

RICHMOND UPON THAMES COLLEGE

LANDSCAPE MANAGEMENT PLAN



APRIL 2018

Version 5.0

Version control

Date	Version	By
04.06.16	V1 Outline planning application	JB
07.07.16	V1.1 Reserved Matters application	ML
02.02.17	V2 Discharge of conditions	ML
24.03.17	V3 Reserved Matters application update	ML
18.05.17	V4 Reserved Matters Sports Building addendum	ML
04.04.18	V5 Updated GAs	ML

BACKGROUND

INTRODUCTION

This document is prepared on behalf of Richmond Upon Thames College in support of the external hard and soft landscape proposals relating to the Main College Building (Phase 1) & the Sports Centre (Phase 2). The document will be used for reserved matters application pertaining to landscape management.

The landscape management boundary for the development is indicated in [Figure 1 Landscape Management Plan Boundary](#).

The document sets out the guidelines for the first 7 years maintenance following installation of hard landscape, soft landscape and street furniture.

SCHEME DESCRIPTION

The development comprises the following management zones as shown on [Figure 2 Landscape Management Zones](#):

- Clipped Hedges
- Hedgerow woodland understorey
- Amenity shrubs and ground cover
- Grass lawn area
- Allotments
- Hard surface
- Green roof

Further details can be found in LUC Hardworks and Softworks drawings (6377.201 & 6377.401 for Phase 1, and 6377.231 & 6377.431 for Phase 2) which are appended for reference.

All external areas will be lit and a separate watering ring main is installed with hose connection points around the site.

WATER SUPPLY

Irrigation will be carried out manually with hosepipe connection to the site watering ring main, connecting into hose valve boxes. All components, bar the hose are handed over to the developer by the contractor on completion of the development.

MANAGEMENT RESPONSIBILITIES AND STAFFING REGIMES

Management organisations, roles and responsibilities etc. will be set out in the operations & maintenance manual. Typically the grounds team have overall responsibility for the maintenance and management of the site on behalf of the college. The caretaking staffs, based on site will carry out basic maintenance as noted.

On completion of the development the external maintenance will be under the construction contractor's responsibility whilst the works are under the defects rectification period. This period will include replacements

of defective planting at the Contractor's expense or replacement of vandalised planting at the developer's expense.

A maintenance activity schedule is provided later in this document outlining the required activities and approximate frequency of visits which will be resourced by the college.

