, and therefore calculate the units scored, the Biodiversity Metric 3.1 utilises three scoring factors detailed as follows:

3.4.3.2 Condition

- 3.4.3.3 The condition of a habitat is assessed utilising the Condition Sheets provided for each habitat type (Natural England, 2022b). These list positive indicators for each habitat and indicate how many of these indicators need to be present to meet certain thresholds of condition.

- 3.4.3.4 Condition assessment results for each habitat have been provided within the ‘user comments’ column of the associated Biodiversity Metric (Urban Green, 2024a).

3.4.3.5 Distinctiveness

- 3.4.3.6 The distinctiveness of each habitat is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat. Table 1 provides the basis of the distinctiveness assessment for area habitats.

Table 1 – Distinctiveness Assessment for Habitats

Distinctiveness Categories		
Category	Scores	Multiplier
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.

Distinctiveness Categories		
Category	Scores	Multiplier
Very Low (hedgerows)	1	Lowest biodiversity value possible e.g. non-native and ornamental hedgerow
Very Low (area and watercourse)	0	Little or no biodiversity value e.g. hard standing or sealed surface.

3.4.3.7 Strategic Significance

3.4.3.8 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 2).

Table 2 – Strategic Significance Assessment for Habitats

Strategic Significance Categories	
Category	Score
High strategic significance Identified in Local Nature Recovery Strategy (LNRS) and delivers specified priorities, or identified local plans as ecologically important	1.15
Medium strategic significance Where LNRS is not available, good potential but not in area defined in local policy – using professional judgment	1.1
Low Strategic Significance Definitions for high or medium not met, i.e., does not deliver specific priorities outlined in LNRS/local plans	1

3.4.3.9 Hollins Vale Local Nature Reserve (LNR) and Site of Biological Importance (SBI) is located immediately south of the site. There is also a section of Green Belt which is located directly adjacent to the site and encompasses the majority of Hollins Vale LNR & SBI.

3.4.3.10 The site is not identified under any local policy within the Bury Policies Map, and no priority habitats were identified on site on DEFRA's MAGiC map.

3.4.3.11 Due to the site's proximity to Hollins Vale LNR & SBI and the Green Belt, all existing and proposed habitats have been allocated a **medium strategic significance**.

3.4.4 **Post-Development**

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

3.4.4.2 Temporal Multiplier

3.4.4.3 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.

3.4.4.4 Difficulty Multipliers

3.4.4.5 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.

3.5 Constraints to the Survey

3.5.1.1 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.

3.5.1.2 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 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.

3.5.1.3 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.

3.5.1.4 The baseline for the site has been assessed retrospectively due to recent clearance of habitats (see Section 3.2.1). Habitat classifications and conditions are, however, based on previous ecological and arboricultural survey data for the site and are considered accurate.

4 Pre-Development Habitat Assessment

- 4.1.1.1 Baseline habitats were assessed following the methodology outlined in Section 3 and assessments were supported by data from the Preliminary Ecological Assessment (PEA) (Urban Green, 2022 & 2024b) and Arboricultural Impact Assessment (AIA) (Urban Green, 2024c).
- 4.1.1.2 Habitat descriptions are provided below, and the results of the condition assessment are provided in the accompanying metric.
- 4.1.1.3 Habitats with comparable structure and condition assessment results have been grouped for simplicity. The habitats have been given reference numbers to correspond with the metric calculation.

4.2 Area Habitats

4.2.1 1) Urban – Building (u1b5)

- 4.2.1.1 A small security booth is located in the southeastern corner of the site. The building is well-sealed and modern, with no visible imperfections.
- 4.2.1.2 Buildings are classified as developed land; sealed surface within the metric, which is automatically allocated a condition score of **N/A**.

4.2.2 2 & 3) Urban – Introduced Shrub (u 847)

- 4.2.2.1 Two areas of well-managed ornamental shrub are located around the security booth. Species identified in this area include cherry laurel (*Prunus laurocerasus*), boxleaf honeysuckle (*Lonicera nitida*), herb Robert (*Geranium robertianum*), red flowering current (*Ribes sanguineum*), curlytop knotweed (*Polygonum lapathifolium*), Portuguese laurel (*Prunus lusitanica*) and shrubby cinquefoil (*Dasiphora fruticosa*).
- 4.2.2.2 Introduced shrub is automatically allocated a condition score of **N/A** within the metric.

4.2.3 4) Urban – Developed Land; Sealed Surface (u1b)

- 4.2.3.1 The remaining area of the southern parcel is comprised of hardstanding, which is classified as developed land; sealed surface within the metric, and is automatically allocated a condition score of **N/A**.

4.2.4 5) Urban – Developed Land; Sealed Surface (u1b)

- 4.2.4.1 The majority of the northern parcel of the site is also comprised of hardstanding, which is classified as developed land; sealed surface within the metric, and is automatically allocated a condition score of **N/A**.

4.2.5 6) Sparsely Vegetated Land – Ruderal/Ephemeral (u1f)

- 4.2.5.1 An area of sparsely vegetated land was present in the northern aspect of the site, though the majority had been cleared at the time of surveying. Details of this habitat have been taken from the previous PEA (Urban Green, 2022).

