

NHM UNLOCKED THAMES VALLEY SCIENCE PARK, READING

LANDSCAPE MANAGEMENT PLAN

RD001-FCB-XX-XX-RP-L-9010

P02 12.05.2025



Natural
History
Museum



grant
associates



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1. INTRODUCTION

1.1 Introduction

This document has been produced to discharge Planning Condition 23 relating to the Landscape Management Plan of the planning application for NHM Unlocked Thames Valley Science Park on behalf of our client Mace Construction Ltd.

This Landscape Management Plan has been developed as an essential document providing a framework and understanding of the management, maintenance, and habitat creation for the landscape as a whole. The purpose of this document is to set out the key principles and objectives of the long term landscape management and sets out the key maintenance operations and schedules to ensure long term health of the soft landscape.

1.2 Key Management Principles and Objectives

The key objectives of long term management will be to ensure:

- The long-term interests of biodiversity, nature conservation and landscape structure are safeguarded.
- The development and establishment of the landscape in line with the Council's planning conditions and guidelines / particularly with regard to tree/plant replacements.
- Management operations to minimise disturbance to the natural land systems such as vegetation cover, soil structure and ground drainage.
- Sustainable and environment friendly approach is adopted for all operational and maintenance tasks.
- Vegetation and landscape components are controlled to maintain a safe environment for the public, maintenance operatives and other site users.
- Educational, office amenity and general visitor experience is maximized and managed.
- Establish a long term plan for maintaining and monitoring existing and proposed habitats. A commitment to replace dead or defective planting stock for a period of 5 years.

- Adaptation to Climate Change. The landscape proposals will need to be monitored and evolve with future climate change in mind, factoring in water management systems, drought tolerant planting and a variety of species to provide biodiversity to combat the potential known and unknown effects of a changing climate.

1.3 Lifecycle

It is assumed that any replacement materials implemented through the lifetime of the project within the scope of this report shall be 'like for like' with the original specification including requirements for materials life span of minimum 30 years unless otherwise noted.

1.4 Duration of Plan

The maintenance tasks and management objectives included in this report assume ongoing works for the lifetime of the development.

1.5 Scope

This scope of this report covers the hard and soft landscape within the extent of the proposed Thames Valley Science Park. Exclusions include but are not limited to:

- Offsite enhancement and BNG areas;

1.6 Management Responsibilities

Establishment and management of the existing habitats and proposed landscape areas shall be the responsibility of the client. The Landscape contractor appointed to deliver the soft landscape works will be responsible for the establishment of the newly created habitats until the Defects Liability period. Following which the ongoing management and maintenance of the soft landscape will be taken over by a management company appointed by the client.

2. LANDSCAPE CONTEXT

2.1 Landscape Setting

The site is set within a predominantly agricultural landscape, bordered on the east and western boundaries by woodland. The site is agricultural and currently being farmed under an arable regime as part of the University of Reading's Farm Estate. The southern area of the field is a pheasantry with a scattering of individual tree specimens of varying age and species.

The western boundary of the site is enclosed by St John's Copse, an area of Ancient Semi Natural Woodland (ASNW) that is listed on Natural England's Provisional Ancient Woodland Inventory (PAWI) and appears on the early maps of the area including the Earl of Fingal's 1756 Estate Map. To the east of this is New Covert, an area of more recent Victorian woodland. The northern boundary is currently undefined and open but will be an estate road with a roundabout for the entrance to the NHM site. The southern boundary of the site is hedgerow and individual specimen trees of varying age and includes two veteran trees and one high quality tree (T39, T40 & T41) which will need to be retained and protected.

The wider landscape character to the south comprises an undulating patch-work of fields, hedgerows and wooded copses. The River Loddon lies to the south of the site and the presence of water within the Loddon River Valley characterises the farmed valley floor that encompasses the site and the surrounding area. The significant number of woodland blocks and mature trees make an important contribution to the rural character. Ditches are prevalent along hedgerows and the perimeter of the woodland which drain stormwater runoff from surrounding fields and roads. The site itself has a gradient of approximately 1% falling from 43m elevation to approximately 41 m elevation. To the north west the Thames Valley Science Park is the only significant development in close proximity.

2.2 Landscape Character

The site is located within Natural England's National Character Area (NCA) 115 (Thames Valley), with NCA 129 (Thames Basin Heaths) located just to the south toward the Arborfield Road. The site is also located within Wokingham

District Landscape Character Assessment (2004) Type A: River Valley - A2 - Loddon River Valley.

The immediate vicinity of the site is somewhat atypical of the wider NCA area, in that it supports a comparatively greater proportion of agricultural land, of which more is arable as opposed to pasture. The NCA profile for Thames Valley sets out several Statements of Environmental Opportunity (SEOs) for this area. Those that are potentially relevant to the proposals include [relevant extracts]:

The NCA profile for Thames Valley sets out several Statements of Environmental Opportunity (SEOs) for this area. Those that are potentially relevant to the proposals include [relevant extracts]:

- SEO 3 – Maintain existing greenspace and plan for the creation of green infrastructure associated with the significant projected growth of urban areas, to reduce the impact of development, to help reduce flooding issues, and to strengthen access and recreation opportunities.... Promote the incorporation of best practice environmental measures into any new development;
- SEO 4 – Protect and manage the areas' historic parklands, wood pastures, ancient woodland, commons, orchards and distinctive ancient pollards, and restore and increase woodland for carbon sequestration, noise and pollution reduction, wood fuel and protection from soil erosion, while also enhancing biodiversity, sense of place and history;
- SEO 5 – Develop the recreational, education and commercial tourism opportunities offered by public access to – and engagement with – the historic... landscapes in the area....

In addition, local plan Policy TB21, the landscape planning proposals must demonstrate how they have addressed the requirements of the Council's Landscape Character Assessment, including the landscape quality; landscape strategy; landscape sensitivity and key issues. Proposals shall retain or enhance the condition, character and features that contribute to the landscape.



2. LANDSCAPE CONTEXT

2.3 Existing Assets

Existing Woodlands

Woodland blocks St John's Copse and New Covert are located respectively to the west and east of the site. St. John's Copse is 'listed on Natural England's Provisional Ancient Woodland Inventory'.

A Planning and Development guidance published by Natural England and the Forestry Commision states that:

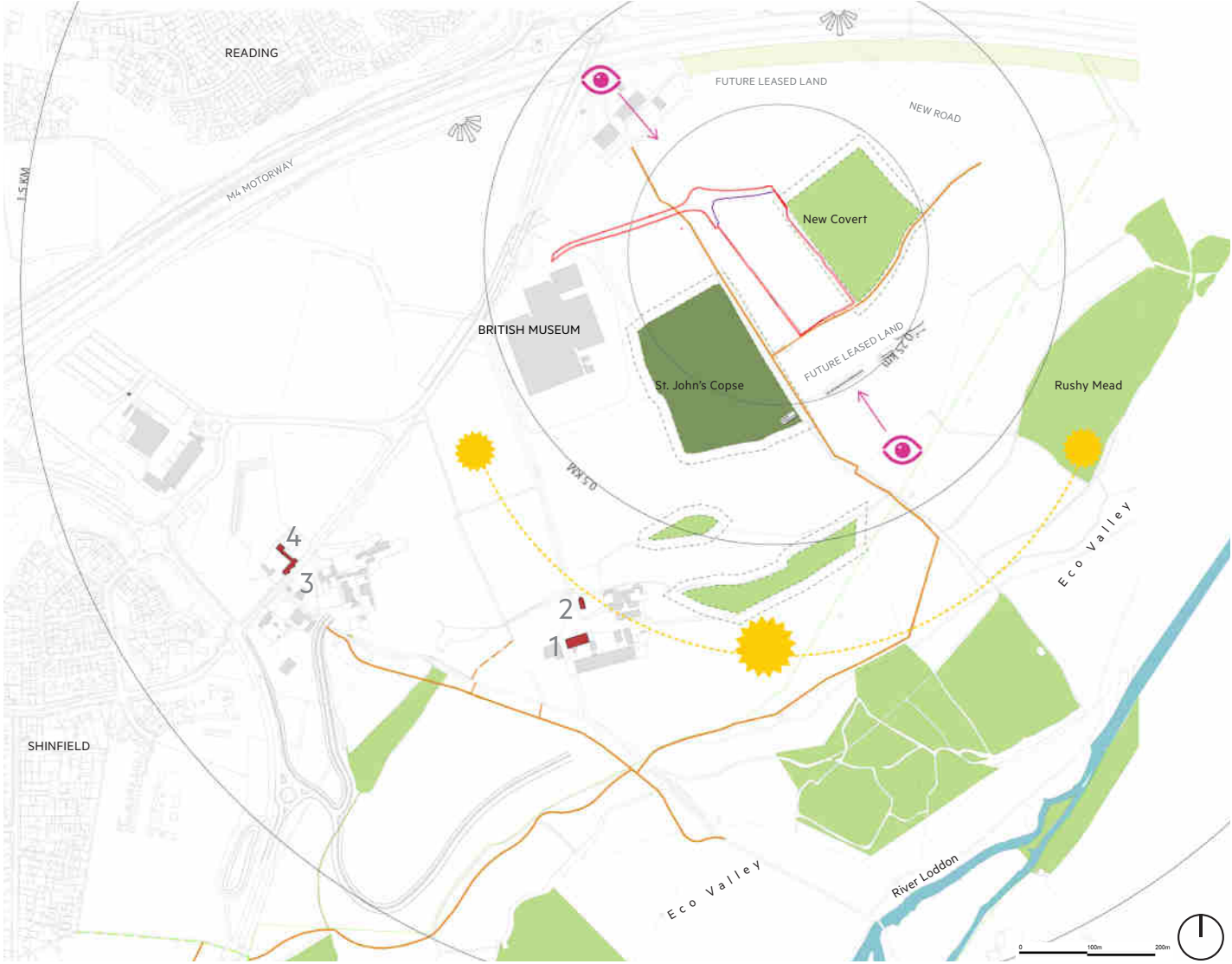
"Trees and woodland classed as 'ancient' or 'veteran' are irreplaceable. Ancient woodland takes hundreds of years to establish and is considered important for its wildlife, soils, recreation, cultural value, history and contribution to landscapes.

Following the guidance a 15m buffer zone will need to be maintained around St. John. Copse to preserve the woodland and protect the area from development. Although, New Covert is not an ancient woodland, it is also required to have a minimum 15m natural buffer.

Existing Trees

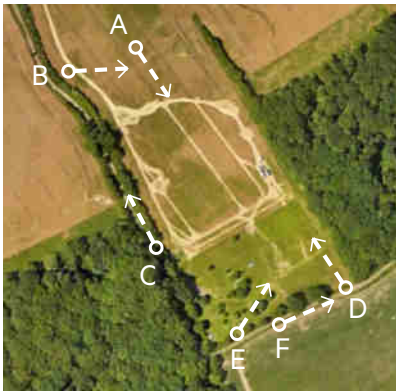
There are a number of existing trees located within the site and an hedgerow along the south boundary. An Arboricultural Survey undertaken by Tree Frontiers Ltd (in June 2022) in accordance with BS5837 provides information on type, age, condition and landscape value of the existing trees within and immediately adjacent to the site. The tree line and hedgerow along the southern boundary contains two veteran Oaks that, like the provisional ancient woodland, are considered 'irreplaceable' habitat.

A diagram illustrating the summary of the arboricultural assessment is set out on the following pages.



Existing Landscape Feature Around the Site

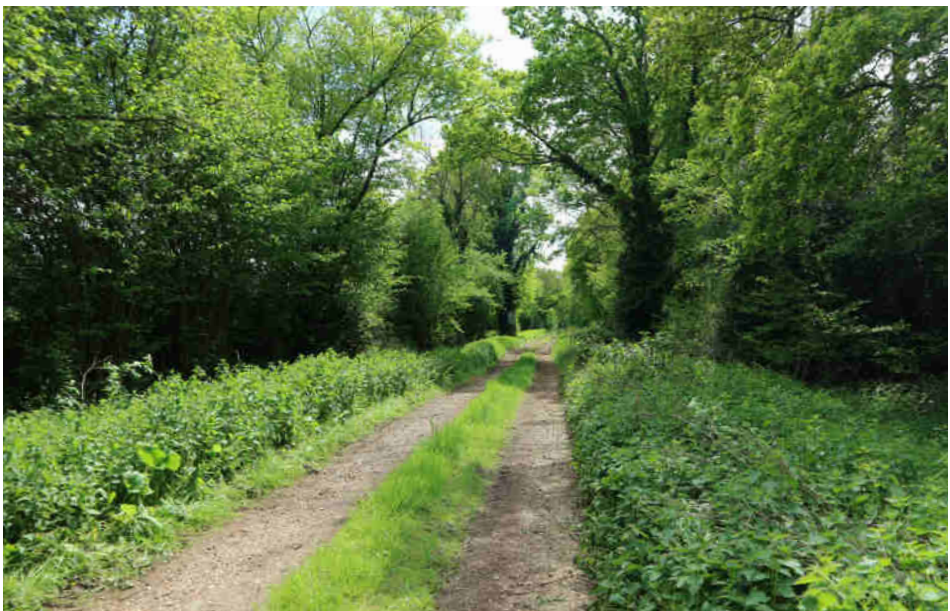
3. LANDSCAPE APPROACH



A. New Covert and St. Jhon woodlands view from North to South



B. Site and New Covert woodland view from North to South-East



C. Existing road on east boundary



D. Site and New Covert woodland view from South to North



E. Southern boundary



F. Southern boundary

3. LANDSCAPE APPROACH

3.1 Landscape Vision and Approach

The landscape strategy is an integral part of the vision for NHM Unlocked to create a sense of place which connects people and nature as well as promotes a healthy and curious working community.

The following design principles inform the landscape vision:

- To establish a landscape setting for the new building which is sensitive to the Thames Valley context and, with the architecture, expresses the identity of NHM Unlocked.
- To create a place which has attractive public spaces and landscapes, which supports staff and users' wellbeing, amenity and productivity.
- To develop an environment which builds on NHM's vision of a future where both people and the planet thrive .

The overall approach will establish a site master plan which responds positively to the sensitive landscape context, the ancient woodland and local natural and cultural heritage. The site organisation creates a clear hierarchy of public and private space, so that the site is connected, accessible and a fully integrated part of the Thames Valley campus and wider community.

The overriding aim of the external environment is to make people feel good about the place in which they work and to help inspire wonder and curiosity in the natural world, where the landscape spaces support opportunities for people and nature.

3.2 Integration of Infrastructure

The new road and roundabout alignment and the estate road is outside the site boundary of the NHM site as defined on the plan. The interface with this access road is important to ensure an appropriate landscape and public realm setting along the west elevation and to ensure the levels and alignment work with the proposed NHM development.

3.3 Integration of Security elements

The site layout and landscape sensitively integrate the security requirements within the overall masterplan and

landscape detailing. The security strategy proposes a range of measures including bollards, perimeter fencing and boulders. To the north of the building the potential risk of attack by hostile vehicle is mitigated by a combination of PAS 68 rated bollards and features integrated into the landscape including large boulders, mounding and attenuation pond.

3.4 Landscape and Circulation

The need to balance the requirement for comfortable, inclusive and legible access to and within the site against the landscape and ecological constraints and operational needs is an important masterplanning consideration. Particular care has been given to the design and siting of vehicular access, drop off and servicing as well managing the movement of cyclists, active travel, and people movement, whilst creating the right level of arrival and welcoming experience. The careful integration of the back of house facilities is a key consideration including mitigating the potential landscape and visual impact of this area.

3.5 SUDs – Sustainable Drainage Systems Principles

An integrated approach to the proposed Surface Water Drainage Strategy is proposed to help structure the landscape of the site.

Sustainable urban drainage (SuDS) techniques will be adopted to attenuate water flow, help treat drainage runoff and to provide onsite storage and attenuation which are soft, nature-based solutions such as the attenuation pond at the entrance space; rain gardens and swales around the perimeter of the building; together with porous paving in the car park. These SuDs features will enable the reduction of peak flows and removal of a portion of runoff by evapo-transpiration as well as create amenity features and enhance the biodiversity value of the site.

The following principles and measures have been incorporated:

- Water attenuation pond at the site entrance with marginal and aquatic planting and timber deck for community and social use. The basin is designed to a depth of 1 m and to be lined with puddled clay to accommodate standing water all year round for aquatic plants and supporting invertebrates, amphibians and species that prey on these such as bats.

- Rain garden along the western elevation integrating a diversity of perennials and pollination plants.

- Swales along the eastern and southern boundaries providing water conveyance and damp grassland ecosystems

- Porous parking to the parking areas.

3.6 Baseline Ecology

7no. statutory designated sites are located within 5 km of the site. These include Longmoor Bog SSSI, Stanford End Mill and River Loddon SSSI, Lodge Wood & Sandford Mill SSSI, Highwood LNR, Maiden Erlegh LNR, Swallowfield Meadow LNR and Longmoor Bog LNR, supporting an interesting array of flora and fauna including woodland habitat, birds, butterfly, insects etc.

In addition to the above a total of 16 non-statutory designated Local Wildlife Sites (LWSs) are located within 2kms of the site. The closest of the LWSs to the site is St John's Copse LWS, which lies immediately west of the Site and is designated for supporting lowland mixed deciduous and wet woodland. The site is an area of likely Ancient Semi Natural Woodland (ASNW) that is listed on Natural England's Provisional Ancient Woodland Inventory (PAWI) and appears on the earliest map of the area seen by EPR, the Earl of Fingal's 1756 Estate Map. The canopy is dominated by English Oak (*Quercus robur*), Alder (*Alnus glutinosa*) and Poplar cultivars with an understorey of Field Maple (*Acer campestre*), Hazel (*Corylus avellana*), Grey Willow (*Salix cinerea*) and Holly (*Ilex aquifolium*). There is evidence of replanting with Poplar cultivars and also occasional conifer species.

3.7 Biodiversity Net Gain (BNG)

The newly created habitats as part of the proposed development have been reviewed with the Ecologist and adapted to maximise biodiversity benefit. The BNG calculation as set out in the Ecological Impact Assessment (EclA) prepared by EPR in November 2023, takes into account the new habitat areas proposed in the landscape plan, these include -

- shrub and trees planting along the southern edge of

the Site and provision of species rich grassland and woodland ground flora planting, creating a green corridor linking St John's Copse and New Covert.

- creation of a rain garden along west road and in the arrival court
- new species-rich 'other neutral grassland' and scrub planting in the New Covert woodland buffer zone to the east of the proposals, as well as in the northern and southern greenspace areas.

- creation of a new pond / SUDs basin, to include species-rich damp neutral grassland, mixed native shrub and woodland.

- creation of new native hedgerows along the south, east and west boundary.

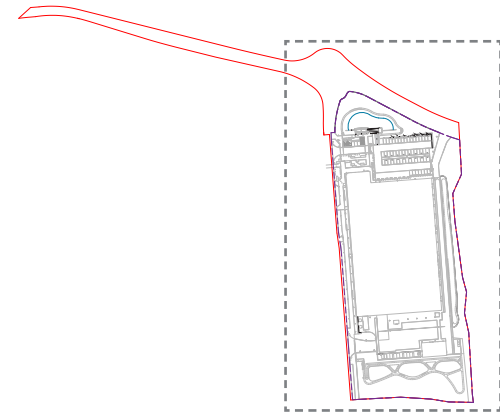
- planting of new trees mainly native species.

The BNG calculation shows that -

- Habitat Units on site will fall from a pre-development baseline of 11.35 units to a post development position of 7.44 units (a net decrease of -34.46%).
- Hedgerow Units on site will rise from a pre-development baseline of 1.22 units to a post development position of 2.24 units (a net increase of +83.83%).

The EclA concludes, although delivery of Habitat Units has been maximised insofar as is reasonably possible it will not be possible to deliver a net gain in area-based habitat units in the undeveloped part of the site due to the constraints associated with the size of the development site. Therefore, it will be necessary for the proposed development to purchase the delivery of approximately 6.18 Habitat Units off-site in the neighbouring Eco Valley project administered by the University of Reading within the Loddon Valley South Biodiversity Opportunity Area, or at an appropriate location elsewhere, in order for the proposed development to achieve it's assigned target of delivering a net gain of 20% in biodiversity units over the pre development baseline position. It will not be necessary for the Proposed Development to purchase any off-site Hedgerow Units, given the substantial uplift forecast.

3. LANDSCAPE APPROACH



Key plan:

- Planning boundary
- - - LMP Scope boundary
- 1. Access road link
- 2. Cycle store
- 3. Arrival Court and visitor parking
- 4. Combined SUDs/ Natural Pond with deck platform and pergola
- 5. Minibus stop
- 6. Woodland edge planting
- 7. Car Parking
- 8. Disabled parking
- 9. Exit Road
- 10. Pedestrian crossing point
- 11. Rain garden and planting buffer.
- 12. Entry point to the service area
- 13. Service area
- 14. External Wet Prep and Liquid Nitrogen Tanks
- 15. Compost Area
- 16. Accessible terrace on L01
- 17. SUDs Swale
- 18. Woodland - Fruit Forest
- 19. Provision for future area link
- 20. Access road
- 21. Meadow
- 22. Existing trees and hedge row
- 23. Seating spaces
- 24. Picnic tables and benches



3. LANDSCAPE APPROACH

3.5 Key Landscape Spaces:

The landscape strategy for Thames Valley Science Park seeks to create a healthy working community connecting people with nature and creating a sense of identity.

The key landscape spaces include:

- **Arrival court** - The space between the building main entrance and the water pond to the north is the first arrival experience. The Arrival court formed of hard paved areas, planting beds with trees and seating blocks seeks to provide a landscape setting to the new building. A combination of large stones and timber furniture in a variety of different sizes and locations provides inclusive seating opportunities for visitors and staff. A deck space next to the attenuation pond accessible from the Arrival court provides an important amenity space offering seating and relaxation opportunities.
- **West road & rain gardens** - The new arrival road proposed to the east of St. John's Copse is an important piece of new infrastructure providing access to the new building. The design proposal sensitively integrates the road and the associated infrastructure (such as crossings, bus bay) balancing the accessibility requirements. A continuous walkway, SUDs features with new trees and benches provides seating opportunities for the staff in the close proximity of the building with views towards the existing Woodland Copse.
- **South Garden** - The south garden is envisaged as a flexible and quiet space for visitors and staff activities - ideal for outdoor study, group activity or informal working meetings with easy access from the rear of the

building. The existing mature trees bolstered with new understorey planting seeks to strengthen the connection with the wider ecological network.

- **North Garden** - The area to the north of the Arrival and Parking Courts is designed as natural woodland with limited access (only for maintenance) to from a buffer sensitively integrating the proposed development into the wider landscape setting.
- **East road & Woodland edge** - Area to the east of the building comprises of a asphalt road providing service access, swale along the road for water conveyance contributing to the sitewide SUDs strategy and existing ecologically sensitive Woodland edge enhanced with new grassland planting.
- **Parking Court** - East of the Arrival Court accommodates 64 parking spaces with new tree planting.

Key

- Planning boundary
- - - LMP Scope boundary



Key Landscape Spaces

Existing field

4. LANDSCAPE STRATEGY

4.1 Landscape and Biodiversity Enhancement Strategy

The opportunity to enhance local biodiversity is central to the soft landscape strategies for the site with a wide range of planting typologies proposed that feature both native species, and species which provide food and habitat for wildlife whilst also maintaining an attractive, robust and easy to maintain planting scheme. The proposed landscape masterplan and planting strategy incorporates a range of biodiversity enhancement measures with the aim of making the NHM Unlocked an integral part of the wider campus ecology.

Specific measures include using native wildlife attracting plants; planting species-rich native hedging; creating green 'wildlife' corridors around and across the site; planted drainage features; rich and bee friendly border planting; large legacy native broad-leaved trees.

4.2 Climate Resilient Landscape

The landscape proposals for Thames Valley Science Park have been developed with future climate change in mind, factoring in water management systems, drought tolerant planting and a variety of species to provide biodiversity resilient to the potential known and unknown effects of a changing climate.

The proposed landscape design measures to support the overall Climate Adaption Strategy include the following:

- An integrated approach to drainage and SuDs including porous paving, rain gardens, linear swales and attenuation pond. Collectively these are an effective way

to help manage stormwater and reduce flooding risks and can also help recharge groundwater and maintain local water resources.

- Soil strategy to reuse site won topsoil to promote low maintenance and resilient planting. Erosion control measures and groundcover planting have been proposed to help preserve the valuable topsoil.
- A multi-layered and biodiverse approach to the planting design offering ecological enhancement; shade and shelter creating more comfortable outdoor spaces during hot weather.
- Tree and plant selection to accommodate changes in temperature; weather fluctuations and drought tolerance. The design prioritizes plants and materials that can withstand high temperatures and extended periods of drought. This ensures that the landscape remains vibrant and functional even during challenging climate conditions.