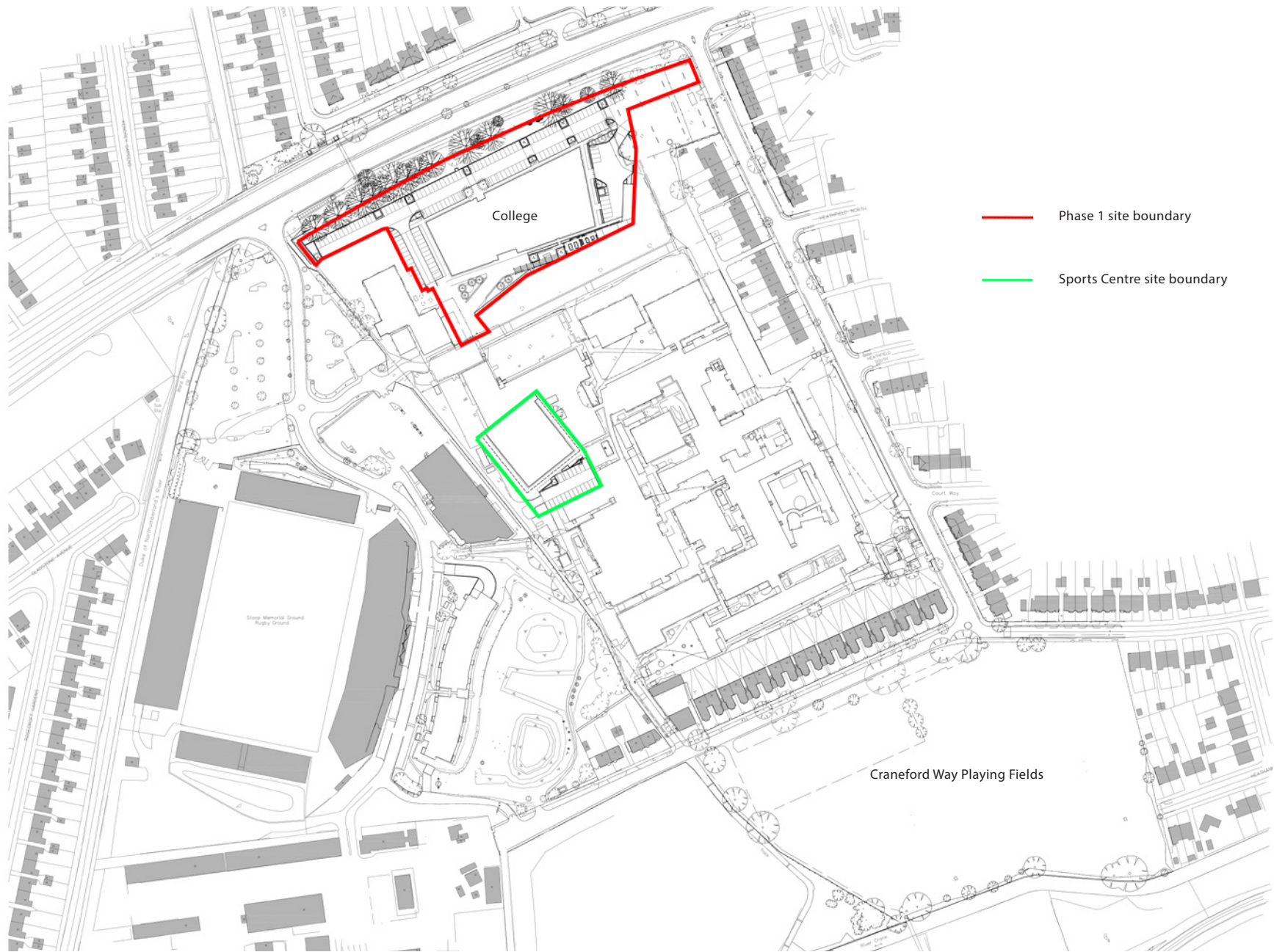


Figure 1 Landscape Management Plan Boundary

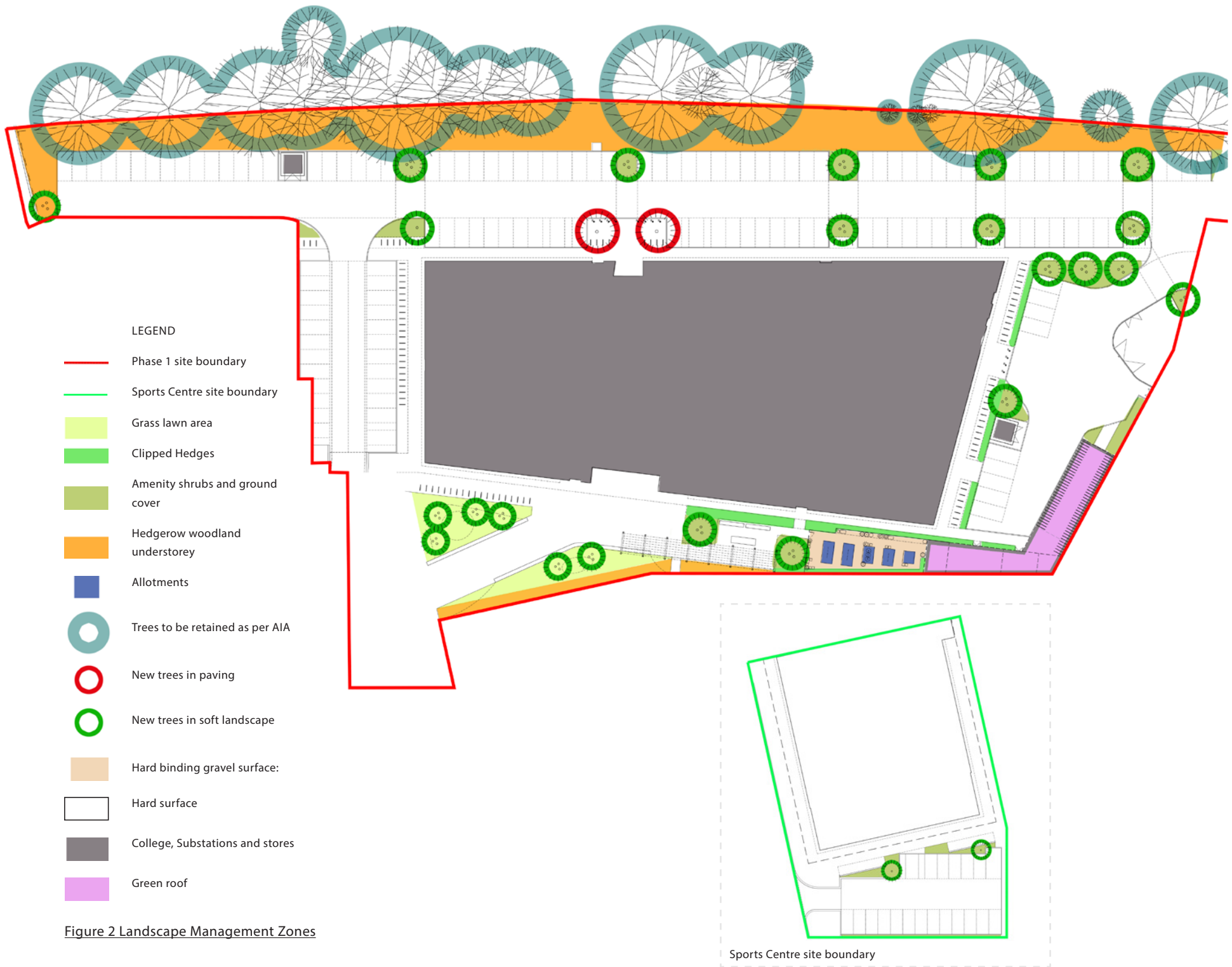


Figure 2 Landscape Management Zones

MANAGEMENT OBJECTIVES

The following summarises the key objectives for each of the management zones shown on Figure 2.