4.2.5.2 These areas were abundant in buddleja (*Buddleja davidii*) and moss species (*Bryophyta spp.*), with springy turf moss (*Rhytidiadelphus squarrosus*) locally abundant. Ribwort plantain (*Plantago lanceolata*) was identified frequently within the area and common soft rush (*Juncus effusus*), broadleaved dock (*Rumex obtusifolius*), rosebay willowherb (*Chamaenerion angustifolium*), and perennial ryegrass (*Lolium perenne*) occurred occasionally. It was also noted that these areas were extremely wet and showed characteristics of marshy grassland with areas of standing water.

4.2.5.3 During the 2024 site survey, Himalayan cotoneaster (*Cotoneaster simonsii*) and Himalayan balsam (*Impatiens glandulifera*) were also identified within this area (TN1 and TN2). Both species are listed as non-native, invasive on Schedule 9 of the Wildlife and Countryside Act 1981.

4.2.5.4 Due to the presence of invasive species, this habitat has been assessed as **moderate** condition.

4.2.6 7 & 8) Building (urb5)

4.2.6.1 Two buildings were previously located onsite, though both were noted to be abandoned in the 2022 site survey (Urban Green, 2022).

4.2.6.2 Buildings are classified as developed land; sealed surface within the metric, which is automatically allocated a condition score of **N/A**.

4.2.7 9) Urban – Introduced Shrub (u 847)

4.2.7.1 A further parcel of introduced shrub was present to the east of the site in 2022, though has since been cleared. The habitat was comprised of wall cotoneaster (*Cotoneaster horizontalis*), small leaved cotoneaster (*Cotoneaster microphyllus*), dog rose (*Rosa canina*), laurel (*Laurus nobilis*), and common dog wood (*Cornus sanguinea*), according to the 2022 site survey (Urban Green, 2022).

4.2.7.2 Wall cotoneaster and small leaved cotoneaster are non-native invasive species and are listed on the Schedule 9 of the Wildlife and Countryside Act 1981.

4.2.7.3 Introduced shrub is automatically allocated a condition score of **N/A** within the metric.

4.2.8 10) Heathland and Shrub – Bramble Scrub (h3d)

4.2.8.1 An area of scrub was present along the northern boundary of the site during the 2022 site survey, though has since been cleared. The scrub was dominated by bramble (*Rubus fruticosus agg.*).

4.2.8.2 Common dog wood, herb robert (*Geranium robertianum*), ribwort plantain and perennial ryegrass were also occasionally occurring. Rhododendron (*Rhododendron ponticum*) and montbretia (*Crocsmia aurea x pottsii*) were locally abundant along the scrub on the western border. Rhododendron and montbretia are also no-native invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.2.8.3 Bramble scrub is automatically allocated a condition score of **N/A** within the metric.

4.2.9 11-12) Individual Trees

4.2.9.1 During the 2024 site survey, contractors confirmed that trees had been cleared from the site. Therefore, the AIA data from 2022 was used to assess the trees prior to clearance (Urban Green, 2023).

4.2.9.2 A total of 4 individual trees were present onsite. Trees which form linear features have been detailed in Section 4.3.

4.2.9.3 Trees with the same condition score have been grouped within the BNG metric.

Table 3 – Summary of Individual Trees

Tree Location	Species	No. of Trees	Size in Metric	Condition Criteria*						Overall Condition	Comments
				A	B	C	D	E	F		
T1	Wild cherry (<i>Prunus avium</i>)	1	Small	Pass	Pass	Fail	Fail	Fail	Fail	Poor	
T3	Hawthorn (<i>Crataegus monogyna</i>)	1	Small	Pass	Pass	Fail	Fail	Fail	Pass	Moderate	
T6	Hornbeam (<i>Carpinus betulus</i>)	1	Medium	Pass	Pass	Fail	Fail	Fail	Pass	Moderate	
T7	Hornbeam (<i>Carpinus betulus</i>)	1	Medium	Pass	Pass	Fail	Fail	Fail	Pass	Moderate	

Condition Criteria A = The tree is a native species (or more than 70% within the block are native species); Condition Criteria B = 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); Condition Criteria C = The tree is mature or veteran (or more than 50% within the block are mature or veteran); Condition Criteria D = There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height; Condition Criteria E = Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark; Condition Criteria F = More than 20% of the tree canopy area is oversailing vegetation beneath.

Condition Assessment Key: Pass = Fail =

4.3 Linear Hedgerow Habitats

4.3.1 1) Non-Native and Ornamental Hedgerow (h2b)

- 4.3.1.1 A line of semi-managed hedgerow lines within the southeastern corner of the site with a neighbouring wire fence. Species within this area include Japanese laurel (*Aucuba japonica*), honeysuckle (*Lonicera periclymenum*), Himalayan cotoneaster (*Cotoneaster simonsii*) and golden cup St John's wort (*Hypericum patulum*).
- 4.3.1.2 A young ornamental cherry tree (*Prunus avium*) (T1) is located on the eastern end of the hedgerow.
- 4.3.1.3 Non-native and ornamental hedgerow is automatically allocated a condition score of **poor** within the metric.

