

HABITAT MANAGEMENT AND MONITORING PLAN

JANUARY 2026

Knowsley Industrial Park
Woodward Road
Merseyside
L33 7UW

QUALITY MANAGEMENT

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Project Details

Project Type:	Commercial
Project:	Knowsley Industrial Park
Location:	Woodward Road, Merseyside, L33 7UW
Author Organisation:	Urban Green
Developer:	Applied Nutrition
Developer Address:	Applied Nutrition plc, Trio, Acornfield Road, Knowsley, Liverpool, L33 7UG
Responsible Person:	TBC
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Are any Irreplaceable Habitats presents onsite?	Yes: ☐ No: ☒
Phasing Strategy:	No phasing proposed

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1 Project Background

1.1 Roles and responsibilities

1.1.1.1 NOTE: This document is currently in draft format. The following section is to be completed by the relevant parties once the document becomes live.

Ecologist or Other Professional Responsible for HMMP				
Name or Initials		Olivia Buxton		
Organisation		Urban Green		
Responsibility	Start Date:	TBC	End Date:	TBC
The author of the report is Olivia Buxton, Assistant Biodiversity Net Gain Consultant, MSc. The person who will be responsible for the implementation of the HMMP and the continued monitoring is still TBC.				
Statement of Competency				
Olivia has experience providing consulting services in Biodiversity Net Gain for a range of development schemes across the UK, including residential and commercial schemes. Olivia is a technically competent and experienced person, as defined in British Standard BS8683 - Suitably qualified person – definition in BS8683:2020.				

Landowner or Land Manager			
Name or Initials		TBC	
Organisation		Applied Nutrition	
Responsibility	Start Date:	TBC	End Date: TBC
Key Responsibilities: • Implementation: Ensure that all habitat management and mitigation measures outlined in the HMMP are fully implemented as specified. • Ongoing Management: Commit to the long-term maintenance of habitats, including activities such as vegetation control, habitat enhancement, species monitoring and prevention of harmful activities. • Monitoring and Reporting: Facilitate or undertake regular ecological monitoring as detailed in the HMMP and maintain accurate records of management actions and outcomes. • Compliance: Ensure adherence to planning conditions, legal requirements and ecological best practices throughout the life of the HMMP. • Engagement with Specialists: Where necessary, appoint or liaise with qualified ecologists, habitat managers, or conservation specialists to assist with the technical aspects of habitat management and monitoring. • Access and Cooperation: Provide access to the site for regulators, monitoring bodies and ecological consultants for inspections, surveys and audits related to the HMMP.			
Statement of Competency			
Applied Nutrition, as the landowner of land at Knowsley Industrial Park hereby confirm that we understand and accept the responsibilities associated with the implementation, ongoing management and maintenance of the habitat as detailed in the Habitat Management and Mitigation Plan (HMMP) for this site. We acknowledge that the success of this HMMP relies on the appropriate management and protection of habitats over the long term to ensure the intended biodiversity outcomes are achieved and confirm the following: • We have read and understood the contents of the HMMP, including the management objectives, required actions, performance criteria and monitoring schedules. • We have, or will obtain, access to the appropriate resources, knowledge and/or professional ecological support necessary to carry out the required habitat management and maintenance activities. • We are committed to ensuring the implementation of the habitat management measures, including but not limited to vegetation management, species protection, habitat restoration, monitoring and any corrective actions required. • We understand the legal and planning obligations associated with the HMMP and accept our role in ensuring these obligations are fulfilled.			

- We will ensure that all necessary records of management actions and monitoring results are maintained and made available to the relevant regulatory authorities upon request.
- We are aware that failure to comply with the HMMP may result in enforcement action by the relevant planning or conservation authorities.

Management Organisation(s) Responsible for Implementing the HMMP

Name or Initials

TBC

Add N/A if works being completed by the landowner or land manager

Organisation

TBC

Responsibility

Start Date:

TBC

End Date:

TBC

Key Responsibilities:

- Plan Delivery: Undertake the practical implementation of all habitat management, enhancement and mitigation measures as specified in the HMMP.
- Technical Expertise: Apply ecological best practices and technical skills to manage habitats, protect species and restore ecological function in accordance with the plan's requirements.
- Monitoring: Carry out ecological monitoring and habitat condition assessments as required, ensuring that performance targets and success criteria are being met.
- Reporting: Maintain detailed records of all management activities and monitoring results and provide timely reports to all relevant stakeholders as required.
- Compliance: Ensure all works comply with planning conditions, legal obligations (such as protected species legislation) and health and safety regulations.
- Adaptive Management: Where monitoring indicates that adjustments are needed, the company should propose and implement appropriate corrective measures to meet the HMMP's objectives.
- Stakeholder Coordination: Work closely with the ecological consultants and regulatory bodies to ensure smooth delivery and ongoing management of the HMMP.

Statement of Competency

Upon confirmation the delegated person will confirm that they have the necessary experience and resources to competently implement the Habitat Management and Mitigation Plan (HMMP) for land at Knowsley Industrial Park.

As the responsible company, we hereby affirm that:

- We possess experience in the delivery of ecological management, habitat restoration and mitigation schemes in line with national and local planning policies and environmental legislation.

- Our in-house and external team includes appropriately qualified personnel such as experienced ecologists, habitat management specialists, and skilled site operatives, all of who are competent in executing the specific habitat management tasks required under this HMMP.
- We are fully familiar with the ecological sensitivities, target habitats, and protected species relevant to this HMMP and understand the ecological objectives and performance standards required for successful delivery.
- We and our contractors have the necessary equipment, methodologies and procedures in place to undertake habitat management and monitoring activities in accordance with best practice guidelines and health and safety regulations.
- We are committed to ensuring that all works are carried out to the highest environmental standards, with minimal disturbance to sensitive habitats and species.
- We will maintain clear records of management actions, monitoring outcomes and any adaptive management undertaken.
- We acknowledge our responsibility to ensure legal and planning compliance throughout the duration of our involvement in the HMMP.

LPA or Responsible Body for Reviewing HMMP

Name or Initials	TBC		
Organisation	TBC		
Responsibility	Start Date:	TBC	End Date: TBC
A suitably qualified representative from the Local planning Authority will be responsible for reviewing data collected during the 30-year monitoring period to ensure that the scheme is achieving the forecasted net gain and also will ensure that the HMMP is being implemented during this period.			

1.2 Summary of Management Plan

1.2.1 Timescales for Actions

- 1.2.1.1 This management plan will cover a period of 30 years once the development onsite has been completed.

1.2.2 Monitoring Requirements

- 1.2.2.1 Monitoring must be carried out by a suitably qualified ecologist on Years 1, 2, 3, 4, 5, 10, 15, 20, 25 and 30.

1.2.3 Funding

- 1.2.3.1 The development and ongoing management will be funded by Applied Nutrition.

1.2.4 Legal Agreement

- 1.2.4.1 The onsite and offsite significant enhancements for BNG will be legally secured (e.g., via a Section 106, or similar) once planning permission has been granted.

1.3 Scope

- 1.3.1.1 Urban Green has been instructed by Applied Nutrition to complete a Habitat Management and Monitoring Plan (HMMP) for the land at Knowsley Industrial Park in Liverpool (hereafter referred to as ‘the site’).
- 1.3.1.2 The site is located on the east of Knowsley Industrial Park and is bordered on all elevations by industrial development. It is currently a derelict brownfield industrial site. The boundary for the site can be found in Appendix 1.
- 1.3.1.3 The proposals include the construction of a 75,000 sqft warehouse within the site boundary. Vehicular access for staff and visitors is provided via the existing Northeast gate, with direct access to the main entrance / office block. Parking for 70 is provided inc. 7 DDA, 7 EV & 4 Car Share.
- 1.3.1.4 There is no phasing strategy proposed.

1.4 Site Context

- 1.4.1.1 The site is located at National Grid Reference SJ 43708 993622 and comprises a total area of approximately 1.45ha (Appendix 1).
- 1.4.1.2 The site is located to the east of Kirkby and forms part of Knowsley Industrial Park. Historically the site has formed part of the Syntor Chemicals Plant and was subject to the storage of hazardous materials, undergoing remediation in 2015. On all aspects, the site is bounded by operational industrial development, which experiences a moderate level of vehicle and foot traffic. The site is isolated from the wider rural landscape which lies to the north and east of the site, by a network of main roads, urban development, and lack of interspersed natural habitats. Several water bodies are present within the wider landscape, namely Simonswood Brook and series of ponds, the closest of which is located within 440m of the site (see Appendix 2).
- 1.4.1.3 The site was comprised predominantly of developed land, alongside a building and sparsely vegetated urban land. Around the peripheries of the site there were several blocks of modified grassland and mixed scrub.

1.5 Purpose of Report

- 1.5.1.1 The purpose of this management plan is to provide a schedule for the management of habitats on site for a 30-year period, ensure that existing and proposed habitats are suitably maintained and ensure good establishment and continued improvement of habitat condition.

2 Baseline Environmental Data

2.1 Desk Study

2.1.1.1 A desk study for relevant environmental data was completed for the site and has been summarised in Table 1.

Table 1 – Desk Study Sources of Information

Environmental Information	Data Source	Results
Local Planning Authority	Local Planning Authorities (April 2024) Boundaries UL - https://geoportal.statistics.gov.uk/datasets/992de91fo65148e786870aec2359d427/explore	The site is within the Knowsley Metropolitan Borough Council Local Planning Authority.
National Character Area	National Character Area Profiles – https://nationalcharacterareas.co.uk/	The site falls within National Character Area Merseyside Conurbation.
Agricultural Land Status	Natural England (https://publications.naturalengland.org.uk/category/5954148537204736)	According to Natural England's Agricultural Land Classification map for the North West region, the site is currently classified as land predominantly in urban use.
Soils and Substrates	Soilscapes Viewer, LandIS (https://www.landis.org.uk/soilscapes/)	The soil on site is likely to be naturally wet, very acidic, sandy and loamy soil, with a sandy and loamy texture and very low fertility. Due to the historic use of the site as part of the Syntor Chemicals Plant, which was subject to the storage of hazardous materials and underwent remediation in 2015, a full soil analysis of the site is mostly likely necessary.
Flood Risk Information	Flood Map for Planning (https://flood-map-for-planning.service.gov.uk/)	The majority of the site lies within Flood Zone 2. Therefore, it has a medium probability of flooding from rivers or the sea. However, a small section of the site boundary in the northeastern corner is within Flood Zone 3. Therefore, it has a high probability of flooding from rivers or the sea.
Landscape Character and Designations	MAGIC/PEA	There are no sites of national importance within 5km of the site, and one statutory site within 2km of the site, Acornfield Plantation Local Nature Reserve. There are also three non-statutory designated sites within 1km radius of the site. These are Northwood Forest Hills Local Wildlife Site (LWS), Charley Wood LWS and Kirkby Brook, Northwood LWS. It is assessed that the proposed development will not adversely impact designated sites.

Environmental Information	Data Source	Results
Public Access	OS Maps	The land is privately owned, with no public access routes.
Climate Information	Met Office https://www.metoffice.gov.uk/research/climate/maps-and-data/location-specific-long-term-averages/gctb66ydw	Weather station: Crosby No. of days rainfall: 146.93 Average annual rainfall (mm): 824.32 Hottest month: July (19.99°C) Coldest month: February (2.74°C)
Contaminated Land	Biodiversity Net Gain Design Stage Assessment	Historically the site has formed part of the Syntor Chemicals Plant and was subject to the storage of hazardous materials, undergoing remediation in 2015. There's no heavy excavation works proposed and so any contaminated land is unlikely to be disturbed if still present.
Hydrology and Drainage	British Geological Survey https://mapapps2.bgs.ac.uk/geoindex/home.html?layer=BGSHydroMap&_ga=2.127165192.462924524.1715347671-664810172.1715347671	Based on the Hydrogeology 1:625,000 scale the site has been identified as having Triassic rocks (undifferentiated) with a principal sandstone aquifer up to 600 m thick and yielding up to 125 L/s. Quality good but hard and becomes saline beneath confining Mercia Mudstone. The character has been described as having a highly productive aquifer.
Historic Land Use	Biodiversity Net Gain Design Stage Assessment	Historically the site has formed part of the Syntor Chemicals Plant and was subject to the storage of hazardous materials, undergoing remediation in 2015.
Historic Environment and Earth Heritage	Historic England https://historicengland.org.uk/listing/the-list/map-search?postcode=M14%204SY&clearresults=True	There were no listed buildings and sites located onsite or within 1km of the site.