HEDGES

Hedges are used on site to create enclosure – to the supported learning garden and around the service yard. These are native, evergreen vegetation, providing ecological benefit whilst keeping clear views over the top. Hedges are managed to provide a dense, healthy screen throughout the year and requires annual trimming and removal / cutting back of top heavy stems, feeding and regular watering.

HEDGEROW WOODLAND UNDERSTOREY

The northern boundary of the site acts as a buffer, screening traffic noise from Chertsey Road. Existing mature trees are retained and underplanted en-masse with a native hedgerow woodland mix providing ecological benefit.

The planting will comprise of woodland plants (1+1), individually hand dug pit-planted with soil ameliorants added to backfill soil, mulch mats and shelters as shown in the image below.



There are three groups: - Woodland; Woodland understorey; & Understorey edge. This method avoids wholesale cultivation within existing RPZs.

The boundary planting will be managed as a low-maintenance woodland edge. Thinning will be undertaken on a 3 year basis or as required. Strimming between tree shelters will be undertaken twice during the first three years of establishment. Thereafter a seasonal application of mulch will be carried out.

AMENITY SHRUBS AND GROUND COVER

Large blocks of planting creating boundaries between pedestrian and vehicular areas, between parking bays and providing moderate ornamental value. Planting is mixed evergreen / deciduous shrub and herbaceous and requires relatively intense horticultural management, particularly to ensure that perennial planting is kept vigorous and flowering abundantly by regular dividing, thinning, weeding and feeding.

GRASS LAWN AREA

The mounded lawn at the front plaza of the college is designed for sitting out and so needs regular mowing during the growing period as well as feeding, weeding and regular watering.

ALLOTMENTS

Timber allotment planters are provided empty for the college's use, and are not included in the regular maintenance activities. Weeding, feeding, watering etc. is the responsibility of the students and is part of the curriculum.

HARD BINDING GRAVEL

Self-compacting Breedon Gravel is applied to the semi-private allotment garden space. It should be maintained to a high quality, even surface finish. Regular inspection and sweeping will be required to maintain a clean, even surface with minimal obstruction to drainage outlets. Any depressions will require top-up from a suitable stockpile location.

HARD SURFACE

All hard surfaces are to be maintained as a safe and clean, high quality pavement. Paving should be checked during maintenance inspections for deviations and settlement. Drainage is direct to below-surface attenuation crates, therefore maintenance of drainage is limited to localised cleaning of outlet gullies, slot drains and Permavoid collection chambers.

Litter bins are provided across the site, both in public and private areas and are used collectively for all inorganic and organic waste. These will be emptied daily, or as required by the management company.

MANAGEMENT OBJECTIVES

GREEN ROOF

The sedum blanket roof on top of the pumphouse & cycle store requires maintenance of drainage outlets and edges at the perimeter for debris &/or litter. Plants should be checked for failure, replacement cuttings and substrate if required. Weed removal and fertiliser application should be undertaken.

Maintenance is relatively low - two visits in the first year, and one visit per year thereafter.

TREE PLANTING

Tree planting is illustrated in [Figure 3 Tree Pit Detail in paving](#) and [Figure 4 Tree Pit Detail in Soft](#).

2No. Trees in paving are semi-mature specimens upwards of 50-60cm girth and therefore require close monitoring, particularly in the first years to prevent costly replacement.

Trees will be planted in compacted soil and regularly watered (watering / aeration pipe) and fed with liquid fertiliser as required.

Multi-stemmed silver birch will be planted at 4.5-5m in soft landscape. These will also require regular watering.

Tree planting is illustrated in [Figure 3 Tree Pit Detail in paving](#) and [Figure 4 Tree Pit Detail in Soft](#).