4.3.2 2) Line of Trees (w1g 33)

- 4.3.2.1 A line of trees was formerly present within the area of bramble scrub, adjacent to the northern boundary. Tree species within the habitat included hornbeam, whitebeam (*Sorbus aria*), and beech (*Fagus sylvatica*).
- 4.3.2.2 The line of trees has been assessed as **moderate** condition.

5 Lost Habitats

5.1 Area Habitats

5.1.1.1 All existing habitats have either already been cleared or will be lost to accommodate for the new development.

5.1.1.2 Table 4 shows a summary of the area habitats and their corresponding area (ha) and unit score to be lost on site.

Table 4 – Area habitats to be lost on site

Habitat Parcel Reference	Total Area (ha)	Total Units	Area Lost (ha)	Units Lost	Proposed Mitigation
1) Developed land; sealed surface	0.002	0	0.002	0	No mitigation required.
2) Introduced shrub	0.003	0.01	0.003	0.01	New areas of low distinctiveness habitat will be created onsite.
3) Introduced shrub	0.001	0	0.001	0	
4) Developed land; sealed surface	0.059	0	0.059	0	No mitigation required.
5) Developed land; sealed surface	0.656	0	0.656	0	
6) Sparsely vegetated land – ruderal/ ephemeral	0.276	1.21	0.276	1.21	New areas of low distinctiveness habitat will be created onsite.
7) Developed land; sealed surface	0.003	0	0.003	0	No mitigation required.
8) Developed land; sealed surface	0.012	0	0.012	0	
9) Introduced shrub	0.007	0.02	0.007	0.02	New areas of low distinctiveness habitat will be created onsite.
10) Bramble scrub	0.025	0.11	0.025	0.11	New areas of scrub will be planted onsite.
11) Urban tree (Poor)	0.004	0.02	0.004	0.02	New trees will be planted onsite to mitigate for those lost.
12) Urban tree (Moderate)	0.077	0.68	0.077	0.68	
Total	1.125	2.05	1.125	2.05	

5.2 Linear Hedgerow Habitats

5.2.1.1 The existing hedgerow habitats will be lost to accommodate for the new development.

5.2.1.2 Table 5 shows a summary of the linear hedgerow habitats and their corresponding length (km) and unit score to be lost on site.

Table 5 – Linear hedgerow habitats to be lost on site

Habitat Parcel Reference	Total Length (km)	Total Units	Length Lost (km)	Units Lost	Proposed Mitigation
H1) Non-native and ornamental hedgerow	0.018	0.02	0.018	0.02	New, native and ornamental hedgerows will be created onsite to mitigate for the loss of these hedgerow habitats
2) Line of Trees	0.034	0.15	0.034	0.15	
Total	0.05	0.17	0.05	0.17	

6 Pre-Development Habitat Summary

6.1.1.1 Using the Biodiversity Metric 3.1, 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.

6.1.1.2 The results of these calculations are presented in the Table 6.

Table 6 - Pre-Development Unit Summary

	On-site baseline	Retained	Lost	Enhanced
Area Habitat Units	2.05	0.00	2.05	0.00
Linear Hedgerow Units	0.17	0.00	0.17	0.00

7 Post-Development Habitat Assessment

- 7.1.1.1 Proposed habitats were assessed following the methodology outlined in Section 3 and information within the proposed landscape designs.
- 7.1.1.2 Habitat descriptions are provided below, and the results of the condition assessment are provided in the accompanying metric.
- 7.1.1.3 Habitats with comparable structure and condition assessment results have been grouped for simplicity. The habitats have been given reference numbers for clarity regarding in-text and the metric calculation illustrates the numerical data.

7.2 Area Habitats

7.2.1 1) Individual Trees – Urban Trees

- 7.2.1.1 A total of 47 non-native trees will be planted on site. Proposed species include ornamental field maple (*Acer campestre* ‘Streetwise’), black pine (*Pinus nigra*) and Himalayan birch (*Betula utilis Jacquemontii*).
- 7.2.1.2 This habitat is expected to achieve **moderate** condition.

7.2.2 2) Individual Trees – Urban Trees

- 7.2.2.1 All other trees (no. 22) will be native, including species such as alder (*Alnus glutinosa*) and bird cherry (*Prunus padus*).
- 7.2.2.2 The proposed silver birch (*Betula pendula*) and wild cherry (*Prunus avium*) trees will be planted as extra heavy standard trees. Due to planting size, expected final size and growth rate, these trees have been classified as medium sized in the metric. All other trees are considered small.
- 7.2.2.3 This habitat is expected to achieve **moderate** condition.

7.2.3 3) Grassland – Modified Grassland

- 7.2.3.1 New areas of amenity grassland will be created using a species rich grassland turf. Areas of grassland will also contain areas of spring bulbs.
- 7.2.3.2 The grassland is expected to achieve **good** condition.

7.2.4 4 & 5) Urban – Introduced Shrub

- 7.2.4.1 New areas of ornamental shrub will be planted around the site to provide amenity value (planting mixes PTO3 and PTO5). Species within the mixes include Christmas rose (*Helleborus niger*), spurge-laurel (*Daphne laureola*) and round-headed garlic (*Allium sphaerocephalon*).
- 7.2.4.2 Introduced shrub is automatically allocated a condition score of **N/A** within the metric.

