

Landscape and Ecology Management Plan



**Catalyst, Bicester,
Units 5, 6, 7, 8 and 9– RM4**

Report No:	Date	Revision	Author	Checked
LB291/R03	03.05.22	-	David Bailey CMLI	Andrew Laird CMLI
LB291/R03a	31.05.22	a		

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Plans:

LB291_D04a: RM4 - Soft Landscape Proposals (Sheets 1-4)
11920_P09_Ecological Enhancement Plan



Section 1: Introduction

Purpose

- 1.1 This Landscape Management Plan (LMP) has been prepared by Laird Bailey Landscape Architects (LBLA) on behalf of Albion Land for Catalyst, Bicester, Units 5, 6, 7, 8 and 9 (hereafter referred to as the 'site'). The site is centred on OS grid reference SP575210.
- 1.2 The purpose of the LMP is to provide details of measures to ensure the successful establishment and ongoing maintenance of the soft and hard landscape elements of the development proposals.
- 1.3 This LMP should be read in conjunction with drawings LB291_D04a – RM4 – Soft Landscape Proposals (Sheets 1-4).

Scope of the Landscape Management Plan

- 1.4 This Landscape Management Plan is set out as follows:
 - Section 2 describes the site, and provides an overview of the existing landscape and its condition;
 - Section 3 describes the proposed soft landscaping typologies;
 - Section 4 describes the proposed hard landscaping typologies;
 - Section 5 sets out the long-term design objectives;
 - Section 6 sets out the management regimes and responsibilities;
 - Section 7 sets out the maintenance operations for all the soft landscape areas; and
 - Section 8 sets out the maintenance operations for all the hard landscape areas.



Section 2: Site Overview of Existing Landscape and its Condition

Site Context

- 2.1 The site is located to the southern edge of Bicester, Oxfordshire. The site is proposed for five units (Units 5, 6, 7, 8 and 9), associated landscaping and highways.
- 2.2 The site currently comprises of grazing pasture and vegetated field boundaries with a series of drainage gully's which serve surrounding agricultural land. Soft landscaping elements are mainly contained to the site's peripheries with an internal hedgerow and tree planting dissecting a portion of the site. The sites western boundary is open with phase 1 of the Catalyst development beyond which is flanked by Wendlebury Road and a belt of existing trees. To the north lies a series of existing industrial units and a row of trees. To the east a continuous buffer of mature trees and water course and to the south a vegetated field boundary comprising trees and hedgerow beyond which lies agricultural land.
- 2.3 The character of the site is semi-urban with a mix of built development and agricultural land surrounding the site in all directions.



Section 3: Proposed Soft Landscaping

1.5 This LEMP is to read in conjunction with details of proposed soft landscaping (see LBLA Drawing No. LB291_D04a – RM4 – Soft Landscape Proposals (Sheets 1-4).

3.1 Soft landscaping within the site is designed to:

- Create an attractive and appropriate setting for the new Industrial Units (5a, 5b and 6), providing all year-round interest and colour.
- Create a strong soft landscape framework with planting to the perimeter of the site including trees, selected to maximise biodiversity;
- Ensure trees and shrubs are managed appropriately to promote the growth of flowers, berries and general 'form' offering the maximum benefit of amenity/habitat for birds, small mammals, and insects, and;
- Provide additional habitats for bats and nesting birds.

3.2 Proposed soft landscaping elements and planting consists of the following.

Trees

3.3 A selection of native trees, planted at a range of appropriate sizes (ranging between selected standard up to semi mature) will feature across the scheme.

Native Woodland Planting

3.4 In addition to specimen trees, a native woodland mix of feathered trees, whips and transplants shall be planted at an approximate density of 1 plant/1.5msq. Over time this will form a dense understorey screen to larger tree specimens, contributing to the overall bio-diversity value and visual mitigation/amenity, reducing visual coalescence between the built form.

Native Shrub Mix and Native Hedgerow

3.5 Featuring within the development and upon the site boundaries, creating a series of green corridors linking to the wider landscape fabric. Hedgerows will consist of a variety of native species (typically those which are prevalent in the local area) planted as double staggered rows at 5 plants per linear meter.

Wetland/Scrapes

3.6 An area of Wetland/Scrapes are to be implemented within the southern area of the site. This area is to consist of shallow depressions with gently sloping edges, which holds a varying degree of water throughout the year. Proposed scrapes create in-field wet features that are attractive to wildlife, as well as supporting a wide variety of invertebrates and provide important feeding areas for breeding and wading birds.



Amenity Shrub Planting

- 3.7 This consists of species which are mainly evergreen and offer all year-round seasonal interest. Specimens will be chosen due to their hardiness/robustness and need for minimal maintenance/management once established. Ultimately, mature sizes will range between 0.3m-1.5m in height. It has also been deemed important that the majority should be flowering species to provide added bio-diversity value and a food source for pollinators.

Wildflower Meadow Mix

- 3.8 Wildflower areas will be limited to the outer perimeters of the development and mainly form a successional buffer to understorey woodland and native hedgerows. Seed mixes will consist of a range of shade tolerant non-invasive grass and long-lasting wildflowers, offering maximum benefits to bees, butterflies, birds, and small mammals.

Amenity Grass Mix

- 3.9 Amenity grass areas will be provided around buildings and for verges flanking access roads and pedestrian paths throughout the site.

Swale Meadow Grass Mix

- 3.10 This is to be implemented on the margins/banks of swales and scrapes, both planted with a wetland meadow mix (Emorsgate EM8 composed of 20% wildflowers and 80% slow growing grasses).



Section 4: Proposed Hard Landscaping

4.1 This LEMP is to read in conjunction with details of proposed hard landscaping (see relevant Cornish Architects drawings).

4.2 Hard landscaping within the site is designed to:

- Create an attractive and appropriate setting for the new Industrial units (5, 6, 7, 8 and 9), providing hard landscape which is fit for purpose, durable and robust;
- Indicate change in use, identifiable from other hard surfaced areas; and
- To provide a pallet of materials which are aesthetically and visually appropriate for the various settings and uses within the development.

Tarmacadam Road and Bitmac Footway Surfacing

4.3 Tarmac surfaces are to be built to the given build-up specification and executed to a high standard. All bound surfaces will be edged accordingly to maintain crisp lines and the structural integrity of the surface build-up.

Concrete Block Paving to Parking Spaces/circulation and footpaths

4.4 Parking spaces, vehicular areas of circulation and footpath are to be laid to concrete blocks differentiating these spaces from main highways within the site and each other. All concrete block surfaces will be edged accordingly to maintain crisp lines and the structural integrity of the surface build-up.

Brushed Concrete Yards

4.5 Unit yards to be laid to brushed concrete for functional purposes. All brushed concrete surfaces will be edged accordingly to maintain crisp lines and the structural integrity of the surface build-up.