4.3 Existing Trees

The Site is not located in a conservation area and no trees are subject to a TPO

Several features (W1, H11, H42 and W43) are classified as Priority Habitat – Deciduous Woodland. This designation provides no specific protection but may be a material consideration as part of any planning submission at a later stage.

Key

- Planning boundary
- - - LMP Scope boundary
- Summary of existing trees
- Category A
- Category B
- Category C
- Category U
- RPA Root protection area

Source: 120-TVSP-INF-SCH-01 SW 170622 ARBORICULTURAL SURVEY by Tree frontiers



4. LANDSCAPE STRATEGY

The location of two veteran trees and one high quality tree (T39, T40 & T41) on the southern boundary are important existing trees to be retained and protected in accordance with the extents of their RPA.

The site has a wide variety of existing tree species and therefore the choice of tree species and size for replacement planting is determined through consideration of the use of the areas into which replacements are being planted.

4.4 Retained and Removed Trees

The proposed development requires the removal of 17 no. trees and section of the existing hedgerow along the south boundary as identified on the Tree Plan. The proposed planting will compensate for the tree loss and removal.

The proposed estate road will result on the loss of a section of the hedgerow and 1no. tree subject to the alignment, width and level of the road.

TREES TO BE REMOVED		
TREE NO.	SPECIES	CATEGORY-SUB-CATEGORY
T037	Field Maple (Acer campestre)	C-1
T045	Common Ash (Fraxinus excelsior)	C-1
T046	Common Ash (Fraxinus excelsior)	C-1
T049	False Acacia (Robinia pseudo-acacia)	C-1
T050	False Acacia (Robinia pseudo-acacia)	U-U
T051	Common Ash (Fraxinus excelsior)	U-U
T052	Blackthorn (Prunus spinosa)	C-1
T053	Common Ash (Fraxinus excelsior)	C-1
T054	Common Ash (Fraxinus excelsior)	C-1
T055	False Acacia (Robinia pseudo-acacia)	C-1
T056	False Acacia (Robinia pseudo-acacia)	C-1
T061	Common Ash (Fraxinus excelsior)	C-1
T062	False Acacia (Robinia pseudo-acacia)	C-1
T064	Common Ash (Fraxinus excelsior)	C-1
G063	Field Maple X4(Acer campestre X4)	C-1

RETAINED TREES		
TREE NO.	SPECIES	CATEGORY-SUB-CATEGORY
T038	Field Maple (Acer campestre)	B-1
T039	Pedunculate Oak (Quercus robur)	A-3
T040	Pedunculate Oak (Quercus robur)	A-1
T041	Pedunculate Oak (Quercus robur)	A-1
H036	Blackthorn (Prunus spinosa)	C-2
H042	Blackthorn (Prunus spinosa)	C-2

Key

Planning boundary

LMP Scope boundary

Summary of existing trees

Category A trees retained

Category B tree retained

Category C tree retained

RPA

Root protection area

Tree to be removed



Source: 120-TVSP-INF-SCH-01 SW 170622 ARBORICULTURAL SURVEY by Tree frontiers

4. LANDSCAPE STRATEGY

4.5 Proposed Tree Strategy

A mix of native and ornamental trees have been proposed across the site providing a resilient framework to the landscape areas and contributing to the biodiversity value bolstering links to the wider ecological network.

- Existing semi-mature and mature trees retained and complemented with new trees to the south to provide valuable habitat and strengthen wildlife connection to the neighbouring existing woodlands - St. John's Copse and New Covert woodland to the east.
- New woodland planting comprising a mix of native trees is proposed to the north of the building with an emphasis on biodiversity enhancement and landscape integration into the wider setting.
- New tree planting to provide structure to the Arrival court and enhance the visual character. The tree planting will be a combination of line of trees along the car park and clusters or single specimen trees at strategic locations in the arrival area.
- A mix of native and ornamental proposed along the west road provide scale and enhance the amenity value.

Key plan:

- Planning boundary
- - - LMP Scope boundary
- Woodland mix trees
- Specimen trees
- Street trees
- Existing trees



4. LANDSCAPE STRATEGY

4.6 Proposed Planting Strategy

The planting character of Thames Valley Science Park comprises a range of planting typologies that contribute to long term establishment of a rich and diverse landscapes and establishment of connections with the wider ecological habitat corridors. The plant mixes have been designed to provide structure throughout the year and seasonal interest through colour. Key design considerations and planting character areas are as follows.

- Woodland understorey planting - A mix of shrubs, herbaceous perennials and ferns forming the understorey layer to the existing and new tree planting provides forage for wildlife and year round structure.
- Woodland edge planting - A mix of native shrubs (like Dogwood, Hawthorn, Alder Buckthorn, Hazel, Holly) supplemented with shade tolerant wildflower and grass seed mixes is planted along the east boundary to provide habitat continuity with New Covert woodland.
- Native hedgerow planting - New hedgerow planting comprising native species such as Blackthorn, Hawthorn and Guelder rose to complement existing hedgerow along south boundary to provides habitat connectivity with New Covert woodland.
- Rain garden planting - Mixed native and naturalistic planting tolerant to wet and dry soils comprising evergreen and deciduous foliage interspersed with flowering species adding colour through the seasons. Mix

Key plan:

- Planning boundary
- - - LMP Scope boundary
- W1 - Woodland mix 1 - Fruit Forest
- W2 - Woodland mix 2
- WE 1- Woodland Edge: Shrubs
- WE 2- Woodland Edge: Grassland
- SW1 - Edge Swale: Grassland mix
- SW2 - Edge Swale: Aquatic and marginal plants
- RG - Rain Gardens: Small to medium trees and water tolerant understorey plants
- MD1 - Meadow Mix 1. Plants for pollinator and native grasses
- MD2 - Meadow Mix 2 - Wet meadow mix
- AC - Arrival Court garden
- H1 - Hedge row
- H2 - Existing hedge row

consists of perennials, ferns, grasses and groundcovers.

- Wet meadow and marginal planting - Side slopes of the attenuation pond and swale along the east service road are planted with planted with a mix of grasses and herbeceous perennials suited to both wet and dry conditions.
- Arrival court garden - A combination of evergreen and deciduous planting to the multi stem trees in the arrival area provides colour for seasonal interest and nectar for wildlife.
- Wildflower planting - Areas of meadow planting are proposed along the buffer zones and southern area landscape to from the understorey layer to the woodland planting. These would be managed in such a way as to allow species present to flower and set seed.



4. LANDSCAPE STRATEGY

4.7 Integration of Biodiversity Enhancements in Landscape

In addition to diverse planting proposals the following measures are proposed to increase and enhance the biodiversity on site and form connections to the wider landscape.

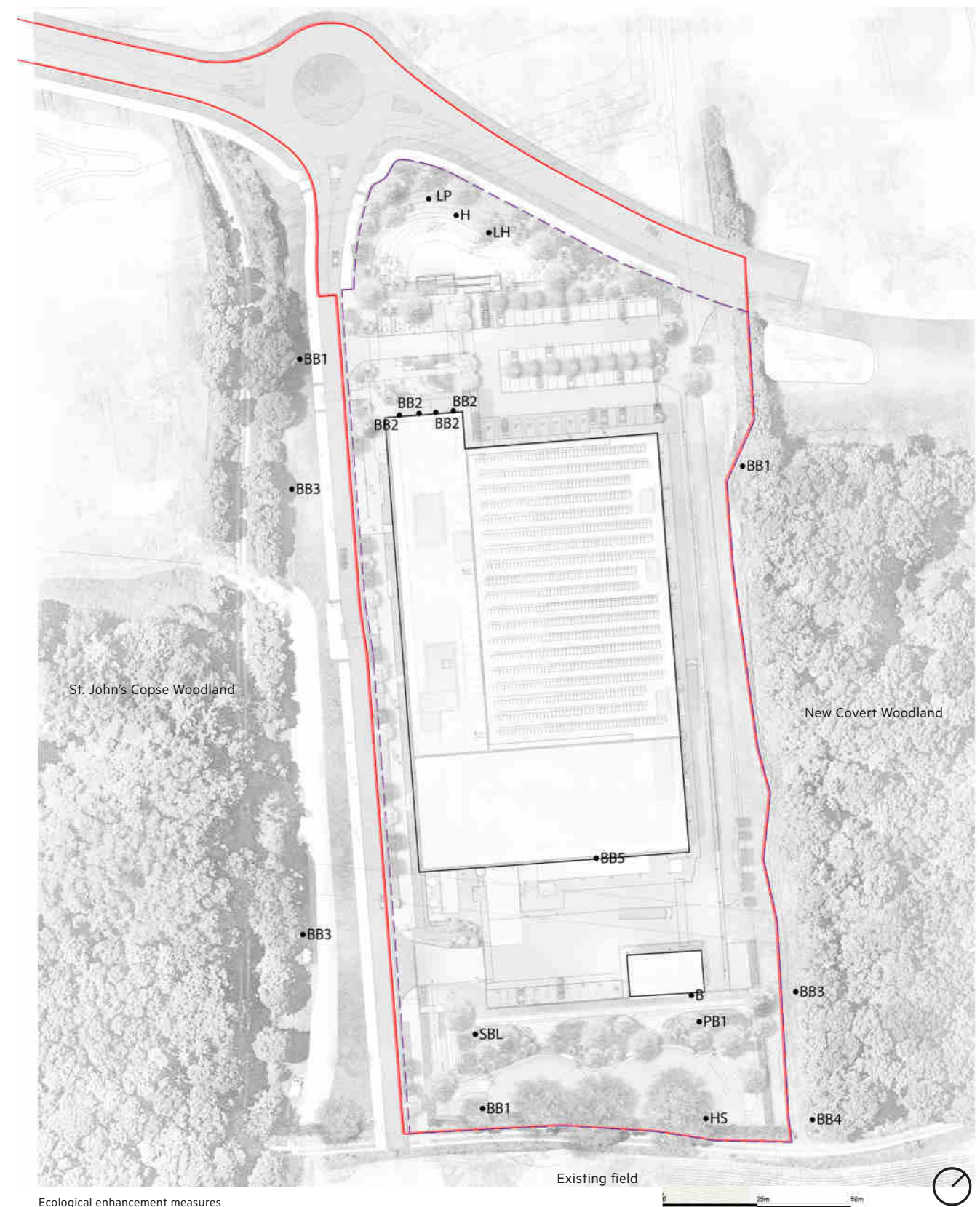
- Log piles - focused within the buffer zones and constructed out of materials from tree felling / clearance work.
- Insect boxes - standalone boxes as well as features detailed and integrated into the landscape.
- Bird boxes - a range of bird boxes to be installed throughout the landscape attached to existing or larger proposed trees. Emphasis to be placed on locating additional boxes within the buffer zones, where possible. Bird boxes to cater for a variety of bird species.

Refer to Ecologist's proposal for ecological enhancement measures.

Key plan:

- Planning boundary
- - - LMP Scope boundary

- BB1 - Bat Box
- BB2 - Swift boxes
- BB3 - Bird boxes
- BB4 - Barn Owl Box
- BB5 - House Sparrow/Black Redstart terraces
- PB1- Pole Mounted Bat Box
- LP - Log piles
- SBL - Stag Beetle Loggery
- LH - Grass Snake Egg laying
- H - Reptile/Amphibian Hibernacula
- B - Bee holes
- HS - Hedgehog Shelter



5. KEY MAINTENANCE OPERATIONS

5.1 Introduction

This section sets out to give a broad overview of the key maintenance operations for soft and hard landscape. Further information on maintenance requirements can be found on the drawings and in the following descriptions of soft and hard landscape maintenance works.

5.2 Establishment Period

The key object throughout the establishment period is to maintain the site in a neat tidy and safe manner with attention to key horticultural tasks thereby supporting the continued growth, health and vigour of all plant material and grass swards for amenity and habitat creation. Whilst pruning schedules are provided, it should be recognised that additional pruning may be necessary in response to periods of accelerated growth or for reason of health and safety. Should areas of planting suffer damage through excessive use, planting replacements shall be 'like for like' with the original specification. In addition hard surfaces will require regular inspection and maintenance as outlined in the relevant Maintenance Schedules. Generally tasks may include inspection and maintenance of fencing, landscape furniture, lighting, paving, steps, pergola and pond deck. All operations should be read in conjunction with the Operation & Maintenance (O&M) Manual. Proprietary system maintenance requirements covered in the O&M manual should be assumed to take precedence over the Management Plan.

The Contractor will have obligations to ensure the successful establishment and maintenance of landscape works both pre- and post- Practical Completion. Upon Practical Completion, a Defects Liability Period commences, during which time the Contractor is responsible for the maintenance of the landscape and the replacement of any defective plants, materials, fixtures and fittings. Requirements for maintenance works during the Defects Liability Period are set out in the Contract Documents and summarised in Section 6 of this document. Following successful completion of the Defects Liability Period, the responsibility for the maintenance of the landscape works will be handed over the management company.

Although the Defects Liability Period will cover most of the

period required for the establishment of new planting, it is important that ongoing maintenance continues to follow the guidelines set out in Q35 of Specification for Hard & Soft Landscape Works, also included in Appendix 3, in order to ensure continued establishment.

5.3 Maturation Period

The maturation period for each of the landscape character areas is dependent on the individual planting regimes found within each area. As a general rule, the amenity grass will be fully established within 2-3 years, due to the use of seed mix and associated herbaceous/bulb planting should take 2-3 years to fully establish and close up, whilst hedge planting can take as long as 5 years to establish a dense, consolidated form. The maturation of trees will depend on a number of factors, namely species, planting size and location.

5.4 Soft Landscape Maintenance Operations

The following pages illustrate the distribution of different maintenance regimes for the soft landscape, including herbaceous perennials and ornamental grass mixes, amenity lawn, shrub, marginal plants and tree maintenance. The planting plans included in Appendix 1 should be read in conjunction with the Maintenance Schedules set out in Section 5 of this document and the clauses included within Section 6 of this document. Key soft landscape maintenance operations include the following:

- Refirming and uprighting of plants;
- Cultivation/recompaction of soils;
- Topdressing;
- Fertilizing and amelioration (where appropriate);
- Adjustment of tree stakes, ties and underground anchors;
- Pruning and deadheading;
- Deadwooding and crown lifting/thinning;
- Formative pruning of young trees;
- Hedge trimming and formative pruning;
- Thinning and division;
- Replacement of plant failures;
- Weed control;
- Topping up of mulch layers;
- Pollarding;
- Grass cutting;
- Regular watering/irrigation to aid establishment;

- Litter picking and leaf removal;
- Meadow grass cutting;
- Pest and disease control (impacting on plant establishment);
- Maintenance of specialist elements - e.g. bird and bat boxes.

5.5 Hard Landscape Maintenance Operations

- Maintenance of fencing;
- Monitoring and removal of excess algae, moss, weed growth and litter from hard landscape surfaces including attenuation pond terraces, steps and walkway;
- Removal of graffiti;
- Maintenance of external works lighting including replacement of bulbs;
- Maintenance to gravel/self binding gravel surfaces;
- Maintenance of paving as required at tree planting positions in hard landscape.
- Seasonal treatment of surfaces to maintain safe access at all times.

5.6 Adaptation to Climate Change

The effects of climate change on our external environment have been well documented and there is a much greater acceptance of the predicted shifts in our future climate. It should be recognised that the maintenance tasks outlined in this report may require review subject to future changes in climatic conditions. This might for example include pests and diseases impacting on particular species or more extreme summer temperatures, or warmer wetter winter conditions, impacting on the water requirements and/or long-term success of particular planting types.

The landscape proposals have been developed with future climate change in mind, factoring in water management systems, drought tolerant planting and a variety of species to provide biodiversity to combat the potential effects of a changing climate.

5.7 Health and Safety

- Operatives should refer to the O&M Manual, Risk Assessments and project Access & Maintenance Strategy prior to commencing any element of maintenance work.

- All maintenance work shall be performed by experienced workmen in accordance with the Health and Safety at Work Act 1974 and BS 4428 Code of practice for general landscape operations, best horticultural and ecological practice, and under the supervision of a skilled foreman.
- The scheme includes an attenuation pond subject to water level changes. Prior to undertaking maintenance of planting around the pond maintenance operatives should carry out a health and safety risk assessment addressing potential hazards like drowning, slips, trips, and falls.
- Maintenance operatives to be aware designated walkways, pedestrian crossing and vehicular movement routes prior to undertaking any maintenance operations. Operatives to implement measures to restrict access to maintenance areas to authorised personnel only.

Details of any particular Health & Safety requirements are not included in this report.

5.8 Management Responsibility

It is envisaged that the public realm will be managed by the appointed management company with the goal of implementing the client's contractual requirements and specific landscape management requirements defined in this report. Responsibility for the management of features/assets will be subject to the terms and conditions of contractual arrangements in place.

6. LANDSCAPE MANAGEMENT TYPES

6.1 Landscape Management Types

The planting framework seeks to connect people with nature and integrating the proposed building to the landscape setting. The diverse plant communities provide a stimulating environment for the user groups and offer habitat opportunities for wildlife.

The planting typologies and their long term management proposed achieve the biodiversity objectives through a graded response to management of planting across the site based on its usage. The key objectives of the planting design are as follows:

- To enhance biodiversity and strengthen ecological connectivity with the wider landscape setting including the existing woodlands to east and west of the site.
- To create safe and resilient environment for staff, visitors, maintenance operatives and other site users.
- To provide office amenity space and maximize visitor experience.
- To sensitively integrate the proposed development and provide a naturalistic setting to the new building.
- To retain and preserve existing trees and hedgerow within the proposed layout constraints.
- To provide foraging and habitat opportunities for wildlife.

- To create climate resilient, biodiverse planting providing opportunities for surface water management.
- To provide year-round structure and seasonal highlights through colour, scent and form to enhance sensory experience and to promote well-being of staff.

The ongoing maintenance as well as long term management of the existing and proposed planting is key to creating and maintaining the desired landscape setting and to achieve biodiversity benefits.

The landscape can be categorized into following management types -

- Retained trees;
- Proposed trees;
- Existing and proposed hedgerows;
- Woodland understorey and edge planting;
- Shrubs & herbaceous prennials, ferns and groundcover;
- Aquatic and marginal planting;
- Meadows.

Key

- Planning boundary
- - - LMP Scope boundary
- W1 - Woodland mix 1 - Fruit Forest
- W2 - Woodland mix 2
- WE 1- Woodland Edge: Shrubs
- WE 2- Woodland Edge: Grassland
- SW1 - Edge Swale: Grassland mix
- SW2 - Edge Swale: Aquatic and marginal plants
- RG - Rain Gardens: Small to medium trees and water tolerant understorey plants
- MD1 - Meadow Mix 1. Plants for pollinator and native grasses
- MD2 - Meadow Mix 2 - Wet meadow mix
- AC - Arrival Court garden
- H1 - Hedge row
- H2 - Existing hedge row
- Proposed trees
- Existing trees



6. LANDSCAPE MANAGEMENT TYPES - EXISTING TREES

6.2 Existing Trees

The existing trees provide an opportunity to provide opportunities for habitat connectivity and to create a long-term legacy for the development . 3 no.s Category A and 1 no. Category B trees will be retained along the south boundary and integrated into the development, in accordance with the Arboricultural Impact Assessment undertaken by Tree Frontiers.

The selection of the individual trees for retention has included a review of the arboricultural quality of individual specimens - including veteran trees, habitat value, character, as well as planning for future growth and establishing a legacy landscape framework.

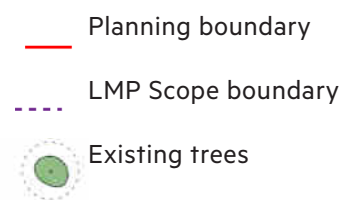
All tree removal works will be undertaken in accordance with industry best practice and guidance, namely BS3998:2010 – Tree Works: Recommendations.

The following principles for the protection of retained trees will be adopted across the site for the duration of the project as noted the Arboricultural Impact Assessment.

- All retained trees will be protected by fencing that will form the Construction Exclusion Zone (CEZ). Where fencing cannot provide the necessary protection measures, alternative systems will be installed that will ensure retained trees are protected. This may include the use of either temporary or permanent ground protection.
- There will be no storage of materials, or access for construction workers or machinery within any CEZ.
- There will be no excavation within a CEZ. All utilities and underground services will be located outside the CEZ or tap into existing service routes.

Refer to Tree Frontier's Arboricultural Method Statement, October 2023 on what protective measures are required for retained trees, how they will be implemented and what supervision is required to ensure that the measures remain in place and fit for purpose.

Key plan:



Management objectives

- Manage existing trees to enhance the tree framework, extend the tree canopy to deliver biodiversity benefits and retain habitat connectivity and support the landscape amenity objectives of the proposed development.
- Improve overall health and resilience of the existing trees.
- Manage trees to maintain green corridors for wildlife use, crossing between foraging sites from the existing woodlands to the east and west of the site and provide nesting opportunities for a range of bird species and potential bat roosts.

Long term management

To achieve the stated objectives the following practices will be undertaken and monitored:

- Removal of invasive species. Management of woodland pests and diseases.
- Retainment of standing deadwood to encourage colonisation by saprobic organisms.
- Monitor, maintain and conserve mature trees by protecting individual specimens and enabling regular checks for tree health.
- Increasing light to the woodland floor where appropriate.
- If tree works are required to trees, they will be undertaken by a suitably qualified arboriculturist in accordance with BS 3998:2010.
- Maintaining a longer grass sward within the existing RPAs to protect the existing tree root. This would naturally redirect footfall to the desired paths.



Management Type - Existing Trees

6. LANDSCAPE MANAGEMENT TYPES - EXISTING TREES

TABLE 1 : EXISTING TREES INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS	
MAINTENANCE OPERATIONS & FREQUENCY	
Prune & thin, remove dead, dying or diseased wood and undesirable species.	As necessary. Any tree works should be undertaken outside of the bird breeding season (March to August inclusive). Elm trees to be pruned between 01st October to 31st May and all pruned material to be correctly disposed of.
Carry out any works required for remove immediate hazard to public safety as soon as identified.	When identified.
Inspect annually and after storms	Carry out work accordingly.
Pest and Disease Control	As necessary.
Retain timber in deadwood piles	As required.
Replacement Planting	October-December as necessary
NOTES: 1. The above schedules is given as a guide only. The operations herein may be carried out at more intensive intervals as necessary to achieve the aims of this document. Additional pruning may be carried out at more regular and/or seasonally intensive intervals as necessary to achieve the aims of this document. 2. Pruning to be undertaken outside of the period March to August to avoid conflict when birds are nesting. All tree pruning should be carefully planned and undertaken in accordance with BS 3998: 2010 Recommendation for Tree Works, in accordance with the Arboricultural Method Statement by Tree Frontiers. 3. All works should be undertaken from outside the RPA wherever possible. Where working within an RPA is unavoidable, ground protection measures fully compliant with section 6.2 of BS 5837:2012 and agreed by a consulting arboriculturalist should be used in accordance with the Arboricultural Method statement, by Tree Frontiers. 4. Prior to the commencement of demolition works, protective fencing in accordance with Figure 2 of BS 5837:2012 should be erected to form CEZs around all trees to be retained as displayed in the Arboricultural Method statement prepared by Tree Frontiers in October 2023. 5. Works to established trees to be carried out in accordance with BS3998 2010 Tree Works Recommendations.	

6. LANDSCAPE MANAGEMENT TYPES - PROPOSED TREES

6.3 Proposed Trees

A mix of native and ornamental trees have been proposed across the site to contribute to the landscape character, biodiversity and amenity value. The tree types help define the character of each area across the site. The key character types are as follows:

- **Woodland Trees** - The proposed new tree planting will provide increased age variation with a range of suitable species to complement the existing trees. A mix of standard and multi-stem native trees like Whitebeam, Field maple, Alder, Willow, Rowan and Oak, strengthens connection with the wider landscape. The mix also includes Wild Service Tree - a species that is rare in the County and present in both St John's Copse and New Covert. In addition of these the woodland to the south includes fruit trees such as Wild Cherry and Crab Apple providing foraging opportunities for the wildlife.
- **Specimen/ Character Trees** - A row of *Alnus glutinosa* 'Laciniata' are proposed in the car park. Groups of standard and multi-stem *Ginkgo biloba* and *Acer campestre* and single specimen of *Salix babylonica*, located at strategic points define spaces enhancing the character of the Arrival garden.
- **Street Trees** - A combination of standard and multi-stem native trees including Field maples, Downy birch, Alder and Bird cherry proposed in the linear rain gardens along the west road provide valuable habitat connections between the proposed and the existing woodlands in and around the site.

For Softworks Plans and Plant Schedule refer to Appendix 01 & 02.