2.2 Preliminary Ecological Appraisal Summary

- 2.2.1.1 A preliminary ecological appraisal (PEA) was conducted on the site on 4th June 2025 by Urban Green. This constituted a desk-based study and a field survey.
- 2.2.1.2 Key information obtained in the PEA is summarised in Table 2; full details can be found within the PEA (Urban Green, 2025a).

Table 2 – Summary of the PEA

Site Aspect	Summary
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Current Site Use and Adjacent Site Use	The site is located on the east of Knowsley Industrial Park and is bordered on all elevations by industrial development. It is currently a derelict brownfield industrial site. The wider northern and eastern landscape is rural but has poor ecological connectivity to the site.
Potential Impacts on Designated Sites	There are no sites of national importance within 5km of the site, and one statutory site within 2km of the site. There are also three non-statutory designated sites within 1km radius of the site. It is assessed that the proposed development will not adversely impact designated sites.
Habitats	The site was comprised predominantly of developed land, alongside a building and sparsely vegetated urban land. Around the peripheries of the site there were several blocks of modified grassland and mixed scrub. A total of 24 priority habitats are within 500m of the site, the closest located at 117m north-east. It is not anticipated that the proposed development will adversely impact priority habitats.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: • Nesting bird (TN1); • Foraging or commuting bat potential; and • Common amphibian commuting and foraging potential
Recommended Ecological Mitigation	To comply with wildlife legislation, good practice guidelines and policy, we recommend the following: • Development of a sympathetic lighting strategy for bats; and • Vegetation clearance should be completed outside of the core breeding bird season (March to August, inclusive).
Recommended Further Surveys and Reports	To comply with wildlife legislation, good practice guidelines and policy, we recommend the following: • Production of a precautionary working methods document covering nesting birds, bats, badger, common amphibians and detail the need of Ecological Clerk of Works (ECoW) during the construction phase of the development; • Production of a Construction and Environmental Management Plan (CEMP) detailing mitigation efforts for impacts to nearby habitats of value and Environmental Best Practice Guidelines. No further surveys are required for works to proceed.
Recommended Ecological Enhancements	In line with the ecological objectives of the NPPF (2024) the following ecological enhancements have been recommended: • Provision of bat and bird boxes; • Retention creation of existing habitat onsite used by nesting birds; • Soft landscaping designed to increase ecological connectivity; • Planting of species of local provenance within the soft landscaping plan; • Enhancement of drainage ditch and installation of amphibian gully pot ladders; • Management of (native and non-native) invasive plant species; • Hedgehog highways; and • Creation of refugia/hibernacula where feasible.

2.3 Biodiversity Net Gain Assessment

2.3.1.1 The Biodiversity Net Gain Assessment was completed on this site by Urban Green in October 2025 (Urban Green, 2025b).

2.3.2 Methodology

2.3.2.1 The Biodiversity Net Gain Assessment and Report follow the user guidance produced by Department for Environment, Food & Rural Affairs (2025a) and the good practice methodology as detailed within the *Biodiversity Net Gain: Good Practice Principles for Development* (Baker, et al., 2019).

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

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

2.3.3 Baseline Habitat Assessment

2.3.3.1 The habitats present onsite prior to development have been summarised in the table below.

2.3.3.2 Photos of all existing, pre-development habitats can be found within Appendix 3. Maps showing the pre-development habitats and definitions for primary and secondary codes can be found in Appendices 4 and 5.

Table 3 – Baseline Area Habitats

Habitat Type and Parcel Reference	Priority Habitat	Total Area (ha)	Condition	Total Units
1) Ruderal/ephemeral	No	0.31	Moderate	1.23
2) Mixed scrub	No	0.08	Moderate	0.67
3) Modified grassland	No	0.13	Moderate	0.54
4) Developed land; sealed surface	No	0.83	N/A	0.00
5) Developed land; sealed surface	No	0.10	N/A	0.00
Total	-	1.45	-	2.44

2.3.4 Post-Development Habitat Assessment

2.3.4.1 Post-development habitats are subject to the same condition assessments as baseline habitats, with the addition of temporal and difficulty multipliers within the Statutory Biodiversity Metric.

2.3.4.2 The proposed landscape plan was provided by FDA landscape, 2025 (Appendix 6) and has been used to identify all retained, lost, enhanced, and newly created habitats on-site.

2.3.4.3 The landscape layout has been converted into a post-development habitat map using UKHab classifications and symbology (Appendix 7), and the habitats proposed to be lost and retained are indicated in a habitat retention map (Appendix 8).

2.3.5 Post-Development Habitat Summary

Table 4 - 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	2.44	0.00	2.44	0.00	0.44	0.44	-2.00	-81.93

- 2.3.5.1 The current landscape proposals for the development of the site produce a 2.00 unit (-81.93%) net loss in biodiversity for area habitats. No linear hedgerow or watercourse habitats were present on site.
- 2.3.5.2 The trading rules were not satisfied by the landscape proposals as the loss of low distinctiveness sparsely vegetated land and medium distinctiveness mixed scrub has not been adequately mitigated for.
- 2.3.5.3 The development does not achieve the required 10% BNG onsite; therefore, off-site mitigation will be necessary to meet local and national planning requirements.
- 2.3.5.4 As the potential for biodiversity has been maximised onsite, an additional 2.24 units (of medium distinctiveness scrub habitat and low distinctiveness habitat) has been purchased through offsite mitigation to achieve a 10% net gain and satisfy the habitat trading rules.
- 2.3.5.5 Off-site units have been purchased from a Green Earth Developments Group, and the units have been successfully allocated to the development. Further information regarding this can be found on the Natural England Gain Site Register using the unique registration number: BNGREG-FWYBV-A5XPR.

3 Habitat Management

3.1 Management Responsibilities

- 3.1.1.1 The detailed maintenance requirements outlined in this section must be followed at all times. Any deviations from the management plan must be highlighted to the site owners or management company.
- 3.1.1.2 The organisation implementing this plan will be a management company with the necessary certificates of competence to implement landscape management operation on site.
- 3.1.1.3 The managing organisation will ensure that all site management complies with good practice standards and all relevant health and safety procedures.
- 3.1.1.4 The managing organisation will also ensure that measures outlined to avoid pollution incidents, comply with protected species and habitats legislation, and ensure overall environmental protection are enforced.
- 3.1.1.5 Any transference of responsibility of this plan should be undertaken with the appropriate appointment of a competent organisation capable of delivering the management detailed within the document.

3.2 Habitats Covered

- 3.2.1.1 This management plan covers all proposed habitats which provide significant onsite enhancements, as assessed within the Statutory Biodiversity Metric. These include:
 - habitats of medium or higher distinctiveness in the biodiversity metric;
 - habitats of low distinctiveness which create a large number of biodiversity units relative to the biodiversity value of the site before development;
 - habitat creation or enhancement where distinctiveness or condition is increased relative to that of the habitat before development;
 - areas of habitat creation or enhancement which are significant in area relative to the size of the development.
- 3.2.1.2 Habitats that do not provide significant on-site enhancements do not require detailed management regimes. However, many of these habitats still perform important functions and should receive some ecologically driven management.
- 3.2.1.3 Habitats that have not provided significant onsite enhancements, and basic management measures are summarised in Table 5.

Table 5 – Habitats that do not provide significant onsite enhancements

Habitat Type	Justification	Management Measures
Introduced Shrub	Introduced shrub contributes 0.07 units (15%) of the overall post-development unit value. However, is a low distinctiveness habitat and it is automatically allocated a condition score of N/A within the BNG metric.	• Pruning and cutting may be necessary, but should aim to maintain shape and vigour, promote flowering/fruitletting, and create variation and diversity in height and structure. • Avoid cutting all specimens across the plot in a single period, particularly where this is likely to remove all flower/fruit interest for wildlife. • Avoid herbicide use, instead prioritise organic mulches.
Artificial Unvegetated, Unsealed Surface	Artificial unvegetated, unsealed surface is a very low distinctiveness habitat and contributes no units to the overall post-development unit value of the site.	• Regularly monitor gravel areas, and even out or supplement where necessary • Replace any loose paving stones or uneven surfaces
Developed Land; Sealed Surface	Developed Land; Sealed Surface is a very low distinctiveness habitat and contributes no units to the overall post-development unit value of the site.	• Regularly monitor tarmacked areas and resurface/fill holes where necessary. • Replace any loose paving stones. • Clear any vegetation that begins to colonise these areas.

3.3 Created Habitats

3.3.1.1 This section sets which habitats are proposed to be created, which provide significant onsite enhancements, and their target condition within the targeted time period.

3.3.1.2 Habitats to be created are summarised in Table 6.

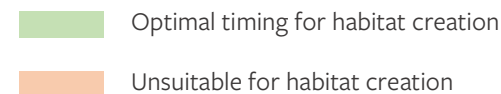
Table 6 – Proposed Habitat Creation

Habitat Type	Proposed Condition	Time to Target Condition (years)
Created Habitats		
Modified Grassland	Moderate	4
Urban Tree	Moderate	27
Urban Tree	Poor	10
Mixed Scrub	Poor	1

3.4 General Measures

3.4.1.1 Habitat creation on site will follow details set out in the Detailed Planting Plan (FDA landscape, 2025). The following general measures shall be met to ensure successful habitat creation and succession on site.

- All planting is to follow guidance set out in the relevant British Standard or Horticultural Trades Association documents and carried out by a competent person.
- Planting is to remain undamaged, with healthy and vigorous growth, and is to be planted upright and well balanced. Trees and shrubs are to be of good shape and without elongated shoots, grown in a suitable environment and hardened off before being delivered to the site.
- All planting is to be true to name and free from pests, diseases, discoloration, weeds, fungus, and physiological disorders upon planting.
- If plants/trees are unobtainable alternatives are to be agreed with the Ecologist/Landscape Architect in writing prior to ordering.
- After planting ensure that the full depth of topsoil is wetted. Apply water evenly and without damaging or displacing plants or soil. Continue to water as necessary to ensure the successful establishment and continued thriving of planting.
- No tree/shrub/hedgerow works shall be completed during nesting bird season (March to September inclusive). If works are required within the nesting bird season, a check must be undertaken of all affected trees by a suitably qualified ecologist.



3.5 Habitat Creation Measures

3.5.1 Grassland – Modified Grassland

- 3.5.1.1 An area of modified grassland will be created the southeastern most corner of the site. This area of grassland will be seeded with EL1 Flowering Lawn Mixture from Emorsgate Seeds (or similar approved).
- 3.5.1.2 The seed mixture will comprise of valuable water meadow species such as ribwort plantain (*Plantago lanceolata*), red fescue (*Festuca rubra*), crested dogstail (*Cynosurus cristatus*), ladys bedstraw (*Galium verum*), and common bent (*Agrostis capillaris*).
- 3.5.1.3 This habitat is expected to achieve **moderate** condition.

Table 7 – Habitat Creation Activities for Modified Grassland.