Section 5: Long-term Design Objectives

Existing Trees and Hedgerows

- 5.1 Management of existing trees, hedgerows and shrubs offers to secure the current landscape elements that have potential for enhancement without compromising other important aims of the development.
- 5.2 Specific objectives include:
- Ensuring long-term enhancement of trees and hedgerows with additional native planting and 'gapping-up' where required;
 - Maintaining long-term health of existing trees and hedgerows to contribute to buffering the development from neighbouring land and infrastructure;
 - To extend the life of mature trees through sound arbouricultural management; and
 - Creating a healthy tree and shrub understorey to knit into the proposed soft landscaping proposals, offering a series of mature/interconnected wildlife corridors
- 5.3 Any tree/hedgerow works such as the removal of hazardous branches or the felling of mature trees will be completed outside of the active period for breeding birds (generally understood as March to August inclusive but some bird species may nest all year round). Should any management be required within the breeding bird period, checks for nesting birds by a suitably trained ecologist will take place prior to any works commencing to ensure that no breeding birds are present. Should a nest be present then a suitable buffer would be installed until the nest is confirmed as being inactive.
- 5.4 Checks for the presence of roosting bats would also be completed prior to management taking place regardless of the time of year. Potential bat roosting features can include woodpecker holes, rot holes, any cracks or splits in the tree bark, cankers, gaps between overlapping stems or branches, partially detached ivy (with stem diameters in excess of 50mm), and man-made holes. If any of the potential bat roosting features are identified, evidence of roosting bats is identified or a bat is found, then works would temporarily stop and an licenced ecologist/Natural England consulted.

Proposed Trees and Native Woodland Planting

- 5.5 The long-term design and management objective is to ensure that on-site trees thrive and contribute to an attractive environment. Trees shall be managed to develop to a healthy and even form. Stems should only be removed so as to retain the natural appearance of the individual plant species or to remove broken or badly damaged branches and dead wood. Tree surgery such as crown lifting should be carried out as required to prevent restriction to pedestrians or vehicles.



- 5.6 Any tree works will have consideration for the potential presence of roosting bats and breeding birds as per the management considerations stated within the retained tree prescriptions above.

Existing and Proposed Native and Amenity Shrub Planting

- 5.7 The long-term design objective of the shrub planting is to ensure the plants thrive to create shrubbery for local amenity and habitat for wildlife. Planting will be managed to achieve a maximum height of 2.5 metres. Pruning should be undertaken to promote flowering and fruiting in accordance with the species and age of the plant.
- 5.8 As such, any management will take place at the end of the winter months to avoid the active period for most wildlife, providing the plants with time to produce flowers, seeds and berries. Should any management be required within the breeding bird season (March and August inclusive), checks for nesting birds will take place prior to any works commencing by a suitably qualified ecologist. Should a nest be present then a suitable buffer would be installed until the nest is confirmed as being inactive. Any vegetation management will have consideration for the potential presence of breeding birds as per the management considerations stated above.

Proposed Native Hedgerow

- 5.9 Hedgerows are to be incorporated into the southern area of the site delineating the access pathway from the ecological habitat area as shown on the planting plan. The hedgerow should create a physical barrier to discourage access to the ecological planting to the south and provide an attractive edge to the car park and access path. The creation of hedgerow will also increase connectivity of the site for wildlife and provide additional foraging and nesting habitat for a variety of species.
- 5.10 Hedgerow planting will be managed to achieve a maximum height of 1.2m.
- 5.11 The ground around the hedgerow transplants will be bark mulched to conserve moisture and reduce weed growth.
- 5.12 Careful trimming and pruning will be required in the early years to ensure the development of a well-clothed hedge. Trimming should aim to form an 'A' profile.
- 5.13 Any hedgerow management will have consideration for the potential presence of breeding birds as per the management considerations stated above.

All Hedging

- 5.14 Inspect monthly for the first year and maintain shrubs/hedging in a weed free condition through combined techniques by hand, herbicides, cultivation and mulching.
- 5.15 Prune or clip to promote bushy, healthy growth and required shape when necessary.



- 5.16 Trimming back of growth overhanging adjacent footpaths or windows when required.
- 5.17 Remove/replace individual specimens as required.

Wetland/Scrapes

- 5.18 Once scrapes are created, it is important to maintain open, muddy margins where wading birds can find and access food. If the margins become too overgrown with plants such as rush, wader use will decline rapidly. If possible, allow livestock to graze and poach the margins at low levels, and do not fence the scrape off. Scrape margins should be managed by mowing each year to maintain access for waders and other animals. Maintain a small proportion of longer marginal vegetation to provide additional habitat variety, which will benefit invertebrates and plants and provide cover for offspring.
- 5.19 Where vegetation is to be cut back this should be completed in September/October to avoid any impacts to breeding birds and also any impacts to potentially overwintering waterfowl.

Proposed Wildflower Meadow Mix, Amenity Grass Mix and Hedgerow Margins

- 5.20 Management aims to increase structural diversity and species composition both in a manner compatible with user's amenity requirements and with the needs of fauna such as invertebrates, reptiles, birds and foraging bats. The management objectives are as follows:
- Secure foraging habitats for wildlife without disturbance by retaining grassland within root protection areas of retained hedgerows and trees;
 - Provide structured mosaics varying from regularly mown amenity grassland to wildflower and grass edges cut on less frequent mowing rotations;
 - Enhance species composition in the seeding mix by specifying a species-rich wildflower and grassland mix for the public open space and hedgerow margins.
- 5.21 Amenity grass will be cut to a height of 50mm monthly during the growing season with arisings removed. Proposed wildflower meadow and hedgerow margins would be cut back once a year in late August and early September, left for a minimum of 3 days and then arisings removed, thus allowing the majority of the grassland plants to bloom and set seed.

Proposed Swale Meadow Grass Mix

- 5.22 Wetlands and other aquatic environments on site will aim to provide a unique habitat for thousands of species of aquatic and terrestrial plants and animals. Equally wetlands, swales and attenuation basins will offer flood protection and water quality improvement as well as a valuable, aesthetically pleasing, recreational resource. This would be cut back annually as per the prescription for Wildflower Meadow.



Improve Opportunities for Bats

- 5.23 The retention of hedgerows on site in conjunction with the new hedgerow and tree planting will maintain and enhance the foraging and commuting opportunities for bats across the site and to the wider area. The provision of wildflower grassland, wetland scrapes and swale planting will also provide foraging opportunities for some bat species.
- 5.24 Additional roosting opportunities are proposed in order to provide further ecological enhancement for bats post-development. This will include the installation of eleven bat boxes across the Catalyst Bicester Phase 2.1 site (Vivaro Pro or similar). The boxes should be placed as high as possible (3 m and above), ensuring the entrance is free from obstruction. Favoured sites are close to linear features along the hedge line or incorporated into the building and away from street lighting. See ecological enhancement plan (Ref: 11920_P09) for suggested specification and location of bat boxes.
- 5.25 The bat boxes are designed to be low maintenance and the only monitoring which should be completed after Year 1 is to confirm that the spec and location is appropriate.