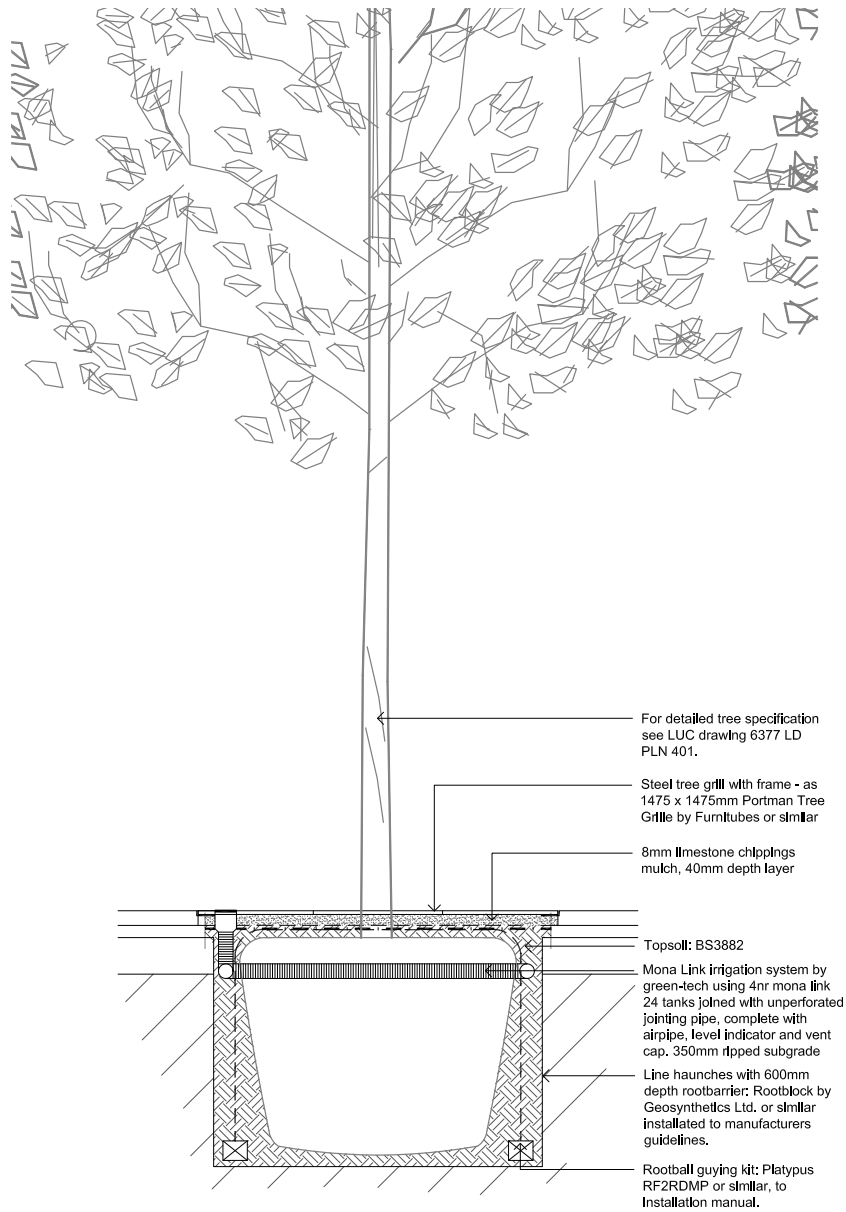


Figure 3 Tree Pit Detail in Paving

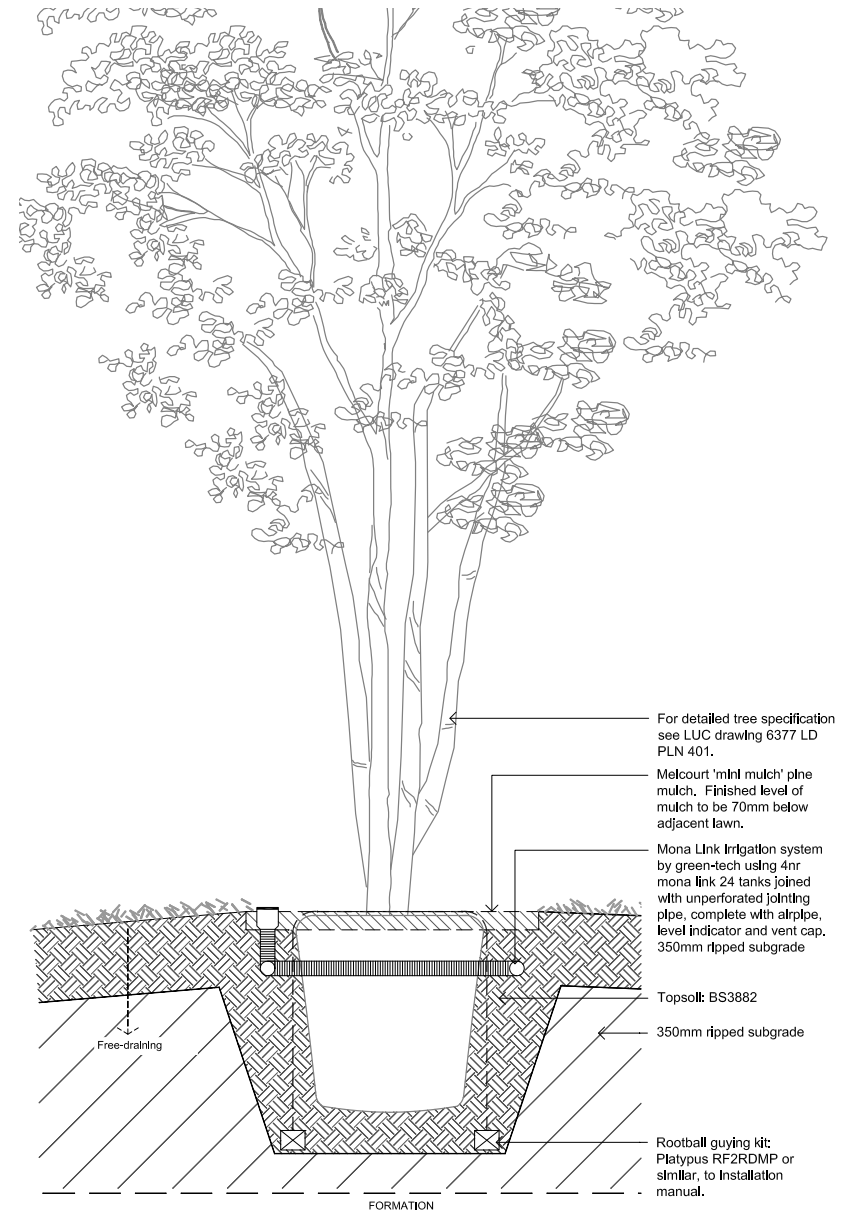


Figure 4 Tree Pit Detail in Soft

MAINTENANCE SCHEDULE

#	Item	Performance Standard	Freq	Nr	Unit
	SOFT LANDSCAPE				
A	Lawn			226	m ²
A1	Cut amenity grass	Maintain to max height 60mm throughout growing season - arisings remain.	20	226	m ²
A2	Trim edges	March - October throughout the growing season.	20	100	m
A3	Leaf clearance	October - January. Assume clearance necessary over 50%.	4	108	m ²
A4	Litter clearance	Collecting litter and disposing per week.	52	226	m ²
B	Bulbs			66	
B1	Cut bulbs	Maintain to max height 75mm during September, removing arisings.	1	66	m ²
B2	Litter clearance	Collecting litter and disposing.	52	66	m ²
C	Hedgerow woodland understory 50%			692	
C1	Strimming	March - September x 1 per month.	7	692	m ²
C2	Apply fertiliser	May/ June	1	692	m ²
C3	Cutting back to control growth out of beds	Nov	1	692	m ²
C4	Litter clearance	Collecting litter and disposing per week.	52	692	m ²
C5	Watering	March - September.	24	692	m ²
C6	Upkeep of tree guards & mats	As required. Check tree guards and refirm / replace if necessary.	1	692	m ²
C7	Beat-up	As required. Replace unsuccessful plants in September/ at the end of growing season in the first 3 years.	0.3	692	m ²
C8	Thinning & Coppicing	As required after the first 3 years of establishment.	1	692	m ²

#	Item	Performance Standard	Freq	Nr	Unit
D	Amenity Shrub & Ground Cover 50%			148	
D1	Hand weeding	March - September x 1 per month.	7	148	m ²
D2	Apply fertiliser	May - June	1	148	m ²
D3	Cutting back	Nov	1	148	m ²
D4	Split and replant, 20% per year	March	1	30	m ²
D5	Litter clearance	Collecting litter and disposing per week.	52	148	m ²
D6	Watering	March - September.	96	148	m ²
E	New Trees			25	
E1	Specimen trees in paving	Watering, pruning, checking and repair to accessories, ties etc.	1	2	nr
E2	Trees in landscape	Watering, pruning, checking and repair to accessories, ties etc.	1	25	nr
E3	Watering of young trees	As required, daily during establishment	365	27	nr