Habitat Creation Activity	Further Details	Indicative Timing of Operation											
		J	F	M	A	M	J	J	A	S	O	N	D
Ground Preparation	Soil testing to ensure soil is of low fertility (<25 mg/l of phosphorus, <120 mg/l of potassium and approx. 0.2% nitrogen), with pH 5-7.												
	If necessary, reduce fertility through stripping topsoil, inversion ploughing or spreading with nutrient-poor soil.												
	Remove weeds by hand, through repeated cultivation, or use herbicides where necessary (e.g. glyphosate free herbicide).												
	Plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll or tread, to produce a firm surface.												
Sowing	Seed with EL1 Flowering Lawn Mixture from Emorsgate Seeds at a rate of 40kg/ha by hand or using appropriate lightweight machinery, and roll or tread once all seeds are sown. For best results, sow in August/September (though can also sow in spring if necessary).												
Establishment	If there is little/no rain, water with a light spray to avoid dislodging seeds.												

	- For trees >1.5m in height, add a stake on the side that will be facing the wind and tether the tree to it. - Water the soil generously.											
Planting (Containerised)	- Soak the roots of the tree for 2 hours before planting. - Place tree into centre of hole, spread roots and fill hole with soil mixture, compacting once full to secure tree. - For trees >1.5m in height, add a stake on the side that will be facing the wind and tether the tree to it. - Water the soil generously.											
Establishment	Water daily for the first two weeks, then weekly for the first year while the tree has its leaves. Tear off any suckers that appear and readjust the tether to the stake to avoid damage to the trunk. Stakes can be removed after 3 years.											

3.5.3 Heathland and Shrub – Mixed Scrub

3.5.3.1 Mixed native scrub will be created around the periphery of the sit. The mixed scrub will be comprised of species such as hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), dog-rose (*Rosa canina*), and common hazel (*Corylus avellana*).

3.5.3.2 This habitat is expected to achieve **poor** condition due to the management techniques that will be proposed and its proximity to areas of hardstanding and fences.

Table 9 – Habitat Creation Activities for Mixed Scrub

Habitat Creation Activity	Further Details	Indicative Timing of Operation											
		J	F	M	A	M	J	J	A	S	O	N	D
Ground Preparation	Remove weeds by hand or use herbicides where necessary (e.g. glyphosate free herbicide).												

	Optimal timing for management
	Unsuitable for management

3.6 Management Prescriptions

3.6.1.1 This section includes detailed management techniques and annual schedule of works for each habitat that will be present within the proposed development, including retained, enhanced and created habitats. These management prescriptions should be followed for the next 30 years to ensure all habitats achieve their proposed condition.

3.6.2 Grassland - Modified Grassland

3.6.2.1 Detailed management techniques are described within Table 10 along with the corresponding condition criteria.

Table 10 - Management Objectives for Modified Grassland

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
A. There are 6-8 vascular plant species per m ² present, including at least 2 forbs	- Mow as required, though avoiding May to allow wildflowers to establish and to support pollinators. - Remove arisings shortly after mowing to prevent nutrient enrichment of soils and the likelihood of a handful of species dominating. Avoid use of any fertiliser or herbicides.	As required												
B. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm)	- Avoid mowing grassland from spring to August. - Mow in August and leave arisings in situ for one week before removing. - Mow again in winter to 50mm if required.	Ongoing												
C. Any scrub present accounts for less than 20% of the total grassland area	Manual removal of bracken and scrub regeneration upon discovery.	As required												
F. Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.														

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
D. Physical damage is evident in less than 5% of total grassland area.	Corden off grassland for at least the first year during establishment.	Year 0 – Year 1												
E. Cover of bare ground is between 1% and 10%, including localised areas	Visual assessment of bare ground cover and physical damage. If exceeding 10%, Seed areas of bare ground with EL1 Flowering Lawn Mixture from Emorsgate Seeds. Seed at a rate of 4g/m² by hand.	As required												
G. There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA)	- Continuously monitor for invasive, non-native species and weeds (see Appendix 9). - Where safe and appropriate to do so, remove by hand immediately. If necessary, application of herbicide should be carried out by an experienced contractor.	As required												

3.6.3 Individual Trees – Urban Trees

3.6.3.1 No management activities to take place during nesting season (March to September inclusive).

3.6.3.2 Detailed management techniques are described within Table 11 along with the corresponding condition criteria.

Table 11 - Management Objectives for Individual Trees

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
A. The tree is a native species (or at least 70% within a block)	Replacement planting for failed trees using same species (according to planting scheme within landscapes).	Root ball - As required												
		Bare root - As required												
	Hand removal of any non-native saplings establishing	As required												
B. The tree canopy is predominantly continuous	Undertake regular arboricultural inspections to identify any structural risks, pests, diseases or other health issues.	Every 3 Every 3 years or according to professional advice												
C. The tree is mature or veteran	- Pruning of damaged or diseased trees to ensure tree canopy is balanced and consistent with the natural structure for the species. All pruning works must be carried out by a qualified professional. - Limit the use of damaging management practices e.g., herbicide use and unnecessary pruning. - Avoid undertaking management activities on all trees in a single month period to retain important resources for wildlife. Instead, rotate management across plots.	As required												
D. There is little or no evidence of an adverse impact on tree health by anthropogenic activities and no current regular pruning regime, so the trees retain >75% of expected canopy														
	Water twice a month during warmer months.	Annually during warmer months or as												

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
		needed in periods of hot weather												
	Once trees reach semi-maturity, appropriate corrective surgery may be necessary and should be completed by a qualified professional	As required depending on maturity												
E. Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark	Leave any micro-habitat features, such as ivy, loose bark and deadwood, in place and where it is safe and appropriate.	As required												
F. More than 20% of the tree canopy area is oversailing vegetation beneath	Mulch forming 1m radius around tree, to control weeds. Use organic mulches (leaf litter, rotted hay or grass clippings, manure, wood chips), at a depth of 75mm.	Annually Years 1 to 3												
	- Leave a 2m unmanaged buffer zone around any trees planted over vegetation to allow natural succession of surrounding vegetation. - Avoid use of herbicides within this zone.	As required												
	- Continuously monitor for invasive, non-native species and weeds (see Appendix 9). - Where safe and appropriate to do so, remove by hand immediately. If necessary, application of herbicide should be carried out by an experienced contractor.	As required												

3.6.4 Heathland and Shrub - Mixed Scrub

3.6.4.1 No management activities to take place during nesting season (March to September inclusive).

3.6.4.2 Detailed management techniques are described within Table 12 along with the corresponding condition criteria.

Table 12 - Management Objectives for Mixed Scrub

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
A. The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description.	Replace lost plants with others of the same species, size and quality to ensure diversity is maintained – follow planting process in Section 3.5.3.	Annually												
B. Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	- Prune all shrubs immediately after flowering, back to a strong, upright shoot as low as possible, aiming to remove one stem in three. - Allow natural seeding of new shrubs where appropriate.	Annually from Year 4												
C. There is an absence of invasive non-native species and species indicative of sub-optimal condition make up less than 5% of ground cover.	- Continuously monitor for invasive, non-native species and weeds (see Appendix 9). - Where safe and appropriate to do so, remove by hand immediately. If necessary, application of herbicide should be carried out by an experienced contractor.	As required												
	Hand removal of any scrub or tree species indicative of suboptimal condition, such as cherry laurel (<i>Prunus laurocerasus</i>), snowberry	As required												

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
	<i>(Symphoricarpos spp.)</i> , and cotoneaster <i>(Cotoneaster spp.)</i> .													
D. The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Maintain a buffer of at least 2m in the adjacent grassland where there is no mowing or management to allow succession of natural vegetation.	Annually												
E. There are clearings, glades or rides present within the scrub, providing sheltered edges.	Woody species in clearings/rides/glades should be removed where possible, to retain open spaces within this habitat.	As required												

4 Habitat Monitoring

4.1 Monitoring Schedule

- 4.1.1.1 Following completion of habitat creation and initial enhancement works, habitats should be monitored to ensure that they are on track to achieve their predicted condition.
- 4.1.1.2 Monitoring should be carried out on Years 1, 2, 3, 4, 5, 10, 15, 20, 25 and 30.
- 4.1.1.3 All monitoring should be completed within the optimal botanical survey period (May to October) by a suitably qualified ecologist, using appropriate measures to assess the habitat against the Statutory Biodiversity Metric Condition Assessments (DEFRA 2025b) (e.g., photography, quadrat sampling, etc).

4.2 Monitoring Reports

- 4.2.1.1 Following completion of habitat creation and initial enhancement works, a monitoring report should be prepared and submitted to the Local Planning Authority or Responsible Body on the years detailed in Section 4.1.
- 4.2.1.2 Monitoring results inform necessary management changes to promote achieving BNG targets stated in the Statutory Biodiversity Metric and HMMP, allowing an adaptive management system to be followed.
- 4.2.1.3 For any habitats which aren't achieving their proposed condition within the target time period, reasons for failure and proposed remediation measures should also be recorded.

4.2.2 Grassland – Modified Grassland

4.2.2.1 Table 13 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place. The proposed overall condition score for this habitat is moderate, with a final time to target condition of **4 years**.

Table 13 – Monitoring Results for Retained Modified Grassland

Condition Criteria	Target Condition Score	Year											Comments / Remediation Measures
		0	1	2	3	4	5	10	15	20	25	30	
A. There are 6-8 vascular plant species per m2 present, including at least 2 forbs.	Pass												Botanical quadrat surveys in late spring to early summer (May–July), using 1 m ² quadrats.
B. Sward height is varied	Fail												This criterion is not expected to pass because the grass will be regularly managed through mowing.
C. Scrub cover is <20%	Pass												Visual estimation of cover across sample plots or transects, ideally during leafing period (June–August).
D. Physical damage is present in <5% of grassland	Fail												The grassland is unlikely to pass this condition due to regular mowing and disturbance.
E. Cover of bare ground is between 1% and 10%	Pass												Visual assessment during quadrat surveys in late spring/summer (May–July).
F. Cover of bracken is <20%	Pass												Visual estimation in summer when bracken is fully grown (July–August).
G. There is an absence of invasive non-native	Pass												Walkover or quadrat survey in late spring/summer (May–August) to identify and record any Schedule 9 species.

species (as listed on Schedule 9 of WCA).													
Overall Condition	Moderate												

4.2.3 Individual Trees – Urban Trees (Native)

4.2.3.1 Table 14 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place. The proposed overall condition score for this habitat is moderate, with a final time to target condition of **27 years**.

Table 14 – Monitoring Results for Individual Trees

Condition Criteria	Target Condition Score	Year											Comments / Remediation Measures
		0	1	2	3	4	5	10	15	20	25	30	
A. The tree is a native species (or at least 70% within a block)	Pass												Native trees automatically pass this criterion.
B. The tree canopy is predominantly continuous	Pass												Individual trees automatically pass this criterion.
C. The tree is mature or veteran	Fail												Trees are not expected to reach maturity within 30 years.
D. There is little or no evidence of an adverse impact on tree health by anthropogenic activities	Fail												Trees will be pruned for safety and aesthetic purposes.
E. Natural ecological niches present	Fail												Trees will be pruned for safety and aesthetic purposes.

F. More than 20% of the tree canopy area is oversailing vegetation beneath	Pass												Trees will be planted within areas of grassland and shrubs.
Overall Condition	Moderate												

4.2.4 Individual Trees – Urban Trees (Non-Native)

4.2.4.1 Table 15 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place. The proposed overall condition score for this habitat is poor, with a final time to target condition of **10 years**.

Table 15 – Monitoring Results for Individual Trees

Condition Criteria	Target Condition Score	Year											Comments / Remediation Measures
		0	1	2	3	4	5	10	15	20	25	30	
A. The tree is a native species (or at least 70% within a block)	Fail												Non-native trees automatically fail this criterion.
B. The tree canopy is predominantly continuous	Pass												Individual trees automatically pass this criterion.
C. The tree is mature or veteran	Fail												Trees are not expected to reach maturity within 30 years.
D. There is little or no evidence of an adverse impact on tree health by anthropogenic activities	Fail												Trees will be pruned for safety and aesthetic purposes.