7.2.5 6) Urban – Rain Garden

- 7.2.5.1 New rain gardens will be created using plants suitable for dry and wet conditions. Species within the mix include false fox sedge (*Carex otrubae*), tufted hairgrass (*Deschampsia cespitosa*), and bistort (*Bistorta officinalis*).

7.2.5.2 This habitat is expected to achieve **good** condition.

7.2.6 7) Urban – Developed Land; Sealed Surface

7.2.6.1 The remaining areas on the site will comprise hardstanding, functioning as access routes, roads, a football multi-purpose all weather pitch, and parking areas, and four new buildings, including the new Hub facility.

7.2.6.2 Both hardstanding and buildings are classified as developed land; sealed surface within the metric, which is automatically allocated a condition score of **N/A**.

7.3 Linear Hedgerow Habitats

7.3.1 1) Native Hedgerow

7.3.1.1 Two lengths of hornbeam (*Carpinus betulus*) hedgerow will be planted on site – within the southern parcel and adjacent to the sport's pitch. The hedgerows are to be maintained at 0.9m high.

7.3.1.2 This habitat is expected to achieve **moderate** condition.

7.3.2 2) Non-Native and Ornamental Hedgerow

7.3.2.1 An ornamental hedgerow is proposed along the northern boundary, containing species such as New Zealand holly (*Olearia macrodonta*), New Zealand broadleaf (*Griselinia littoralis*) and silverbush (*Convolvulus cneorum*).

7.3.2.2 Non-native and ornamental hedgerows are automatically allocated a condition score of **poor** within the metric.

8 Post-Development Habitat Summary

8.1.1.1 Using the Biodiversity Metric 3.1, the habitat units of the retained, lost, enhanced and created habitats were calculated.

8.1.1.2 The results of these calculations are presented in the Table 7.

Table 7 – Post Development Biodiversity Net Gain Calculation

	On-site baseline	Habitat Unit Change				On-site post development	Net change in Biodiversity	
		Retained	Lost	Enhanced	Created		Habitat units	%
Area Habitat Units	2.05	0.00	2.05	0.00	2.57	2.57	+0.53	+25.71
Linear Hedgerow Units	0.17	0.00	0.17	0.00	0.20	0.20	+0.03	+17.04

8.1.1.3 The current landscape proposals for the development of the site produce a 0.53 unit (25.71%) net gain in area habitats and a 0.03 unit (17.04%) net gain in linear hedgerow habitats.

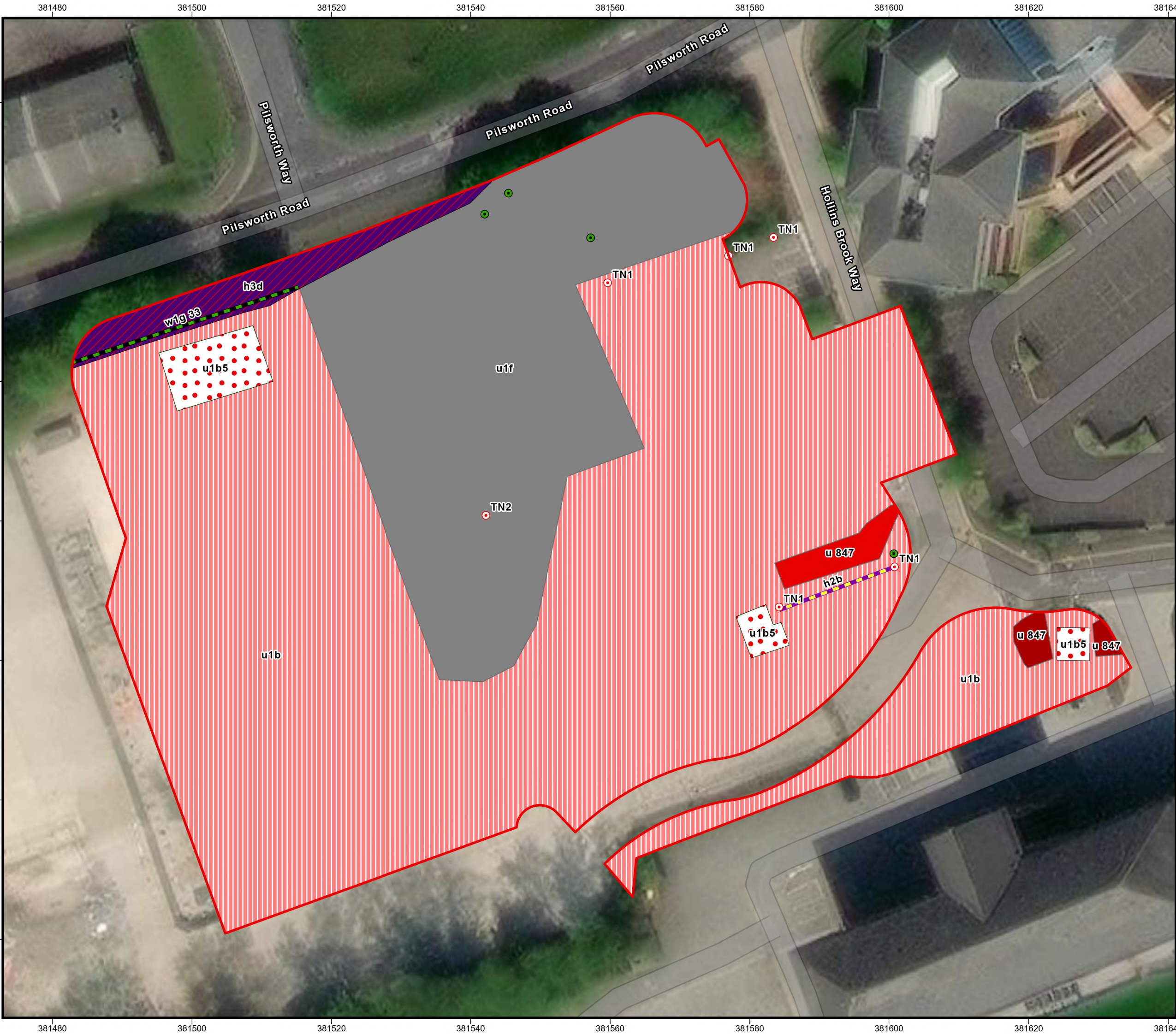
8.1.1.4 The trading rules have not been satisfied due to insufficient compensation for the loss of bramble scrub habitat.