Management Objective

- Tree canopies should be managed to ensure a good healthy overall form representative of the individual species whilst maintaining sight lines and clear stem heights that do not cause a hazard to pedestrians or vehicles particularly next to the road and site entrance.
- Proposed trees to be managed to re-establish and maintain the habitat connectivity lost due to removal of existing trees.
- Trees to be managed to enhance the tree framework, extend tree canopy to deliver biodiversity benefits, provide a robust landscape structure and support

landscape amenity objectives.

- Enhance peoples connection with nature and educational opportunities.

Long term management

To achieve the objectives the following practices will be undertaken and monitored:

- All new planting of trees to be carried out in the months of November, December and January. New planting of trees will be regularly watered until independence in the landscape has been achieved. This should continue through the summer months for a period of three years.
- Removal of invasive species. Management of woodland pests and diseases.
- Planting of native, disease resistant trees to enhance the biodiversity and woodland health value of the woodland.
- All tree stakes, ties and guys found to be defective are to be removed. Stakes removed if no longer required.
- If tree works are required to trees, they will be undertaken by a suitably qualified arboriculturist in accordance with BS 3998:2010.
- Any new tree planting which is lost in a five year establishment period will be replaced on a like for like basis.
- The new trees shall be installed with adequate tree guards capable of providing protection from rabbits. Any tree stakes or tree protection will be removed following the establishment of the trees.
- Light pruning of trees may be required to maintain the form of trees next to the road and the arrival area. Contractor undertaking pruning shall be experienced with the type and timing of pruning operations to suit the species.



6. MAINTENANCE SCHEDULE : PROPOSED TREES

TABLE 2: PROPOSED TREES INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS			
MAINTENANCE OPERATIONS	YEARS 1-5	YEARS 6-10	YEARS 11-30
Watering	2 x week minimum during dry periods. Water quantities to be as recommended by nurseries and good horticultural practice to ensure successful establishment through all weather conditions.	N/A unless particular drought situations exist	N/A unless particular drought situations exist
Soil Testing	1 x only if problems are evident.	Only if problems are evident. E.g. die back	Only if problems are evident. E.g. die back
Weed Control Note: Minimise use of herbicides and undertake mechanical/ manual weed control where possible (ensuring removal of unwanted species).	5x (year 1 and 2), 3x (year 3,4 and 5).	2 x.	2 x.
Pest and Disease Control	Visual check each visit during growing season	Visual check each visit during growing season	Visual check each visit during growing season
Firmness	2 x (Spring and Autumn). Each maintenance visit and immediately after high winds	As necessary.	N/A
Checking underground guys and stakes	3 x. Each maintenance visit and immediately after high winds.	1 x	1x
Pruning Cross refer to specification for individual methodologies	2 x inspections - plus corrective pruning when and as required	1 x Note special pruning requirements for individual species. Each Spring and Autumn walk round inspections to made of all tree canopies	1 x every 3rd year trees to be checked in detail in respect of health and vigour and in particular stability and sound healthy canopy structure. Pruning / canopy management to be carried out as advised by qualified arboricultural consultant to reduce any risk of branch or sudden tree failure.
Thinning Only implacable if problems occur. Note all trees to be managed for traffic clearance.	N/A	N/A	N/A
Replacement Planting	October-December as necessary	As necessary (October – December)	As necessary (October – December)
NOTES: 1. The above schedules is given as a guide only. The operations herein may be carried out at more intensive intervals as necessary to achieve the aims of this document. Additional pruning may be carried out at more regular and/or seasonally intensive intervals as necessary to achieve the aims of this document. 2. Pruning to be undertaken outside of the period March to August to avoid conflict when birds are nesting. 3. Tree procurement and planting operations, maintenance and management tasks post planting are to be carried out in accordance with BS8545 2014 Trees from nursery to independence in the landscape. 4. Works to established trees to be carried out in accordance with BS3998 2010 Tree Works Recommendations.			

6. LANDSCAPE MANAGEMENT TYPES - HEDGEROWS

6.4 Proposed & Existing hedgerow

- Existing hedgerow - Existing Blackthorn hedgerows (H032 and H042) are retained south, east and west boundaries.
- Proposed hedgerow - Double staggered row of species rich native hedgerow mix containing species such as Blackthorn, Hawthorn, Guelder rose, Hazel, Elder, salix ripaiolo and common ash is proposed to fill the gaps between the existing hedgerow and provide habitat continuity.

For Softworks Plans and Plant Schedule refer to Appendix 01 & 02.

Management Objective -

- Manage existing and proposed hedgerows to enhance biodiversity and restore habitat connectivity.
- New hedgerow to be managed to enhance the landscape structure and link up existing hedgerows.

Long term management

To achieve the objectives the following practices will be undertaken and monitored:

- All new hedgerow planting to be carried out in the months of November, December and January. New planting of trees will be regularly watered until independence in the landscape has been achieved. This should continue through the summer months for a period of three years.
- Trimming of hedgerow every 2-3 years should be considered the maximum. Additional ecological benefits would accrue where sections of the hedge can be left 7

years between trimming, and where hedgerow trimming is not needed to keep space open, some sections of hedgerow can be left un-trimmed. Additionally, if the opportunity arises trimming can be substituted for laying.

- Hedges should be trimmed to an 'A' shape, which is thicker at the base and gets narrower at the top. This provides maximum protection for wildlife, while allowing light to reach the ground flora.
- No cutting should take place during peak bird nesting season, which runs from March to September. Where possible, delay any maintenance work until January or February, as hedgerow berries provide a valuable autumn and winter food source for birds.
- After the establishment period hedges should be trimmed on a two or three year rotation, targeting different sections each year. This will make sure there are always flowers for pollinators in spring and berries for birds in autumn.
- Any new plants that are lost in the five years establishment period will be replaced on a like for like basis.
- If works are required to the existing hedgerow, they will be undertaken by suitably qualified arboriculturalist in accordance with BS 3998:2010.
- Management of weeds, woodland pests and diseases.
- Limiting disturbance to the existing hedgerow by managing foot traffic.

Key plan:

- Planning boundary
- LMP Scope boundary
- H1 - Hedge row
- H2 - Existing hedge row



Management Type - Existing and Proposed Hedgerows

6. MAINTENANCE SCHEDULE: HEDGEROWS

TABLE 3: HEDGES INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS		
SEASON	TASK	FREQUENCY
SPRING: MARCH, APRIL, MAY	Litter Removal – Hedgerows remove all litter each and every visit. Care taken not to disturb any nesting birds.	Once a year.
	Weed Control – Hedgerows maintain fully weed-free. Note: Minimise use of herbicides and undertake mechanical/ manual weed control where possible (ensuring removal of unwanted species).	As necessary, minimum 3x.
	Water – Establishment Years 1-4; Water as necessary.	Hedges as necessary, guidance 12x (to include inspection of manual watering points) undertake corrective actions as necessary.
	Clipping / Pruning – Hedges	Year 1 - Immediately after Planting On planting (October-March) cut back any side growths that straggle to leave the lines of hedge plants straight sided. Leave the branches at the bottom of the plant just a little longer than the ones near the top so your hedge has slightly sloping sides (slight 'A' frame). Do not cut the top of the plant off following planting unless instructed by the Landscape Architect. This will help the hedge increase in height rapidly (Note - once cut off the plant never regains the same vigour again). Remove all clippings.
	Fertiliser – Hedges – apply organic N.P.K as to dressing during April.	1x in April years 1-4, apply after only if necessary. Fertiliser use should be minimised as it is likely to damage hedgerow ground flora.
	Re-firming – Hedges, re-firm upright plants as necessary in early March.	1x detail check and adjustment and action each visit as necessary.
	Cultivation – Hedges, break up compacted soil that impedes watering.	1x detail check and as necessary as indicated by potential drainage problems.
SUMMER: JUNE, JULY, AUGUST	Litter Removal – As Spring. Weed Control – As Spring. Water – As Spring, (until Year 3).	
SEASON	TASK	FREQUENCY
AUTUMN - SEPTEMBER, OCTOBER, NOVEMBER	Litter Removal – As Spring.	Once a year.
	Clipping / Pruning – Hedges	On 2-3 year rotation after establishment Recommend gently clipping in April, July and October for the first 2-3 years at least (leave the growing point alone until overall required height is attained). Remember to keep forming the hedge to a tapered 'A' shape to allow light to get to the lower branches. When height attained (allow to grow 10-15cms higher than desired height) cut growing points off. Remove all clippings. Top of hedge to be cut flat and level. Years 4-5+ Recommend clipping as and when the hedges look like they require trimming to retain desired shapes. Should there be a need to drastically alter shape or height carry out the surgery in mid-winter when the plants are semi-dormant. Remove all clippings. Top of hedge to be cut flat and level. Trimming of hedgerow every 2-3 years should be considered the maximum. Additional ecological benefits would accrue where sections of the hedge can be left 7 years between trimming, and where hedgerow trimming is not needed to keep space open, some sections of hedgerow can be left un-trimmed. Additionally, if the opportunity arises trimming can be substituted for laying.
	Re firming – Re firm as necessary, in particular checking stock for wind rock.	1x per hedge detail check and when and as individual problems occur.
WINTER - DECEMBER, JANUARY, FEBRUARY	Litter Removal – As Spring.	Once a year.
	Replacement Planting- Until year 5 gap up all failures.	1 x per hedge until growth /establishment dictates otherwise.

6. LANDSCAPE MANAGEMENT TYPES - WOODLAND UNDERSTOREY & EDGE

6.5 Woodland understorey and edge planting

The proposed woodland understorey planting complements the tree canopy and enhances biodiversity reinforcing the connection with the neighbouring woodlands. A mix of native and ornamental plants provide valuable foraging and habitat for the wildlife and provides year round interest. The key typologies are as follows-

- Woodland mix 1 (W01) - Multi-layered plant mix containing fern, shrubs and perennials forms the understorey layer to woodland trees to the south garden. A mix includes 80% herbaceous perennials and groundcovers and 20% ferns interplanted with native shrubs. Native shrubs to include species such as Dogwood, Guelder rose, Hawthorn, Hazel, Holly, Blackthorn and Elder.
- Woodland mix 2 (W02) - Multi-layered plant mix containing ferns, shrubs and perennials to form the understorey layer to Woodland trees to the north. east. A mix includes 70% herbaceous perennials and groundcovers and 30% ferns interplanted with native shrubs.
- Woodland edge mix (WE01) - Native shrub mix planted at 4 per meter square to form the buffer zone to New Covert Woodland.

For Softworks Plans and Plant Schedule refer to Appendix 01.

Management Objectives -

- Improve the overall health and resilience of the woodland and enhance its biodiversity value.
- Maintain species diversity to enhance biodiversity and provide food, shelter and breeding places for insects and birds.
- Manage woodland to provide a diverse and resilient understorey layer beneath the trees.

Key plan:

- Planning boundary
- - - LMP Scope boundary
- W1 - Woodland mix 1 - Fruit Forest
- W2 - Woodland mix 2
- WE1- Woodland Edge: Shrubs

Long term management

To achieve the objectives the following practices will be undertaken and monitored:

- During establishment of planting ensure that sufficient water is applied to maintain healthy growth. Attention must be paid to watering all plant material and particularly to containerised plant material before, during and after planting to ensure successful establishment.
- All woodland planting areas to be maintained in a neat, weed free condition. Maintain at all times mulch areas to their original specified depths. Top-up if necessary to meet the requirements of original specified depth.
- Planting of native, disease resistant trees and shrubs and woodland bulbs to enhance the biodiversity value of the woodland.
- Any new planting which is lost in a five year establishment period will be replaced on a like for like basis.
- No herbicides or pesticides or fertilisers will be used within the woodland. Low nutrient values encourage the establishment of rarer specialist flora. Instead, new planting roots are to be inoculated with beneficial mycorrhizal fungi appropriate to the site to encourage nutrient exchange.
- Plants out-competing other plants and adversely affecting the development of adjoining plants shall be removed.
- Consider coppicing woodland understorey planting along the attenuation pond margins to keep the pond open and minimize leaf litter. Coppicing cannot happen until the trees are old enough. The suggested coppicing rotation for biodiversity benefit is 7-15 years depending on species.
- Monitor the habitat quality and adjust management practices based on the findings to enhance biodiversity outcomes.



6. MAINTENANCE SCHEDULE: WOODLAND UNDERSTOREY & EDGE

TABLE 4: WOODLAND UNDERSTOREY AND EDGE PLANTING INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS		
SEASON	TASK	FREQUENCY
SPRING	Weeding : maintain totally weed-free in all areas. Note: Minimise use of herbicides and undertake mechanical/ manual weed control where possible (ensuring removal of unwanted species).	Each visit.
	Mulch: top up shrub beds to original specified depths in March.	1x.
	Litter and Arisings: remove as soon as they occur.	As necessary.
	Surface Cultivation: hand cultivate around beds were compacted.	1x late March when dry.
	Fertiliser: apply organic fertiliser on a bi-annual cycle.	1x April
	Replacements: replace failed or senile plants, Note wide-scale replacement of these is not anticipated until around Year 10.	1x
	Rejuvenation: Inspect plant beds for failures, overcrowding or excessive use. Replace failed plants to original specification in next available opportunity within appropriate planting season.	1x.
	Watering: Watering through taps/ watering points located in the landscape. Hand water via quick coupler system during dry spells as specified. There may be a need to source water externally to meet the requirement (particularly during the dry spells).	As necessary.
SUMMER	Weeding: as Spring above.	As necessary.
	Litter and Arisings: as Spring.	As necessary.
	Watering : as Spring.	As necessary.
	Rejuvenation: as Spring.	As necessary.
AUTUMN	Weeding : as Spring.	As necessary.
	Litter and Arisings: as Spring. Watering : as Spring.	As necessary.
	Rejuvenation: as Spring.	As necessary.
	Replacements: replace bare root species which have failed e.g., native transplants treated as ornamental shrubs. Replace short lived species like for like at end of life cycle circa years 5-7+. If alternative species are used, select for wildlife value e.g. flowering and nectar producing sensory plants	As necessary.
WINTER	Thinning Out: as necessary starting Year 3+.	1x per annum.
	Litter and Arisings: as Spring.	

6. LANDSCAPE MANAGEMENT TYPE: SHRUBS, HERBACEOUS PERENNIALS, FERNS AND GROUNDCOVERS

6.6 Shrubs, herbaceous perennials, ferns and groundcover

A variety of plant mixes comprising shrubs, herbaceous perennials, ferns, ornamental grasses and groundcovers have been specified across the site to perform both ecological and sensory functions. Plant mixes are tailored and carefully selected to enhance user experience and deliver biodiversity benefits. The key typologies are as follows-

- Arrival court (AC) - A mix of deciduous and evergreen mix of shrubs, herbaceous perennials, ferns, grasses and groundcovers provide seasonal flower display and diverse foliage textures throughout the year.
- Rain gardens (RG) - The proposal is for wet/dry planted rain garden to collect surface run-off water from the landscaped areas and hard surfaces. A rich mix of planting in the rain gardens provides opportunities for sensory spaces for the users and nectar sources for pollinators.
- Climbers - A mix of climbers around the pond deck and bike shelter.

For Softworks Plans and Plant Schedule refer to Appendix 01&02

Management Objectives -

- Maintain a species rich mosaic of planting to maximize food and shelter opportunities for wildlife.
- Maintain planting to provide year round structure to enhance user experience.

Long term management

To achieve the objectives the following practices will be undertaken and monitored:

- During establishment of planting ensure that sufficient water is applied to maintain healthy growth. Attention must be paid to watering all plant material and particularly to containerised plant material before, during and after planting to ensure successful establishment.
- All planting areas to be maintained in a neat, weed free condition. Maintain at all times mulch areas to their original specified depths. Top-up if necessary to meet the requirements of original specified depth.
- Any new planting which is lost in a five year establishment period will be replaced on a like for like basis.
- Plants out-competing other plants and adversely affecting the development of adjoining plants shall be removed.
- Monitor the habitat quality and adjust management practices based on the findings to enhance biodiversity outcomes.

Key

- Planning boundary
- LMP Scope boundary
- RG - Rain Gardens: Small to medium trees and water tollerand understory plants
- AC - Arrival Court garden
- Climbing plants



6. MAINTENANCE SCHEDULE: SHRUBS, HERBACEOUS PERENNIALS, FERNS AND GROUNDCOVERS

TABLE 5: SHRUBS, HERBACEOUS PERENNIALS, GRASSES & GROUNDCOVER		
INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS		
SEASON	TASK	FREQUENCY
SPRING	Weeding : maintain totally weed-free in key locations and less than 5% in wider site locations. Note: Minimise use of herbicides and undertake mechanical/ manual weed control where possible (ensuring removal of unwanted species).	Each visit.
	Mulch: top up shrub beds to original specified depths in March.	1x.
	Litter and Arisings: remove as soon as they occur.	As necessary.
	Surface Cultivation: hand cultivate around beds were compacted.	1x late March when dry.
	Replacements: Inspect plant beds for failures, overcrowding or excessive use. Replace failed plants to original specification in next available opportunity within appropriate planting season. Note wide-scale replacement of these is not anticipated until around Year 10.	1x March / April.
	Rejuvenation: refer to pruning tables.	1x.
	Watering: Hand water via quick coupler system during dry spells as specified.	Spring - Autumn, manual watering during dry spells as necessary to ensure continued thriving. Monitor each visit
SUMMER	Weeding: as Spring above.	As necessary.
	Litter and Arisings: as Spring.	As necessary.
	Watering : as Spring.	As necessary.
	Rejuvenation: as Spring.	As necessary.
AUTUMN	Weeding : as Spring.	As necessary.
	Litter and Arisings: as Spring. Watering : as Spring.	As necessary.
	Rejuvenation: as Spring.	As necessary.
	Replacements: replace bare root species which have failed e.g., native transplants treated as ornamental shrubs. Replace short lived species like for like at end of life cycle circa years 5-7+. If alternative species are used, select for wildlife value e.g. flowering and nectar producing sensory plants and select species in keeping with the original design intent.	As necessary.
WINTER	Thinning Out: Thin as necessary and replant with species to match the original specification and maintain the design intent. Submit substitutions to the client for approval prior to ordering.	1x per annum. As necessary, typically 3 yearly cycle starting at year 5.
	Cutting/Pruning	Late winter/early spring: 1 x annually remove dead foliage, prune back last season's flower heads. Important note: leave seedheads to grasses and perennials in place after flowering through Autumn and Winter. Additional pruning as necessary in response to periods of accelerated growth or for reason of health and safety.
	Litter and Arisings: as Spring.	As necessary
NOTE: the above schedule is given as a guide only: the operations herein may be carried out at more intensive intervals as necessary to achieve the aims of this document.		

6. LANDSCAPE MANAGEMENT TYPE: AQUATIC, MARGINAL & WET MEADOW PLANTING

6.7 Aquatic, marginal & wet meadow planting

A diverse mix of plants suited to wet conditions are proposed for the side slopes of the attenuation pond and the swales enhance visual character and provide amenity value. The key typologies are as follows-

- Plant mix to swale (SW1) - A mix of 60% grasses and 40% perennials proposed to the base of the swales to the east and south.
- Plant mix to attenuation pond (SW2) - A mix of sedges, rushes and perennials are carefully selected based on the permanent and exceedance water levels. The plant mix proposed for the permanent water zone includes aquatic species like Willow Moss, Water crowsfoot, Hornwort whereas the species selected for the zone above the permanent water level are suited to both wet and dry conditions.
- Wet meadow mix to attenuation pond (MD2) - A mix of 70% wildflower and 30% grasses along the pond edge. For Softworks Plans and Plant Schedule refer to Appendix 01.

Management Objectives -

- Managed to maximise wildlife benefit and visual character.
- Maintained to withstand wet and dry conditions.
- Manage species rich balance and avoid over-dominance by certain species.

Long term management

To achieve the objectives the following practices will be undertaken and monitored:

Key

- Planning boundary
- LMP Scope boundary
- SW1 - Edge Swale: Grassland mix
- SW2 - Edge Swale: Aquatic and marginal plants
- MD2 - Meadow Mix 2 - Wet meadow mix

- The attenuation pond and swales shall be kept free from weeds, algal growth, floating and sunken litter, rubbish and debris at all times. Periodic inspections and cleaning of pond features to ensure that the pond functions effectively.
- Contractor shall ensure that any maintenance operations associated with machinery and personnel undertaking maintenance tasks do not cause damage to the pond and swale features including liner systems, inlets, outlets etc.
- Aquatic and marginal plants are to be inspected regularly for plant failures, presence of harmful, injurious and / or invasive weeds.
- Care should be taken to avoid accidental introduction of invasive species such as Azolla and Crassula.
- Thin planting if it becomes overcrowded or impacts on adjacent planting and/ or pond construction elements such as liner system, inlets, outlets etc. Thinning out of excess aquatic vegetation every autumn might be beneficial to reduce the progressive build up of nutrients like nitrates and phosphates.
- Any plants found to be dead, dying or failing to thrive should be replaced on a like for like basis in the five year establishment phase.
- Planting to be monitored regularly. Management practices and/ or plant mixes to be adjusted (if necessary) based on the reasons for plant failure e.g. maintenance regime, suitability of location, ground conditions, water level.
- Sediment build up monitoring and removal when required.



Management Type - Aquatics and marginal planting

6. MAINTENANCE SCHEDULE: AQUATIC, MARGINAL & WET MEADOW PLANTING

TABLE 6: AQUATIC, MARGINAL & WET MEADOW PLANTING		
INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS		
SEASON	TASK	FREQUENCY
SPRING	Weeding : Maintain as weed and algae free year round. Note: Minimise use of herbicides and undertake mechanical/ manual weed control where possible (ensuring removal of unwanted species).	Monitor each visit.
	Litter and Arisings: remove as soon as they occur.	As necessary.
	Replacements and rejuvenation: Inspect planting for failures, overcrowding or excessive use. Replace failed plants to original specification in next available opportunity within appropriate planting season.	1x March / April.
	Watering: As necessary to ensure continued thriving	Monitor each visit.
SUMMER	Weeding: as Spring above.	As necessary.
	Litter and Arisings: as Spring.	As necessary.
	Watering : as Spring.	As necessary.
	Rejuvenation: as Spring.	As necessary.
	Weeding : as Spring.	As necessary.
	Litter and Arisings: as Spring. Watering : as Spring.	As necessary.
	Rejuvenation: as Spring.	As necessary.
AUTUMN	Replacements: As Spring	As necessary.
WINTER	Thinning Out: Thin as necessary and replant with species to match the original specification and maintain the design intent. Submit substitutions to the client for approval prior to ordering. Thinning out of excess aquatic vegetation every autumn might be beneficial to reduce the progressive build up of nutrients like nitrates and phosphates.	1x per annum. As necessary, typically 3 yearly cycle starting at year 5.
	Cutting/Pruning	Late winter/early spring: 1 x annually remove dead foliage, prune back last season's flower heads. Note: leave seedheads to grasses and perennials in place after flowering through Autumn and Winter for planting adjacent to the ponds and swale.
	Litter and Arisings: as Spring.	As necessary
NOTE: the above schedule is given as a guide only: the operations herein may be carried out at more intensive intervals as necessary to achieve the aims of this document.		

6. LANDSCAPE MANAGEMENT TYPE: MEADOWS

6.8 Meadows

Meadow mixes together with the planting framework helps integrate the development into the landscape setting and provides essential ground coverage while the planting establishes. The key typologies are as follows-

- Meadow mix to swale slopes (SW1) - A proprietary wildflower seed mix comprises species suited to both wet and dry conditions is proposed to the swale slopes.
- Meadow mix to existing trees (MD1) - A proprietary seed mix comprising 80% grasses and 20% wildflowers suited to clay soil is specified under the retained trees to the south.
- Meadow mix to woodland edge (EH1 and EW1) - Mix of grasses and wildflowers suited to semi shade proposed along the woodland planting to the east boundary.

For Softworks Plans and Plant Schedule refer to Appendix 03.

Management objectives

- Manage meadows to create continuous cover providing visual and habitat connectivity with adjacent sites.
- Manage meadows to maintain the species diversity. Implement low intensity cutting to prevent nutrient build up and control succession.
- Avoid disturbance to flowering and seeding of wildflowers, or disturbance to fauna by careful timing of maintenance operations.
- Grassland in newly planted woodland to be managed appropriately managed to allow the woodland to thrive.