Improve Opportunities for Birds

- 5.26 The creation and appropriate management of new native shrub, hedgerow, wetland scrapes and tree planting will provide and overall enhancement to bird foraging and nesting resources within the site post-development.
- 5.27 To provide an additional enhancement for birds, fifteen bird boxes will be erected on the buildings or suitable retained trees. Boxes will be positioned so they are sheltered from prevailing wind, rain and strong sunlight, normally facing north through to south east on buildings, at a height of between 2m and 5m (5m minimum for the swift boxes), ensuring a clear flight path to the entrance. See ecological enhancement plan (Ref: 11920_P09) for suggested specifications and location of bird boxes.
- 5.28 All boxes should be Vivara Pro or similarly created from woodcrete as these are known to be durable, long-lasting and to regularly attract birds to nest.
- 5.29 All boxes should be annually inspected for presence, damage, obstruction and if necessary, should be cleaned. Inspection and cleaning should be conducted annually during the winter months to avoid impact to nesting birds. If replacement through loss or damage is required, it should be for an identical product positioned in the same or a similar location.



Section 6: Management Regimes and Responsibilities

- 6.1 The landscaping works will receive post installation maintenance for a one-year defects liability period (DLP). All defects resulting from plant loss, disease, or failure will be replaced on a like for like basis. A visit every month, or more frequently should watering be required, is recommended during the DLP. Subsequently a minimum of 12 maintenance visits per annum is recommended.
- 6.2 Maintenance and management activities are set out below (which covers a minimum period of five years) to ensure the soft landscaping is managed effectively beyond the time limits of the implementation and establishment works. The responsibility for this management and maintenance is to be agreed. LBLA's recommendation is for the landscape contractor that undertakes the planting works to be engaged to carry out the one-year establishment maintenance.
- 6.3 Management and maintenance operations will be monitored and reviewed annually on an on-going basis and where required, modified if the operations and frequencies set out do not deliver the required results or meet the specific aims and objectives.
- 6.4 As a minimum, maintenance visits should be undertaken to inspect, monitor as well as to carry out routine operations, including weeding and litter picking, with other specific operations being undertaken as scheduled below.



Section 7: Soft Landscaping Maintenance Works Schedule

Component	Task	Time of Year	Frequency
<i>Visits every month throughout the one-year defects and establishment period, more frequently if required due to prologued dry weather conditions and the need for watering. Subsequently management and maintenance operations will be monitored and reviewed annually on an on-going basis and where required modified if the operations and frequencies set out do not deliver the required results or meet the specific aims and objectives.</i>			
Trees & Native Woodland Planting	Prune and repair wounds in accordance with good horticultural and arboricultural practice.	Oct-Feb	As required (annually).
	Check the ties regularly for rubbing and adjust if necessary. Constriction of the stem by ties happens very quickly, so fast-growing trees need frequent checking. After bad weather, check for abrasion and snapped stakes or ties. Re-firm tree by adjusting tree ties and ensuring soil is re-firmed around the base.	All year round and especially after strong winds, frost heave and other disturbances.	As required (annually).
	Hand weed mulched areas around trees.	Mar-Sep	Every visit.
	Apply suitable non-selective herbicide to control weeds.	Mar/Oct	Only if required.
	Replace any failed specimens.	Oct-Mar	As required during the one-year DLP (next available planting season).
	Remove debris/litter	Throughout	Every visit.



Component	Task	Time of Year	Frequency
	Top up bark mulch around bases of trees to full depth of 75mm.	Mar/Apr	As required during the DLP.
	Newly planted trees will be watered throughout May-August months after any period of four weeks without significant rain to thoroughly wet the top 150mm of soil around the tree roots.	Throughout	As required after a period of four weeks without significant rainfall.
	Trimming and selective thinning of the canopy. Trim back growth overhanging adjacent footpaths when required.	Oct-Mar	Annually if required.
	In years 2 and onwards remove staking if tree has established well and the stakes are no longer required.	Any	As required.
Amenity Shrub Planting	Trimming and reshaping to encourage healthy bushy growth. Trim back growth overhanging adjacent footpaths when required.	Oct-Mar	Annually if required.
	Hand weed.	Throughout	Every visit.
	Apply suitable non-selective herbicide to control weeds.	Apr-Sep	Only if required.
	Remove debris/litter.	Throughout	Every visit.
	Replace any failed specimens.	Oct to March	Within the DLP, as required (next available planting season).



Component	Task	Time of Year	Frequency
	Top up bark mulch around bases of shrubs to full depth of 75mm.	Apr	As required during the DLP.
	Watering of newly established shrubs.	Throughout	As required after a period of four weeks significant rainfall, during the DLP.
Native Hedgerows/ Native Shrub Mix	Re-shaping.	Hard-prune Oct-Feb	Annually if required.
	Hand weed.	Throughout	Monthly/every visit.
	Apply suitable non-selective herbicide to control weeds.	Apr-Sep	As required.
	Apply fertiliser: Slow release, applied as per manufacturer's recommendations.	Mar/Apr	Annually.
	Remove debris/litter.	Throughout	Monthly/every visit.
	Replace any failed specimens.	Oct-Mar	As required (next available planting season).
	Top up bark mulch hedge base to full depth of 75mm.	Apr	Annually.
	Watering of newly established hedgerows.	Throughout	As required after a period of four weeks without significant rainfall.
	Trim and top hedgerow as necessary avoiding bird nesting season.	Feb	As required (annually).



Component	Task	Time of Year	Frequency
Wetland/ Scrapes	During the first year allow annual weeds to establish to protect seed stock. Cut, compost and remove in August. In subsequent years mow meadow margins to 50mm.	August	Once per year. Leave hay cuttings to drop seed for minimum of 3 days (up to 7) before removing.



Component	Task	Time of Year	Frequency
	Aquatic plant management/thinning	August to October	Aquatic plant thinning should be carried out on a 3-year cycle to halt the natural succession process and ensure an open body of water maintained.
	Clearance of debris/ rubbish	Throughout	Water bodies to be regularly checked for rubbish or other detritus material. Any rubbish to be cleared by hand and removed from site
	Dredging and silt removal	September to October	It is recommended that attenuation basins/ ponds are de-silted on a 5–7 year cycle. Silt should be carefully removed by mechanical means (typically a long arm dredging excavator) and deposited and spread along the bank margins dependant on the volume removed.



Component	Task	Time of Year	Frequency
Wildflower Meadow Mix	Mowing/strimming.	Late Aug/early Sep	Cuttings must be left for a minimum period of 3 days before being raked up and removed, to allow wildflowers to bloom and disperse seeds
	Weeding.	Throughout	Monthly/every visit. Weeds exceeding 75mm and which don't feature in the seed mix should be removed.
	Re-seeding (if required).	Sep	Any bare patches of ground where seed has failed to germinate should be re-seeded as per the original specification.
Amenity Grass Mix	Mowing and removal of arisings.	Mar-Oct	Monthly/every visit. Grass should be mown regularly to aid with establishment to a height of 50mm.
	Clearance of debris/rubbish	Throughout	Water bodies to be regularly checked for rubbish or other detritus material. Any rubbish to be cleared by hand and removed from site.