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APPENDIX 1 – BASELINE HABITAT MAP

U R B A N
G R E E N



U R B A N
G R E E N

Legend

- Red Line Boundary
- Non-native and ornamental hedgerow
- Line of trees
- Building
- Developed land sealed surface
- Urban
- Sparsley vegetated urban land
- Bramble scrub
- Urban Tree
- Invasive species
TN1 - Cotoneaster
TN2 - Himalayan balsam



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Client:		JD Sport	
Project:		JD Campus	
Title:		UKHAB Habitat Map	
Issue: 01		Figure: 00	
Drawn: CL	Checked: SB	Approved: SB	
Project: UG1466	Scale @ A3: 1:500	Date: 05/09/2024	
Dwg No: UG_1466_ECO_HM_01		Revision: 01	

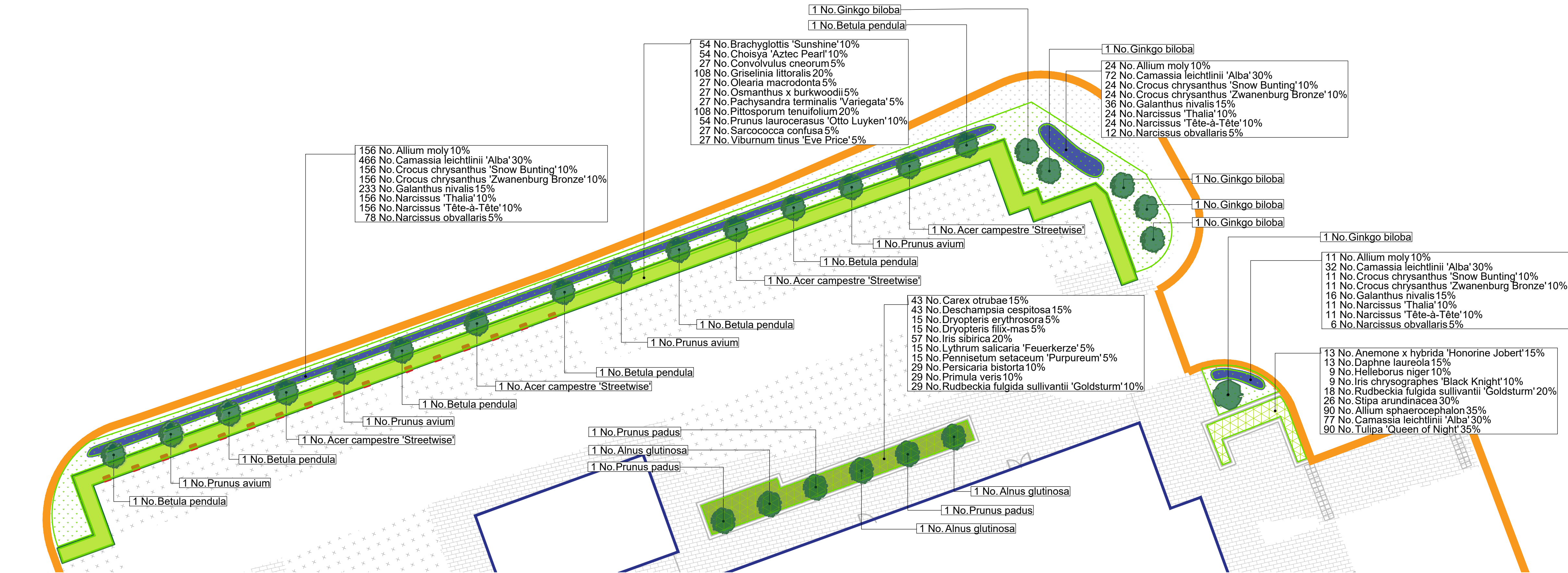
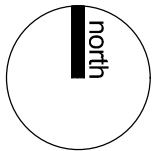
APPENDIX 2 - PRIMARY AND SECONDARY CODES

Primary Code	Definition
h2b	Non-native and ornamental hedgerow
h3d	Bramble scrub
u	Urban
u1b	Developed land; sealed surface
u1b5	Building
u1f	Sparsely vegetated land
w1g	Other woodland; broadleaved
Secondary code	Definition
33	Line of trees
847	Introduced shrub

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, concentric shapes, suggesting a landscape with hills and valleys.