Key

- Planning boundary
- - - LMP Scope boundary
- MD1 - Meadow Mix 1 - Plants for pollinator and native grasses
- WE 2- Woodland Edge: Grassland
- SW1 - Edge Swale: Grassland mix

Long term management and monitoring

To support stated objectives the following practices will be undertaken and monitored:

- Elevated levels of Phosphorus from past agricultural activity likely to impact the development of species rich grassland. This is to be managed and mitigated through carefully planned approach to annual cutting and removal of arisings to suppress aggressive weeds and competitive grasses from out-competing the slow growing species, accelerate nutrient reduction and promote long term species diversity.
- Conduct soil testing to ensure nutrient levels support the meadows.
- Inspect and maintain fencing, drainage and access routes.
- Manage scrub encroachment annually.
- Management approach/ cutting regimes to be adjusted according to the seed mixes proposed across the site.
- Conduct suveys to monitor the habitat quality and adjust management practices based on the findings to enhance biodiversity outcomes.
- Update of the agreed plan to be reviewed every five years incorporating lessons learnt and adapting to site-specific needs.



Management Type - Aquatics and marginal planting

6. LANDSCAPE MANAGEMENT TYPE: MEADOWS

TABLE 7: MEADOWS			
INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS			
YEAR	SEASON	TASK	NOTES
YEAR 1	AUTUMN	WEED: Weeds should be removed in cuts (these should be minimal until early August due to nature of establishing meadow seed). Additional emphasis to be placed on removal of pernicious weeds during the establishment phase.	
		LITTER REMOVAL: As necessary	
		MONITOR: Monitor wildflower areas	
	WINTER	LITTER REMOVAL: As necessary	
		MOWING: Wildflower species will start to flower and the grassland should be left uncut throughout spring	
	SPRING	WEED: If invasive weeds are a problem - should be cut to 50mm. If weed is in specific areas these can be treated by strimming these areas only. Additional emphasis to be placed on removal of pernicious weeds during the establishment phase.	
		SEEDING: Re-seed any areas with specified wildflower and grass mix where necessary	
	SUMMER	LITTER REMOVAL: As necessary	
		MOWING: Wildflower species will be flowering . In late July/August, (allowing key species to set seed) cut to 75mm - leave arisings for 3-7 days and then remove.	
		WEED: If invasive weeds are a problem across area - Sward should be cut to 50mm. If weed is in specific areas these can be treated by strimming these areas or hand removal only and removing arisings. Additional emphasis to be placed on removal of pernicious weeds during the establishment phase.	
		OVER-SEEDING: Re-seed any areas with specified wildflower and grass mix where necessary	
YEAR 2 - 3	AUTUMN	LITTER REMOVAL: As necessary	
		MOWING: Cut sward down to 50mm during Autumn months, if required.Removing arisings immediately after cuts	
		WEED: Weeds will be removed in cuts. Additional emphasis to be placed on removal of pernicious weeds during the establishment phase.	
	WINTER	LITTER REMOVAL: As necessary	
		MONITOR: Monitor wildflower areas	

6. LANDSCAPE MANAGEMENT TYPE: MEADOWS

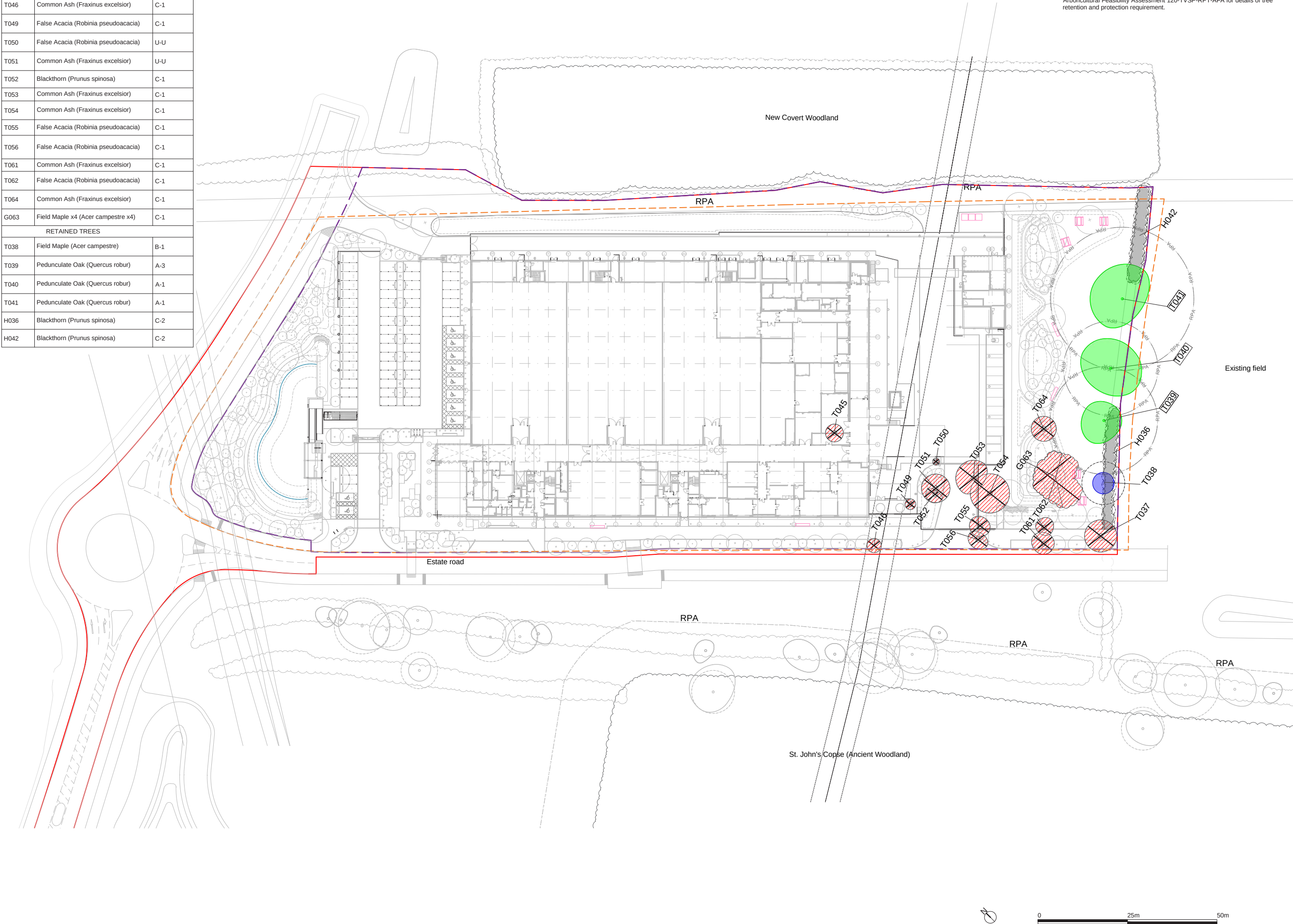
TABLE 7: MEADOWS			
INDICATIVE ANNUAL FREQUENCIES OF MAINTENANCE OPERATIONS			
YEAR	SEASON	TASK	NOTES
YEAR 5+	SPRING	MOWING: Grassland becomes more diverse as the slower establishing species appear no cuts required.	
		WEED: If invasive weeds are a problem across area - should be cut to 50mm. If weed growth is in specific areas these can be treated by strimming these areas only.	
		LITTER REMOVAL: As necessary	
	SUMMER	MOWING: 1 cut late August/early September cut to 75mm, (subject to seasonal variations/growth)	
		WEED: If invasive weeds are a problem across area - should be cut to 50mm. If weeds are in specific areas only these can be treated by strimming these areas only and removing arisings	
		LITTER REMOVAL: As necessary	
	AUTUMN	MOWING: If nutrient levels are still high and weeds are still a problem 1 hard cut to 50mm in late Autumn	
		WEED: If weeds are in specific areas these can be treated by strimming these areas or hand removal only and removing arisings.	
		LITTER REMOVAL: As necessary	
	WINTER	MONITOR: Monitor wildflower areas	
		LITTER REMOVAL: As necessary	
GENERAL NOTE		- During year 2 and subsequent years mowing regime adjacent kerb edges to be more regular than rest of the sward to achieve a tidy medium mown regime. - Over seed areas with approved seed mix if any areas fail to fully establish a dense sward.	- Monitor sward and record on an annual basis - Review opportunities for seed collection year 3+

NOTE:
1. THE ABOVE SCHEDULE IS GIVEN AS A GUIDE ONLY: THE OPERATIONS HEREIN MAY BE CARRIED OUT AT MORE INTENSIVE INTERVALS AS NECESSARY TO ACHIEVE THE AIMS OF THIS DOCUMENT. ADDITIONAL WEEDING/ PRUNING MAY BE CARRIED OUT AT MORE REGULAR AND/OR SEASONALLY INTENSIVE INTERVALS AS NECESSARY TO ACHIEVE THE AIMS OF THIS DOCUMENT.

APPENDIX 01- SOFTWARES PLANS

RD001-FCB-XX-XX-DR-L-1002	Site Wide Public Realm Annotation Legend Softworks
RD001-FCB-XX-XX-DR-L-5101	Site Wide Public Realm - Softworks - Existing trees, retention and removal plan
RD001-FCB-XX-XX-DR-L-5102	Site Wide Public Realm - Softworks - Tree Planting Plan 1/2
RD001-FCB-XX-XX-DR-L-5103	Site Wide Public Realm - Softworks - Tree Planting Plan 2/2
RD001-FCB-XX-XX-DR-L-5104	Site Wide Public Realm - Softworks - Planting Beds Plan 1/2
RD001-FCB-XX-XX-DR-L-5105	Site Wide Public Realm - Softworks - Planting Beds Plan 2/2

TREE NO.	SPECIES	CATEGORY -SUBCATE GORY
T037	Field Maple (Acer campestre)	C-1
T045	Common Ash (Fraxinus excelsior)	C-1
T046	Common Ash (Fraxinus excelsior)	C-1
T049	False Acacia (Robinia pseudoacacia)	C-1
T050	False Acacia (Robinia pseudoacacia)	U-U
T051	Common Ash (Fraxinus excelsior)	U-U
T052	Blackthorn (Prunus spinosa)	C-1
T053	Common Ash (Fraxinus excelsior)	C-1
T054	Common Ash (Fraxinus excelsior)	C-1
T055	False Acacia (Robinia pseudoacacia)	C-1
T056	False Acacia (Robinia pseudoacacia)	C-1
T061	Common Ash (Fraxinus excelsior)	C-1
T062	False Acacia (Robinia pseudoacacia)	C-1
T064	Common Ash (Fraxinus excelsior)	C-1
G063	Field Maple x4 (Acer campestre x4)	C-1
RETAINED TREES		
T038	Field Maple (Acer campestre)	B-1
T039	Pedunculate Oak (Quercus robur)	A-3
T040	Pedunculate Oak (Quercus robur)	A-1
T041	Pedunculate Oak (Quercus robur)	A-1
H036	Blackthorn (Prunus spinosa)	C-2
H042	Blackthorn (Prunus spinosa)	C-2



- NOTE:
- Drawing to be read in conjunction with tree Arboricultural's Survey 20-TVSP-INF-SCH-01 SW 170622 and Arboricultural Feasibility Assessment 120-TVSP-RPT-AFA by Tree Frontiers, dated 22 June 2022.
 - Refer to tree arboriculture survey 20-TVSP-INF-SCH-01 SW 170622 and Arboricultural Feasibility Assessment 120-TVSP-RPT-AFA for details of tree retention and protection requirement.

- GENERAL NOTES:
- All dimensions and levels to be checked and verified on site before commencing any work or producing shop drawings
 - This drawing is to be read in conjunction with all other relevant drawings, specifications and schedules.
 - Any discrepancy concerning the drawings should be referred to the originator / CA immediately
 - All dimensions in millimetres unless noted otherwise
 - All levels in metres
 - Existing service alignments to be checked on site by the contractor on site by the contractor prior to construction work commencing
 - The content of this drawing is to be read in conjunction with the latest project CDM risk register
- NOTES:
- The proposed access road is not part of the Natural History Museum works. Refer to the University of Reading planning application for details.
 - For building plans and associated details, refer to the Architect's information.
 - All external gates, railings, and boundary treatments around the Service Yard shall be in accordance with the Architect's information, unless noted otherwise.
 - All paving make-ups to be in accordance with the Engineer's information.
 - For highways directional signage, refer to the Engineer's information.
 - Retaining wall structural details are provided in the Engineer's information.
 - Structural performance and requirements of gabions to be in accordance with the Engineer's details and specification. The scope of the gabion system in the Landscape Specification (Clause D42) is limited to visual appearance and performance. The final system must be coordinated with the Engineer for structural requirements. Slot and channel drains must meet the Engineer's specifications - finishes to be agreed with Landscape Architect.
 - Site-wide drainage and primary water services are detailed in the Engineer's information. The contractor must incorporate positive tree pit drainage in line with the site-wide drainage strategy and Engineer's details.
 - External lighting proposals to follow the Engineer's information and comply with planning guidance to minimise light pollution and preserve dark skies. External lighting position as are coordinated with the landscape layout.
 - HVM (Hostile Vehicle Mitigation) measures and security requirements are subject to final detail confirmation by the Security Consultant, who will advise on the placement of sensors, access control systems for gates, fences, and bollards type and location.
 - EV charging points shown indicatively on landscape plans, refer to the Engineer's information.
 - Ecological hibernacula features are shown indicatively on landscape plans. Final details to be provided by Ecologist.
 - Footings design for benches, bins, fence and gate posts, steps, walls, and bollards to be provided by the Engineer.
 - All external signage and road marking by others.
 - External tap watering points are shown on the landscape plan. The source of water and required volume to be in accordance with engineer's requirements.

- Planning Boundary
- Lease Boundary
- Scope of Works Boundary

Note: The proposed access road is not part of the Natural History Museum application. See University of Reading application for details of the access road.

S4 For LAP Review & Authorization

- To be read in conjunction with the following documents & drawings
- RD001-FCB-XX-XX-DR-L-1001 Annotation Legend - Hardworks
 - RD001-FCB-XX-XX-DR-L-1002 Annotation Legend - Softworks
 - RD001-FCB-XX-XX-DR-L-1003 Annotation Legend - Section & Details

PO4	02.05.2025	STAGE 4	VDM	KF
PO3	21.02.2025	STAGE 4	VDM	KF
PO2	21.06.2024	TENDER	VDM	KF
PO1	26.04.2024	TENDER	VDM	KF
Rev.	Date	Description	Drawn	Ch'd

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CLIENT
FEILDEN CLEGG BRADLEY STUDIOS

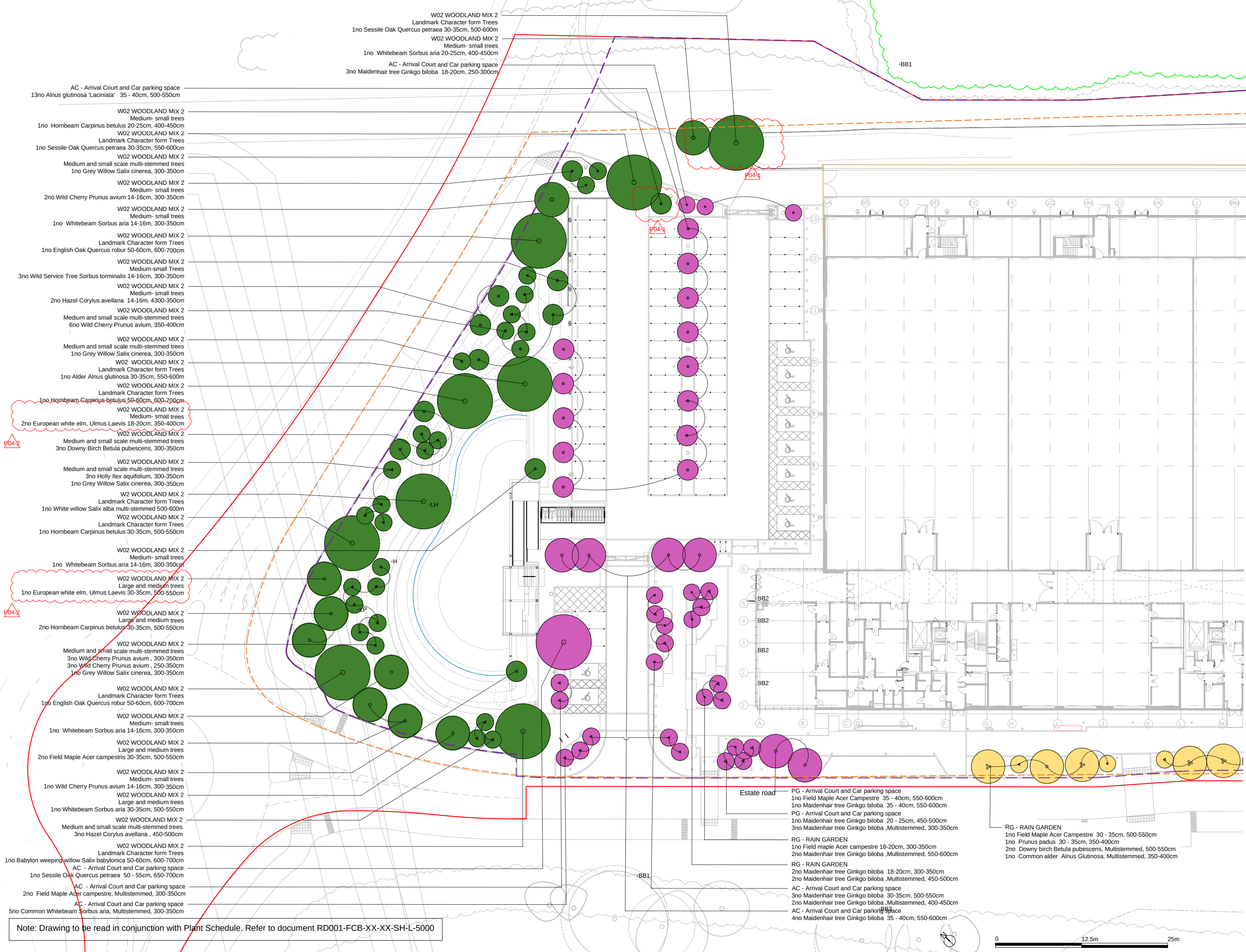
PROJECT
 Natural NHM UNLOCKED
Museum THAMES VALLEY SCIENCE PARK

TITLE
SITE WIDE PUBLIC REALM
SOFTWARE - EXISTING TREES
RETENTION AND REMOVAL PLAN

Scale:	Date:	Drawn:	Checked:	Approved:
1:500@ A1	02/05/2025	VDM	MS	KF

Status:
STAGE 4

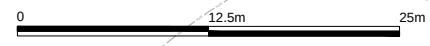
Drawing Number:	Rev:
RD001-FCB-XX-XX-DR-L-5101	P04



- AC - Arrival Court and Car parking space
13no Alnus glutinosa 'Laciniata' 35 - 40cm, 500-550cm
- W02 WOODLAND MIX 2
Medium- small trees
1no Hornbeam Carpinus betulus 20-25cm, 400-450cm
W02 WOODLAND MIX 2
Landmark Character form Trees
1no Sessile Oak Quercus petraea 30-35cm, 550-600cm
W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
1no Grey Willow Salix cinerea, 300-350cm
- W02 WOODLAND MIX 2
Medium- small trees
2no Wild Cherry Prunus avium 14-16cm, 300-350cm
- W02 WOODLAND MIX 2
Medium- small trees
1no Whitebeam Sorbus aria 14-16m, 300-350cm
- W02 WOODLAND MIX 2
Landmark Character form Trees
1no English Oak Quercus robur 50-60cm, 600-700cm
- W02 WOODLAND MIX 2
Medium-small Trees
3no Wild Service Tree Sorbus torminalis 14-16cm, 300-350cm
- W02 WOODLAND MIX 2
Medium- small trees
2no Hazel Corylus avellana 14-16m, 4300-350cm
- W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
6no Wild Cherry Prunus avium, 350-400cm
- W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
1no Grey Willow Salix cinerea, 300-350cm
- W02 WOODLAND MIX 2
Landmark Character form Trees
1no Alder Alnus glutinosa 30-35cm, 550-600m
- W02 WOODLAND MIX 2
Landmark Character form Trees
1no Hornbeam Carpinus betulus 50-60cm, 600-700cm
- W02 WOODLAND MIX 2
Medium- small trees
2no European white elm, Ulmus Laevis 18-20cm, 350-400cm
- W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
3no Downy Birch Betula pubescens, 300-350cm
- W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
3no Holly Ilex aquifolium, 300-350cm
1no Grey Willow Salix cinerea, 300-350cm
- W2 WOODLAND MIX 2
Landmark Character form Trees
1no White willow Salix alba multi-stemmed 500-600m
- W02 WOODLAND MIX 2
Landmark Character form Trees
1no Hornbeam Carpinus betulus 30-35cm, 500-550cm
- W02 WOODLAND MIX 2
Medium- small trees
1no Whitebeam Sorbus aria 14-16m, 300-350cm
- W02 WOODLAND MIX 2
Large and medium trees
1no European white elm, Ulmus Laevis 30-35cm, 500-550cm
- W02 WOODLAND MIX 2
Large and medium trees
2no Hornbeam Carpinus betulus 30-35cm, 500-550cm
- W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
3no Wild Cherry Prunus avium , 300-350cm
3no Wild Cherry Prunus avium , 250-350cm
1no Grey Willow Salix cinerea, 300-350cm
- W02 WOODLAND MIX 2
Landmark Character form Trees
1no English Oak Quercus robur 50-60cm, 600-700cm
- W02 WOODLAND MIX 2
Medium- small trees
1no Whitebeam Sorbus aria 14-16cm, 300-350cm
- W02 WOODLAND MIX 2
Large and medium trees
2no Field Maple Acer campestris 30-35cm, 500-550cm
- W02 WOODLAND MIX 2
Medium- small trees
1no Wild Cherry Prunus avium 14-16cm, 300-350cm
- W02 WOODLAND MIX 2
Large and medium trees
1no Whitebeam Sorbus aria 30-35cm, 500-550cm
- W02 WOODLAND MIX 2
Medium and small scale multi-stemmed trees
3no Hazel Corylus avellana , 450-500cm
- W02 WOODLAND MIX 2
Landmark Character form Trees
1no Babylon weeping willow Salix babylonica 50-60cm, 600-700cm
- AC - Arrival Court and Car parking space
1no Sessile Oak Quercus petraea 50 - 55cm, 650-700cm
- AC - Arrival Court and Car parking space
2no Field Maple Acer campestre, Multistemmed, 300-350cm
- AC - Arrival Court and Car parking space
5no Common Whitebeam Sorbus aria, Multistemmed, 300-350cm

Note: Drawing to be read in conjunction with Plant Schedule, Refer to document RD001-FCB-XX-XX-SH-L-5000

- PG - Arrival Court and Car parking space
1no Field Maple Acer Campestre 35 - 40cm, 550-600cm
1no Maidenhair tree Ginkgo biloba 35 - 40cm, 550-600cm
- PG - Arrival Court and Car parking space
1no Maidenhair tree Ginkgo biloba 20 - 25cm, 450-500cm
3no Maidenhair tree Ginkgo biloba, Multistemmed, 300-350cm
- RG - RAIN GARDEN
1no Field maple Acer campestre 18-20cm, 300-350cm
2no Maidenhair tree Ginkgo biloba, Multistemmed, 550-600cm
- RG - RAIN GARDEN
2no Maidenhair tree Ginkgo biloba 18-20cm, 300-350cm
2no Maidenhair tree Ginkgo biloba, Multistemmed, 450-500cm
- AC - Arrival Court and Car parking space
3no Maidenhair tree Ginkgo biloba, 30-35cm, 500-550cm
2no Maidenhair tree Ginkgo biloba, Multistemmed, 400-450cm
- AC - Arrival Court and Car parking space
4no Maidenhair tree Ginkgo biloba 35 - 40cm, 550-600cm
- RG - RAIN GARDEN
1no Field Maple Acer Campestre 30 - 35cm, 500-550cm
1no Prunus padus 30 - 35cm, 350-400cm
2no Downy birch Betula pubescens, Multistemmed, 500-550cm
1no Common alder Alnus Glutinosa, Multistemmed, 350-400cm



GENERAL NOTES:

- All dimensions and levels to be checked and verified on site before commencing any work or producing shop drawings
- This drawing is to be read in conjunction with all other relevant drawings, specifications and schedules.
- Any discrepancy concerning the drawings should be referred to the originator / CA immediately
- All dimensions in millimetres unless noted otherwise
- All levels in metres
- Existing service alignments to be checked on site by the contractor on site prior to construction work commencing
- The content of this drawing is to be read in conjunction with the latest project CDM risk register

NOTES:

- The proposed access road is not part of the Natural History Museum works. Refer to the University of Reading planning application for details.
- For building plans and associated details, refer to the Architect's information.
- All external gates, railings, and boundary treatments around the Service Yard shall be in accordance with the Architect's information, unless noted otherwise.
- All paving make-ups to be in accordance with the Engineer's information.
- For highways directional signage, refer to the Engineer's information.
- Retaining wall structural details are provided in the Engineer's information. Structural performance and requirements of gabions to be in accordance with the Engineer's details and specification. The scope of the gabion system in the Landscape Specification (Clause D41) is limited to visual appearance and performance. The final system must be coordinated with the Engineer for structural requirements. Slot and channel drains must meet the Engineer's specifications - finishes to be agreed with Landscape Architect.
- Site-wide drainage and primary water services are detailed in the Engineer's information. The contractor must incorporate positive tree pit drainage in line with the site-wide drainage strategy and Engineer's details.
- External lighting proposals to follow the Engineer's information and comply with planning guidance to minimise light pollution and preserve dark skies. External lighting position as are coordinated with the landscape layout.
- HVM (Hostile Vehicle Mitigation) measures and security requirements are subject to final detail confirmation by the Security Consultant, who will advise on the placement of sensors, access control systems for gates, fences, and bollards type and location.
- EV charging points shown indicatively on landscape plans, refer to the Engineer's information.
- Ecological fibermacula features are shown indicatively on landscape plans. Final details to be provided by Ecologist.
- Footings design for benches, bins, fence and gate posts, steps, walls, and bollards to be provided by the Engineer.
- All external signage and road marking by others.
- External tap watering points are shown on the landscape plan. The source of water and required volume to be in accordance with engineer's requirements.