F	Clipped Hedges			87	
F1	Cut hedge by hand	October. Side faces vertical and top horizontal or parallel to the ground. Arisings removed.	1	87	m ²
F2	Maintain hedge base	May - September. Hand hoe to open hedge base where planted.	5	87	m ²
F3	Litter clearance	Collecting litter and disposing per week.	52	87	m ²

*All approximate figures

#	Item	Performance Standard	Freq	Nr	Unit
	HARD LANDSCAPE				
G	Paved areas			6063	
G1	Leaf clearance self-propelled motorised vacuum and disposal	October - January x 4 per month	16	6063	m ²
G2	Snow and ice clearance	Snow - 20 - 40mm deep, manual removal and then salt.	5	6063	m ²
G3	Litter clearance using self-propelled motorised vacuum or rotary brush sweeper	Collecting litter and disposing per week.	52	6063	m ²
G4	Herbicide application to weeds	May - September. Spot treatment.	3	6063	m ²
H	Self-binding gravel areas			70	
H1	Litter clearance	Collecting litter and disposing per week.	52	70	m ²
H2	Herbicide application to weeds	May - September. Spot treatment.	3	70	m ²

#	Item	Performance Standard	Freq	Nr	Unit
	SITE FIXTURES				
I	Benches			20	
I1	Clean and treat	Once every three years - provisional sum.	0.3	3	nr
J	Litter bins			6	
J1	Emptying, disposal and keep clean		364	0	nr
J2	Clean and treat	Once every three years - provisional sum.	0.3	0	nr
K	External Lighting			240	
K1	Inspection	Inspect for damage, once per month.	12	0	nr
K2	Clean and repair	As required	0.3	0	nr
L	Green Roof				
L1	Check drainage outlets / plant module structure	Remove debris, leaf litter etc. Two visits within first year (spring & autumn). One visit per year after.	2	212	m ²
L2	Replace area of settled substrate	Two visits within first year (spring & autumn). One visit per year after.	2	212	m ²
L3	Replace failed plants with sedum cuttings	Two visits within first year (spring & autumn). One visit per year after.	2	212	m ²
L4	Hand weeding	Two visits within first year (spring & autumn). One visit per year after.	2	212	m ²
L5	Fertiliser application	Two visits within first year (spring & autumn). One visit per year after.	2	212	m ²