APPENDIX 3 – PROPOSED LANDSCAPE PLAN

U R B A N
G R E E N



Partial Planting Schedule (Sheet 1 of 2)

Trees						
Number	Species	Specification	Height	Girth	Pot Size	Density
4	Acer campestre 'Streetwise'	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem min. 200cm	400-450cm	14-16cm		Counted
3	Alnus glutinosa	Multi-Stemmed: Bushy: 3 Stems min.: 4x: RB	450-500cm			Counted
7	Betula pendula	Extra Heavy Standard: 3x: RB: Clear Stem min. 200cm	450-500cm	18-20cm		Counted
6	Ginkgo biloba	Extra Heavy Standard: 4x: RB: Clear Stem min. 200cm	400-600cm	18-20cm		Counted
4	Prunus avium	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	400-450cm	14-16cm		Counted
3	Prunus padus	Heavy Standard: 5 brks: C: Clear Stem 175-200cm	350-425cm	12-14cm	45-85L	Counted

Shrubs				
Number	Species	Specification	Mix Species Density	Pot Size
54	Brachyglottis 'Sunshine'	Branched: 8 brks: C	4/m ²	10L
54	Choisya 'Aztec Pearl'	Bushy: 6 brks: C	4/m ²	5L
27	Convolvulus cneorum	Bushy: 4 brks: C	4/m ²	2L
13	Daphne laureola	Branched: 2 brks: C		2L
108	Griselinia littoralis	Bushy: 3 brks: C	4/m ²	2L
27	Olearia macrodonta	Bushy: 2 brks: C	4/m ²	2L
27	Osmanthus x burkwoodii	Bushy: 7 brks: C	4/m ²	10L
27	Pachysandra terminalis 'Variegata'	Several Shoots: 6 brks: C	4/m ²	2L
108	Pittosporum tenuifolium	Branched: 3 brks: C	4/m ²	2L
54	Prunus laurocerasus 'Otto Luyken'	Bushy: 5 brks: C	4/m ²	5-7.5L
27	Sarcococca confusa	Bushy: 6 brks: C	4/m ²	5L
27	Viburnum tinus 'Eve Price'	Bushy: 5 brks: C	4/m ²	5L

Herbaceous					
Number	Species	Specification	Density	Pot Size	
13	Anemone x hybrida 'Honorine Jobert'	Full Pot: C	5/m ²	2L	
9	Helleborus niger	Full Pot: C	5/m ²	2L	
9	Iris chrysographes 'Black Knight'	Full Pot: C	5/m ²	2L	
57	Iris sibirica	Full Pot: C	6/m ²	0.5L	
15	Lythrum salicaria 'Feuerkerze'	Full Pot: C	6/m ²	0.5L	
29	Rudbeckia fulgida sullivantii 'Goldsturm'	Full Pot: C	6/m ²	2L	
18	Rudbeckia fulgida sullivantii 'Goldsturm'	Full Pot: C	5/m ²	2L	

Wildflowers				
Number	Species	Specification	Density	Pot Size
29	Persicaria bistorta	Full Pot. Sept to April planting: British Native-origin: C	6/m ²	2L
29	Primula veris	Full Pot: C	6/m ²	2L

Bulbs			
Number	Species	Specification	Density
191	Allium moly	Grade 5/6	25/m ²
90	Allium sphaerocephalon	Grade 5/+	15/m ²
570	Camassia leichtlinii 'Alba'	Grade 14/+	25/m ²
77	Camassia leichtlinii 'Alba'	Grade 12/14	15/m ²
191	Crocus chrysanthus 'Snow Bunting'	Grade 5/7	25/m ²
191	Crocus chrysanthus 'Zwanenburg Bronze'	Grade 5/7	25/m ²
285	Galanthus nivalis	Grade 5/6	25/m ²
191	Narcissus 'Thalia'	Grade 10/12	25/m ²
191	Narcissus 'Tête-à-Tête'	Grade 10/12	25/m ²
96	Narcissus obvallaris	Grade 8/10	25/m ²
90	Tulipa 'Queen of Night'	Grade 11/12	15/m ²

Ferns				
Number	Species	Specification	Density	Pot Size
15	Dryopteris erythrosora	Full Pot: C	6/m ²	1.5-2L
15	Dryopteris filix-mas	Full Pot: C	6/m ²	1.5-2L

Marginal / Aquatics				
Number	Abbreviation	Species	Specification	Density
43	C ot	Carex otrubae	Full Pot: Sept to April planting: British Native-origin: C	6/m ²
				2L