Planning Boundary

Lease Boundary

Scope of Works Boundary

Note: The proposed access road is not part of the Natural History Museum application. See University of Reading application for details of the access road.

AMENDMENTS FOR STAGE 4:

- Tree location change to accommodate the updated swale extension.
- Tree species change from Ulmus 'New Horizon' to the European white elm, Ulmus laevis, following the ecologist's recommendation and market availability.

S4 For LAP Review & Authorization

To be read in conjunction with the following documents & drawings

- RD001-FCB-XX-XX-DR-L-1003 Annotation Legend - Hardworks
- RD001-FCB-XX-XX-DR-L-1002 Annotation Legend - Softworks
- RD001-FCB-XX-XX-DR-L-1003 Annotation Legend - Section & Details
- RD001-GRK-XX-XX-SH-L-5000 Planning schedule for planting details
- RD001-GRK-XX-XX-SH-L-5000 series tree pit details

Rev.	Date	Description	Drawn	Chk'd
P04	02.05.2025	STAGE 4	VDM	KF
P03	21.02.2025	STAGE 4	VDM	KF
P02	21.06.2024	TENDER	VDM	KF
P01	26.04.2024	TENDER	VDM	KF

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CLIENT

FEILDEN CLEGG BRADLEY STUDIOS

PROJECT

NH M UNLOCKED

THAMES VALLEY SCIENCE PARK

TITLE

SITE WIDE PUBLIC REALM

SOFTWARE - TREE PLANTING

PLAN 1/2

Scale: 1:250@ A1

Date: 02/05/2025

Drawn: VDM

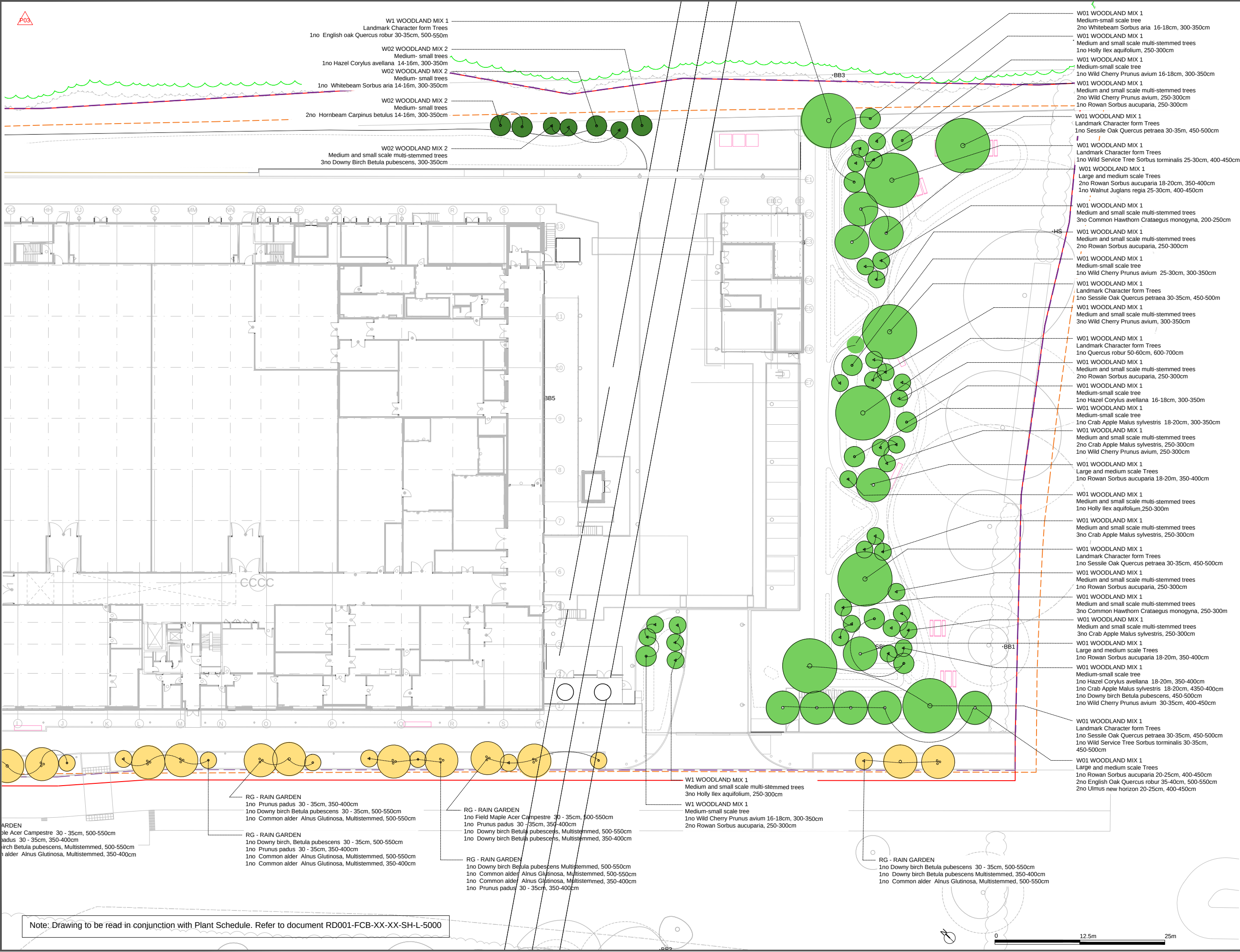
Checked: MS

Approved: KF

Status: STAGE 4

Drawing Number: RD001-FCB-XX-XX-DR-L-5102

Rev: P04



GENERAL NOTES:

- All dimensions and levels to be checked and verified on site before commencing any work or producing shop drawings.
- This drawing is to be read in conjunction with all other relevant drawings, specifications and schedules.
- Any discrepancy concerning the drawings should be referred to the originator / CA immediately.
- All dimensions in millimetres unless noted otherwise.
- All levels in metres.
- Existing service alignments to be checked on site by the contractor on site by the contractor prior to construction work commencing.
- The content of this drawing is to be read in conjunction with the latest project CDM risk register.

NOTES:

- The proposed access road is not part of the Natural History Museum works. Refer to the University of Reading planning application for details.
- For building plans and associated details, refer to the Architect's information.
- All external gates, railings, and boundary treatments around the Service Yard shall be in accordance with the Architect's information, unless noted otherwise.
- All paving make-ups to be in accordance with the Engineer's information.
- For highways directional signage, refer to the Engineer's information.
- Retaining wall structural details are provided in the Engineer's information. Structural performance and requirements of gabions to be in accordance with the Engineer's details and specification. The scope of the gabion system in the Landscape Specification (Clause D41) is limited to visual appearance and performance. The final system must be coordinated with the Engineer for structural requirements. Slot and channel drains must meet the Engineer's specifications - finishes to be agreed with Landscape Architect.
- Site-wide drainage and primary water services are detailed in the Engineer's information. The contractor must incorporate positive tree pit drainage in line with the site-wide drainage strategy and Engineer's details.
- External lighting proposals to follow the Engineer's information and comply with planning guidance to minimise light pollution and preserve dark skies. External lighting position as are coordinated with the landscape layout.
- HVM (Hostile Vehicle Mitigation) measures and security requirements are subject to final detail confirmation by the Security Consultant, who will advise on the placement of sensors, access control systems for gates, fences, and bollards type and location.
- By changing points shown indicatively on landscape plans, refer to the Engineer's information.
- Ecological hibernacula features are shown indicatively on landscape plans. Final details to be provided by Ecologist.
- Footings design for benches, bins, fence and gate posts, steps, walls, and bollards to be provided by the Engineer.
- All external signage and road marking by others.
- External tap watering points are shown on the landscape plan. The source of water and required volume to be in accordance with engineer's requirements.

Planning Boundary

Lease Boundary

Scope of Works Boundary

Note: The proposed access road is not part of the Natural History Museum application. See University of Reading application for details of the access road.

S4 For LAP Review & Authorization

To be read in conjunction with the following documents & drawings

- RD001-FCB-XX-XX-GRP-L-1003 Annotation Legend - Hardworks
- RD001-FCB-XX-XX-GRP-L-1002 Annotation Legend - Softworks
- RD001-FCB-XX-XX-GRP-L-1003 Annotation Legend - Section 4 Details

RD001-GR4-XX-XX-SH-L-5000 Planning schedule for planting details		
RD001-GR4-XX-XX-SH-L-5000 Series tree pit details		

P04	02.05.2025	STAGE 4	VDM	KF
P03	21.02.2025	STAGE 4	VDM	KF
P02	21.06.2024	TENDER	VDM	KF
P01	26.04.2024	TENDER	VDM	KF
Rev.	Date	Description	Drawn	Chd

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CUSTOMER

FEILDEN CLEGG BRADLEY STUDIOS

PROJECT

Natural History Museum UNLOCKED THAMES VALLEY SCIENCE PARK

TITLE

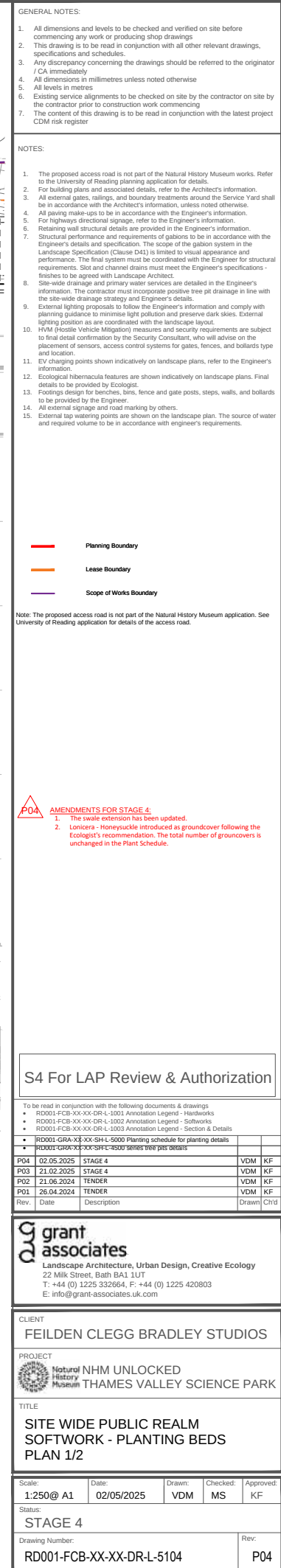
SITE WIDE PUBLIC REALM
SOFTWARE - TREE PLANTING
PLAN 2/2

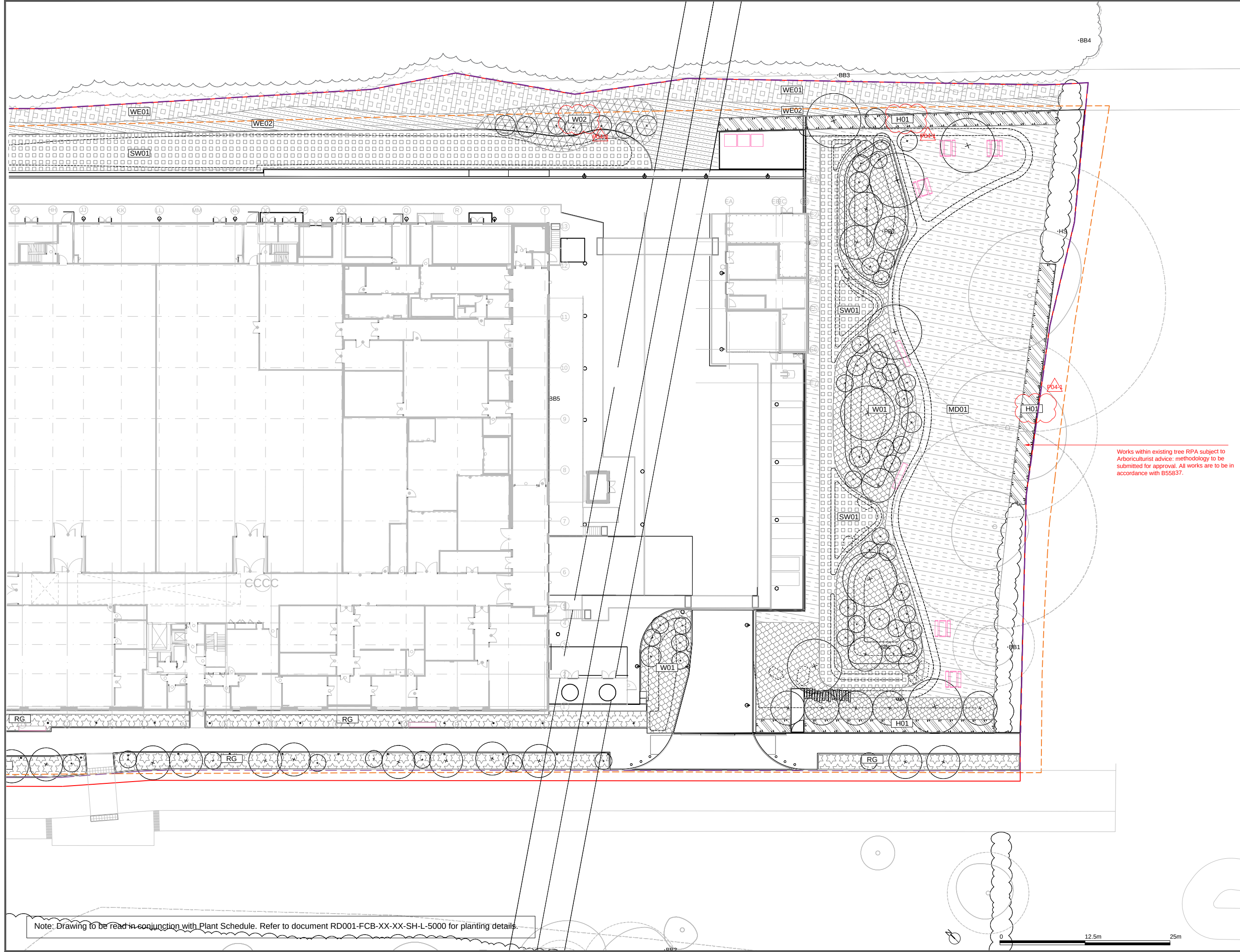
Scale:	1:250@ A1	Date:	02/05/2025	Drawn:	VDM	Checked:	MS	Approved:	KF
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Status:

STAGE 4

Drawing Number:	RD001-FCB-XX-XX-DR-L-5103	Rev:	P04
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Note: Drawing to be read in conjunction with Plant Schedule. Refer to document RD001-FCB-XX-XX-SH-L-5000 for planting details.

- GENERAL NOTES:
- All dimensions and levels to be checked and verified on site before commencing any work or producing shop drawings
 - This drawing is to be read in conjunction with all other relevant drawings, specifications and schedules.
 - Any discrepancy concerning the drawings should be referred to the originator / CA immediately
 - All dimensions in millimetres unless noted otherwise
 - All levels in metres
 - Existing service alignments to be checked on site by the contractor on site by the contractor prior to construction work commencing
 - The content of this drawing is to be read in conjunction with the latest project CDM risk register

- NOTES:
- The proposed access road is not part of the Natural History Museum works. Refer to the University of Reading planning application for details.
 - For building plans and associated details, refer to the Architect's information.
 - All external gates, railings, and boundary treatments around the Service Yard shall be in accordance with the Architect's information, unless noted otherwise.
 - All paving materials to be in accordance with the Engineer's information.
 - For highways directional signage, refer to the Engineer's information.
 - Retaining wall structural details are provided in the Engineer's information.
 - Structural performance and requirements of gabions to be in accordance with the Engineer's details and specification. The scope of the gabion system in the Landscape Specification (Clause D42) is limited to visual appearance and performance. The final system must be coordinated with the Engineer for structural requirements. Slot and channel drains must meet the Engineer's specifications - finishes to be agreed with Landscape Architect.
 - Site-wide drainage and primary water services are detailed in the Engineer's information. The contractor must incorporate positive tree pit drainage in line with the site-wide drainage strategy and Engineer's details.
 - External lighting proposals to follow the Engineer's information and comply with planning guidance to minimise light pollution and preserve dark skies. External lighting position as are coordinated with the landscape layout.
 - HVM (Hostile Vehicle Mitigation) measures and security requirements are subject to final detail confirmation by the Security Consultant, who will advise on the placement of sensors, access control systems for gates, fences, and bollards type and location.
 - EVI charging points shown indicatively on landscape plans, refer to the Engineer's information.
 - Ecological hibernacula features are shown indicatively on landscape plans. Final details to be provided by the Ecologist.
 - Footings design for benches, bins, fence and gate posts, steps, walls, and bollards to be provided by the Engineer.
 - All external signage and road marking by others.
 - External tap watering points are shown on the landscape plan. The source of water and required volume to be in accordance with engineer's requirements.

- Planning Boundary
- Lease Boundary
- Scope of Works Boundary

Note: The proposed access road is not part of the Natural History Museum application. See University of Reading application for details of the access road.

Works within existing tree RPA subject to Arboriculturist advice: methodology to be submitted for approval. All works are to be in accordance with B55837.

- AMENDMENTS FOR STAGE 4:
- Shrub species increases from No.3 species to No.7 species, following the Ecologist's recommendation. The total number of shrubs is unchanged in the Plant Schedule.
 - Londonia - Honeysuckle introduced as groundcover following the Ecologist's recommendation. The total number of groundcovers is unchanged in the Plant Schedule.

S4 For LAP Review & Authorization

To be read in conjunction with the following documents & drawings:			
• RD001-FCB-XX-XX-DR-L-1001 Annotation Legend - Hardworks			
• RD001-FCB-XX-XX-DR-L-1002 Annotation Legend - Softworks			
• RD001-FCB-XX-XX-DR-L-1003 Annotation Legend - Section & Details			
• RD001-GPA-XX-XX-SH-L-5000 Planting schedule for planting details			
• RD001-CRA-XX-XX-SH-L-5000 Series Tree pit details			
P04	02.05.2025	STAGE 4	VDM KF
P03	21.02.2025	STAGE 4	VDM KF
P02	21.06.2024	TENDER	VDM KF
P01	26.04.2024	TENDER	VDM KF
Rev.	Date	Description	Drawn/Chd

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CLIENT
FEILDEN CLEGG BRADLEY STUDIOS

PROJECT
Natural NHM UNLOCKED
Museum THAMES VALLEY SCIENCE PARK

TITLE
SITE WIDE PUBLIC REALM
SOFTWARE - PLANTING BEDS
PLAN 2/2

Scale:	Date:	Drawn:	Checked:	Approved:
1:250@ A1	02/05/2025	VDM	MS	KF
Status:				
STAGE 4				
Drawing Number:				Rev:
RD001-FCB-XX-XX-DR-L-5105				P04

APPENDIX 02 - PLANT SCHEDULE

RD001-FCB-XX-XX-SH-L-5000 Plant Schedule

The plant schedule includes all plants incorporated in the scheme including trees, shrubs, herbaceous perennial, grasses and ground covers

**NHM UNLOCKED
THAMES VALLEY SCIENCE PARK**

Plant Schedule

Document No: RD001-FCB-XX-XX-SH-L-5000

Revision: P04

Date: 2 May 2025

Client: Feilden Clegg Bradley Studios

Status: STAGE 4



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02/05/2025	P04	STAGE 4	VDM	KF
20-01-2025	P03	STAGE 4	VDM	KF
21-06-2024	P02	TENDER	VDM	KF
26-04-2024	P01	TENDER	VDM	KF
Date:	Revision	Purpose of Issue	By:	Chkd:

Plant Schedule:

Status: Stage 4

AC - Arrival Court and Car Park								
No. Req.	Species	Form	Age / Condition / No. of X transplanted	Girth (cm)	Height (cm)	Clear stem height (cm)	Root Condition/ Container Size	Notes:
Landmark, character form trees								
1	Sessile Oak <i>Quercus petraea</i>	Semi-Mature Standard	6x	50-55	650-700	250-300	Root ball	Specimen tree of excellent form and character. Good, evenly branched and dense canopy. Min. 7 no. laterals and clear central leader.
Large and medium trees								
Arrival Court								
1	Field Maple <i>Acer campestre</i>	Semi-Mature Standard	5x	25-30	55-60	210	Root ball	Good evenly branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
5	Maidenhair tree <i>Ginkgo biloba</i>	Semi-Mature Standard	5x	35-40	550-600	210	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Specimen tree with c. 100-120cm clearance to canopy
Car Park								
13	<i>Alnus glutinosa</i> 'Laciniata'	Semi-Mature Standard	5x	35-40	500-550	210	Root ball	Good evenly branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
Medium Semi-Mature and multi-stemmed trees								
3	Maidenhair tree <i>Ginkgo biloba</i>	Semi-Mature Standard	5x	30-35	500-550	175	Root ball	Good even branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
1	Field Maple <i>Acer campestre</i>	Semi-Mature Standard	5x	20-25	300-350	210	Root ball	
2	Maidenhair tree <i>Ginkgo biloba</i>	Multi-stemmed	4x	-	550-600	-	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Specimen trees suitable for high quality public realm.
2	Maidenhair tree <i>Ginkgo biloba</i>	Multi-stemmed	4x	-	450-500	-	Root ball	
2	Maidenhair tree <i>Ginkgo biloba</i>	Multi-stemmed	4x	-	400-450	-	Root ball	
5	Common Whitebeam <i>Sorbus aria</i>	Multi-stemmed	4x	-	300-350	-	Root ball	
Small grove of Ginkgo trees								
5	Maidenhair tree <i>Ginkgo biloba</i>	Semi-Mature Standard	5x	18-20	300-350	175	Root ball	Good even branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader. Min. 2.5m to underside of canopy.
1	Maidenhair tree <i>Ginkgo biloba</i>	Semi-Mature Standard	4x	20-25	450-500	175	Root ball	
2	Field Maple <i>Acer campestre</i>	Multi-stemmed	4x	-	300-350	-	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Specimen tree with c. 100-120cm clearance to canopy
3	Maidenhair tree <i>Ginkgo biloba</i>	Multi-stemmed	4x	-	300-350	-	Root ball	
3	Maidenhair tree <i>Ginkgo biloba</i>	Multi-stemmed	4x	-	300-350	-	Root ball	