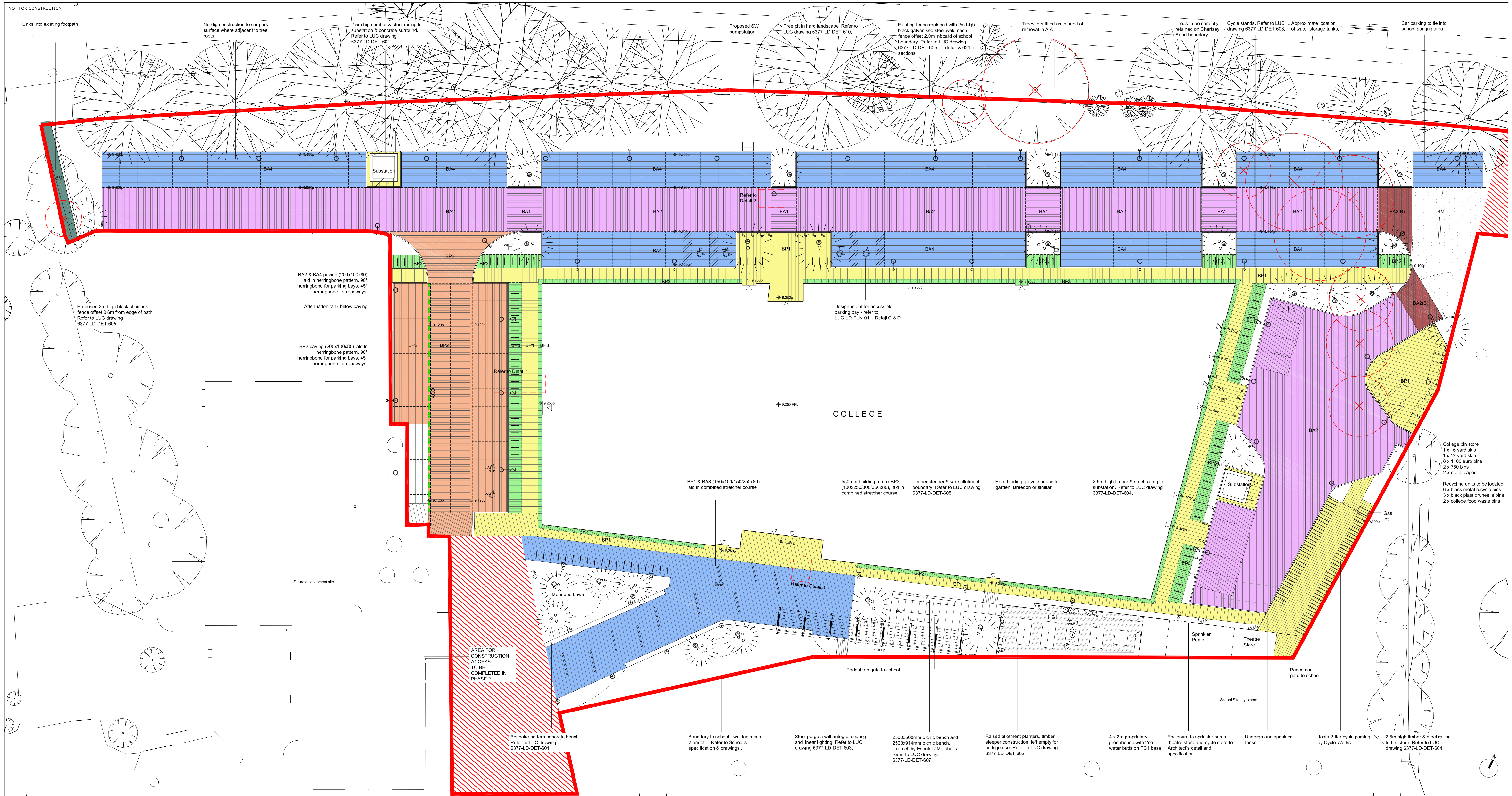
*All approximate figures

APPENDICES

LUC DRAWINGS

To be read in conjunction with the following drawings:

- 6377-201 Phase 1 Hardworks
- 6377-401 Phase 1 Planting
- 6377-231 Sports Building Hardworks
- 6377-431 Sports Building Planting