Grasses				
Number	Species	Specification	Density	Pot Size
43	Deschampsia cespitosa	Full Pot: C	6/m ²	2L
15	Pennisetum setaceum 'Purpureum'	Full Pot: C	6/m ²	2L
26	Stipa arundinacea	Full Pot: C	5/m ²	2L

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P02	LM		Updated planning issue
P01	LM		Original planning issue

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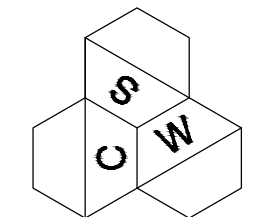
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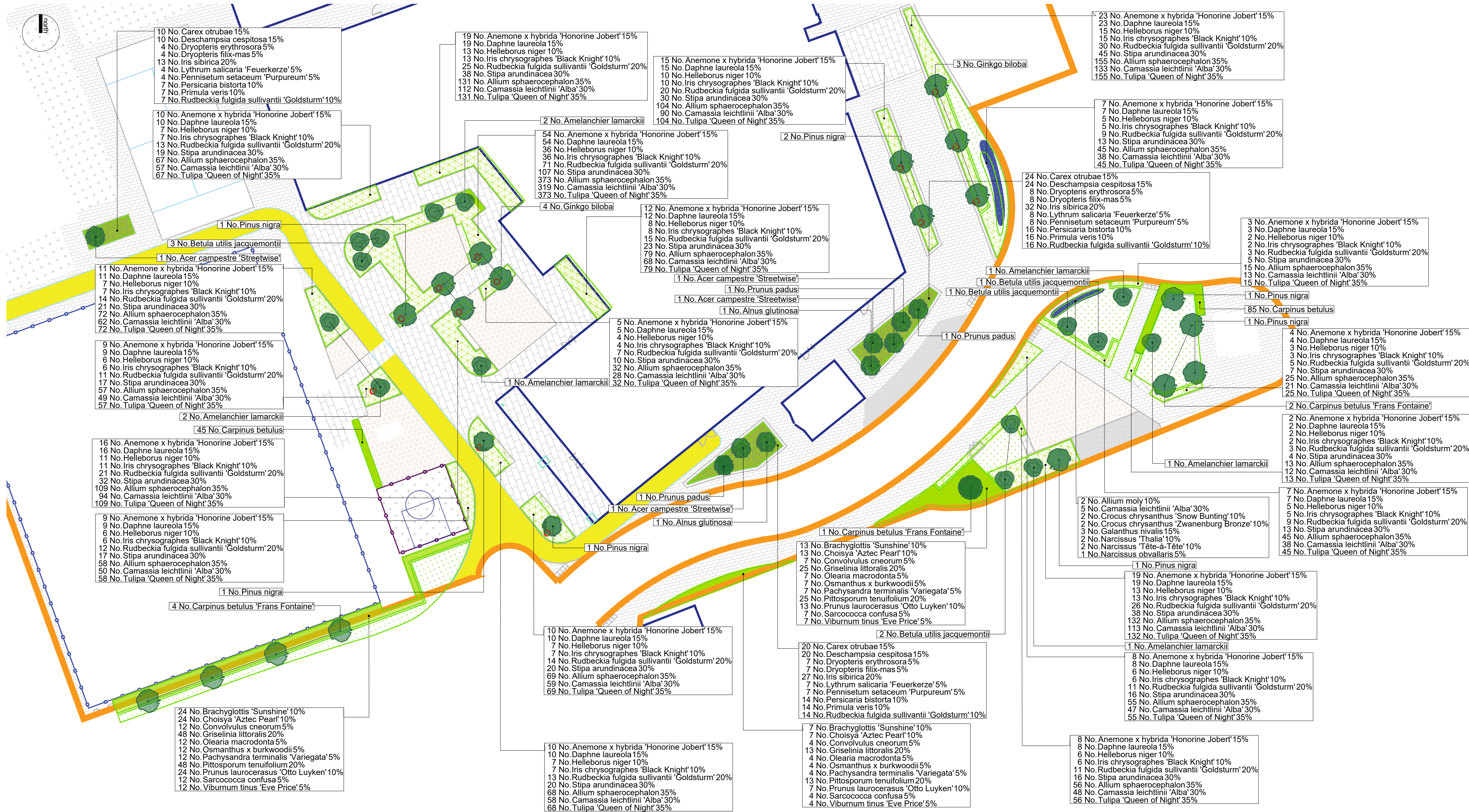
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DRAWING NUMBER
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DRAWING SCALE
1:200 @ A1

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JD Sports

PROJECT NAME
JD Campus Phase 2

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Partial Planting Schedule (Sheet 2 of 2)