W01 WOODLAND MIX 1 - FRUIT FOREST								
No. Req.	Species	Form	Age / Condition / No. of X transplanted	Girth (cm)	Height (cm)	Clear stem height (cm)	Root Condition/ Container Size	Notes:
Landmark, character form trees								
1	English Oak <i>Quercus robur</i>	Semi-Mature Standard	6x	50-60	600-700	210	Root ball	Specimen tree of excellent form and character. Good, evenly branched and dense canopy. Min. 7 no. laterals and clear central leader.
2	English Oak <i>Quercus robur</i>	Semi-Mature Standard	6x	30-35	550-600	210	Root ball	
4	Sessile Oak <i>Quercus petraea</i>	Semi-Mature Standard	6x	30-35	450-500	180	Root ball	
1	Wild Service Tree <i>Sorbus torminalis</i>	Semi-Mature Standard	6x	30-35	450-500	210	Root ball	
1	Wild Service Tree <i>Sorbus torminalis</i>	Semi-Mature Standard	6x	25-30	400-450	210	Root ball	
Large and medium scale Trees								
2	English Oak <i>Quercus robur</i>	Semi-Mature Standard	5x	35-40	500-550	210	Root ball	Good even branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
0	Wild Cherry <i>Prunus avium</i>	Semi-Mature Standard	4x	30-35	450-500	210	Root ball	
1	Rowan <i>Sorbus aucuparia</i>	Semi-Mature Standard	4x	20-25	400-450	210	Root ball	
1	Walnut <i>Juglans regia</i>	Semi-Mature Standard	5x	25-30	400-450	210	Root ball	
1	Wild Cherry <i>Prunus avium</i>	Semi-Mature Standard	4x	25-30	300-350	210	Root ball	
Medium-Small scale trees								
2	European white elm - <i>Ulmus laevis</i>	Semi-Mature Standard	4x	20-25	400-450	210	Root ball	Good even branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
1	Hazel <i>Corylus avellana</i>	Semi-Mature Standard	4x	18-20	350-400	180	Root ball	
1	Crab Apple <i>Malus sylvestris</i>	Semi-Mature Standard	4x	18-20	350-400	180	Root ball	
4	Rowan <i>Sorbus aucuparia</i>	Semi-Mature Standard	4x	18-20	350-400	210	Root ball	
2	Whitebeam <i>Sorbus aria</i>	Semi-Mature Standard	4x	16-18	300-350	180	Root ball	
1	Hazel <i>Corylus avellana</i>	Semi-Mature Standard	4x	16-18	300-350	180	Root ball	
2	Wild Cherry <i>Prunus avium</i>	Semi-Mature Standard	4x	16-18	300-350	180	Root ball	
Medium and small scale multi-stemmed trees								
1	Wild Cherry <i>Prunus avium</i>	Multi-stem	4x	-	450-500	-	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Suitable for woodland planting.
1	Downy birch <i>Betula pubescens</i>	Multi-stem	4x	-	450-500	-	Root ball	
3	Wild Cherry <i>Prunus avium</i>	Multi-stem	4x	-	300-350	-	Root ball	
5	Holly <i>Ilex aquifolium</i>	Multi-stem	4x	-	250-300	-	Root ball	
1	Crab Apple <i>Malus sylvestris</i>	Multi-stem	4x	-	250-300	-	Root ball	
6	Common Hawthorn <i>Crataegus monogyna</i>	Multi-stem	4x	-	250-300	-	Root ball	
0	Field Maple <i>Acer campestre</i>	Multi-stem	4x	-	250-300	-	Root ball	
8	Rowan <i>Sorbus aucuparia</i>	Multi-stem	4x	-	250-300	-	Root ball	
8	Crab Apple <i>Malus sylvestris</i>	Multi-stem	4x	-	250-300	-	Root ball	
3	Wild Cherry <i>Prunus avium</i>	Multi-stem	4x	-	250-300	-	Root ball	

W02 WOODLAND MIX 2								
No. Req.	Species	Form	Age / Condition / No. of X transplanted	Girth (cm)	Height (cm)	Clear stem height (cm)	Root Condition/ Container Size	Notes:
Landmark, character form trees								
1	Babylon weeping willow <i>Salix babylonica</i>	Semi-Mature Standard	6x	50-60	600-700	210	Root ball	Specimen tree of excellent form and character. Good, evenly branched and dense canopy. Min. 7 no. laterals and clear central leader.
1	Hornbeam <i>Carpinus betulus</i>	Semi-Mature Standard	6x	50-60	600-700	210	Root ball	
2	English Oak <i>Quercus robur</i>	Semi-Mature Standard	6x	50-60	600-700	210	Root ball	
2	Sessile Oak <i>Quercus petraea</i>	Semi-Mature Standard	6x	30-35	550-600	180	Root ball	
1	White Salix Alba	multi-stem	6x	-	500-600	-	Root ball	
1	Alder Alnus <i>Alnus Glutinosa</i>	Semi-Mature Standard	6x	30-35	550-600	180	Root ball	
1	Whitebeam Sorbus aria	Semi-Mature Standard	6x	30-35	500-550	210	Root ball	
Large and medium scale trees								
2	Field Maple <i>Acer campestris</i>	Semi-Mature Standard	4x	30-35	500-550	210	Root ball	Good even branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
1	European white elm - <i>Ulmus laevis</i>	Semi-Mature Standard	4x	30-35	500-550	210	Root ball	
3	Hornbeam <i>Carpinus betulus</i>	Semi-Mature Standard	4x	30-35	500-550	210	Root ball	
1	Whitebeam <i>Sorbus aria</i>	Semi-Mature Standard	4x	20-25	400-450	180	Root ball	
1	Hornbeam <i>Carpinus betulus</i>	Semi-Mature Standard	4x	20-25	400-450	180	Root ball	
Medium-small scale trees								
2	European white elm <i>Ulmus laevis</i>	Semi-Mature Standard	4x	18-20	350-400	120	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Suitable for woodland planting.
3	Hazel <i>Corylus avellana</i>	Semi-Mature Standard	4x	14-16	300-350	120	Root ball	
3	Wild Service Tree <i>Sorbus torminalis</i>	Semi-Mature Standard	4x	14-16	300-350	120	Root ball	
2	Hornbeam <i>Carpinus betulus</i>	Semi-Mature Standard	4x	14-16	300-350	120	Root ball	
4	Whitebeam <i>Sorbus aria</i>	Semi-Mature Standard	4x	14-16	300-350	120	Root ball	
3	Wild Cherry <i>Prunus avium</i>	Semi-Mature Standard	4x	14-16	300-350	120	Root ball	
Medium and small scale multi-stemmed trees								
9	Wild Cherry <i>Prunus avium</i>	multi-stem	4x	-	350-400	-	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Suitable for woodland planting.
6	Downy Birch <i>Betula pubescens</i>	multi-stem	4x	-	300-350	-	Root ball	
4	Grey Willow <i>Salix cinerea</i>	multi-stem	4x	-	300-350	-	Root ball	
3	Hazel <i>Corylus avellana</i>	multi-stem	4x	-	300-350	-	Root ball	
3	Holly <i>Ilex aquifolium</i>	multi-stem	4x	-	300-350	-	Root ball	
3	Wild Cherry <i>Prunus avium</i>	multi-stem	4x	-	250-350	-	Root ball	

RAIN GARDEN - WEST ROAD								
No. Req.	Species	Form	Age / Condition / No. of X transplanted	Girth (cm)	Height (cm)	Clear stem height (cm)	Root Condition/ Container Size	Notes:
5	Downy birch <i>Betula pubescens</i>	multi-stem	4x	-	500-550	210	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Canopy clearance up to 210cm
4	Common alder <i>Alnus Glutinosa</i>	multi-stem	4x	-	500-550	210	Root ball	
4	Field Maple <i>Acer campestre</i>	Semi-Mature Standard	4x	30-35	500-550	210	Root ball	Good even branched dense canopy; Well branched (min. 5 - 7 no.) with clear central leader.
5	Bird cherry <i>Prunus padus</i>	Semi-Mature Standard	4x	18-20	350-400	175	Root ball	
2	Common alder <i>Alnus Glutinosa</i>	multi-stem	4x	-	350-400	120	Root ball	Good evenly branched, dense canopy. Min. 3 no. major stems from ground. Canopy clearance up to 120cm
3	Downy birch <i>Betula pubescens</i>	multi-stem	4x	-	350-400	120	Root ball	

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.
2. Few special selected tree species possibly sourced from cuttings or seed from the population in St John's Copse.
3. Trees are to be selected on their individual form and character as good quality specimen. Well balanced crown, clear central header.
4. Clear stem trees to be free of recent legging up scars, i.e. tree to have one full growing season following legging up.
5. Tree spacing at nursery to truly reflect the no. of times transplanted.
6. Note: Rootballed trees must be planted within the recognised horticultural planting (dormant) season mid Oct - mid March. If planting is programmed outside of this period, the Contractor must include optional costs at tender for container grown stock.
7. Refer to Landscape specification Q31/220 for the list of preferred nurseries. Any change to this strict adherence requires full justification and approval from the Landscape Architect.

Plant Schedule:

Status: Stage 4

H01 - NATIVE HEDGE ROW -120 LINEAR METER, 2.5m wide (258m2)							
Item	Description	Species	Habit / Form	Size: Height / Spread (cm)	Root condition	Notes	No. Required
1	Hedge row	Blackthorn <i>Prunus spinosa</i>	Dense core, feathered form for hedging	60-80cm	Bare root, 1+2 Transplant	Planted 500mm apart as double staggered rows of 500mm. Planted within single species swathes of approx 10 no.	80
2	Hedge row	Midland Hawthorn <i>Crataegus laevigata</i>	Dense core, feathered form for hedging	60-80cm	Bare root, 1+2 Transplant		80
3	Hedge row	Guelder Rose <i>Viburnum opulus</i>	Dense bushy form for hedging	60-80cm	Bare root, 1+2 Transplant		70
4	Hedge row	<i>Corylus avellana</i> - Hazel	Dense bushy form for hedging	60-80cm	Bare root, 1+2 Transplant		70
5	Hedge row	<i>Sambucus nigra</i> - Elder	Dense bushy form for hedging	60-80cm	Bare root, 1+2 Transplant		70
6	Hedge row	<i>Salix Eleagnos</i> - Salix Ripaudo	Dense bushy form for hedging	60-80cm	Bare root, 1+2 Transplant		80
7	Hedge row	<i>Fraxinus excelsior</i> - Common Ash	Dense bushy form for hedging	60-80cm	Bare root, 1+2 Transplant		80

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.
2. Hedging plants to be established, dense core suitable to provide immediate hedging at planting.
3. Note: Rootballed / bare root stock must be planted within the recognised horticultural planting (dormant) season mid Oct - mid March. If planting is programmed outside of this period, the Contractor must include optional costs at tender for container grown stock.

Plant Schedule:

Status: Stage 4

AC - ARRIVAL PLAZA- Total Area 203.5 m2

AC - ARRIVAL PLAZA

Item	Species to include	Size: Height / Spread (cm)	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
1	Dogwood <i>Cornus sanguinea</i>	80-100cm high; 50-60 wide	10L	CG	No.15 to be plant in the cycle store area	4/m ²	-	30
2	Sweet box <i>Sarcococca hookeriana var. humilis</i>	80-100cm high; 50-60 wide	10L	CG		4/m ²	-	10
3	Stag's horn sumach <i>Rhus typhina</i>	80-100cm high; 50-60 wide	10L	CG		4/m ²	-	10

AC - ARRIVAL PLAZA

Item	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
Ferns and grasses 40% of remaining total bed area							
4	Shuttlecock fern <i>Matteuccia struthiopteris</i>	3L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 4-5 no.	6/m²	10	50
5	Soft shield fern <i>Polystichum setiferum</i>	3L	CG		6/m²	20	100
6	Scaly male fern <i>Dryopteris affinis</i>	3L	CG		6/m²	20	100
7	Pheasant's tail grass <i>Anemanthele lessoniana</i>	3L	CG		6/m²	30	150
8	<i>Carex Pendula</i>	3L	CG		6/m²	20	100
						100	

Herbaceous and perennial 40% of remaining total bed area

9	Wood spurge <i>Euphorbia</i> var.	2L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 7-9 no.	9/m²	10	75
10	Virginia knotweed <i>Persicaria</i> var.	2L	CG		9/m²	20	150
11	Foxglove <i>Digitalis</i> × <i>mertonensis</i>	2L	CG		9/m²	20	150
12	Common fennel <i>Foeniculum vulgare</i>	2L	CG		9/m²	10	75
13	Wood anemone <i>Anemone nemorosa</i>	2L	CG		9/m²	20	150
14	Lady's mantle <i>Alchemilla mollis</i>	2L	CG		9/m²	20	150
						100	

Groundcover 20% of remaining total bed area							
15	Lesser periwinkle <i>Vinca minor</i>	1L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 7-9 no along the planter edge.	9/m²	50	185
16	Variegated Japanese spurge <i>Pachysandra Terminalis Variegata</i>	1L	CG		9/m²	50	185
						100	

Seasonal Bulbs						
Item	Species	Container size	Root condition	Notes	Planting Density / m²	No. Required
17	Snowdrop <i>Galanthus</i>	Top size	-	Scattered in drifts throughout the beds, over 2/3 of total bed area.	15/m²	2040
18	Hellebore <i>Hellebores</i>	Top size	-	Scattered in drifts throughout the beds, over 1/3 of total bed area.	20/m²	1360

Climber plants - Pergola							
Item	species	Container size	Root condition	Notes	Planting Density / m²	%mix	No. Required
19	Wisteria floribunda f. alba 'Shiro-noda'	10L	CG	Full pot. Well developed, vegetative, dense clump			2
20	Clematis cirrhosa var. purpurascens 'Freckles'	10L	CG				3

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:

Status: Stage 4

W01 WOODLAND MIX 1 - Total Area 987 m2

Area to be planted with 2x2m grid inter shrubs mix along all planting beds. Planting mix of ferns, herbaceous and ground cover to be planted within shrubs. Bulbs mix to be scattered in drifts throughout the planting bed.

W01 WOODLAND MIX 1: SHRUBS - Total Area 987 m2

Item	Species to include	Size: Height / Spread (cm)	Container size	Root condition	Notes	%mix	Planting Density / m ²	No. Required
1	Dogwood <i>Cornus sanguinea</i>	60-80cm	-	Bare root, 1+2 Transplant	2x2m grid inter planted along the all planting bed	5	-	50
2	Guelder Rose <i>Viburnum opulus</i>	20-30cm	3L	CG		10	-	100
3	Midland Hawthorn <i>Crataegus laevigata</i>	60-80cm	-	Bare root, 1+2 Transplant		5	-	50
4	Hawthorn <i>Crataegus monogyna</i>	60-80cm	-			5	-	50
5	Alder Buckthorn <i>Frangus alnus</i>	60-80cm	-			15	-	60
6	Hazel <i>Corylus avellana</i>	60-80cm	-			15	-	60
7	Holly <i>Ilex aquifolium</i>	60-80cm	3L	CG		5	-	50
8	Dog Rose <i>Rosa canina</i>	60-80cm	-	Bare root, 1+2 Transplant		2.5	-	25
9	Blackthorn <i>Prunus spinosa</i>	60-80cm	-			2.5	-	25
10	Blackberry <i>Rubus fruticosus</i>	60-80cm	-			10	-	100
11	Bird cherry <i>Prunus padus</i>	60-80cm	-			20	-	200
12	Common elder <i>Sambucus nigra</i>	60-80cm	-			5	-	50
						100		

W01 WOODLAND MIX 1: Ferns 20% of total bed area

Item	Species to include	Container size	Root condition	Notes	%mix	Planting Density / m ²	No. Required
13	<i>Asplenium scolopendrium</i>	2L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 5-7 no.	20	6/m ²	240
14	<i>Dryopteris affinis</i>	2L	CG		40	6/m ²	480
15	<i>Polypodium vulgare</i>	2L	CG		40	6/m ²	480
					100		

W01 WOODLAND MIX 1: Herbaceous and Groundcover 80% of total bed area

Item	Species to include	Container size	Root condition	Notes	%mix	Planting Density / m ²	No. Required
16	Garlic Mustard <i>Alliaria petiolata</i>	P9	CG	To be planted at 6 per m2 within the shrub. Planted within single species swathes of approx 3-4 no.	10	6/m ²	480
17	<i>Lonicera</i> - Honeysuckle	2L	CG		5	6/m ²	240
18	Cow Parsley <i>Anthriscus sylvestris</i>	P9	CG		5	6/m ²	240
19	Carex pendula – Pendulous Sedge	2L	CG		5	6/m ²	240
20	Carex sylvatica	2L	CG		5	6/m ²	240
21	Meadowsweet <i>Filipendula ulmaria</i>	P9	CG		5	6/m ²	240
22	Wood Avens <i>Geum urbanum</i>	P9	CG		5	6/m ²	240
23	<i>Silene dioica</i>	P9	CG		5	6/m ²	240
24	Ragged Robin <i>Silene flos-cuculi</i>	P9	CG		5	6/m ²	240
25	<i>Fragaria vesca</i>	P9	CG		10	6/m ²	480
26	Aquilegia vulgaris	P9	CG		10	6/m ²	480
27	<i>Angelica sylvestris</i>	P9	CG		10	6/m ²	480
28	<i>Allium ursinum</i>	P9	CG		10	6/m ²	480
29	<i>Oxalis acetosella</i>	P9	CG		10	6/m ²	480
					100		

W01 WOODLAND MIX 1: Seasonal Bulbs

Item	Species	Size: Height / Spread (cm)	Root condition	Notes	Planting Density / m ²	No. Required
30	English Bluebell <i>Hyacinthoides non-scripta</i>	Top size	-	Scattered in drifts throughout the beds, over 2/3 of total bed area.	15/m ²	9900
31	Wild Daffodil <i>Narcissus pseudonarcissus</i>	Top size	-	Scattered in drifts throughout the beds, over 1/3 of total bed area.	15/m ²	4940
32	Wood Anemone <i>Anemone nemorosa</i>	Top size	-	Scattered in drifts throughout the beds, over 1/3 of total bed area.	15/m ²	4940

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:

Status: Stage 4

W02 WOODLAND MIX 2 - Total Area 1619 m ²								
Area to be planted with 2x2 grid inter shrubs mix along all planting beds. Planting mix of ferns, herbaceous and ground cover to be planted within shrubs. Bulbs mix to be scattered in drifts throughout the planting bed.								

W02 WOODLAND MIX 2: SHRUBS Total Area 1619m2								
Item	Species to include	Size: Height / Spread (cm)	Container size	Root condition	Notes	%mix	Planting Density / m ²	No. Required
1	Hawthorn <i>Crataegus monogyna</i>	60-80cm	-	Bare root, 1+2 Transplant	2x2m grid inter planted along the all planting bed	30	-	100
2	Holly <i>Ilex aquifolium</i>	60-80cm	-			30	-	100
3	Blackthorn <i>Prunus spinosa</i>	60-80cm	-			40	-	140
4	Hawthorn <i>Crataegus monogyna</i>	80-120	6L	CG	Full pot. Well developed, vegetative, dense clump. Planted scattred along the estate road edge	-	-	20
5	Holly <i>Ilex aquifolium</i>	80-120	6L			-	-	20
6	Blackthorn <i>Prunus spinosa</i>		6L			-	-	20
7	Hawthorn <i>Crataegus monogyna</i>	200-300	15L	CG	Full pot. Well developed, vegetative, dense clump.Planted scattred along the estate road edge	-	-	20
8	Holly <i>Ilex aquifolium</i>	200-300	15L			-	-	20
9	Blackthorn <i>Prunus spinosa</i>	200-300	15L			-	-	20
W02 WOODLAND MIX 2: Ferns 30% of total bed area								
Item	Species to include	Container size	Root condition	Notes	%mix	Planting Density / m ²	No. Required	
10	<i>Asplenium scolopendrium</i>	3L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 5-7 no.	20	6/m ²	590	
11	<i>Dryopteris affinis</i>	3L	CG		40	6/m ²	1170	
12	<i>Polypodium vulgare</i>	3L	CG		40	6/m ²	1170	

W02 WOODLAND MIX 2: Herbacus and Groundcover 70% of total bed area							
Item	Species to include	Container size	Root condition	Notes	%mix	Planting Density / m ²	No. Required
13	Garlic Mustard <i>Alliaria petiolata</i>	P9	CG	Full pot. Well developed, vegetative, dense clump.To be planted at 6 per m2 within the shrub. Planted within single species swathes of approx 3-4 no.	10	6/m ²	680
14	Cow Parsley <i>Anthriscus sylvestris</i>	P9	CG		10	6/m ²	680
15	Pendulous Sedge <i>Carex pendula</i>	2L	CG		10	6/m ²	680
16	Meadowsweet <i>Filipendula ulmaria</i>	P9	CG		10	6/m ²	680
17	Wood Avens <i>Geum urbanum</i>	P9	CG		10	6/m ²	680
18	<i>Silene dioica</i>	P9	CG		5	6/m ²	340
19	<i>Lonicera</i> - Honeysuckle	2L	CG		5	6/m ²	340
20	<i>Aquilegia vulgaris</i>	P9	CG		10	6/m ²	680
21	<i>Angelica sylvestris</i>	P9	CG		20	6/m ²	1360
22	<i>Oxalis acetosella</i>	P9	CG		10	6/m ²	680
					100		

W02 WOODLAND MIX 2: Seasonal Bulbs						
Item	Species to include	Container size	Root condition	Notes	Planting Density / m ²	No. Required
23	English Bluebell <i>Hyacinthoides non-scripta</i>	Top size	-	Scattered in drifts throughout the beds, over 2/3 of total bed area.	15/m ²	16190
24	Wild Daffodil <i>Narcissus pseudonarcissus</i>	Top size	-	Scattered in drifts throughout the beds, over 1/3 of total bed area.	15/m ²	8100
25	Wood Anemone <i>Anemone nemorosa</i>	Top size	-	Scattered in drifts throughout the beds, over 1/3 of total bed area.	15/m ²	8100

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:

Status: Stage 4

WE01 WOODLAND EDGE: SHRUBS - Total Area 460m2							
Item	Species to include	Size: Height / Spread (cm)	Container size	Root condition	Notes	%mix	No. Required
1	Dogwood <i>Cornus sanguinea</i>	60-80cm	-	Bare root, 1+2 Transplant	To be planted at 4 per m2 within the shrub. Planted within single species swathes of approx 3-4 no.	15	280
2	Guelder Rose <i>Viburnum opulus</i>	20-30cm	3L	CG		10	185
3	Midland Hawthorn <i>Crataegus laevigata</i>	60-80cm	-	Bare root, 1+2 Transplant		10	185
4	Hawthorn <i>Crataegus monogyna</i>	60-80cm	-			10	185
5	Alder Buckthorn <i>Frangus alnus</i>	60-80cm	-			20	370
6	Hazel <i>Corylus avellana</i>	60-80cm	-			20	370
7	Holly <i>Ilex aquifolium</i>	60-80cm	3L	CG		5	95
8	Field Rose <i>Rosa arvensis</i>	60-80cm	-	Bare root, 1+2 Transplant		5	95
9	Dog Rose <i>Rosa canina</i>	60-80cm	-			2.5	50
10	Blackthorn <i>Prunus spinosa</i>	60-80cm	-			2.5	50
						100	

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:

Status: Stage 4

WE02 WOODLAND EDGE: GRASSLAND - Total Area 460 m2

Area to be seeded with seed mixes EW1 and EH1 as defined in drawing number RD001-GRA-XX-XX-DR-L-5102

Items	Description	Species to include	%mix	Tot. Area
Planting mix				
1	Emorsgate Woodland Mixture EW1 (or equivalent)	Wild Flowers 20% 1.00% Alliaria petiolata – Garlic Mustard 0.50% Anthriscus sylvestris – Cow Parsley 2.00% Carex divulsa ssp divulsa – Grey Sedge 0.10% Carex pendula – Pendulous Sedge 4.00% Chaerophyllum temulum – Rough Chervil 1.00% Digitalis purpurea – Foxglove 1.10% Filipendula ulmaria – Meadowsweet 0.50% Galium album – (Galium mollugo) – Hedge Bedstraw 2.00% Geranium pyreniacum – Hedge Crane's-bill 0.80% Geum urbanum – Wood Aven 1.00% Hyacinthoides non-scripta – Bluebell 5.00% Silene dioica – Red Campion 1.00% Silene flos-cuculi – Ragged Robin Grasses 80% 1.00% Agrostis capillaris – Common Bent (w) 2.00% Anthoxanthum odoratum – Sweet Vernal-grass (w) 1.00% Brachypodium sylvaticum – False Brome (w) 50.00% Cynosurus cristatus – Crested Dogtail 2.00% Deschampsia cespitosa – Tufted Hair-grass (w) 20.00% Festuca rubra – Red Fescue (w) 4.00% Poa nemoralis – Wood Meadow-grass	50	260
2	Hedgerow Mixture EH1 (or equivalent)	Wild Flowers 0.10% Achillea millefolium – Yarrow 1.00% Alliaria petiolata – Garlic Mustard 0.50% Anthriscus sylvestris – Cow Parsley 1.50% Carex divulsa ssp divulsa – Grey Sedge 2.00% Centaurea nigra – Common Knapweed 3.00% Chaerophyllum temulum – Rough Chervil 2.00% Cruciata laevipes – Crosswort 0.20% Dipsacus fullonum – Wild Teasel 0.50% Galium album – Hedge Bedstraw 0.10% Geranium pratense – Meadow Crane's-bill 1.00% Geranium pyreniacum – Hedge Crane's-bill 0.30% Geum urbanum – Wood Aven 0.20% Knautia arvensis – Field Scabious 1.00% Leucanthemum vulgare – Moon Daisy 1.00% Malva moschata – Musk Mallow 2.00% Plantago lanceolata – Ribwort Plantain 3.00% Silene dioica – Red Campion 0.50% Silene flos-cuculi – Ragged Robin 0.10% Torilis japonica – Upright Hedge-parsley Grasses 1.00% Agrostis capillaris – Common Bent (w) 2.00% Anthoxanthum odoratum – Sweet Vernal-grass (w) 1.00% Brachypodium sylvaticum – False Brome (w) 50.00% Cynosurus cristatus – Crested Dogtail 2.00% Deschampsia cespitosa – Tufted Hair-grass (w) 20.00% Festuca rubra – Red Fescue (w) 4.00% Poa nemoralis – Wood Meadow-grass	50	260
			100	