Component	Task	Time of Year	Frequency
Swale Meadow Grass Mix	Weed control.	Mar-Sep	Invasive weeds to be spot treated with a glyphosate herbicide applicator. Herbicide must not be applied within 2m of attenuation or swale bank if permanent standing water is present. Any weeds within this 2m zone or on sloping banks should be removed by hand or mechanically.
	Aquatic planting management/thinning.	Sept-Oct	Aquatic plant thinning should be carried out on a 3-year cycle to halt the natural succession process and ensure an open body of water maintained.
	Weeding.	Mar-Sep	Invasive weeds to be spot treated with a glyphosate herbicide applicator. Herbicide must not be applied within 2m of attenuation or swale bank if



Component	Task	Time of Year	Frequency
			permanent standing water is present. Any weeds within this 2m zone or on sloping banks should be removed by hand or mechanically.
Improve opportunities for bats	Installation of bat boxes into the buildings on site or suitable retained trees to include a range of different aspects (mainly to the south or west, but providing a variety of different positions to offer a range of climatic conditions). Boxes should be placed as high as possible (3m and above), ensuring the entrance is free from obstruction. To be installed within six months of implementation of the LEMP preferably between November and February.	During construction phase	Once
	After Year 1 a check would be completed to ensure that they have been installed in the correct/optimal locations. Bricks / boxes should then be checked annually for presence, damage and obstruction.	Anytime	Annually



Component	Task	Time of Year	Frequency
Improve opportunities for birds	<p>Installation of bird boxes into the buildings on site or suitable retained trees to include a range of different aspects (mainly to the north or north-west, but providing a variety of different positions to offer a range of climatic conditions).</p> <p>Boxes should be placed as high as possible (3m and above, 5m minimum for swift boxes), ensuring the entrance is free from obstruction.</p> <p>To be installed within six months of implementation of the LEMP preferably between November and February.</p>	During construction phase	Once
	<p>All boxes should be inspected annually for presence, damage, obstruction and if necessary, should be cleaned. Inspection and cleaning should be conducted during the winter months to avoid impact on nesting birds.</p>	Oct-March	Annually



Section 8: Hard Landscaping Maintenance Works Schedule

Component	Task	Time of Year	Frequency
<i>Visits every month throughout the one-year defects and liability period. Management and maintenance operations will be monitored and reviewed annually on an on-going basis and where required modified if the operations and frequencies set out do not deliver the required results or meet the specific aims and objectives.</i>			
Hard landscape surfaces	Weeding/litter picking/sweeping.	Throughout	Hard surfaces within external areas should be maintained in a clean and tidy appearance free from weeds and litter. This will include general sweeping, weeding and occasional spray of surfaces as required.
	Repairs to cracked or worn surfaces.	Throughout/weather permitting	Hard landscape road and footways should be checked quarterly; any areas of wear that may become a safety concern should be assessed and repaired.



Component	Task	Time of Year	Frequency
Street Furniture	Check/assessment of street furniture.	Throughout	Undertake regular checks, maintenance, and repairs as necessary to ensure furniture and boundary treatment remains safe, in a usable condition and in a good state of repair. Empty litter bins at intervals appropriate to level of use.
	Litter collection.	Throughout	Empty litter and dog bins at intervals appropriate to level of use.

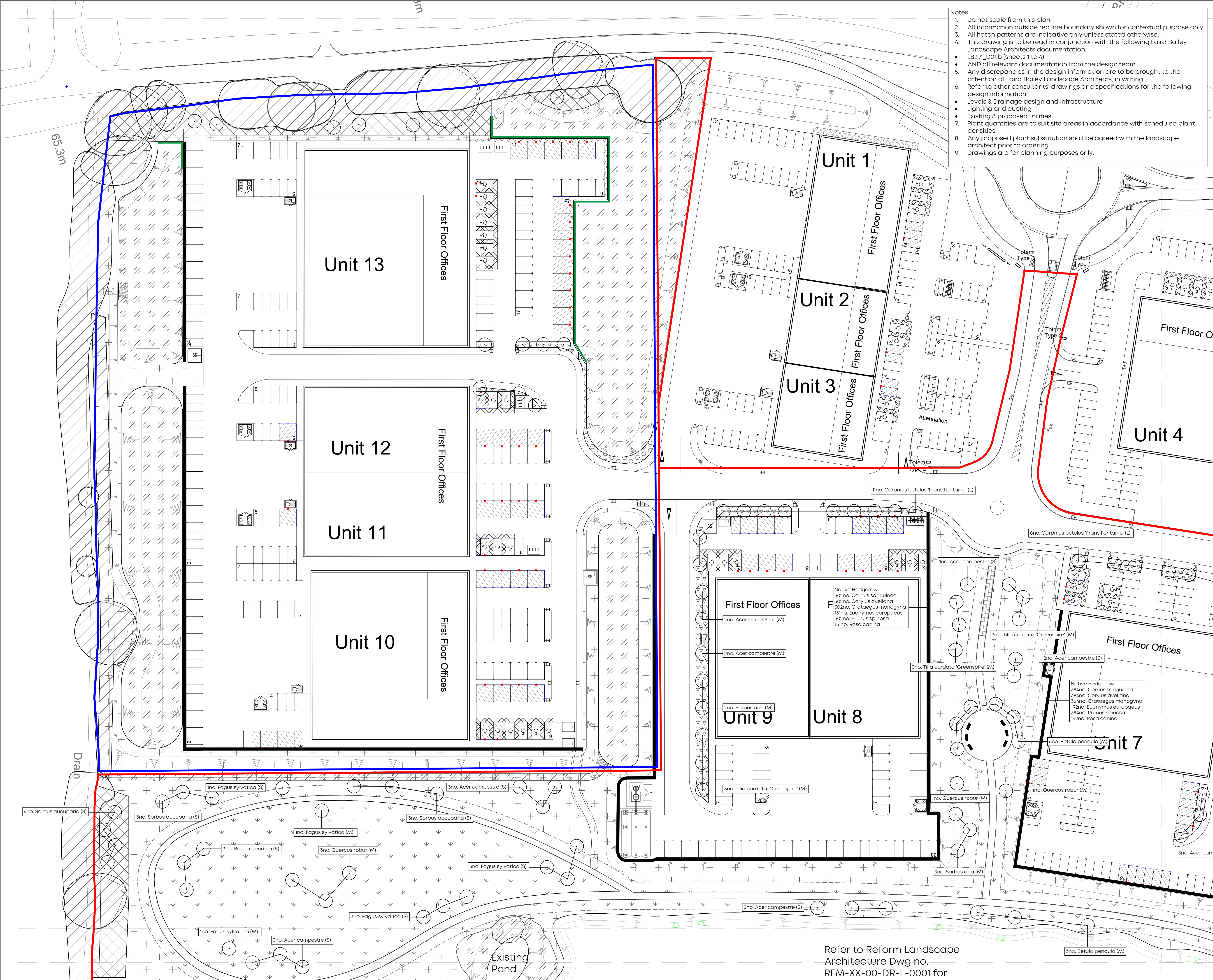


Plan:

LB291_D04a – RM4 - Soft Landscaping Proposals (Sheets 1 – 4)