Trees						
Number	Species	Specification	Height	Girth	Pot Size	Density
4	Acer campestre 'Streetwise'	Heavy Standard: 5 brks: C: Clear Stem min. 200cm	350-425cm	12-14cm	45-85L	Counted
2	Alnus glutinosa	Multi-Stemmed: Bushy: 3 Stems min.: 4x: RB	450-500cm			Counted
6	Amelanchier lamarckii	Multi-Stemmed: Bushy: 3 Stems min.: 3x: RB	300-350cm			Counted
2	Amelanchier lamarckii	Multi-Stemmed: Bushy: 3 Stems min.: 3x: RB	300-350cm			No.
4	Betula utilis jacquemontii	Multi-Stemmed: Bushy: 2 Stems: 3x: RB	300-350cm			Counted
3	Betula utilis jacquemontii	Multi-Stemmed: Bushy: 2 Stems: 3x: RB	300-350cm			No.
130	Carpinus betulus	1+1: Transplant - seed raised: Branched: 3 brks: C	60-80cm		2L	0.3Ctr Double Staggered at 0.3m offset
7	Carpinus betulus 'Frans Fontaine'	Semi-Mature: 3x: RB: Clear Stem min. 200cm	500-550cm	20-25cm		Counted
7	Ginkgo biloba	Extra Heavy Standard: 4x: RB: Clear Stem min. 200cm	400-600cm	18-20cm		Counted
8	Pinus nigra	Leader with Laterals: Feathered to base: C	250-300cm		70-120L	Counted
3	Prunus padus	Heavy Standard: 5 brks: C: Clear Stem 175-200cm	350-425cm	12-14cm	45-85L	Counted

Shrubs			
Number	Species	Specification	Mix Species Density/Pot Size
44	Brachyglottis 'Sunshine'	Branched: 8 brks: C	4/m ² 10L
4	Choisya 'Aztec Pearl'	Bushy: 6 brks: C	4/m ² 5L
23	Convulvulus cneorum	Bushy: 4 brks: C	4/m ² 2L
261	Daphne laureola	Branched: 2 brks: C	2L
86	Griselinia littoralis	Bushy: 3 brks: C	4/m ² 2L
23	Olearia macrodonta	Bushy: 2 brks: C	4/m ² 2L
23	Osmanthus x burkwoodii	Bushy: 7 brks: C	4/m ² 10L
23	Pachysandra terminalis 'Variegata'	Several Shoots: 6 brks: C	4/m ² 2L
86	Pittosporum tenuifolium	Branched: 3 brks: C	4/m ² 2L
44	Prunus laurocerasus 'Otto Luyken'	Bushy: 5 brks: C	4/m ² 5-7.5L
23	Sarcococca confusa	Bushy: 5 brks: C	4/m ² 5L

23	Sarcococca confusa	Bushy: 6 brks: C	4/m ²	5L
23	Viburnum tinus 'Eve Price'	Bushy: 5 brks: C	4/m ²	5L

Herbaceous				
Number	Species	Specification	Density	Pot Size
261	Anemone x hybrida 'Honorine Jobert'	Full Pot: C	5/m ²	2L
179	Helleborus niger	Full Pot: C	5/m ²	2L
179	Iris chrysographes 'Black Knight'	Full Pot: C	5/m ²	2L
72	Iris sibirica	Full Pot: C	6/m ²	0.5L
19	Lythrum salicaria 'Feuerkerze'	Full Pot: C	6/m ²	0.5L
37	Rudbeckia fulgida sullivantii 'Goldsturm'	Full Pot: C	6/m ²	2L
343	Rudbeckia fulgida sullivantii 'Goldsturm'	Full Pot: C	5/m ²	2L

Wildflowers			
Number	Species	Specification	Density/Pot Size
37	Persicaria bistorta	Full Pot: Sept to April planting: British Native-origin: C	6/m ² 2L
37	Primula veris	Full Pot: C	6/m ² 2L

Bulbs		
Number	Species	Specification/Density
2	Allium moly	Grade 5/6 4/m ²
1760	Allium sphaerocephalon	Grade 5/+ 15/m ²
1509	Camassia leichtlinii 'Alba'	Grade 12/14 15/m ²
5	Camassia leichtlinii 'Alba'	Grade 14/+ 4/m ²
2	Crocus chrysanthus 'Snow Bunting'	Grade 5/7 4/m ²
2	Crocus chrysanthus 'Zwanenburg Bronze'	Grade 5/7 4/m ²
3	Galanthus nivalis	Grade 5/6 4/m ²
2	Narcissus 'Thalia'	Grade 10/12 4/m ²
2	Narcissus 'Tête-à-Tête'	Grade 10/12 4/m ²
1	Narcissus obvallaris	Grade 8/10 4/m ²

1	Narcissus obvallaris	Grade 8/10 4/m ²
1760	Tulipa 'Queen of Night'	Grade 11/12 15/m ²

Ferns				
Number	Species	Specification	Density	Pot Size
19	Dryopteris erythrosora	Full Pot: C	6/m ²	1.5-2L
19	Dryopteris filix-mas	Full Pot: C	6/m ²	1.5-2L

Marginal / Aquatics				
Number	Abbreviation	Species	Specification	Density/Pot Size
54	C ot	Carex otrubae	Full Pot: Sept to April planting: British Native-origin: C	6/m ² 2L

Grasses			
Number	Species	Specification	Density/Pot Size
54	Deschampsia cespitosa	Full Pot: C	6/m ² 2L
19	Pennisetum setaceum 'Purpureum'	Full Pot: C	6/m ² 2L
511	Stipa arundinacea	Full Pot: C	5/m ² 2L

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14.11.2024	LM	P03	Updated planning issue
14.09.2024	LM	P02	Updated planning issue
11.09.2024	LM	P01	Planning issue

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