Seasonal Bulbs				
Item	Species to include	Container size	Notes	Planting Density / m2
3	English Bluebell <i>Hyacinthoides non-scripta</i>	Top size	Scattered in drifts throughout the beds, over 2/3 of total bed area.	15/m²
4	Snowdrop <i>Galanthus nivalis</i>	Top size	Scattered in drifts throughout the beds, over 1/3 of total bed area.	15/m²
5	Wood Anemone <i>Anemone nemorosa</i>	Top size	Scattered in drifts throughout the beds, over 1/3 of total bed area.	15/m²

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:
Status: Stage 4

MD01 - MEADOW MIX 1 - Total Area 1640 m2
Area to be seeded with seed mix EM4 as defined in drawing number RD001-GRA-XX-XX-DR-L-5102

Planting mix		
Items	Description	Species
1	Emorsgate Meadow Mixture for Clay Soils EM4 (or equivalent) Common + 10% Poppy (Red) Papaver rhoeas of the total bed to be costum	Wild Flowers – 20% 0.20% Agrimonia eupatoria – Agrimony 0.20% Betonica officinalis – Betony 3.00% Centaurea nigra – Common Knapweed 0.80% Filipendula ulmaria – Meadowsweet 0.80% Leucanthemum vulgare – Oxeye Daisy 2.50% Malva moschata – Musk Mallow 4.10% Plantago lanceolata – Ribwort Plantain 0.70% Ranunculus acris – Meadow Buttercup 0.20% Silaum silaus – Pepper Saxifrage 0.20% Primula veris – Cowslip 0.10% Lotus corniculatus – Bird’s-foot Trefoil 2.00% Achillea millefolium – Yarrow 1.20% Silene flos-cuculi – Ragged Robin 2.00% Galium verum – Lady’s Bedstraw 0.50% Lathyrus pratensis – Meadow Vetchling 1.00% Carex flacca – Glaucous Sedge 0.20% Taraxacum officinale – Dandelion0.30% Daucus carota – Wild Carrot Grasses – 80% 2.40% Agrostis capillaris – Common Bent 2.00% Anthoxanthum odoratum – Sweet Vernal-grass (w) 2.00% Briza media – Quaking Grass (w) 62.40% Cynosurus cristatus – Crested Dogstail 10.00% Festuca rubra – Red Fescue 1.20% Trisetum flavescens – Yellow Oat-grass (w)

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:

Status: Stage 4

MD02 - WET MEADOW MIX- Total Area 306 m2**Grasses mix 30%**

Item	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
1	Sweet Vernal-grass (w) <i>Anthoxanthum odoratum</i>	P9	CG	Full pot. Well developed, vegetative, dense clump. Planted within single species swathes of approx 5-10	9/m²	20	165
2	Crested Dogstail <i>Cynosurus cristatus</i>	P9	CG		9/m²	20	165
3	Tufted Hair-grass (w) <i>Deschampsia cespitosa</i>	P9	CG		9/m²	30	250
4	Red Fescue <i>Festuca rubra</i>	P9	CG		9/m²	30	250
						100	

Wild flower mix 70%

Item	Species	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
5	Grey Sedge <i>Carex divulsa</i> <i>ivulsa</i>	P9	CG	Full pot. Well developed, vegetative, dense clump. Planted within single species swathes of approx 5-10	9/m²	5	100
6	Pendulous Sedge <i>Carex pendula</i>	P9	CG		9/m²	5	100
7	Common Knapweed - <i>Centurea nigra</i>	P9	CG		9/m²	10	200
8	Crosswort <i>Cruciata laevipes</i>	P9	CG		9/m²	5	100
9	Wild teasel <i>Dipsacus fullonum</i>	P9	CG		9/m²	10	195
10	Meadowsweet <i>Filipendula ulmaria</i>	P9	CG		9/m²	10	200
11	Water Avens <i>Geum rivale</i>	P9	CG		9/m²	10	200
12	Yellow Iris <i>Iris pseudacorus</i>	P9	CG		9/m²	20	400
13	Selfheal <i>Prunella vulgaris</i>	P9	CG		9/m²	10	200
14	Yellow Rattle <i>Rhinanthus minor</i>	P9	CG		9/m²	5	100
15	Red Campion <i>Silene dioica</i>	P9	CG		9/m²	5	100
16	Ragged Robin <i>Silene flos-cuculi</i>	P9	CG		9/m²	5	100
						100	

Shrubs along retaining wall							
Item	Species	Container size	Root condition	Notes	Planting Density / m ²	%mix	No. Required
17	Holly Ilex aquifolium	10L	CG	Shrubs to be planted along the water pond wall edge. Planted 650mm apart within single species swathes of approx 3-5. Full pot. Well developed, vegetative, dense clump, multistamp	3/m ²		20
18	Salix eleagnos - Salix ripaido	10L	CG		3/m ²		20

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.
2. Submerged aquatic plant supplied and planted in proprietary baskets. Pond liner system to be fully compatible with planting intent.

Plant Schedule:

Status: Stage 4

SW01 - EDGE SWALE GRASSLAND MIX - Total Area 1093 m2

Area to be seeded with seed mix EM8 along swale slope and with wet and dry planting mix on swale bottom

Planting mix on the swale slope - 656m2 (60% of total planting bed)

Items	Description	Species	Tot. Area(m2)
1	Emorsgate Meadow Mixture for Wetlands EM8 (or equivalent)	Wild Flowers 100% 2.00% Achillea millefolium – Yarrow 2.40% Galium verum – Lady's Bedstraw 1.20% Leucanthemum vulgare – Oxeye Daisy (Moon Daisy) 3.60% Plantago lanceolata – Ribwort Plantain 0.80% Rumex acetosa – Common Sorrel 0.20% Primula veris – Cowslip 0.60% Silene flos-cuculi – Ragged Robin 1.00% Ranunculus acris – Meadow Buttercup 0.80% Lotus pedunculatus – Greater Birdsfoot Trefoil 0.50% Lathyrus pratensis – Meadow Vetchling 0.10% Succisa pratensis – Devil's-bit Scabious 1.00% Sanguisorba officinalis – Great Burnet 0.10% Vicia cracca – Tufted Vetch 3.60% Centaurea nigra – Common Knapweed 1.00% Filipendula ularia – Meadowsweet 1.00% Rhinanthus minor – Yellow Rattle 0.10% Taraxacum officinale – Dandelion Grasses 80% 2.0% Agrostis capillaris – Common Bent (w) 2.0% Anthoxanthum odoratum – Sweet Vernal-grass (w) 4.0% Briza media – Quaking Grass (w) 48.0% Cynosurus cristatus – Crested Dogstail 2.0% Deschampsia cespitosa – Tufted Hair-grass (w) 22.0% Festuca rubra – Red Fescue	652

Wet and dry planting on the swale bottom 437 m2 (40% of total planting bed)

Item	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
Grasses: 60% of total bed area							
2	Sweet Vernal-grass (w) <i>Anthoxanthum odoratum</i>	2L	CG	Full pot. Well developed, vegetative, dense clump. Planted within single species swathes of approx 5-10	6/m²	10	270
3	Crested Dogstail <i>Cynosurus cristatus</i>	2L	CG		6/m²	10	270
4	Tufted Hair-grass (w) <i>Deschampsia cespitosa</i>	2L	CG		6/m²	20	320
5	<i>Deschampsia cespitosa</i>	2L	CG		6/m²	20	320
6	<i>Juncus inflexus</i>	2L	CG		6/m²	10	270
7	<i>Helicotrichon sempervirens</i>	2L	CG		6/m²	10	270
8	<i>Red Fescue Festuca rubra</i>	2L	CG		6/m²	20	320
						100	

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Perennials- 40% of total bed area							
9	<i>Achillea 'Coronation Gold'</i>	P9	CG	Full pot. Well developed, vegetative, dense clump. Planted within single species swathes of approx 5-10	9/m²	20	320
10	<i>Crosswort Crucjata laevipes</i>	P9	CG		9/m²	10	160
11	<i>Wild teasel Dipsacus fullonum</i>	P9	CG		9/m²	10	160
12	<i>Meadowsweet Filipendula ulmaria</i>	P9	CG		9/m²	20	320
13	<i>Water Avens Geum rivale</i>	P9	CG		9/m²	10	160
14	<i>Selfheal Prunella vulgaris</i>	P9	CG		9/m²	10	160
15	<i>Yellow Rattle Rhinanthus minor</i>	P9	CG		9/m²	10	160
16	<i>Red Campion Silene dioica</i>	P9	CG		9/m²	5	80
17	<i>Ragged Robin Silene flos-cuculi</i>	P9	CG		9/m²	5	80
						100	

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

Plant Schedule:

Status: Stage 4

SW02 - Edge Swale: Aquatic and marginal plants - Total Area 300 m2**Aquatic and marginal plants between 40.600m and 41.500m AOD - Area 210 m2**

Items	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
1	Purple Loosestrife <i>Lythrum salicaria</i>	2L	CG	To be plant on water pond edge. Full pot. Well developed, vegetative, dense clump.	9/m²	20	380
2	Yellow Flag <i>Iris pseudacorus</i>	2L	CG		9/m²	15	290
3	Water Mint <i>Meths aquatica</i>	2L	CG		9/m²	15	285
4	Marsh Marigold <i>Caltha palustris</i>	2L	CG		9/m²	5	95
5	Brooklime <i>Veronica beccabunga</i>	2L	CG		9/m²	10	190
6	Flowering rush <i>Butomus umbrellatus</i>	2L	CG		9/m²	15	285
Oxygenating plants							
7	Willow Moss <i>Fontinalis Antipyretica</i>	P9	CG	To be plant on water pond edge. Full pot. Well developed, vegetative, dense clump.	9/m²	5	100
8	Water crowsfoot <i>Ranunculus aquatilis</i>	P9	CG		9/m²	5	100
9	Water Videt <i>Hottonia palustris</i>	P9	CG		9/m²	5	100
10	Hornwort <i>Ceratophyllum demersum</i>	P9	CG		9/m²	5	95
						100	

Aquatic and marginal plants between 41.500m and 42.000m AOD - Area 90 m2

Items	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
11	Purple Loosestrife <i>Lythrum salicaria</i>	2L	CG		9/m ²	30	245
12	Water Mint <i>Meths aquatica</i>	2L	CG		9/m ²	20	165

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13	Marsh Marigold <i>Caltha palustris</i>	2L	CG	To be plant on water pond edge. Full pot. Well developed, vegetative, dense clump.	9/m²	15	125
14	Cuckoo flower <i>Cardamine pratensis</i>	2L	CG		9/m²	15	125
15	Water Forget-me-not <i>Mysotis scorpiodes</i>	2L	CG		9/m²	20	165
						100	

Floating plants							
Items	Species	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
16	Frogbit <i>Hydrocharis morsus-ranae</i>	2L	-	To be plant on water pond bottom . Full pot. Well developed, vegetative, dense clump	-	-	10
17	Native White Water Lilly <i>Nymphaea alba</i>	2L	-		-	-	15

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.
2. Submerged aquatic plant supplied and planted in proprietary baskets. Pond liner system to be fully compatible with planting intent.

Plant Schedule:

Status: Stage 4

RG - RAIN GARDEN - Total Area 683 m2**Structure plants to include**

Item	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
1	<i>Cornus sanguinea</i>	10L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 4-5 no.	4/m ²		30
2	<i>Osmunda regalis</i>	5L	CG		4/m ²		30
3	<i>Viburnum opulus</i>	10L	CG		4/m ²		20

AC - ARRIVAL PLAZA

Item	Species to include	Container size	Root condition	Notes	Planting Density / m2	%mix	No. Required
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Ferns and grasses 40% of remaining total bed area

4	<i>Deschampsia cespitosa</i>	3L	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 4-5 no.	6/m²	20	330
5	<i>Dryopteris dilatate</i>	3L	CG		6/m²	10	165
6	<i>Dryopteris felix-mas</i>	3L	CG		6/m²	20	330
7	<i>Molinia caerulea</i>	3L	CG		6/m²	10	165
8	<i>Festuca altissima</i>	3L	CG		6/m²	10	165
9	<i>Carex divulsa</i>	3L	CG		6/m²	10	165
10	<i>Carex Pendula</i>	3L	CG		6/m²	20	330
						100	

Herbaceous and perennial 40% of remaining total bed area

11	<i>Ajuga reptans</i>	P9	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 8-9 no.	6/m ²	5	85
12	<i>Campanula glomerata</i>	P9	CG		6/m ²	5	85
13	<i>Cardamine pratensis</i>	P9	CG		6/m ²	10	165
14	<i>Eupatorium cannabinum</i>	P9	CG		6/m ²	10	165
15	<i>Inula hookeri</i>	P9	CG		6/m ²	10	165
16	<i>Iris pseudocorus</i>	P9	CG		6/m ²	10	165
17	<i>Knautia arvensis</i>	P9	CG		6/m ²	10	165

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18	<i>Succisa pratensis</i>	P9	CG		6/m²	10	165
19	<i>Valerian officinalis</i>	P9	CG		6/m²	10	165
20	<i>Juncus effusus</i>	2L	CG		6/m²	10	165
21	<i>Filipendula ulmaria</i>	2L	CG		6/m²	10	165
						100	

Groundcover 20% of remaining total bed area							
22	<i>Vinca minor</i>	P9	CG	Full pot. Well developed, vegetative, dense clump.Planted within single species swathes of approx 7-9 no along the planter edge.	9/m²	50	615
23	<i>Hellebores</i>	P9	CG		9/m²	50	615
						100	

Seasonal Bulbs						
Item	Species	Container size	Root condition	Notes	Planting Density / m2	Planting Density / m2
24	Snowdrop <i>Galanthus</i>	Top size	-	Scattered in drifts throughout the beds, over 2/3 of total bed area.	15/m²	6850

General notes:

1. Refer to drawings RD001-FCB-XX-XX-DR-L-4101&2, RD001-GRA-XX-XX-DR-L-5101, RD001-FCB-XX-XX-DR-L-5102&3, RD001-FCB-XX-XX-DR-L-5104&5 for Soiling Strategy and Softwork information.

APPENDIX 03- Q35 LANDSCAPE MAINTENANCE SPECIFICATION



Natural History Museum
Unlocked Thames Valley Science Park
CLIENT: Natural History Museum

SPECIFICATION FOR HARD & SOFT LANDSCAPE WORKS



Document Number: RD001-FCB-XX-XX-SP-L-9001
Revision: 06
Date: 30.04.2025
Status: STAGE 4

Q35
Landscape maintenance

Clauses - Not Used

To be read with preliminaries/ general conditions.

5 Section index

- 1. 10 - 199: GENERAL REQUIREMENTS
- 2. 200 - 399: GRASS SEEDING & TURF AREAS
- 3. 400 - 499: ORNAMENTAL PLANTING
- 4. 500 - 699: STRUCTURE PLANTING
- 5. 800 - 879: TREE WORK
- 6. 880 - 899: WATER AREAS
- 7. 900 - 949: HARD LANDSCAPE AREAS & STREET FURNITURE
- 8. 950 - 999: GREEN ROOFS AND GREEN WALLS - ADDITIONAL REQUIREMENTS

10 Landscape maintenance - scope of specification

- 1. The following clauses set out the requirements for: Post-Practical Completion landscape maintenance works only

20 General requirements

- 1. Duration: For the entirety of the Defects Liability Period and Maintenance Period as defined in Clause A15/270
- 2. Scope: hard & soft landscape works implemented under the Contract, as defined within this Specification and on the Contract drawings
- 3. Definition: 'Maintenance' as applied to work included in this Contract will include the following:
- 4. - all operations necessary to ensure the successful establishment of, and ongoing proper growth of, all plants within the works- all operations necessary to keep the works in a neat & tidy condition- all operations necessary to keep all hard landscape elements, e.g. paving, kerbs, walls, drainage channels, etc., in a clean, safe & sound condition- all operations necessary to keep all street furniture elements, e.g. seating, play equipment, bins, handrails, balustrades, tree grilles, fencing, signage, etc., in a clean, safe & fully-functioning condition- all operations necessary to keep all external lighting elements in a clean, safe & fully-functioning condition- regular and thorough inspections of all hard and soft landscape works implemented under this contract

30 Site cleanliness

- 1. The Contractor shall take all necessary measures to ensure that all hard and soft landscape areas within the Contract Works, including planted areas and drains, are kept clear of litter and fallen leaves at all times

40 Method statement

- 1. The Contractor shall submit a proposed method statement for carrying out the landscape maintenance works to the: CA/Landscape Architect for approval

50 Post-practical completion maintenance - frequency of visits

- 1. The Contractor is responsible for making regular maintenance visits to the site
- 2. The Contractor shall carry out minimum of: 35 visits per year subject to agreement with the Client, giving the Landscape Architect 72 (seventytwo) hours notice of the intention to commence work on each operation.

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3. The number of maintenance visits shall be increased as necessary to maintain the specified standards
4. The maximum intervals between visits by the Contractor shall be:
 - 4.1. April to October (inclusive): 7days (to an agreed programme)
 - 4.2. November to February (inclusive): 20days (to an agreed programme)

55 Maintenance reports

1. Within two working days of each maintenance visit the Landscape Contractor shall submit to a record report outlining the condition of the works, a schedule of the works carried out and any items that require the attention of, or the approval of, including drainage problems, areas of suspected soil toxicity or vandalism.
2. Payment for maintenance work will only be certified for correctly recorded, approved work in accordance with this clause.

60 Post-practical completion maintenance - inspections

1. At the end of the first growing season (Sept/Oct) of the Defects Liability Period (i.e. within 12 months of the start of the Defects Liability Period), the: CA/Landscape Architect and the Landscape Contractor shall carry out a joint inspection of the works
2. At the end of the second growing season (Sept/Oct) of the Defects Liability Period (i.e. between 12 & 24 months of the start of the Defects Liability Period) the: and the shall carry out a second and final inspection of the works

70 Post-practical completion - defects & replacements

1. During Defects Liability Period: Any materials, trees or other plants which are found to be defective (e.g. does not show leaf, make adequate growth, or shows signs of excessive stress) during the Defects Liability Period must be replaced by the Contractor, at no additional cost to the Contract, during the planting season immediately following their loss
 - 1.1. Any/all replacement plants will be subject to a separate/new Defects Liability Period, of the same duration as originally specified (refer to Clause: **A15/270**), starting from the date at which the replacement planting is approved by the CA/Landscape Architect
2. Vandalism: : rectification or replacements to be undertaken in accordance with the contract
3. Any stakes, ties, guys, etc., found to be defective are to be replaced as soon as possible
4. The relevant planting rates shall be deemed to include all such costs and no additional payment will be made for defective work under any circumstances
5. Any plants subject to a 24 (twenty four) month Defects Liability Period (as defined in Clause: **A15/270**) that fail during the first 12 (twelve) month period must be replaced by the 31st December of that same year, or the planting season immediately following their loss, whichever is earlier

80 Labour

1. The Contractor shall employ an approved competent Supervisor on the works, who is to be present during all maintenance visits, and any instruction given to the Supervisor by the: CA/Landscape Architect shall be deemed to have been given to the Contractor
2. All work people employed on site by the Contractor shall be competent and experienced in all aspects of work on which they are engaged
3. The Contractor's Tender shall include a preliminary maintenance programme confirming the minimum number of staff employed on site during each maintenance visit

90 Weed control

1. The Contractor shall ensure that all hard and soft landscape areas within the Contract Works are maintained in a neat, weed-free condition

2. The Contractor shall suppress weed growth to planted areas: either by hand or by approved mechanical means
 - 2.1. Remove weeds to tip as required
3. All perennial weeds, unless instructed otherwise, shall be removed and their roots destroyed
4. Growing plants shall not be disturbed by hoeing
5. Herbicides may only be used if approved by: by CA/ Landscape Architect
 - 5.1. Submit proposals for approval
 - 5.2. Herbicides must be applied strictly in accordance with the manufacturer's instructions
 - 5.3. Herbicides containing ingredients that persist in the soil in a toxic form must not be used
6. Adjacent plants, trees & grass: Do not damage
7. Refer also to the following clauses for further requirements: **Q35/95, Q35/342, Q35/645**

95 Harmful, injurious and/or non-native invasive weeds

1. The Contractor is to ensure that harmful, injurious and/or non-native invasive weeds, as defined by: Schedule 9 of the *Wildlife and Countryside Act 1981 (Variation of Schedule 9) England and Wales Order 2010* and within the *Weed Act 1959*, Water Framework Directive *Alien Species Alarm List*, including (but not limited to) the following, are prevented from establishing within the Works:
2. - Common ragwort (*Senecia jacobaea*)- Spear thistle (*Cirsium vulgare*)- Creeping or field thistle (*Cirsium arvense*)- Broad-leaved dock (*Rumex obtusifolius*)- Curled dock (*Rumex crispus*)- Japanese knotweed (*Fallopia japonica*/Polygonum cuspidatum)- Giant hogweed (*Heracleum mantegazzianum*)- Himalayan balsam (*Impatiens glandulifera*)- Rhododendron (*Rhododendron ponticum*)- Stonecrop (*Crassula helmsii*)- Water fern/Fairy fern (*Azolla filiculoides*)- Parrot's feather (*Myriophyllum aquaticum*)- Floating pennywort (*Hydrocotyle ranunculoides*)- Floating water primrose (*Ludwigia peploides*)- Fanwort (*Cabomba caroliniana*)- Canadian pondweed (*Elodea canadensis*)
3. Contractor to notify: immediately should any harmful, injurious and/or non-native invasive weeds be found within the works
4. Contractor to submit proposals for control/removal of harmful, injurious and/or non-native invasive weeds to: CA/Landscape architect for approval
 - 4.1. Control/removal to be carried out by suitably qualified (specialist) personnel
 - 4.2. Contractor to notify Environment Agency as required/appropriate
5. This clause should be read in conjunction with Clause(s): **Q35/90** above

Generally

100 Seasonal constraints

1. Pruning to be carried out in the appropriate season for each species
 - 1.1. Winter pruning must not be carried out during frosting weather
2. Further seasonal requirements/constraints are set out in individual clauses including, but not limited to,: **Q35/420, 543, 570, 580 & 605**

105 Maintenance objectives

1. Location: All Planting
 - 1.1. Duration: To be agreed with the Client
2. Aims: To ensure successful establishment and increase in biodiversity.

110 Notice

1. Give notice before
 - 1.1. Application of herbicide.

- 1.2. Application of fertilizer.
- 1.3. Watering.
- 1.4. Each site maintenance visit.
2. Period of notice: 7 days

130 Reinstatement

1. Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstatement to original condition.

135 Recultivation

1. Allow for the re-cultivation of planting areas, by approved hand or machinery means, that have become compacted due to any cause whatsoever
 - 1.1. To gentle cambers, without hollows
2. Remove/reapply mulch as required to maintain specified depth/effect
3. Submit proposals for approval

156 Watering

1. Supply: Watering points shown indicatively on landscape plans. Irrigation strategy to be confirmed by others
2. Quantity: Wet to field capacity
3. Application: Do not damage or loosen plants.
4. Compacted soil: Loosen or scoop out, to direct water to rootzone.
5. Frequency: As necessary for the continued thriving of all planting

160 Water restrictions

1. General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

165 Watering general

1. Attention must be paid to watering all soft landscape areas/plants, including grass areas, during the maintenance period of the works
2. Carry out all watering as necessary to ensure the successful establishment of all plant material and grass areas
3. Special attention to watering is particularly required during the first spring/summer months following planting
4. Include within the Tender:
 - 4.1. rates for the watering of each planting typology, e.g.: ornamental planting, woodland planting, hedgerows, wildflower planting areas, trees in hard and soft etc., as defined on the Contract Drawings
 - 4.2. an indicative programme of watering
 - 4.3. a schedule of quantities to be applied for each planting typology
 - 4.4. a detailed methodology confirming machinery and water sources
5. Watering shall be stopped and a report made to: if the soil is seen to have become water-logged or if any symptoms of bad drainage, sour soil or yellowing of foliage are seen

167A Irrigation/watering supply

1. For the purposes of this tender, the Contractor should assume that all irrigation water supply will be obtained from: To be confirmed by Ramboll

170 Disposal of arisings

1. General: Unless specified otherwise, dispose of arisings as follows:
 - 1.1. Biodegradable arisings: Contractor to agree with Client means of disposal i.e. either compost on site or remove to green waste recycling facility
 - 1.2. Grass cuttings: Contractor to agree with Client means of disposal i.e. either compost on site or remove to green waste recycling facility
 - 1.3. Tree roots and stumps: Contractor to agree with Client means of disposal i.e. either compost on site or remove to green waste recycling facility
 - 1.4. Shrub and tree prunings: Contractor to agree with Client means of disposal i.e. either compost on site or remove to green waste recycling facility
 - 1.5. Litter and nonbiodegradable arisings: Remove from site

180 Chipping or shredding

1. General: Not permitted on site unless specified otherwise

181 Mechanical equipment

1. General: Minimize.
2. Prohibited equipment: The use of chippers, leaf blowers, litter vacuums, etc. shall be agreed prior to use with the Client
3. Timing: Use of mechanical equipment to be agreed with the Client in respect to hours of use.