E. Natural ecological niches present	Fail												Trees will be pruned for safety and aesthetic purposes.
F. More than 20% of the tree canopy area is oversailing vegetation beneath	Pass												Trees will be planted within areas of grassland and shrubs.
Overall Condition	Poor												

4.2.5 Heathland and Shrub - Mixed Scrub

4.2.5.1 Table 16 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place. The proposed overall condition score for this habitat is poor, with a final time to target condition of **1 years**.

Table 16 – Monitoring Results for Mixed Scrub

Condition Criteria	Target Condition Score	Year											Comments / Remediation Measures
		0	1	2	3	4	5	10	15	20	25	30	
A. The parcel represents a good example of its habitat type	Pass												Assess structure, species composition, and diversity via plot sampling when shrubs are in leaf.
B. Seedlings, saplings, young shrubs and mature shrubs are all present	Fail												This criterion is likely to fail as all shrubs will be the same age when planted. This criterion may pass as shrubs mature and natural regeneration occurs.
C. There is an absence of invasive non-native species and less than 5% cover of species	Pass												Visual inspection in late spring/summer (May–August) to identify and record any Schedule 9 species.

indicative of sub-optimal condition													
D. The scrub has a well-developed edge	Fail												This criterion fails as developed land is present at the edge of the scrub.
E. There are clearings, glades or rides present	Fail												This criterion is likely to fail due to proposed location of this habitat and due to proposed planting density of this habitat.
Overall Condition	Poor												

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APPENDIX 1 - SITE CONTEXT MAP

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Legend: Red Line Boundary		1 Kilometers		N	
Client:	Ryder & Granite Estates Limited	Issue:	01	Figure:	01
Project:	Knowsley Industrial Park	Scale @ A4		1:12000	
Title:	Site Context	Approved by:	CL	Checked by:	JH
Drawing Ref:	UG_3078_SITE_CONTEXT	Author:	CL	Date:	22/05/2025
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					

APPENDIX 2 - DESIGNATED SITE MAP

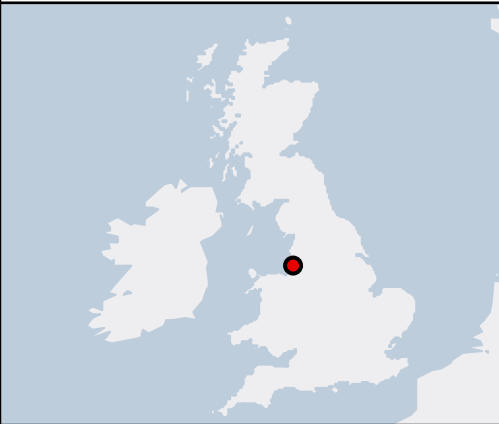
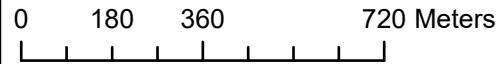
U R B A N
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U R B A N G R E E N

Legend

-  Red Line Boundary
-  2km Buffer
-  Local Nature Reserves (England) © Natural England



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Client: Ryder & Granite Estates Limited		
Project: Knowsley Industrial Park		
Title: Designated Sites Results		
Issue: 01	Figure: 00	
Drawn: CL	Checked: JH	Approved: JH
Project: UG3078	Scale @ A3: 1:15,000	Date: 22/05/2025
Dwg No: UG_3078_ECO_DS_01		Revision: 01

APPENDIX 3 - PHOTOGRAPHS OF THE SITE

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Photograph 1: Overview of the site and building B1 located near the centre of the site.



Photograph 2: Building B1 with u1c artificial, unsealed surface habitat to the west of the site.



Photograph 3: B1 – negligible roosting potential, bounded by u1b6 – developed land to the north, east and south.



Photograph 4: Internal structure of B1 displaying internal artificial light and negligible roosting potential.



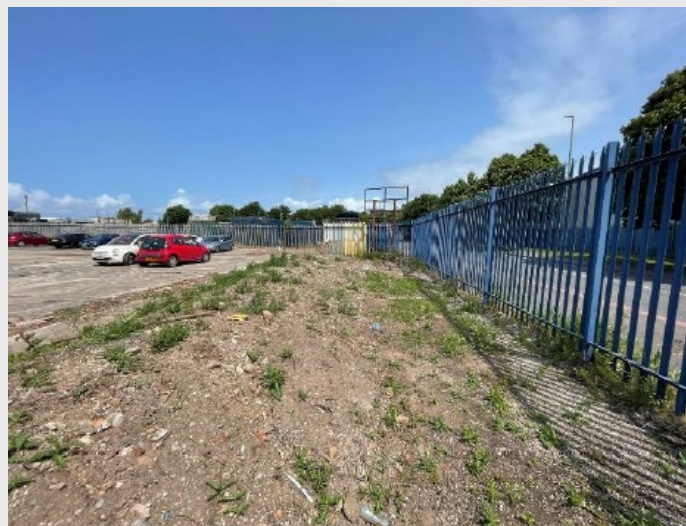
Photograph 5: Structure of building B2 with negligible roosting potential in relation to u1b6 and u1c habitats on site.



Photograph 6: Internal space of B2 showing lack of potential roosting features.



Photograph 7: Example of ruderal and ephemeral species interspersed across u1b6 and u1c habitats.



Photograph 8: Example of ephemeral plant species scattered across the site, within u1c habitat parcels.



Photograph 9: u1b5 buildings in relation to predominant u1c habitat, wets of the site.



Photograph 10: Example of poor condition u1b6 habitat south-west of the site, and interspersed ruderal plant species.



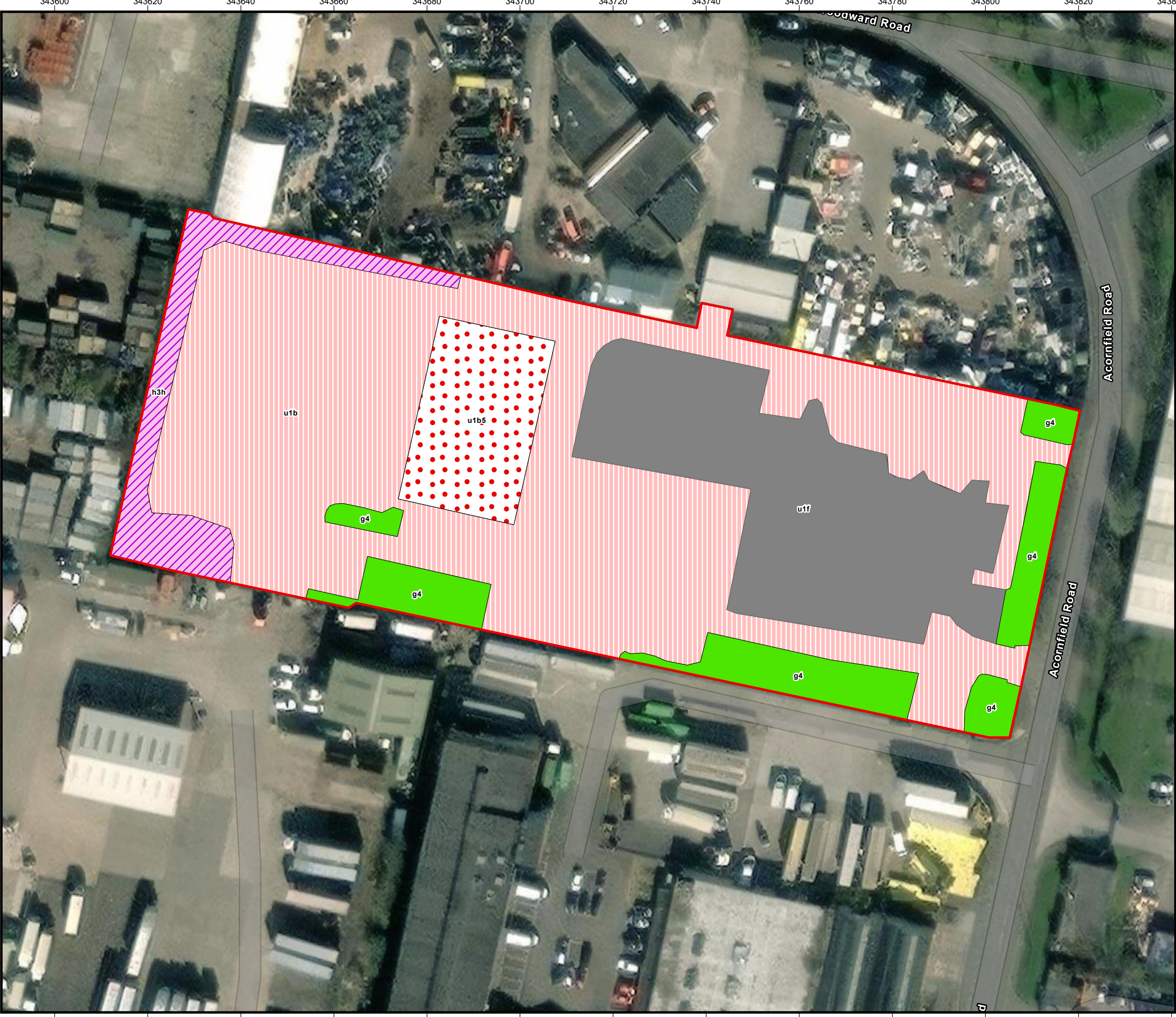
Photograph 11: Combination of habitats onsite, including u1b5, u1b6, u1c and scattered ephemeral and ruderal species.



Photograph 12: Active herring gull (*Larus argentatus*) nest TN1 with three eggs present at the time of surveying.

APPENDIX 4 - BASELINE HABITAT MAP

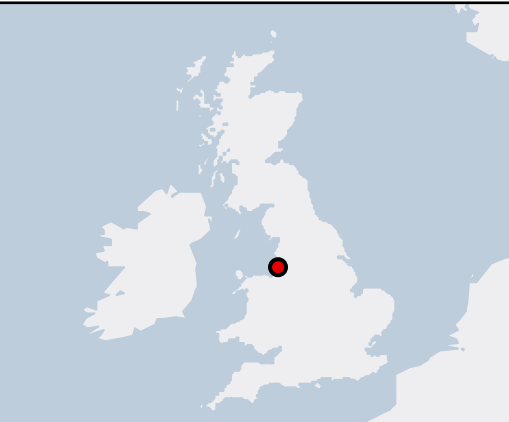
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U R B A N
G R E E N

Legend

- Red Line Boundary
- Building
- Developed land sealed surface
- Mixed scrub
- Sparsely vegetated previously urban land
- Modified grassland



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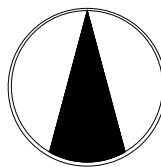
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Project: Knowsley Industrial Estate		
Title: UKHAB Habitat Map		
Issue: 01	Figure: 00	
Drawn: CL	Checked: TM	Approved: TM
Project: UG3078	Scale @ A3: 1:750	Date: 22/09/2025
Dwg No: UG_3078_BNG_HM_01		Revision: 01

APPENDIX 5 - PRIMARY AND SECONDARY CODES

Hierarchical code	Code	Definition
Primary Code	g4	Modified grassland
	h3h	Mixed scrub
	u1b	Developed land; sealed surface
	u1b6	Other developed land
	u1f	Sparsely vegetated land

APPENDIX 6 – PROPOSED LANDSCAPE PLAN

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NOTES

PROTECTION OF EXISTING VEGETATION

Existing vegetation to be retained on site shall be protected where necessary during works by a tree protective barrier, secured to a scaffold tubing framework with fluorescent tape to the top rail. Protective fencing shall be erected on the canopy drip line wherever possible. Laminated, waterproof A4 signs shall be fixed to the fence posts at 10m intervals bearing the words 'PROTECTED TREE ZONE - NO STORAGE OR OPERATIONS WITHIN FENCED AREA'.

Tracking of machinery, storage of chemicals and building materials shall not be permitted within the protected area. Leaks or spills should be removed immediately and the contaminated soil replaced. No bonfires shall be lit within 5m of the canopy spread. Any excavation work beneath the canopy spread shall be carried out by hand.

All works affecting trees within the development shall be subject to BS 5837:2012.