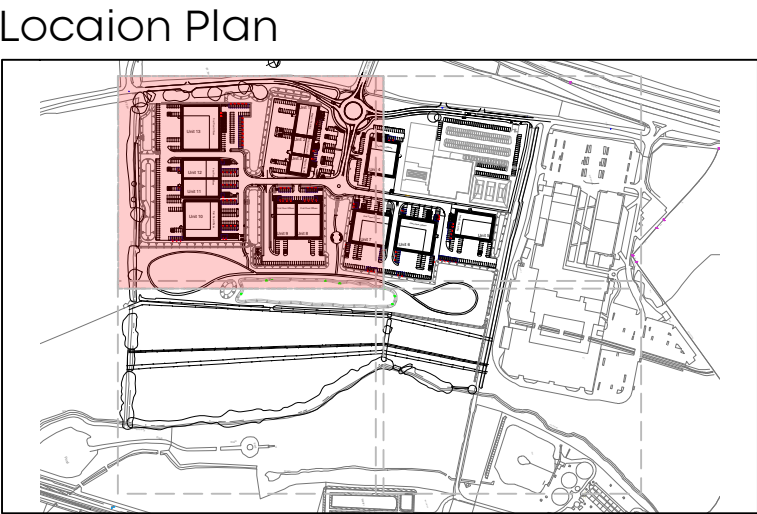
11920_P09_Ecological Enhancement Plan



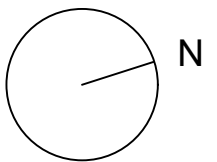


- Notes
1. Do not scale from this plan
 2. All information outside red line boundary shown for contextual purpose only.
 3. All hatch patterns are indicative only unless stated otherwise.
 4. This drawing is to be read in conjunction with the following Laird Bailey Landscape Architects documentation:
 - LB291_D04b (sheets 1 to 4)
 - AND all relevant documentation from the design team
 5. Any discrepancies in the design information are to be brought to the attention of Laird Bailey Landscape Architects, in writing.
 6. Refer to other consultants' drawings and specifications for the following design information:
 - Levels & Drainage design and infrastructure
 - Lighting and ducting
 - Existing & proposed utilities
 7. Plant quantities are to suit site areas in accordance with scheduled plant densities.
 8. Any proposed plant substitution shall be agreed with the landscape architect prior to ordering.
 9. Drawings are for planning purposes only.

- Site Boundary
- Land Under Applicants Ownership
- Existing Vegetation to be Retained
- Proposed Tree
- Proposed Native Woodland Planting
- Proposed Hedgerow
- Proposed Amenity Planting Mix
- Proposed Native Shrub Planting
- Proposed Wildflower Meadow Mix
- Proposed Swale Seed Mix
- Proposed Amenity Grass Seed/Turf



b	Layout Update/Services Co-ordination	27.05.22
a	Layout Update	18.05.22
Rev	Comment	Date



0m 25m

LAIRD BAILEY
LANDSCAPE ARCHITECTS

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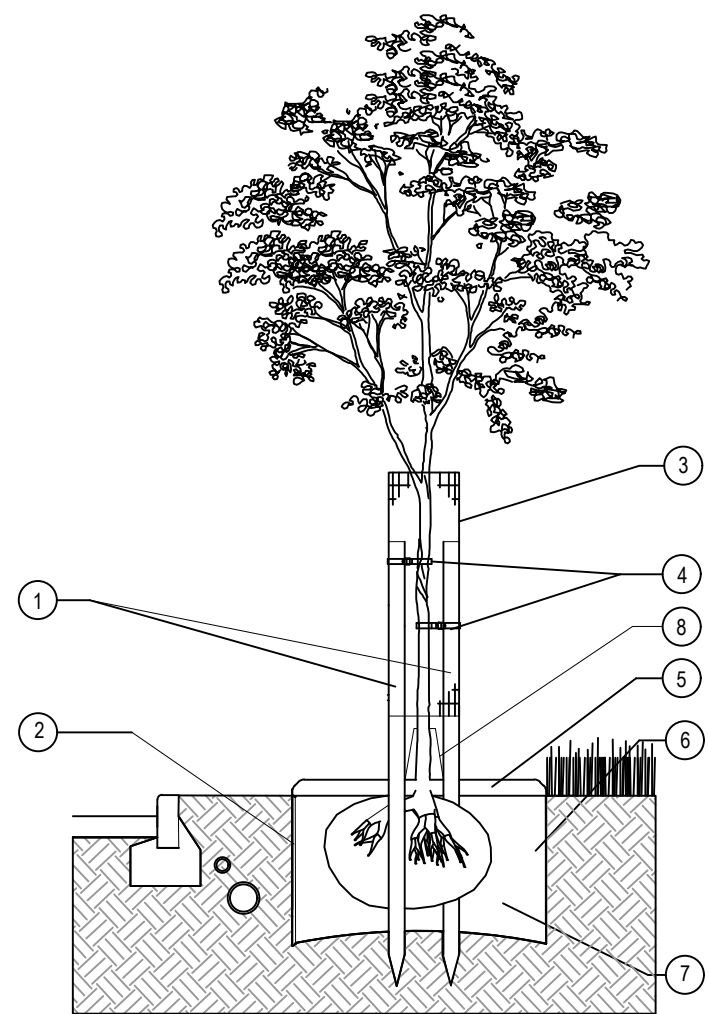
Client:
Albion Land

Project Title:
Catalyst Bicester

Drawing Title:
RM4 - Soft Landscape Proposals
(Sheet 1 of 4)

Date: 25 April 2022	Drawn By: AL
Drawing Number: LB291_D04	Checked by: DB
Scale: 1:500 at A1	Revision: b

Refer to Reform Landscape
Architecture Dwg no.
RFM-XX-00-DR-L-0001 for



Tree Pit Detail (for trees in proximity to hard landscaping and services)

1. 2x tanalised timber tree stakes 2m, 75mm Ø driven into backfilled pit to provide support to the tree.

2. *ReRoot* root barrier with root deflecting ribs installed between tree root ball and hard surfaces/services where there is a risk of root damage as the tree grows outward. As a general rule, root barriers should be installed in locations where hard surfaces and/or services are located within four metres of the tree stem. Install closer to the paving/service than the tree, to allow space for the tree roots to grow into the space available, with the ribs facing the tree. Note this may mean not placing the barrier within the tree pit, but further away within its own trench. Root barriers must extend a minimum of 2m lengthways beyond the expected canopy of the mature tree. The top of the root barrier should be set as close to the soil surface as possible without being visible.

3. Tubex Treeguard Mesh Roll or similar approved, 12mm mesh roll cut to size and bent in circle 320mm Ø and tied to tree stake to protect tree from damage by people and animals. Bottom of mesh should be 300mm above ground level to allow strimmer guard to be fitted and prevent litter and grass/weeds building up around the base of the tree. Top of mesh should be below the first lateral branch.

4. Use 2x Tree Ties GLB25A with GLPFA spacer sleeves or similar to secure tree to support post.

5. 75mm deep bark mulch layer to be spread evenly over a circular area 1000mm Ø around the tree to prevent weed growth and retain moisture. Alternatively, a suitable mulch mat can be used covering the same area.