190 Litter

1. Extraneous rubbish not arising from the contract work: Collect and remove from site.

195 Protection of existing grass

1. General: Protect areas affected by maintenance operations using boards/tarpaulins. Do not place excavated or imported materials directly on grass.

197 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.

Grassed areas - Not Used

Grass seeding & turf areas

200 Grass seeding & turf areas - introduction

1. The following clauses cover the maintenance of areas of wildflower and grass seeding areas, as defined on: the Contract Drawings
2. For ornamental/architectural grass planting (within planting beds) maintenance requirements, refer to the: *Ornamental Planting* clauses of this specification
3. The: *Grass Seeding & Turf Areas* clauses should be read in conjunction with clauses set out within other planting typology sections, e.g. *Ornamental Planting*, *Structure Planting*, etc.

211 Maintenance of grassed areas

1. Standard: To BS 7370-3. Carry out maintenance appropriate to each category of turf, as follows:
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- 1.1. Objectives: To BS 7370-3, table 6.
- 1.2. Programme: To BS 7370-3, clause 11.
- 1.3. Mowing methods: To BS 7370-3, table 3.

220 Grass cutting generally

- 1. Before mowing: Remove litter, rubbish and debris.
- 2. Finish: Neat and even, without surface rutting, compaction or damage to grass.
- 3. Edges: Leave neat and well defined. Neatly trim around obstructions.
- 4. Adjoining hard areas: Sweep clear and remove arisings.
- 5. Drought or wet conditions: Obtain instructions.

225 Tree stems

- 1. Precautions: Do not use mowing machinery closer than 100 mm to tree stems. Use nylon filament rotary cutters and other hand held mechanical tools carefully to avoid damage to bark.

226 Tree stems

- 1. Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
 - 1.1. Operations close to stems: Complete using hand tools.

235 Bulbs and corms in grassed areas

- 1. Before flowering: Do not cut.
- 2. Interval between end of flowering and start of grass cutting (minimum): until leaves have died back

240 Mowing strips

- 1. Location: Adjacent to service yard fence on the southern side
- 2. Width (approximate): 2000 mm.
- 3. Operations: Grass to be maintained at 25mm height

250 Leaf removal

- 1. Operations: Collect fallen leaves.
- 2. Disposal: Remove from site to a green composting recycling facility unless client has a compost facility that it agrees for use.

265 Mowing general areas

- 1. Grass height:
- 2. Arisings: Remove from site to a green composting recycling facility unless client has a compost facility that it agrees for use

272 Maintaining grassed areas with perennial wild flowers in Woodland Edge (WE02), Swale (SW01) and Meadow mix (MD01)

- 1. Preparation: Before each cut remove litter and debris.
- 2. Height and frequency of cut in first growing season:
 - 2.1. Time of first cut: Mid to late summer, e.g early August
 - 2.2. Height of first cut: 75mm
 - 2.3. Frequency of subsequent cutting (minimum): Cut sward down to 50mm during Autumn months

- 2.4. Height of growth permitted (maximum): 75mm
- 3. Height and frequency of cut in second growing season:
 - 3.1. Time of cut: 1 cut late August/early September cut to 75mm, 1 cut to 50mm in late Autumn. Allow for one cut in spring. Frequency of cuts to be agreed with the Ecologist to meet the biodiversity objectives
 - 3.2. Height of cut: 75mm
- 4. Trimming: All edges.
 - 4.1. Arisings: Remove.
- 5. Watering: As required

309 Edges to seeded areas

- 1. Location: Wildflower and grass seeding areas - Swale (SW01), Meadow mix (MD01) and Woodland edge (WE02)
- 2. Timing: After seeded areas are well established.
- 3. Method: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.
- 4. Arisings: Remove.

310 Re-forming grass edges

- 1. Location: Wildflower and grass seeding areas - Swale (SW01), Meadow mix (MD01) and Woodland edge (WE02)
- 2. Method: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.

342 Weed control in wildflower grass areas

- 1. Wildflower grass seeding/turf areas to be maintained free from weeds
- 2. Method: Combination of hand removal and regular mowing
 - 2.1. Submit proposals for approval
- 3. Refer to Clause: for cutting requirements

Flower beds/ seasonal beddings - Not Used

Ornamental planting

400 Ornamental planting - introduction

- 1. The following clauses cover the maintenance of areas of Ornamental Planting including, but not limited to, the following:
- 2. - Ornamental shrub planting- Ornamental grass & fern planting- Herbaceous perennial planting- Planting beds of annuals- Bulb planting
- 3. The: *Ornamental Planting* clauses should be read in conjunction with clauses set out within other planting typology sections, e.g. *Grass Seeding & Turf Areas*, *Structure Planting*, etc.

410 Top-up mulch

- 1. Maintain (at all times) mulch areas to their original specified depths
- 2. Top-up mulch to meet requirements of original mulch specification
 - 2.1. Refer to Clause: **Q28/155 & Q28/156**

420 Bulbs & herbaceous planting - cutting back & dead-heading

- 1. Bulbs and herbaceous perennials shall be dead headed at a time and frequency appropriate to their species

2. Each autumn, or as appropriate to each plant, withered or dead herbaceous material shall be cut out of the plant (unless directed otherwise) and removed from site to keep each plant in a tidy condition

430 Reinstatement of ornamental planting areas

- 1. Dead and damaged plants: Remove & replace
- 2. Mulch/ matting materials:
 - 2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting
- 3. Do not disturb roots of adjacent plants
- 4. Replacement plants:
 - 4.1. Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater
 - 4.2. Additional requirements: Submit details and cost of plants before ordering.
- 5. Dressing: Slow release fertilizer:
 - 5.1. Type: Refer to Q28
 - 5.2. Application rate: Refer to Q28

450 Planting beds of annuals

- 1. Clearance: Remove previous season's bedding, including all bulbs, litter and debris.
- 2. Preparation: Dig over beds using a spade or hand held mechanical cultivator:
 - 2.1. Annual weeds: Bury.
 - 2.2. Perennial weeds: Carefully dig out.
- 3. Fertilizer: Either in autumn or spring spread and incorporate: Slow release fertilizer.
 - 3.1. Application rate: As manufacturer's recommended rate.
- 4. Annual bedding plants:
 - 4.1. Standard: To BS 3936-7.
 - 4.2. Setting out: Plant out: , including edging plants, main layer, specimen or pot plants, corms, bulbs or tubers.
- 5. Watering: Keep plants watered as necessary before planting out and water in after planting.
- 6. Failed planting: Replant as necessary any plants, or areas of plants, that have failed to thrive.

460 Beds of perennials or perennials and annuals

- 1. Plant supports: Stake and tie plants using: using bamboo canes if necessary.
 - 1.1. Length: To suit plant height
 - 1.2. Maintain throughout the growing season.
- 2. Gaps in planting: Refill by replanting.
- 3. Watering:
 - 3.1. New plants: Before and after planting out.
 - 3.2. Ongoing: As necessary for the continued thriving of all planting.
- 4. Operations at end of growing season:
 - 4.1. Trim: Older flowering stems of herbaceous perennials.
 - 4.2. Remove: Redundant plant supports, litter, debris and arisings.
 - 4.3. Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.
 - 4.4. Top dress: Apply: sanitized and stabilized compost top dressing.

470 Flower beds generally

- 1. Operations:
 - 1.1. Remove: Dead flower heads, fallen leaves, litter and debris.
 - 1.2. Weeds: Thoroughly hand weed.
 - 1.3. Cultivate: Lightly hoe.
 - 1.4. Trim: Clip grass edges.
- 2. Fungicide: Not required
- 3. Insecticide: Not required

Shrubs/trees/hedges

185 Hand weeding

- 1. General: Remove weeds entirely, including roots
- 2. Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible
- 3. Completion: Rake area to a neat, clean condition
- 4. Mulch: Reinstatate to original depth

501 Structure planting - introduction

- 1. The following clauses cover the maintenance of areas of Structure Planting including, but not limited to, the following:
- 2. - Woodland and/or scrub transplant planting- Non-ornamental shrub planting- Hedge planting- Tree planting
- 3. The: *Structure Planting* clauses should be read in conjunction with clauses set out within other planting typology sections, e.g. *Grass Seeding & Turf Areas, Ornamental Planting, etc.*

505 Tree stakes & ties/fixings

- 1. Trees stakes shall be maintained secure and vertical
- 2. Blocks and belts shall be maintained secure but not over tight
- 3. The Contractor shall monitor the stems of staked trees and take any action necessary to prevent damage

510 Tree stakes and ties

- 1. Inspection/ Maintenance times: As scheduled and immediately after strong winds.
- 2. Stakes
 - 2.1. Replace loose, broken or decayed stakes to original specification.
 - 2.2. If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
- 3. Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
 - 3.1. Where chafing has occurred, reposition or replace ties to prevent further chafing.
- 4. Removal of stakes and ties: When instructed
 - 4.1. Fill stake holes with lightly compacted soil.

515 Tree guy wires

- 1. Inspection/ Maintenance times: As scheduled and immediately after strong winds
- 2. Operations
 - 2.1. Replace or resecure loose or missing guy wires.

- 2.2. Adjust to suit stem growth and to provide correct and uniform tension.
3. Removal: When instructed

516 Adjustment of tree guys, ties & training wires

1. Tree anchors to be maintained tight at all times
2. Anchors to be re-tensioned periodically to prevent excessive wind rock and to compensate for settlement
3. Protective covering to be checked regularly and made good where necessary

520 Refirming of trees and shrubs

1. Timing: After strong winds, frost heave and other disturbances.
2. Refirming: Tread around the base until firmly bedded.
3. Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

526 Tree guards

1. Loose or defective guards: Adjust, refix or replace to original specification and to prevent chafing
2. Ensure that at all times the tree guards are secure and undamaged and active as effective protectors against rabbit damage

527 Aeration pipes

1. Aeration pipes and wells (in hard paved areas) to be kept fully operational at all times
2. To be kept free of ingress of any material
3. Replace damaged or missing caps to pipes

537 Nesting wild birds

1. Survey: Before starting hedge or tree work during the period of February to August (inclusive), carry out a survey by a qualified ecologist and submit report.
2. Accidental disturbance: Report immediately.

540 Pruning generally

1. Pruning: In accordance with good horticultural and arboricultural practice.
- 1.1. Removing branches: Do not damage or tear the stem or bark.
- 1.2. Wounds: Keep as small as possible and cut cleanly back to sound wood.
- 1.3. Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
- 1.4. Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
2. Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
3. Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
4. Disease or infection: Give notice if detected.
5. Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

542 Sympathetic pruning

1. The Contractor shall be experienced with pruning techniques and plant responses to pruning

2. Pruning shall be carried out with due regard to natural growth patterns, and shall accentuate natural tendencies
3. Allow for the cutting back or light pruning of shrubs to encourage correct shaping and bushiness
4. Where plants have out grown their position and hard cutting back is required, pruning shall reflect the natural form of the plant (unless specified otherwise) and shall: **not** be clipped to a formal shape (forming straight lines and edges), unless specified otherwise

543 Pruning - seasonal requirements

1. Light pruning to control spread, the removal of obstacles and the removal and repair of damage may occur at any time of year, and shall be carried out at the time it first becomes apparent.
2. Branches that hang too low from the weight of leaves or fruit may be thinned during the growing season.
3. Formative pruning and crown management for broad leaved trees shall be carried out in the dormant season between September and February.
4. Species that are prone to bleeding, particularly Carpinus, Betula and Acer species shall only be pruned in late July or August.

545 Pruning of excessive overhang

1. Timing: As instructed
2. Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
3. Special requirements: None

550 Pruning of excessive height

1. Timing: As instructed
2. Operations: Remove excessive height As instructed.

555 Pruning trees and shrubs

1. Standard: To BS 7370-4.
2. Special requirements: None

570 Formative pruning of young trees

1. Standard: Type and timing of pruning operations to suit the plant species.
2. Time of year: Do not prune during the late winter/ early spring sap flow period.
3. Young trees up to 4 m high
- 3.1. Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well balanced head and ensure the development of a single strong leader.
- 3.2. Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
4. Whips or feathered trees: Do not prune.
5. Operatives: Approved specialist contractor

575 Pruning ornamental shrubs

1. General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
2. Suckers: Remove by cutting back level with the source stem or root.

580 Pruning flowering species of shrubs and roses

1. Time of year
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- 1.1. Winter flowering shrubs: Spring.
- 1.2. Shrubs flowering between March and July: Immediately after the flowering period.
- 1.3. Shrubs flowering between July and October: Back to old wood in winter.
- 1.4. Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.

600 Trimming rapidly establishing hedges

1. General: Allow to reach planned height as rapidly as possible.
 - 1.1. Form: Trim back lateral branches moderately.

605 Trimming slowly establishing hedges

1. Operations
 - 1.1. Timing: Cut back hard in June and September to encourage bushy growth down to ground level.
 - 1.2. Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

610 Trimming tapering established hedges

1. Time of year: Trim once in July or August, frequency to be agreed with Ecologist to meet the biodiversity objectives
2. Operations
 - 2.1. Form: Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base.
 - 2.2. Trim: Remove current growth rather than old wood.
3. Tools/ Cutting: Suitable mechanical cutters

620 Removal of dead plant material

1. Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

625 Climbing plants

1. Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
2. Insecure growth: Attach to supporting wires or structures using Stainless steel wire.
3. Supporting structures: Check and repair as necessary.

630 Dead and diseased plants

1. Removal: As soon as possible
2. Replacement: In the next suitable planting season

632 Reinstatement of structure planting areas

1. Dead and damaged plants: Remove
2. Mulch/ matting materials
 - 2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting
3. Do not disturb roots of adjacent plants
4. Replacement plants
 - 4.1. Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater
 - 4.2. Additional requirements: None

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5. Dressing: Slow release fertilizer:
 - 5.1. Type: Submit proposals
 - 5.2. Application rate: As manufacturer's recommendations

635 Reinstatement of shrub/ herbaceous areas

1. Dead and damaged plants: Remove.
2. Mulch/ matting materials
 - 2.1. Carefully move to one side and dig over the soil, leaving it fit for replanting.
3. Do not disturb roots of adjacent plants.
4. Replacement plants
 - 4.1. Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
 - 4.2. Additional requirements: None
5. Dressing: Slow release fertilizer:
 - 5.1. Type: Submit proposals
 - 5.2. Application rate: As manufacturer's recommendations

641 Thinning and re-firming

1. Remove by approved means any plants which are out-competing other plants and adversely affecting the development of adjoining plants
 - 1.1. Including plants identified for removal/thinning by: the Landscape Architect
 - 1.2. Submit proposals to: for approval
2. All plant materials shall be re-firmed in the spring following planting
 - 2.1. The Landscape Contractor shall ensure that all plants loosened due to late frosts, strong winds or surface water movement shall be firmed as required

645 Weed control generally

1. Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high
2. Adjacent plants, trees and grass: Do not damage.

650 Hand weeding

1. General: Remove weeds entirely, including roots.
2. Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
3. Completion: Rake area to a neat, clean condition.
4. Mulch: Reinstatate to original depth.

665 Weed control with winter herbicide

1. Type: Suitable residual soil acting herbicide.
2. Time of year: Unless otherwise agreed, complete before end of March.
3. Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

670 Weed control with summer herbicide

1. Type: Suitable foliar acting herbicide.
2. Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

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675 Digging over

- General: Dig over beds. Do not damage existing plants, bulbs and roots.
 - Depth of dig (minimum): 150 mm

680 Soil aeration

- Compacted soil surfaces
 - Prick up: To aerate the soil of root areas and break surface crust.
 - Size of lumps: Reduce to crumb and level off.
 - Damage: Do not damage plants and their roots.

685 Soil level adjustment

- Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
 - Arisings (if any): Spread evenly over the bed.

690 Maintenance of loose mulch

- Thickness (minimum): 50 mm
 - Top up: As scheduled
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by hand weeding.

695 Fertilizing established trees and shrubs

- Time of year: After flowering
- Type of fertilizer: Slow release
- Application: Spread evenly.
 - Rate: As manufacturer's recommendations

700 Snow removal from shrubs/ trees

- Standard: To BS 7370-4.
- Plants subject to snow removal: All evergreens
- Timing: Within 24 hours of snowfall

705 Winter leaf removal

- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Arisings: Remove

Tree work

810 Tree work generally

- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Protection: Avoid damage to neighbouring trees, plants and property
- Standard: To BS 3998.
- Removing branches: Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
- Appearance: Leave trees with a well-balanced natural appearance.
- Chain saw work: Operatives must hold a Certificate of Competence.

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- Tree work: To be carried out by an approved member of the Arboricultural Association.

815 Additional work

- Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.

820 Prevention of wound bleeding

- Standard: To BS 3998.

825 Prevention of disease transmission

- Standard: To BS 3998.

830 Cleaning out and deadwooding

- Remove
 - Dead, dying, or diseased wood, broken branches and stubs.
 - Fungal growths and fruiting bodies.
 - Rubbish, windblown or accumulated in branch forks.
 - Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
 - Other unwanted objects, e.g. tree houses, swings.
 - Climbing plants as instructed.

835 Cutting and pruning generally

- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts
 - Chainsaws: Do not use on branches of less than 50 mm diameter.
 - Hand saws: Form a smooth cut surface.
 - Anvil type secateurs: Do not use.
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.
- Large branches:
 - Remove in small sections and lower to ground with ropes and slings.
- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 Crown reduction/ shaping

- General: Cut back selectively to lateral or sublateral buds or branches to retain flowing branch lines without leaving stumps.
- Operations:

845 Crown lifting

- Clearances: Remove branch systems to give clearance.
 - Height: As recommended by BS 7370-4, clause 3.7.2.3

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2. Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

850 Crown thinning

1. Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
2. Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown.
- 2.1. Quantity:
3. Cutting: Make no cuts of more than
- 3.1. Branches: Cut back to lateral or sublateral buds or branches without leaving stumps.
4. Appearance: Leave a uniform and well balanced structure of branches and foliage.

855 Cutting tree roots

1. Excavating: Use hand tools only.
2. Protected area: Do not cut roots within an area which is the larger of:
- 2.1. The branch spread of the tree.
- 2.2. An area with a radius of half the tree's height, measured from the trunk.
3. Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
4. Cutting
- 4.1. Cutting: Make clean smooth cuts with a hand saw.
- 4.2. Wounds: Minimize. Avoid ragged edges.
- 4.3. Finishing: Pare cut surfaces smooth with a sharp knife.
5. Backfilling
- 5.1. Protection: Cover cut roots with clean sharp sand.
- 5.2. Material: Backfill with original topsoil.

865 Bark damage

1. Wounds
- 1.1. Do not attempt to stop sap bleeding.
- 1.2. Bark: Remove ragged edges using a sharp knife.
- 1.3. Wood: Remove splintered wood from deep wounds.
- 1.4. Size: Keep wounds as small as possible.
2. Liquid or flux oozing from apparently healthy bark: Give notice.

870 Cavities in trees

1. Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay, and give notice.
2. Water filled cavities: Do not drain.
3. Sound wood inside cavities: Do not remove.
4. Cavity openings: Do not cover

Water areas

880 Water areas, marginal & aquatic planting general

1. Scope: All wetland & waterbody features included within the Contract Works, including the following:

2. Contractor to be fully aware of wetland and waterbody construction elements, including liner systems, inlets, outlets, etc., and carry out regular inspections to ensure that they remain in good working order
3. The Contractor shall ensure that any maintenance operations, associated machinery and personnel undertaking maintenance tasks do not cause damage to any wetland and/or waterbody features
- 3.1. Particular care is to be taken to ensure that any liner systems remain intact and undamaged
4. All wetland and waterbody features to be kept free from floating and sunken litter, rubbish and debris at all times
5. All wetland and waterbody features to be kept free from weeds, algal growth, floating deposits and contaminants
6. Contractor to take all necessary measures to ensure safe working conditions for operatives

885 Marginal, emergent & aquatic planting areas

1. To be kept free from weeds, litter and debris at all times
2. To be regularly inspected for plant failures, presence of harmful, injurious and/or non-native invasive weeds, etc.
- 2.1. Refer to Clause: **Q35/95** for further requirements
3. Thin planting if it becomes overcrowded and/or impacts on adjacent planting and/or waterbody construction elements such as inlets, outlets, liner systems, etc.
- 3.1. submit proposals for approval
- 3.2. consider options for relocating plants to elsewhere within the works

886 Replacement planting

1. Any marginal, emergent or aquatic plants found to be dead, dying or failing to thrive must be replaced by the Contractor, at no additional cost to the Contract
2. Timing: To be carried out during the next available planting season following loss
3. Contractor to consider reasons for plant failure, e.g. maintenance regime, suitability of location, ground conditions, water level, etc.
- 3.1. Submit proposals for replacement planting to: for approval, including proposals for alternative species that may be more suited to localised planting conditions

Hard landscape areas/fencing - Not Used

Hard landscape areas, street furniture, etc.

905 Hard landscape maintenance - general

1. All hard landscape & street furniture elements, e.g. paving, kerbs, drainage gullies/channels, seating, signage, play equipment, bins, bollards, etc. to be kept in a clean, weed-free, safe, sound and functional condition at all times.
2. Contractor to carry out regular inspections of all hard landscape & street furniture elements to check for defects and/or potential health & safety risks
- 2.1. Contractor to advise: immediately of any defects and/or potential health & safety risks and provide remedial/protective measures as necessary to prevent risk of injury to users
- 2.2. Submit proposals for approval

910 Hard surfaces and gravel areas

1. Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
2. Hard surfaces: Remove litter, leaves and other debris.

- 3. Surface gutters and channels: Remove mud, silt and debris.
- 4. Drainage gullies: Empty traps and flush clean.
- 5. Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.
- 6. Repairs to flexible bituminous pavings: In accordance with the original paving specification or BS 7370-2, clause 4.12.
- 7. Stain removal: In accordance with BS 7370-2, table 4.
- 8. Timber deck: Remove litter, leaves and other debris.
To be kept clean by regular brushing with a stiff bristle brush to remove dirt, algae and dead leaves to maintain slip resistance

925 Snow and/or ice clearance

- 1. Contractor to ensure that all hard landscape areas are kept in a safe and useable condition, free from ice and snow, in accordance with the following:
- 2. Snow Clearance: when instructed
- 3. Deicing: To all areas in public realm
 - 3.1. Material: Acetate based granules
 - 3.2. Timing: when instructed
 - 3.3. Application rate: Spread evenly at a rate of: As manufacturer's recommendations

945 Street furniture maintenance

- 1. Street furniture elements, e.g.: seating, bins, bollards, signage, etc., to be regularly maintained & inspected for defects and wear & tear, in accordance with manufacturer's requirements.

Commissioning of electrical items with M& E scope. Responsibility for regular testing of automated equipment eg. bollards/ gates to M&E Engineer's specification and in accordance with supplier's recommendations.
- 2. Street furniture to be maintained in a clean, safe, sound & functioning condition at all times
- 3. Replacement parts to be sourced & installed in accordance with manufacturer's requirements
- 4. Contractor to advise: of any requirements for repairs, repainting, etc.
 - 4.1. submit proposals for approval
- 5. Contractor to ensure that any/all maintenance/repair operations do not in any way invalidate any warranties/guarantees

Green roofs & walls - additional requirements

950 General

- 1. In addition to the landscape maintenance requirements noted above, the following landscape maintenance requirement clauses apply to all areas of green roofs and/or green walls

960 Fire performance - maintenance

- 1. Maintenance shall be provided, as necessary, in order to minimise fire risk and sustain the system by keeping vegetative roof plants healthy and keeping dry foliage to a minimum
- 2. Such maintenance includes, but is not limited to, the following:
 - 2.1. Irrigation
 - 2.2. Fertilization
 - 2.3. Weeding
- 3. Excess biomass such as overgrown vegetation, leaves, and other dead and/or decaying material shall be removed at regular intervals, not less than: 2 No. (two) times per year in accordance with the agreed Fire Strategy document.

- 4. Provision shall be made to provide access to water for permanent or temporary irrigation
- Q End of Section