TREE PLANTING

Tree planting to the front gardens of selected plots will break up the hard lines of the buildings and create focal points within the development. The tree species selected will maximise food and nectar sources for birds and invertebrates. Trees will be planted as Select and Heavy Standards to provide a reasonable degree of instant maturity to the development. Foundation design of new buildings shall accommodate proposed tree planting in accordance with Engineers details.

Species to be selected from:

Acer campestre (Ac)	Prunus subhirtella 'Autumnalis Rosea' (P&AR)
Acer platanoides 'Laciniatum' (Apl)	Pyrus calleryana 'Chanticleer' (P&C)
Alnus incana (Al)	Quercus robur (Qr)
Betula pubescens (Bpu)	Sorbus aria (Sa)
Betula utilis var. jacquemontii (Bu)	Sorbus aucuparia (Sau)
Carpinus betulus (Cb)	Sorbus 'Timbley' (SE)
Malus sylvestris (Ms)	Sorbus 'Joseph Rock' (SJR)
Malus tchonoskii (Mt)	Tilia x euchlora (Te)
Prunus padus (Pp)	Tilia cordata 'Green Spire' (TcGS)
Prunus sargentii (Ps)	

SHRUB PLANTING

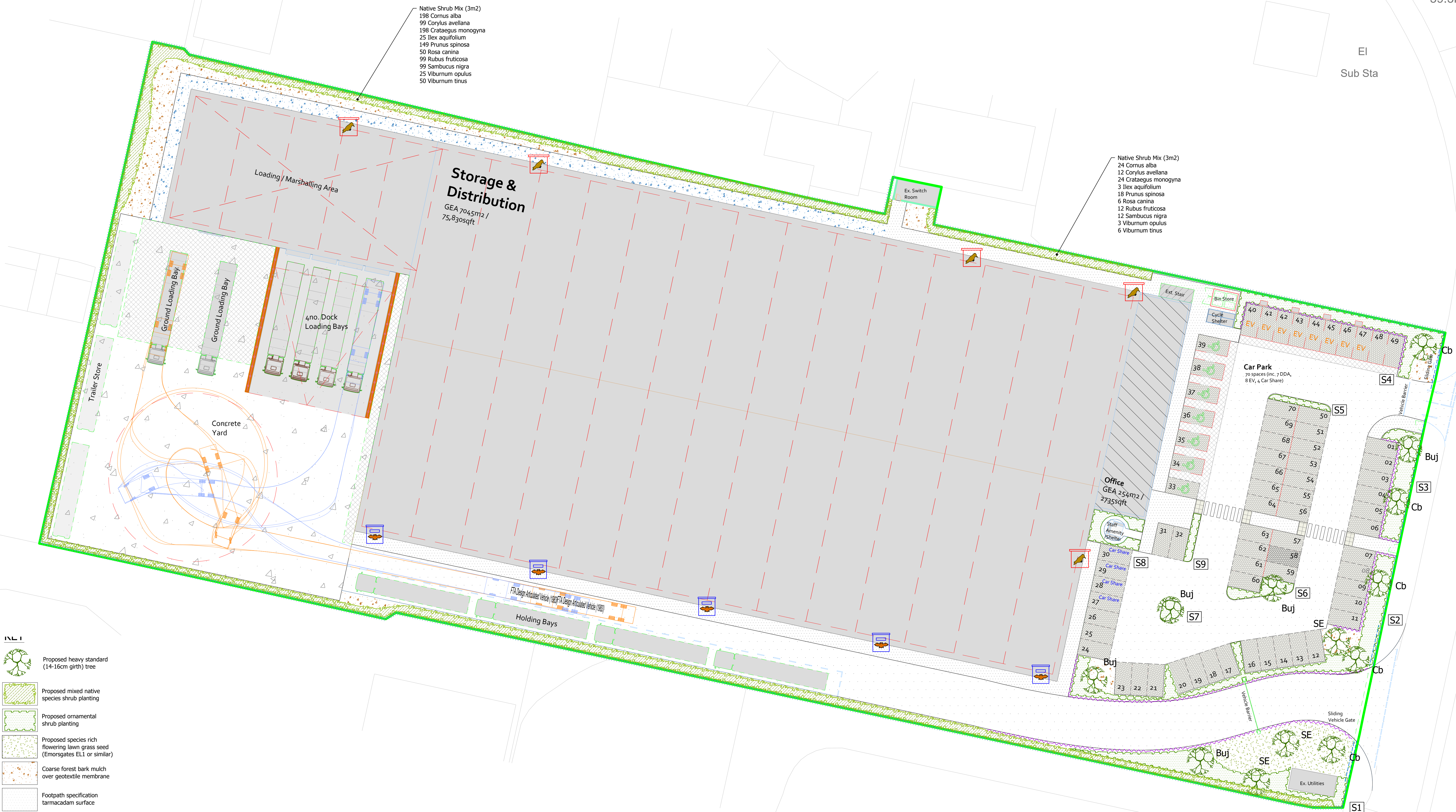
A mix of evergreen and deciduous shrubs will be planted in selected front gardens to soften the development and to provide a valuable food source for birds and invertebrates. A mix of medium/low shrubs will be planted to shrub beds with medium/large varieties used for informal hedging.

Species to be selected from: () density/m2

Barberry 'Finkii' 'Amstelweert' (S), Berberis thunbergii 'Atropurpurea Nana' (S), Berberis cordifolia 'Silberlichte' (S), Canochus thyrsoiflorus repens (4), Chaenomeles superba 'Jel Trail' (4), Cornus alba 'Spaethii' (2), Cornus stolonifera 'Flaviramea' (2), Cytisus alpinus (4), Eleagnus pungens 'Maculata' (3), Escallonia 'Apple Blossom' (4), Eonymus fortunei 'Emerald Gaiety' (6), Festuca spon (6), Geranium 'Johnson's Blue' (4), Hebe aliciana 'Red Edge' (4), Hebe 'Autumn Glory' (4), Hypericum x moserianum (4), Juniperus sabina 'Tamanischofolia' (3), Lavandula 'Hidcotte' (6), Lonicera 'Nargess' (4), Lonicera 'Silver Beauty' (4), Nepeta 'Fassennil' (4), Petrovskia 'Blue Spire' (6), Phormium var, Potentilla 'Red Ace' (5), Prunus laurocerasus 'Zabelliana' (3), Pycnantha 'Orange Chamer' (3), Rubus x 'Betty Ashburne' (4), Spiraea 'Gold Flame' (4), Spiraea 'Shirobana' (4), Viburnum tinus 'Eve Price' (3)