6. Excavate tree pit to sufficient size to accommodate tree root ball. Loosen any compaction in base of excavated pit to aid drainage. The tree should be planted at a depth where the root flare is still visible, just breaching the soil surface, following backfilling.

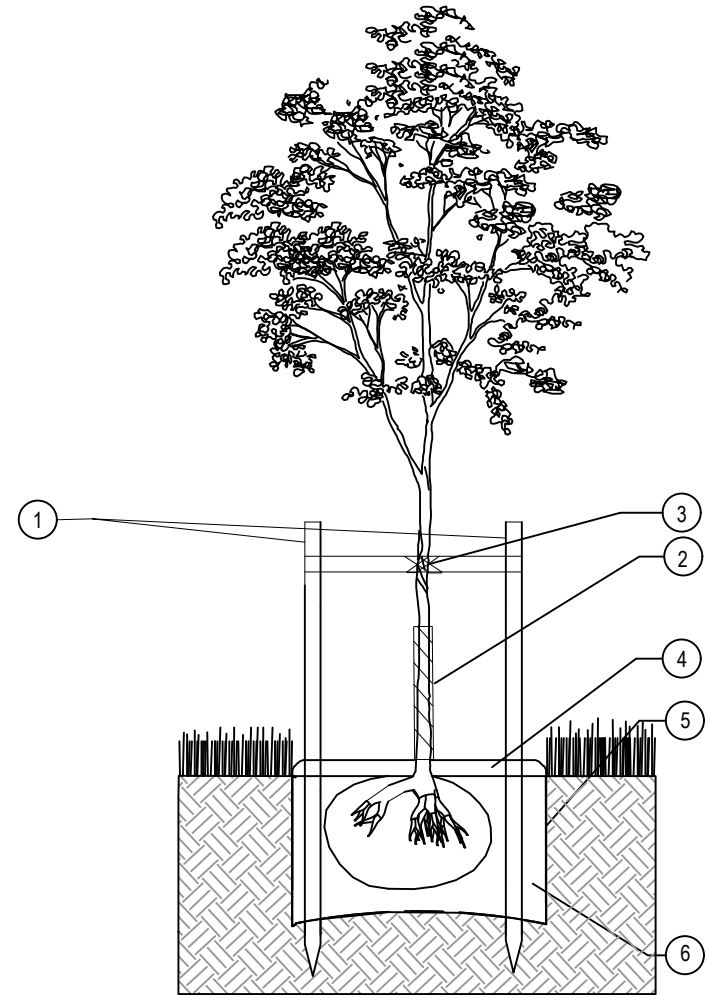
7. Backfill tree pit with subsoil and topsoil excavated from pit if this is regarded as of sufficient quality to promote the healthy establishment of the tree. If either the top soil or sub soil excavated from the pit is of poor quality, then soil ameliorants may be used sparingly or imported topsoil compliant with BS3882 should be used.

8. *Strimmer guard* by Arbortech or similar to be fitted around base of tree to protect from damage by grass maintenance machinery primarily, but also to provide an additional layer of defense against animal browsing.

Immediately after planting, water the tree, saturating the tree pit to field capacity.

The notes above are intended as a basic guide only. For further guidance on tree planting refer to BS8545:2014 Section 10.

Products suggested in *italics* above are available from Green Blue Urban (<http://greenblueurban.com/>) and Arbortech (www.arbortech.co.uk).



Tree Pit Detail (for trees in open space)

1. 2x tanalised timber tree stakes 2m, 75mm Ø and crossbar driven into backfilled pit to provide support to the tree.

2. Clear spiral guard to be fitted to trunk to protect against animal browsing.

3. Use 2x Tree Ties GLB25A with GLPFA spacer sleeves or similar to secure tree to support post.

4. 75mm deep bark mulch layer to be spread evenly over a circular area 1000mm Ø around the tree to prevent weed growth and retain moisture. Alternatively, a suitable mulch mat can be used covering the same area.

5. Excavate tree pit to sufficient size to accommodate tree root ball. Loosen any compaction in base of excavated pit to aid drainage. The tree should be planted at a depth where the root flare is still visible, just breaching the soil surface, following backfilling.

6. Backfill tree pit with subsoil and topsoil excavated from pit if this is regarded as of sufficient quality to promote the healthy establishment of the tree. If either the top soil or sub soil excavated from the pit is of poor quality, then soil ameliorants may be used sparingly or imported topsoil compliant with BS3882 should be used.

Immediately after planting, water the tree, saturating the tree pit to field capacity.

The notes above are intended as a basic guide only. For further guidance on tree planting refer to BS 8545:2014 Section 10.

Products underlined above are available from Green Blue Urban (<http://greenblueurban.com/>).

Native Hedgerow Planting Detail

1. Tubex shrub shelter with supporting cane or stake.

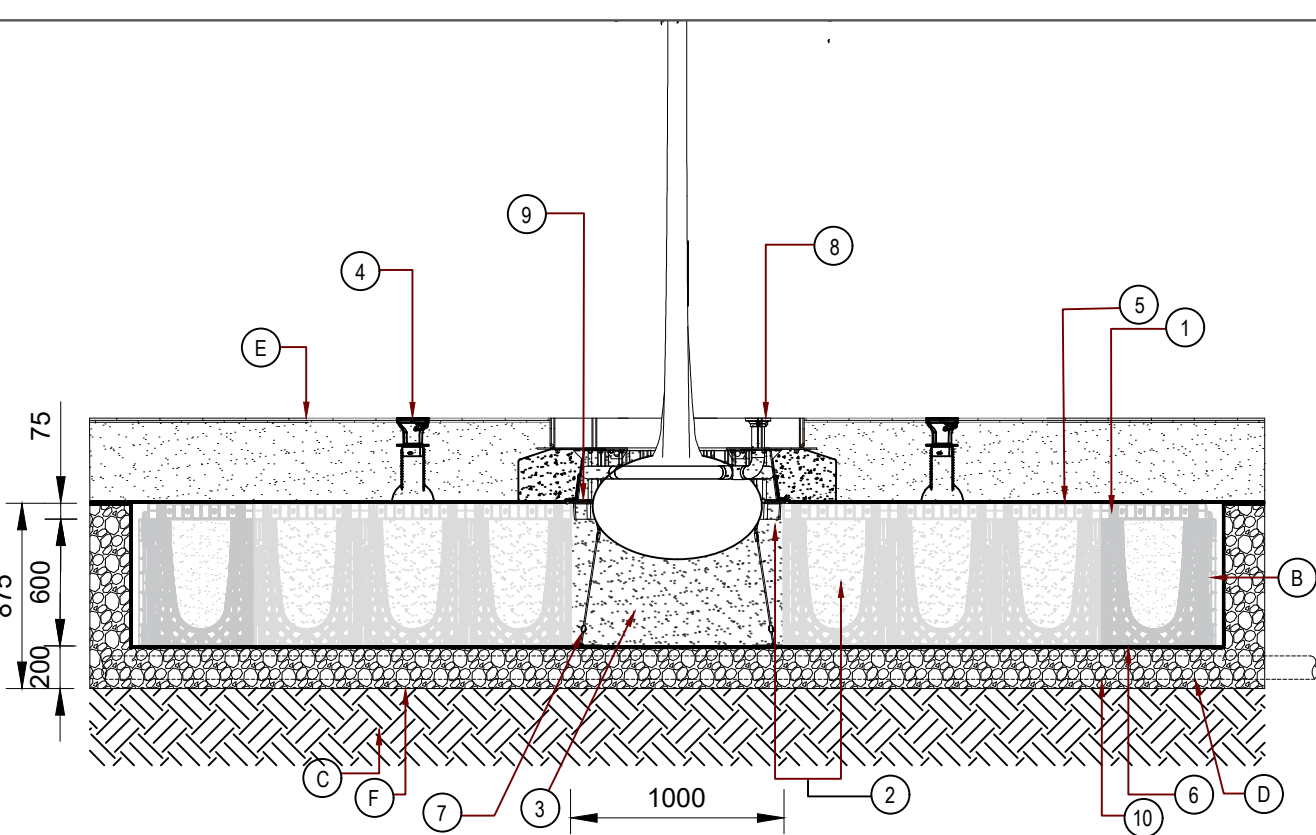
2. 2m wide biodegradable weed mat roll pegged down with biodegradable pegs along line of hedgerow to prevent weed growth and retain moisture.