LEGEND

Phasing Boundary	BA1 Permeable block paving Aquaset Ecogranite 'Combi' by Formpave to BS75332. Vehicle loading, 80mm thick mix of sizes: 150x100/150/250. Build ups to engineers specification.	BM Illuminous macadam. Build ups to engineers specification.	External watering valve pit
ACO Aco multi-chamber MD sliding channel 100mm. B&K skid grating. Refer to engineers specification.	BA2 Permeable block paving Aquaflo Ecogranite 'Combi' by Formpave to BS75332. Vehicle loading, 200x100/80mm Aquaflo 'Balmoral' blocks (dark grey) used to delineate parking bays. Build ups to engineers specification.	PC1 Textured concrete flag paving. Manufacture 'Saxon' 600x900x60mm to BS75332. Build ups to engineers specification.	Bollards (1.2m spacing). Removeable.
BP1 Block paving (impermeable) Ecogranite combined block paving by Formpave in 'Combi' to BS75332. 80mm thick mix of sizes: 150x100/150/250mm.	BA2(B) Permeable block paving Aquaflo Ecogranite 'Balmoral' (dark grey) by Formpave to BS75332. Vehicle loading, 200x100/80mm. Aquaflo 'Balmoral' blocks (dark grey) used to delineate parking bays. Build ups to engineers specification.	HG1 Hand-binding gravel. Brewood. Build ups to engineers specification.	EVCP Electric Vehicle Charging Points (EVCP)
BP2 Block paving (impermeable) Formpave Ecogranite 'Combi' by Formpave to BS75332. Vehicle loading, 200x100/80mm. Formpave 'Balmoral' blocks (dark grey) used to delineate parking bays. Formpave Royal Forest (yellow) used to delineate accessible parking bays. Build ups to engineers specification.	BA3 Permeable block paving Aquaset Ecogranite 'Combi' by Formpave to BS75332. Light loading, 80mm thick mix of sizes: 150x100/150/250. Build ups to engineers specification.	2m High black galvanised steel weldmesh fence	Lighting column, pole mounted luminaire. 6m height CR15 poles RAL 9007 with Denver halophane luminaire (or similar). Lighting locations are indicative. Refer to external lighting layout ATK-MB-VX-DR-E-3203 for lighting positions and specification.
BP3 Block paving (impermeable) Formpave Ecogranite longsets by Formpave in 'Combi' to BS75332. 80mm thick mix of sizes: 100x250/300/350mm. Build ups to engineers specification.	BA4 Permeable block paving Aquaflo Ecogranite 'Combi' by Formpave to BS75332. Light loading, 200x100/80mm. Aquaflo 'Balmoral' blocks (dark grey) used to delineate accessible parking bays. Build ups to engineers specification.	Sheffield cycle stands, 800 x 715mm, 305 grade stainless steel on concrete pad foundations. Refer to LUC drawing 6377-LD-DET-606.	Recessed or spike mount uplight. Lighting locations are indicative. Refer to external lighting layout ATK-MB-VX-DR-E-3203 for lighting positions and specification.

1 Detail 1
Scale 1:25@A1

2 Detail 2
Scale 1:25@A1

3 Detail 3
Scale 1:25@A1

E	09.06.17	Planning	HL	EP	EP
D	28.03.17	Planning - parking update	HL	EP	EP
C	24.02.17	Planning	HL	EP	EP
B	23.01.17	Planning	HL	EP	EP
A	14.12.16	Planning	HL	EP	EP
Iss	Date	Issue Notes			

LUC 43 Chalton Street
London, NW1 1JD
T: 020 7383 5784
F: 020 7383 4798
london@landuse.co.uk
www.landuse.co.uk

Project
Richmond Upon Thames College

Client
Atkins

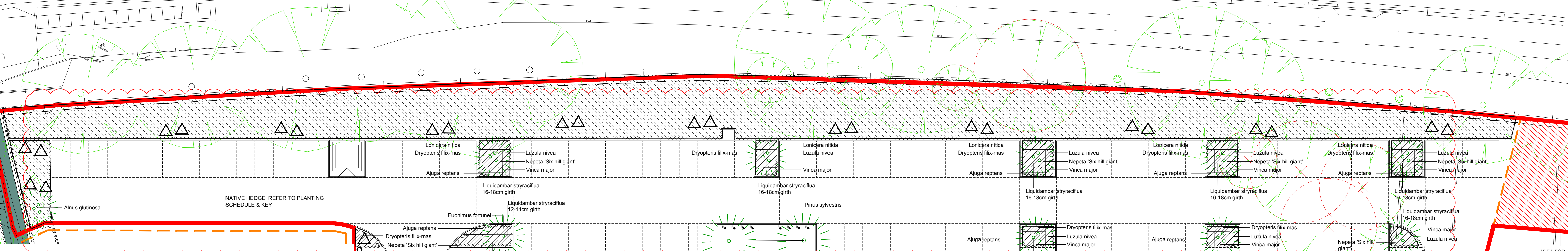
Title
College, Parking & Plaza Hardworks Plan

Scale
1:250@A1

Status
for Planning

Job No. 6377	Drawing No. 201	Issue E
------------------------	---------------------------	-------------------