NATIVE PLANTING

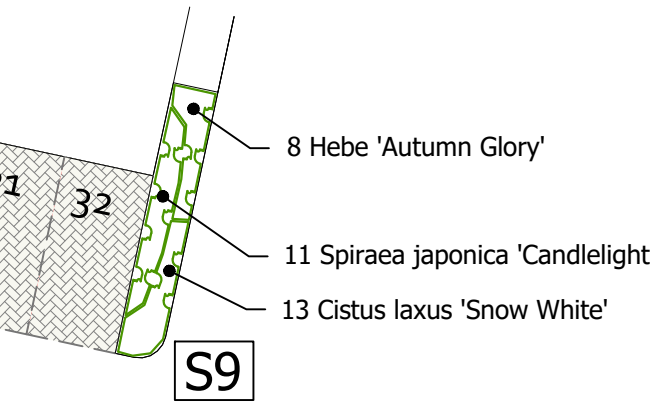
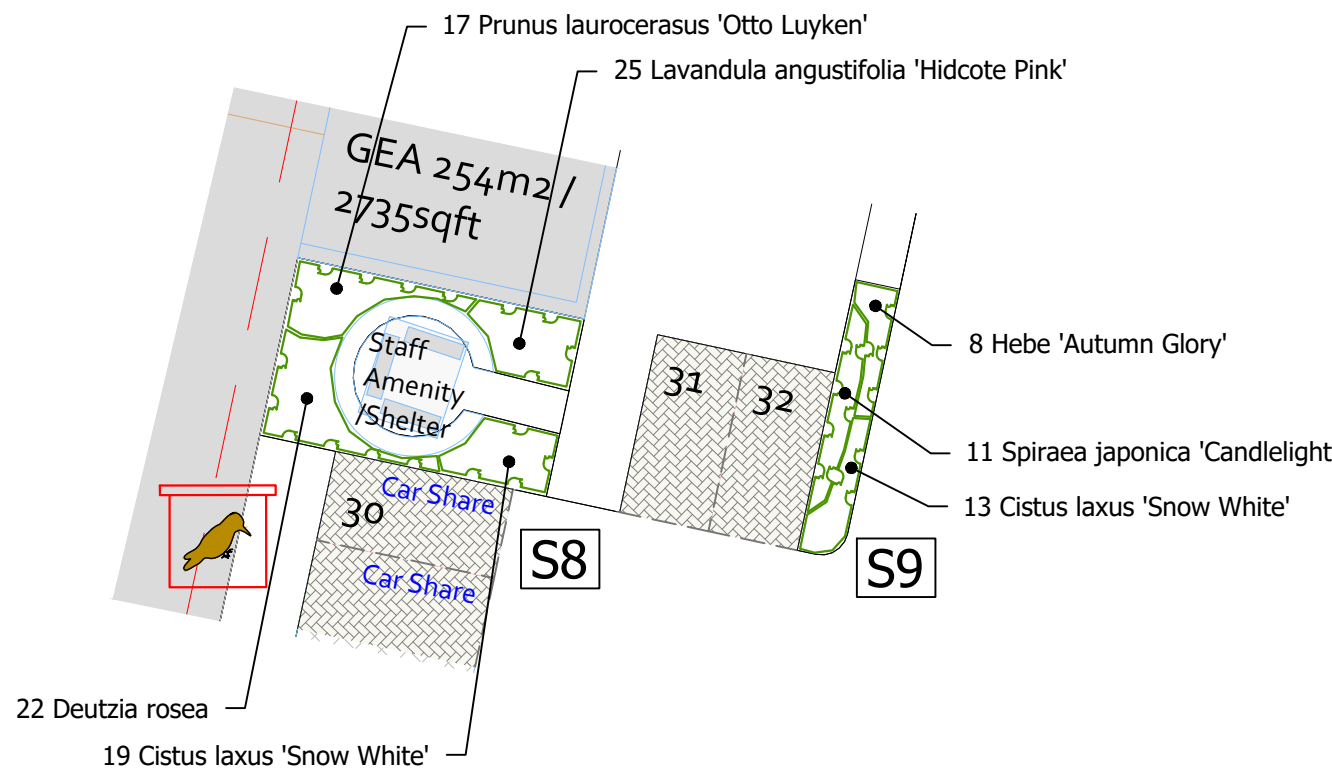
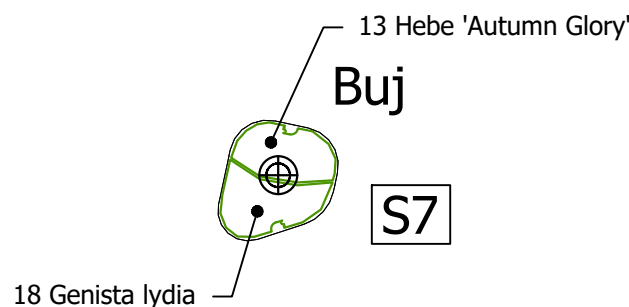
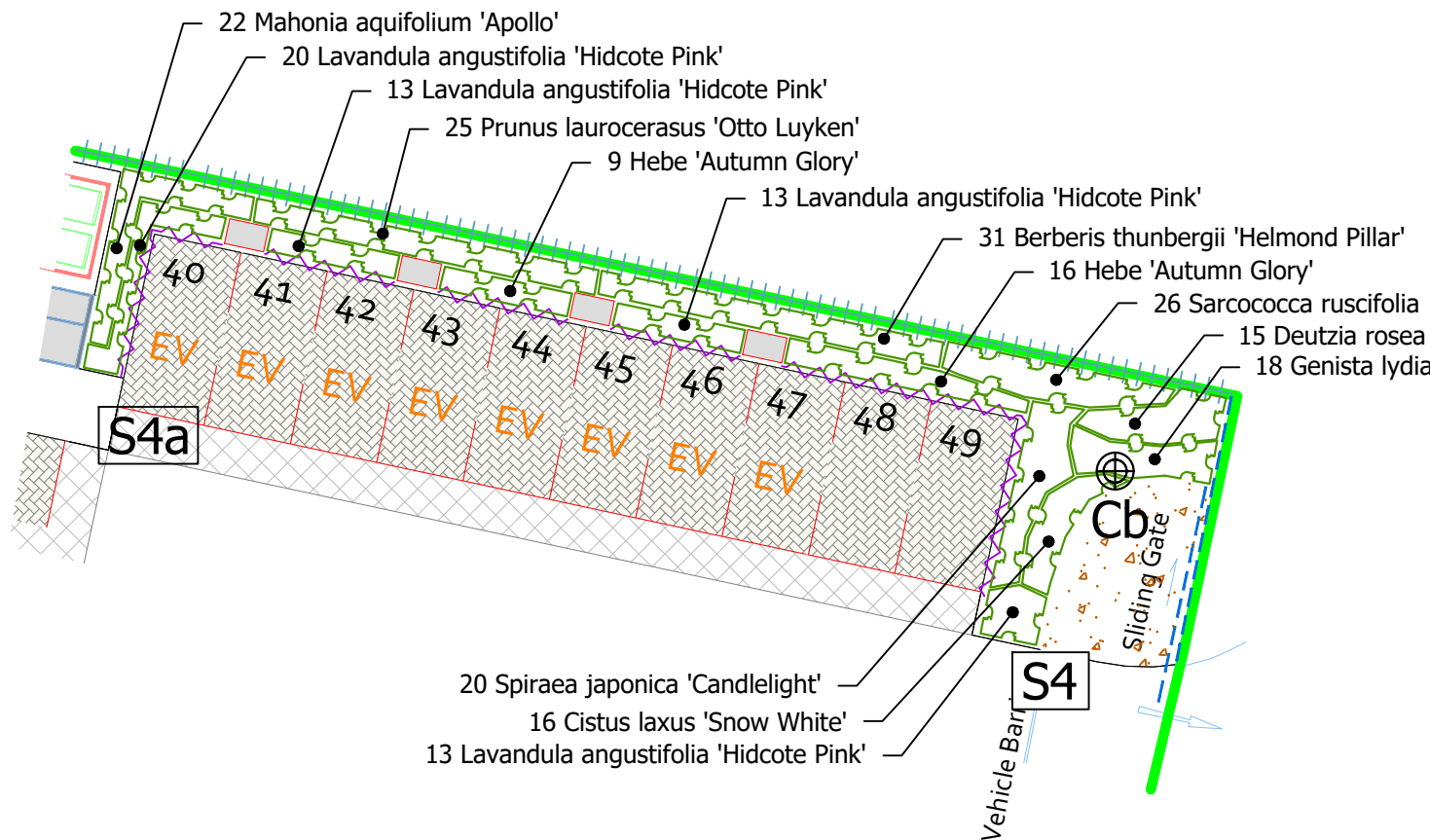
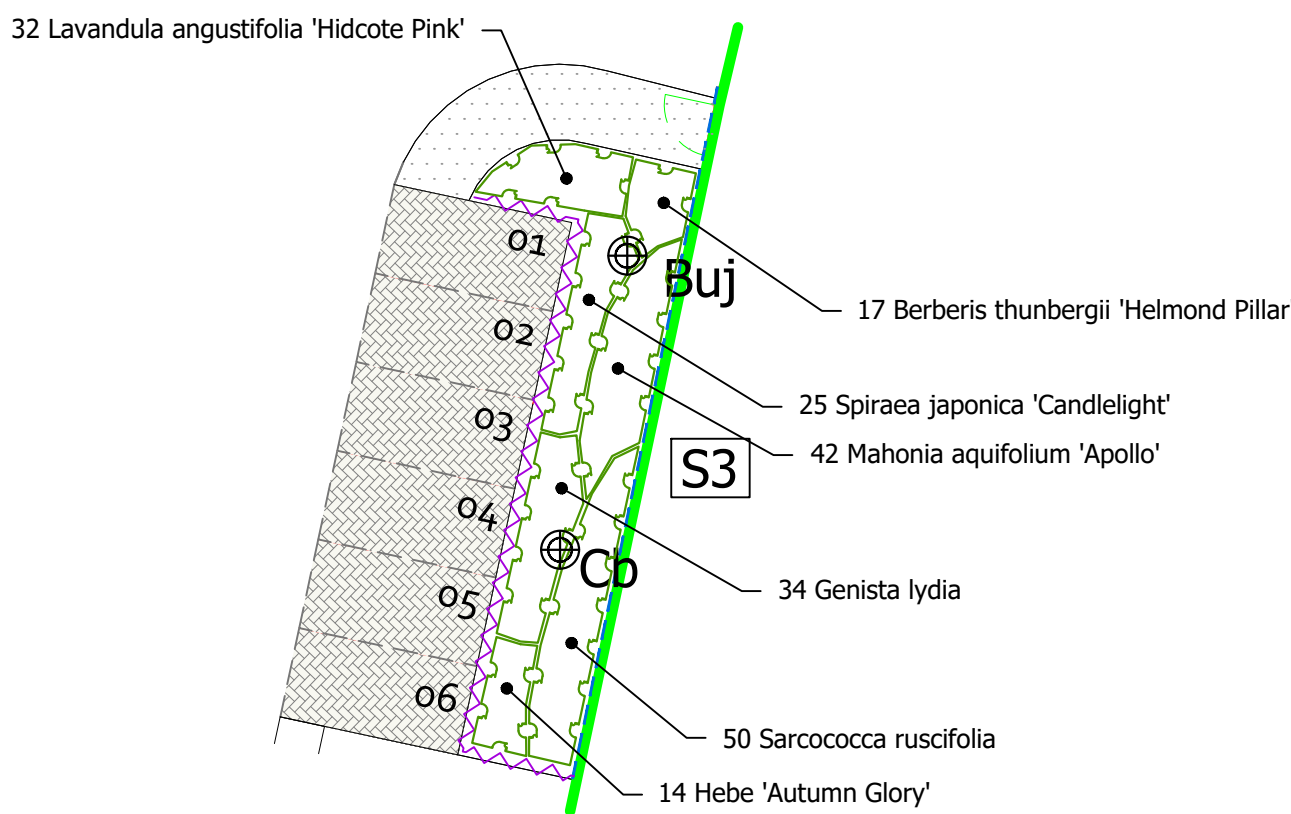
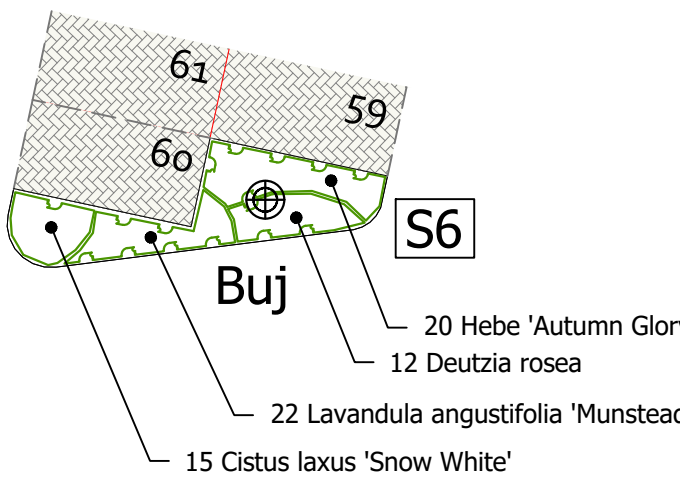
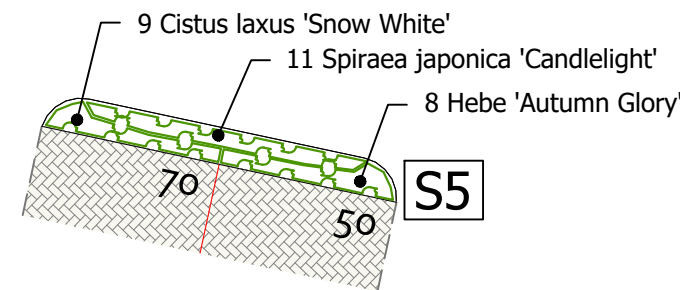
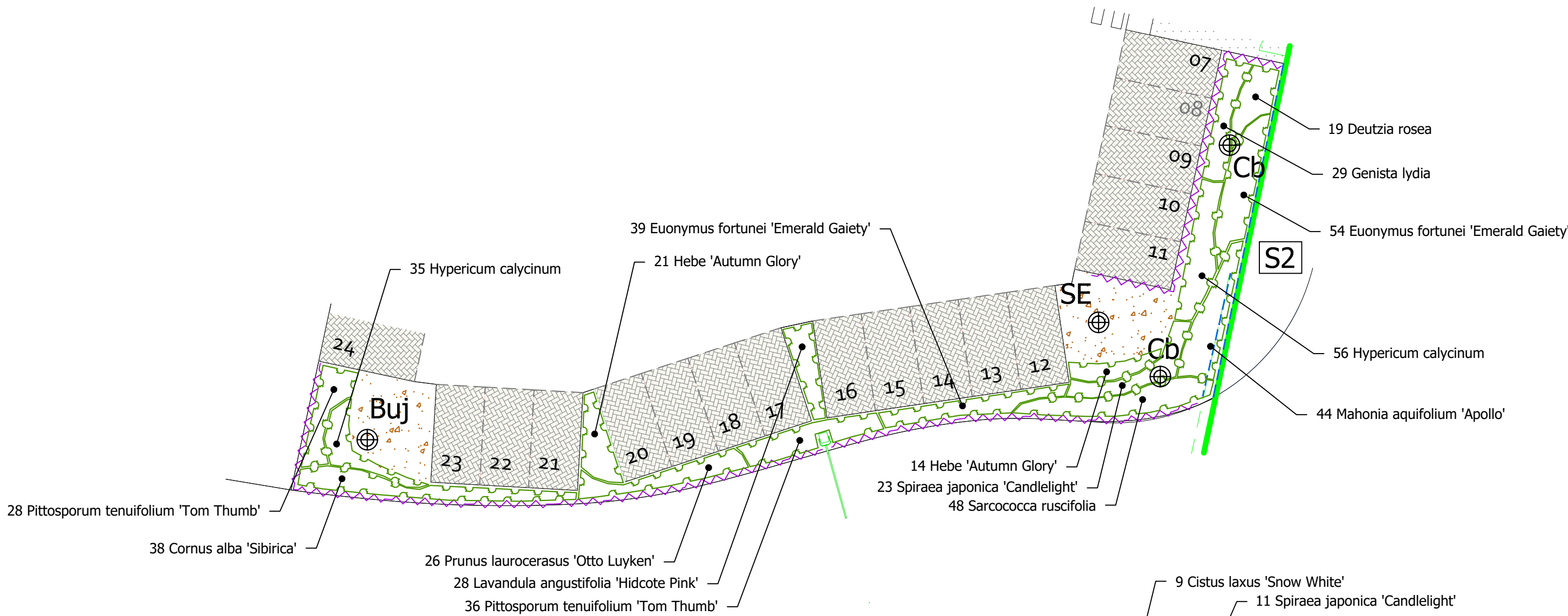
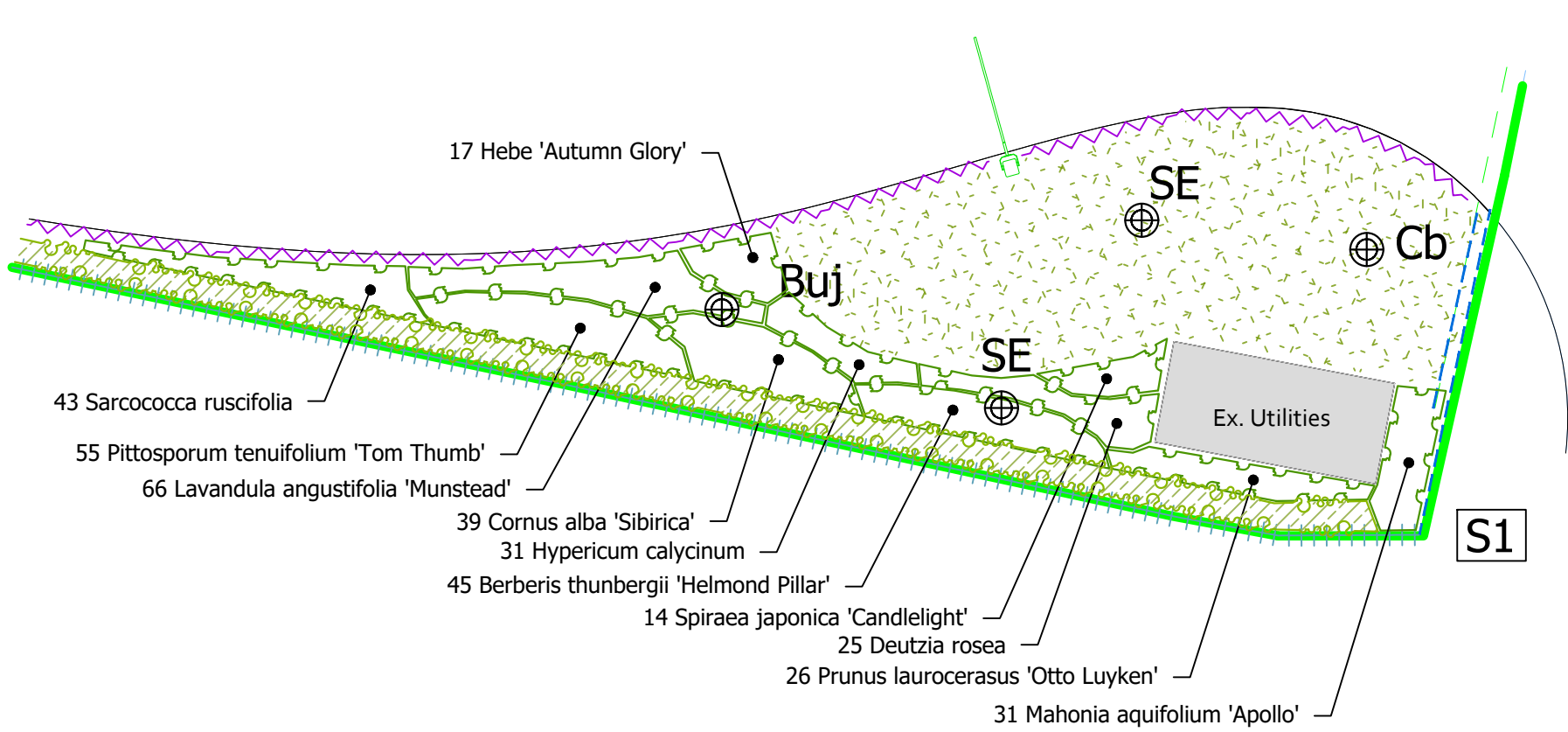
Native species shrub mix to be planted to the perimeter of the site. This native planting mix will help improve the ecological value of the site and improve wildlife foraging opportunities. Species to be planted in random groups to create a 'natural' effect.