3. Whip to be notch planted following clearance of any existing vegetation.

Immediately after planting, water the whip, saturating the ground around its base to field capacity.

The notes above are intended as a basic guide only. For further general guidance on planting refer to BS8545:2014 Section 10 and BS4428:1989 Section 9.

Products suggested in *italics* above are available from Tubex (<http://www.tubex.com/>).



Tree pit detail (for trees in car parking areas)

- Rootspace @600mm depth (1 unit deep) c/w twin walled geonet & open reinforcing mesh - gburs61a -
- Ropsoil for use within top 600mm of soil profile
- Subsoil for use within soil profiles 600mm or deeper
- Roottrain arborvent cast aluminium trafficable aeration inlet with 150mm square top and manifold - rrarbv150b (or acceptable equivalent)
- Twin walled structural geonet (or acceptable equivalent)
- 20mm Open reinforcing mesh
- Arborguy anchorplate strapped anchor system - sasap06a (or acceptable equivalent)
- Roottrain arborvent irrigation system - castle12a (or acceptable equivalent)
- Medium rootdirector with root deflecting ribs - rd1000-rsa (or acceptable equivalent) set at edge of planting area
- 10 - 20mm Clean angular drainage aggregate - gbudrsa (or acceptable equivalent)

Notes:

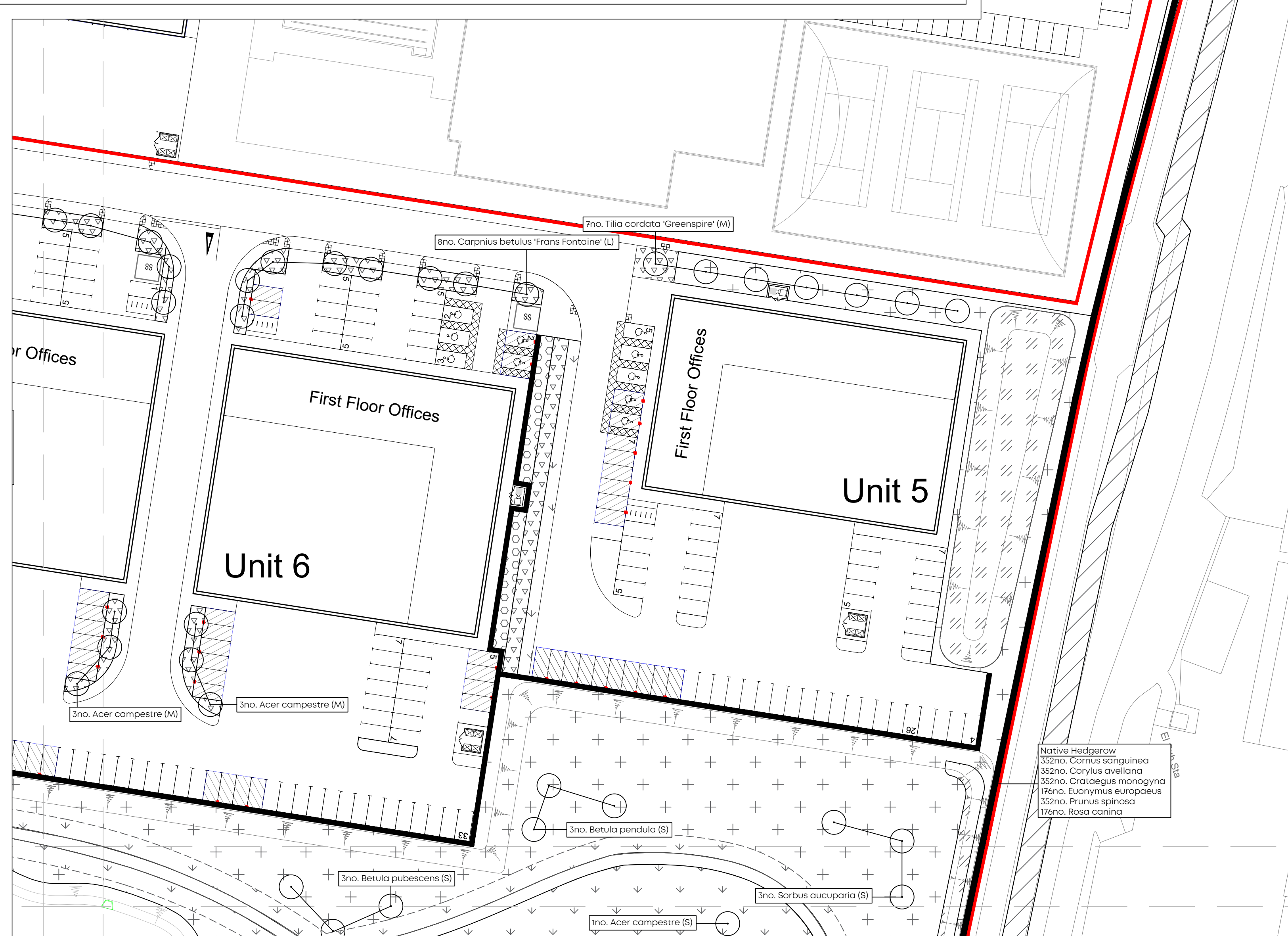
- Allow 20% additional for geotextile and reinforced geogrid for overlap and cutting requirements
- Install rootspace side panels to installation as directed by engineer
- Existing ground
- Positive drainage pipe (110mm perforated pipe)
- Build-up to suit engineer designs and requirements

Structural engineer's note:

- Additional twinwall geonet (gltwgna) to be installed where sub-base is installed below 3% cbr - minimum 2% cbr of formation level to be assessed by engineer

Notes

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- All hatch patterns are indicative only unless stated otherwise.
- This drawing is to be read in conjunction with the following Laird Bailey Landscape Architects documentation:
 - LB291_D04a (sheets 1 to 4)
 - AND all relevant documentation from the design team
- Any discrepancies in the design information are to be brought to the attention of Laird Bailey Landscape Architects, in writing.
- Refer to other consultants' drawings and specifications for the following design information:
 - Levels & Drainage design and infrastructure
 - Lighting and ducting
 - Existing & proposed utilities
 - Plant quantities are to suit site areas in accordance with scheduled plant densities.
- Any proposed plant substitution shall be agreed with the landscape architect prior to ordering.
- Drawings are for planning purposes only.