- INL 1**
- Proposed heavy standard (14-16cm girth) tree
 - Proposed mixed native species shrub planting
 - Proposed ornamental shrub planting
 - Proposed species rich flowering lawn grass seed (Emorsgates EL1 or similar)
 - Coarse forest bark mulch over geotextile membrane
 - Footpath specification tarmacadam surface
 - Vehicular specification tarmacadam surface
 - Permeable pavers Marshalls Priora - Charcoal/Natural colour
 - Maintenance Access - Loose gravel
 - Proposed 2000mm high timber bin store fence (detailed by others)
 - Existing 2400mm Paladin fence retained
 - Proposed 2400mm high paladin fence with gates (detailed by others)
 - Proposed 900mm dock wall steel railing (detailed by others)
 - Proposed 400mm timber knee rail (detailed by others)
 - Bat boxes (Envisage code 0612 or equivalent)
 - Bird boxes suitable for different species (eg. Envisage 0107 for house martin, 0902 for sparrow and 0904 for starling or equivalent)

REV A Native hedge removed and replaced with native shrubs (MN) SEPT 25

Sue Farmer BA MAU MAU Landscape Architect fdalandscape Westleigh Hall Wakefield Road Derby Dale Huddersfield HD8 8QJ Telephone 01484 866611 Fax 01484 866616 Isdn 01484 866900 email info@fdalandscape.co.uk www.fdalandscape.co.uk	client BDN Ltd			
	project Commercial Development ACORNFIELD ROAD, LIVERPOOL, L33 7UG			
	drawing title LANDSCAPE MASTERPLAN			
	scale 1:250 @A0	date Jul 25	drawn by SF	drawing no R/2883/1A



PLANTING SCHEDULES

TREE SCHEDULE		NUMBERS REQUIRED
SPECIES	Ht in m	3.5-4.25
	Girth in cm	⊕ 12-14
Betula utilis var. jacquemontii (Buj)		5
Carpinus betulus (Cb)		5
Sorbus 'Embley' (SE)		3

All trees to have clear stems to 1.8m above ground level with well developed branching heads with a single, central leader and healthy, fibrous root systems. Trees shall be either container grown or rootballed in accordance with season of planting. Trees shall be planted into pits of an appropriate size to accommodate the root system without restriction, backfilled with a 3:1 topsoil:compost mix and shall be secured to a machine rounded stake using 1 no. tree tie with rubber spacer. Finished height of stake shall not exceed 1/3 height of staked tree above ground. Foundation design of new buildings shall accommodate proposed tree planting in accordance with Engineers details.

SHRUB SCHEDULE

ORNAMENTAL PLANTING SCHEDULE				
Shrub				
Nr	Name	Ht in cm	Pot(L)	Density
93	Berberis thunbergii 'Heldmond Pillar'	30-40cm	3L	5.00
72	Cistus laxus 'Snow White'	30-40cm	3L	5.00
77	Cornus alba 'Sibirica'	50-60cm	3L	4.00
93	Deutzia rosea	50-60cm	3L	4.00
93	Euonymus fortunei 'Emerald Gaiety'	20-30cm(D)	3L	6.00
99	Genista lydia	30-40cm(D)	3L	5.00
140	Hebe 'Autumn Glory'	25-30cm	3L	4.00
122	Hypericum calycinum	15-20cm	3L	7.00
144	Lavandula angustifolia 'Hidcote Pink'	25-30cm	3L	6.00
88	Lavandula angustifolia 'Munstead'	25-30cm	3L	6.00
139	Mahonia aquifolium 'Apollo'	25-30cm	3L	5.00
119	Pittosporum tenuifolium 'Tom Thumb'	30-40cm	3L	5.00
94	Prunus laurocerasus 'Otto Luyken'	50-60cm	3L	4.00
167	Sarcococca ruscifolia	25-30cm	3L	5.00
104	Spiraea japonica 'Candlelight'	30-40cm	3L	4.00

All shrub material shall be first quality, sturdy, well rooted non-refridgerated stock with well branched heads and fibrous root systems. Shrubs shall be planted into 450mm good quality fibrous topsoil incorporating organic compost and slow release fertiliser in accordance with all good horticultural practice. All plant material shall be a minimum of 3L pot size unless otherwise specified and conform to BS3936 Part 1 and BS 4428. Finished beds shall be lightly forked over and dressed with 50mm coarse forest bark mulch.

NATIVE SHRUB SCHEDULE

Native species shall be planted at 0.75m centres (3/m²) into 450mm depth, good quality clean topsoil incorporating organic compost and slow release fertiliser, over un-compacted sub-grade. Prior to planting all bareroot plant stock shall be dipped into a suitable mychorrhizal plant dip in accordance with the manufacturers recommendations. Plants shall be planted in groups of 3-11 of a single species with the taller growing species to the back of the areas of the areas and the lower growing species to the edges of the areas. Planted areas to be mulched after planting with coarse grade forest mulch to a uniform depth of 50mm.

NATIVE SHRUB MIX SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
232	Cornus alba	40-60cm		B	
116	Corylus avellana	40-60cm		B	
232	Crataegus monogyna	30-40cm		B	
29	Ilex aquifolium	30-40cm		C	2L
175	Prunus spinosa	40-60cm		B	
59	Rosa canina	40-60cm		B	
116	Rubus fruticosus	30-40cm		B	
116	Sambucus nigra	40-60cm		B	
29	Viburnum opulus	30-40cm		B	
59	Viburnum tinus	20-25cm		C	2L

PLANTING NOTES

All trees to be planted and procured in accordance with BS 8545:2014. The providing nursery shall demonstrate Plant Healthy Certification and/or an adopted biosecurity policy and plant passport scheme. Aftercare shall be in accordance with the approved Landscape Management Document.

GROUND PREPARATION

- Where required all existing topsoil and subsoil shall be stripped and stored separately on site. Heaps must not exceed 3m in height and should be used within 12 months in accordance with BS 4425 (Code of practice for general landscape operations).
- Existing topsoil and inert sub soils, shall be analysed in accordance with BS 3882 to determine available nutrients, texture, organic matter content and pH. Where required, existing soils are to be improved in accordance with BS 3882:2015. Subsoils shall conform to BS 8601:2013
- In all instances, where soil is to be retained and relatively undisturbed for the purposes of planting new vegetation on site, then it must be alleviated to avoid compaction, must be tested for pH for specific species suitability, and may require the addition of biochar + compost + organic fertiliser + native soil.
- Imported topsoil and site won soils shall be to British Standards BS 3882 - Multipurpose Grade. Spread to 300mm depth over areas to be planted with trees and shrubs. Remaining minimum rooting depth to be provide by a good quality subsoil to BS 8601:2013, free of building material debris to achieve the following overall rooting depths:
 - Grass - 450mm
 - Shrubs - 600mm
 - Trees - 900mm

GRASS SEEDING

MEADOW AND SPECIES RICH GRASS SEEDING

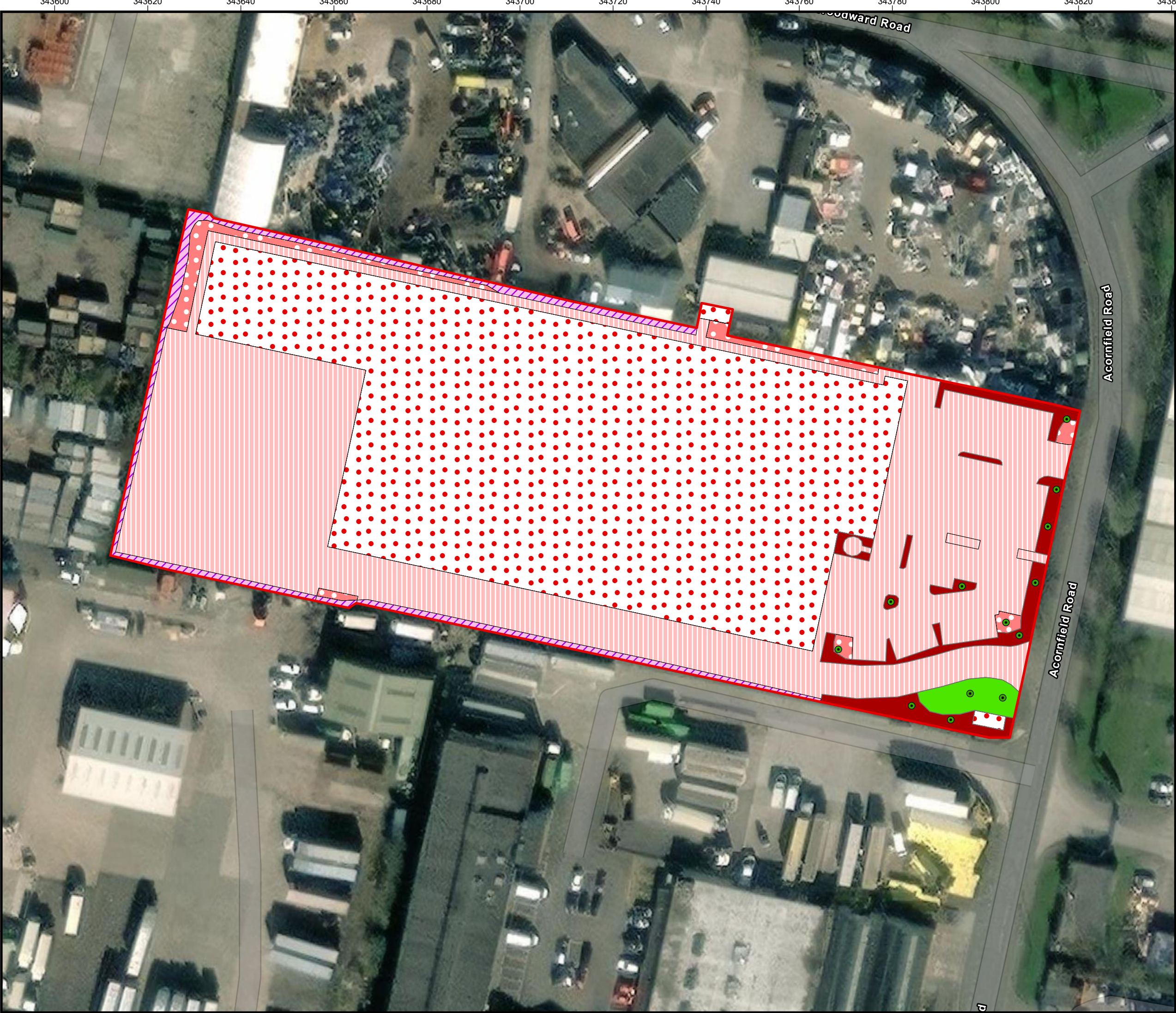
A variety of grassland habitats will be created incorporating species to attract locally important species and enhance the biodiversity of the site. Where appropriate the seeds should be of local provenance and locally sourced but based on the mixed specified below:

SPECIES RICH GRASS (Emorsgate EL1 or similar approved)
Mixture EL1 is to be sown at a rate of 4g/m² and contains slow growing grasses with a selection of wild flowers that respond well to regular short mowing.

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	project	Commercial Development ACORNFIELD ROAD, LIVERPOOL, L33 7UG			
	drawing title	LANDSCAPE DETAILS SHRUB BED S1-S9			
	scale	date	drwn by	drawing no	
1:200 @A1	Jul 25	MBN	R/2883/2A		

APPENDIX 7 - POST- DEVELOPMENT HABITAT MAP

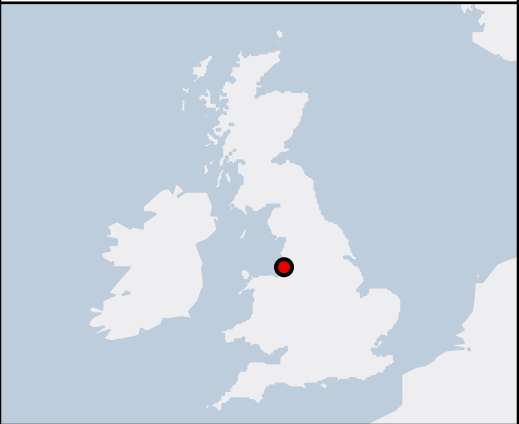
U R B A N
G R E E N



URBAN
GREEN

Legend

- Red Line Boundary
- Building
- Artificial unvegetated unsealed surface
- Developed land sealed surface
- Introduced shrub
- Modified grassland
- Mixed scrub
- PDTree

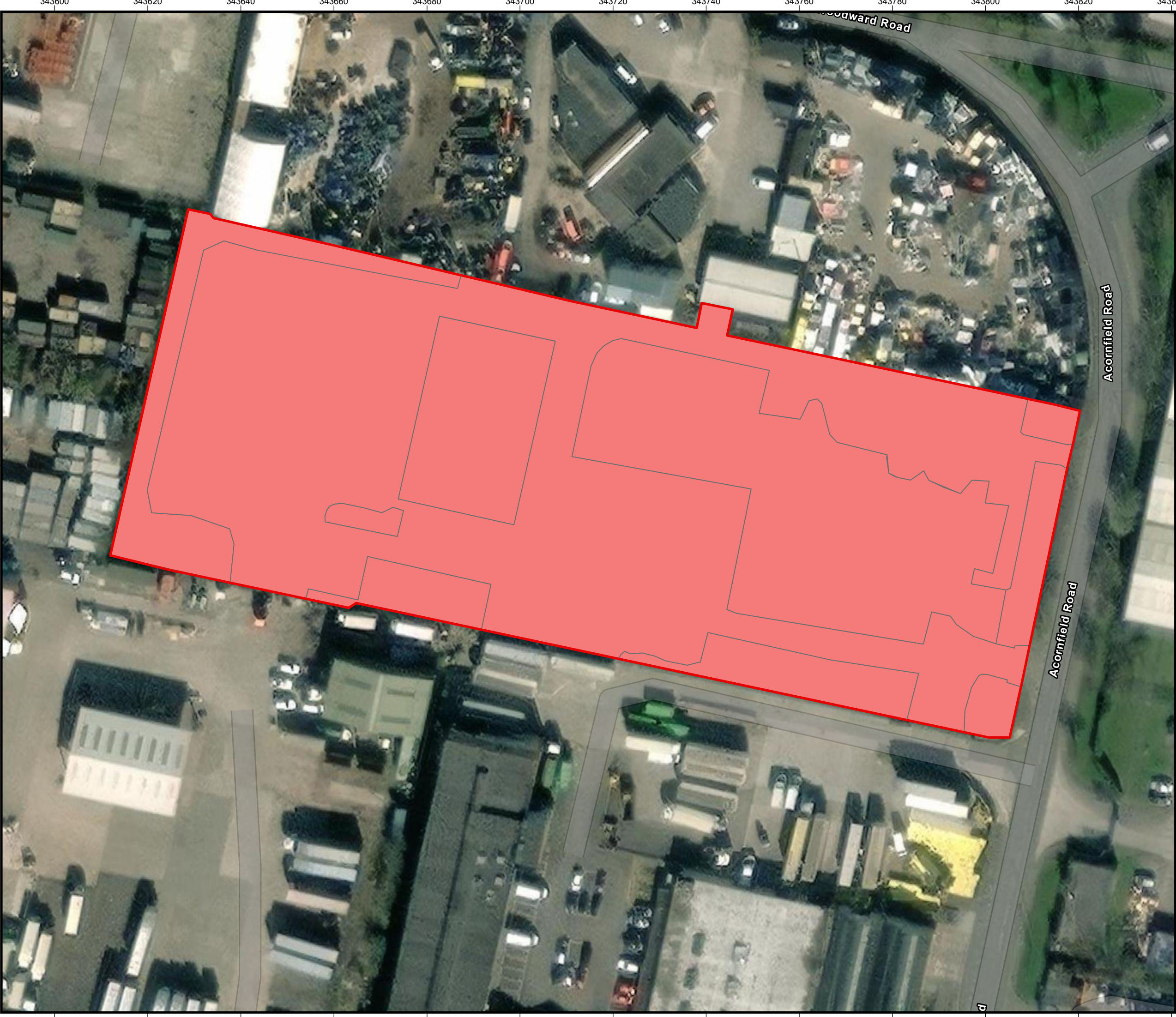


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Client: Ryder & Granite Estates Limited		
Project: Knowsley Industrial Estate		
Title: Post Development UKHAB Habitat Map		
Issue: 01	Figure: 00	
Drawn: CL	Checked: TM	Approved: TM
Project: UG3078	Scale @ A3: 1:750	Date: 07/10/2025
Dwg No: UG_3078_BNG_PDHM_01	Revision: 01	

APPENDIX 8 - HABITAT RETENTION PLAN

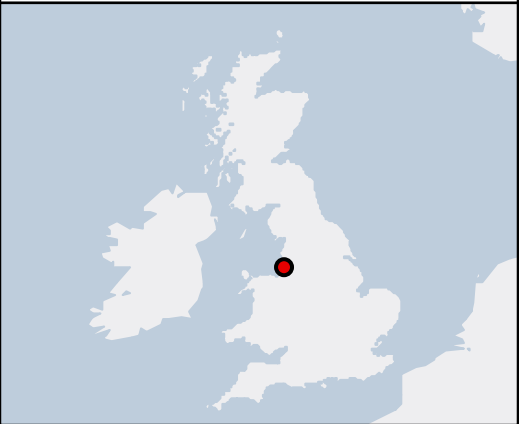
U R B A N
G R E E N



U R B A N
G R E E N

Legend

- Red Line Boundary
- Lost



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Client: Ryder & Granite Estates Limited		
Project: Knowsley Industrial Estate		
Title: Habitat Retention Results		
Issue: 01	Figure: 00	
Drawn: CL	Checked: TM	Approved: TM
Project: UG3078	Scale @ A3: 1:750	Date: 26/09/2025
Dwg No: UG_3078_BNG_HR_01		Revision: 01

APPENDIX 9 - INVASIVE AND NON-NATIVE SPECIES

- 5.1.1.1 An invasive, non-native species is a species that is present outside of its native range but has established populations after accidental or intentional introduction to a geographical region. These species have negative ecological impacts on the environments in which they are present by outcompeting native flora and fauna for resources, facilitating the spread of disease, and interrupting natural food webs.
- 5.1.1.2 Schedule 9 of the Wildlife and Countryside Act 1981 and the Invasive Alien Species (Enforcement and Permitting) Order 2019 list the species within the UK which are considered invasive and are damaging to biodiversity. It is the legal responsibility of the landowner to control populations of invasive species and prevent their growth and spread.
- 5.1.1.3 While no invasive species were identified onsite; however, it should be noted that some invasive non-native plants are very fast spreading and therefore the potential for these species to be introduced to the site at a later date cannot be ruled out.
- 5.1.1.4 The table below details common invasive, non-native species listed on Schedule 9 and the Invasive Alien Species Order 2019 and how to identify them. If any are identified onsite, a professional management company that specialises in invasive species should be contacted immediately.

Common name (<i>scientific name</i>)	Identification		
Himalayan balsam (<i>Impatiens glandulifera</i>)	• Green or red stems • Serrated oval leaves growing in a whorl round the stem • Bright pink flowers		
Giant Hogweed	• Up to 4m in height • Large white flower clusters • Green stem with purple blotches • Large compound leaves with serrated edges, up to 1.5m across		

Japanese knotweed (<i>Fallopia japonica</i>)	• Bamboo like stems with purple flecks • Large, shovel shaped leaved • Cream/white clustered flowers		
Rhododendron (<i>Rhododendron</i> spp.)	• Woody stems • Oval, dark green, glossy leaves • Dense clusters of flowers of various colours		
Montbretia (<i>Crocsmia</i> <i>x crocosmiiflora</i>)	• Low growing plant • Long, thin, light green leaves • Bright orange flowers		

Cotoneaster (<i>Cotoneaster</i> spp.)	• Genus of flowering plants • Dense, shrubby growth • Small, shiny, dark green leaves • Small white or pink berries with red berries in autumn	
Variegated yellow archangel (<i>Lamium galeobdolon</i> subsp. <i>Argentatum</i>)	• Low growth which forms carpets on the ground • Opposite, variegated leaves • Small, round, yellow flowers	