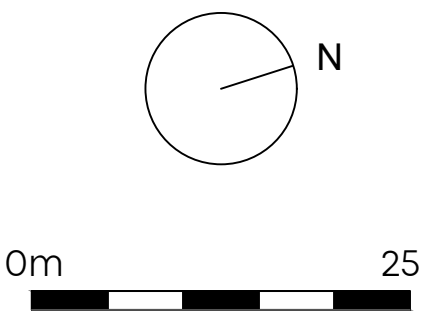


- Site Boundary
- Land Under Applicants Ownership
- Existing Vegetation to be Retained
- Proposed Tree
- Proposed Native Woodland Planting
- Proposed Hedgerow
- Proposed Amenity Planting Mix
- Proposed Native Shrub Planting
- Proposed Wildflower Meadow Mix
- Proposed Swale Seed Mix
- Proposed Amenity Grass Seed/Turf

Locaion Plan



b	Layout Update/Services Co-ordination	27.05.22
a	Layout Update	18.05.22
Rev	Comment	Date



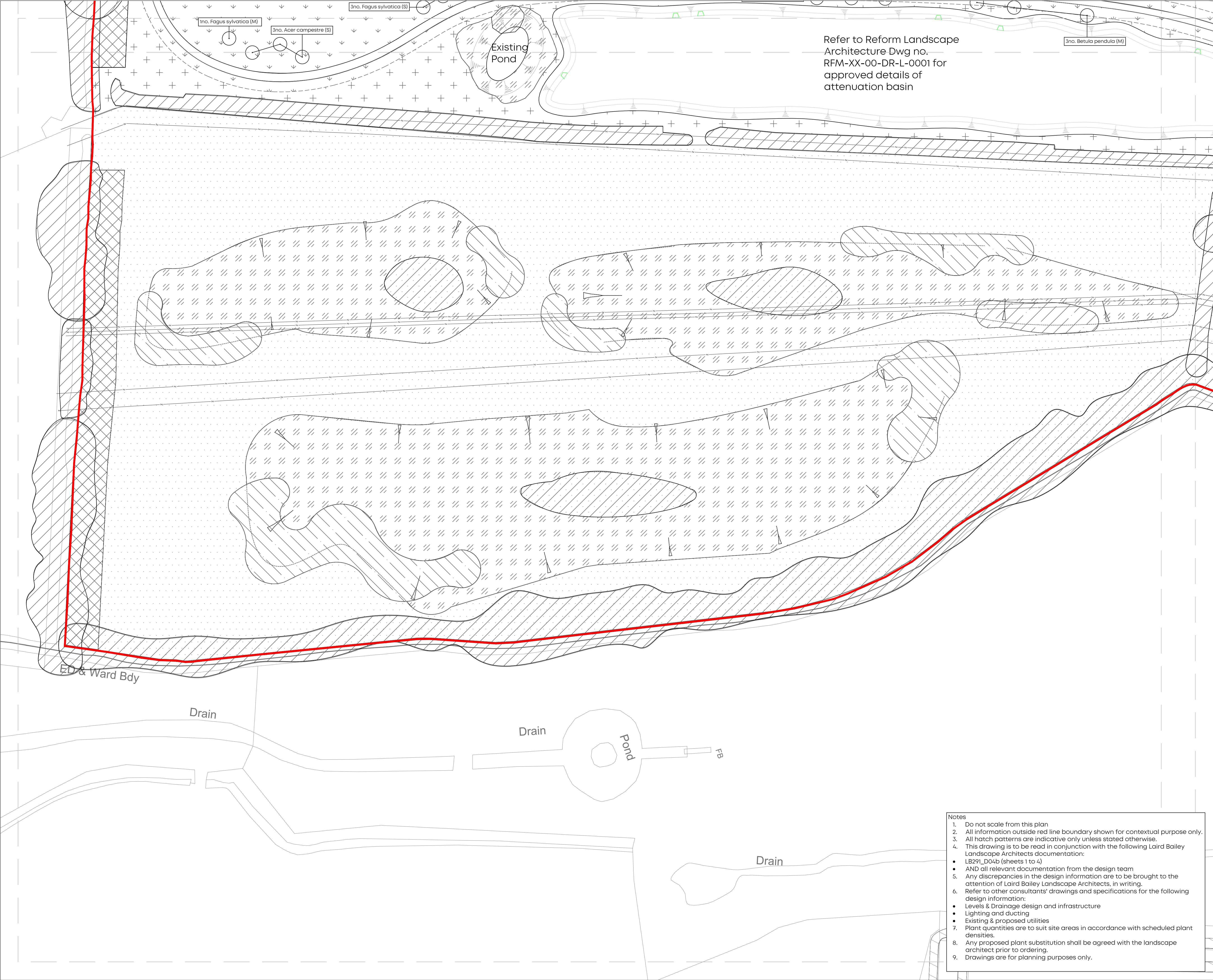
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Cotswolds - Somerset - South Wales

Client:
Albion Land

Project Title:
Catalyst Bicester

Drawing Title:
RM4 - Soft Landscape Proposals
(Sheet 2 of 4)

Date: 25 April 2022	Drawn By: AL
Drawing Number: LB291_D04	Checked by: DB
Scale: 1:500 at A1	Revision: b

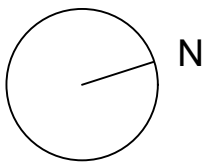


- Site Boundary
- Land Under Applicants Ownership
- Existing Vegetation to be Retained
- Proposed Tree
- Proposed Native Woodland Planting
- Proposed Hedgerow
- Proposed Wetland Planting
- Proposed Reed Bed
- Proposed Amenity Planting Mix
- Proposed Native Shrub Planting
- Proposed Wildflower Meadow Mix
- Proposed Swale Seed Mix
- Wetland Dry Meadow Mix
- Proposed Amenity Grass Seed/Turf

Locaion Plan



b	Layout Update/Services Co-ordination	27.05.22
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Legend

 Site boundary

Bat Boxes

 Vivara Pro Large Multichamber

 Vivara Pro Beaumaris Box

 Vivara Pro Harlech Box

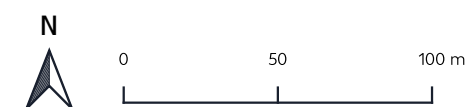
Bird Boxes

 Vivara Pro Swift Nest Box

 Woodstone Alicante Open Nest Box

 Woodstone Seville 32mm Box

 Woodstone Seville 28mm Box



Project	Catalyst Bicester
Drawing Title	Ecological Enhancement Plan
Scale	As Shown (Approximate)
Drawing No.	11920/P09
Date	May 2022
Checked	WW/AP



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