Do not scale from this drawing
© Drawing & Design Copyright of LUC



Type / Species	Specification	Density/Percentage
Trees		
1 Alnus glutinosa	400-450cm height, RB, 4x, multi-stem-bushy, 3 stems min	As shown
5 Betula pendula	400-450cm height, RB, 4x, multi-stem-bushy, 3 stems min	As shown
9 Betula utilis jacquemontii	400-450cm height, RB, 4x, multi-stem-bushy, 3 stems min	As shown
2 Prunus avium 'Plena'	400-450cm height, RB, 4x, multi-stem-bushy, 3 stems min	As shown
1 Liquidambar styraciflua	16-18 cm girth, height 400-500cm, RB	As shown
1 Liquidambar styraciflua	12-14 cm girth, height 300-400cm, RB	As shown
2 Pinus sylvestris	50-60 cm girth, height 600-700cm, RB, semi-mature, clear stem min 200cm	As shown
Hedging		
124 Acer campestre	Hedging plants, 80-100cm, 2 x tr., rootballed	2.5/linear m, staggered row, 33%
124 Carpinus betulus	Hedging plants, 80-100cm, 2 x tr., rootballed	2.5/linear m, staggered row, 33%
124 Malus sylvestris	Hedging plants, 80-100cm, 2 x tr., rootballed	2.5/linear m, staggered row, 33%
Climbers		
4 Lonicera periclymenum	100-150cm height, 10l pot, caned, several shoots, 3 breaks	As shown
4 Clematis montana var. 'Grandiflora'	150cm height, 10l pot, caned x3, several shoots, 5 breaks	As shown
Native hedge mix		
65 Acer campestre	40-60cm height, B, 1+1; Transplant - seed raised, Tree shelter and weed mat	1/m2
129 Corylus avellana	40-60cm height, B, 1+1; Transplant - seed raised; branched; 2 brks. Tree shelter and weed mat	1/m2
517 Crataegus monogyna	40-60cm height, B, 1+1; Transplant - seed raised, Tree shelter and weed mat	1/m2
65 Euonymus europaeus	40-60cm height, B, 1+1; Transplant - seed raised; branched; 3 brks. Tree shelter and weed mat	1/m2
1293 Hedera hibernica	40-60cm height, 2L, Several shoots; 5 brks. Tree shelter and weed mat	1/m2
65 Ilex aquifolium	40-60cm height, 2L, Leader with laterals	1/m2
129 Prunus spinosa	40-60cm height, B, 1+1; Transplant - seed raised; branched; 2 brks. Tree shelter and weed mat	1/m2
65 Rosa canina	40-60cm height, 2L, Branched; 3 brks. Tree shelter and weed mat	1/m2
65 Sambucus nigra	40-60cm height, B, 1+0; Seeding; branched; 2 brks. Tree shelter and weed mat	1/m2
65 Sorbus aucuparia	40-60cm height, B, 1+1; Transplant - seed raised, Tree shelter and weed mat	1/m2
65 Viburnum opulus	40-60cm height, B, 1+1; Transplant - seed raised; branched; 2 brks. Tree shelter and weed mat	1/m2
Ornamental shrubs		
14 Buddleja 'Pink delight'	80-100cm height, 10l	15% - 1/m2
18 Ceanothus 'Puget blue'	10l, bushy, 6 breaks	20% - 1/m2
19 Ficus carica 'Brown turkey'	80-100cm height, 15l, Frame, branched, 5 breaks	15% - 1/m2
14 Rosa 'Roseraie de l'Hay'	60-80cm height, 4l, bush, 5 breaks	15% - 1/m2
14 Spiraea nipponica	60-80cm height, 10l, bushy, 9 breaks	15% - 1/m2
18 Viburnum rhytidophyllum	60-80cm height, 10l, bushy, 5 breaks	20% - 1/m2
Groundcover		
80 Ajuga reptans	2l pot	6/m2
504 Dryopteris filix-mas	2l pot	5/m2
14 Euonymus fortunei	5l pot	5/m2
528 Galium odoratum	2l pot	12/m2
108 Lonicera nitida	5l pot	5/m2
170 Luzula sylvatica	2l pot	6/m2
186 Nepeta 'Six hill giant'	2l pot	6/m2
104 Vinca major	2l pot	6/m2
Lawn		
Turf - Lindum LT7 - Festival	NA	NA
Bulbs		
32 Hyacinthoides non-scripta	NA	groups of 30
16 Crocus tommasinianus	NA	groups of 30

Species	%	Species	%
Acer campestre	5%	Prunus spinosa	10%
Corylus avellana	10%	Rosa canina	5%
Crataegus monogyna	40%	Sambucus nigra	5%
Euonymus europaeus	5%	Sorbus aucuparia	5%
Hedera hibernica (total number @ 1/m2)	100%	Taxus baccata	5%
Ilex aquifolium	5%	Viburnum opulus	5%

OUTLINE SPECIFICATION NOTES

GENERAL
All supply, planting and other landscape works to be in accordance with relevant British Standards and Codes of Practice. Works to be undertaken by a competent and accredited landscape contractor with 12months Defects Liability/ in contract maintenance. Following that maintenance works shall be undertaken in accordance with the Landscape Management Plan, LUC 2016.

PLANTING METHODOLOGY
Soil
Soil to be free of pests, disease, fungus and foreign matter. Do not use topsoil contaminated with subsoil, rubbish or other materials that are corrosive, explosive, flammable, hazardous to human or animal life or detrimental to healthy plant growth. The Contractor shall appoint a suitably qualified and approved, independent Soil Scientist to undertake the sampling and testing of the soil materials considered for importation. An approved Soil Scientist is: Tim O'Hare Associates LLP, Howbery Park, Wallingford, Oxon, OX10 8BA, Tel: 01491 822653, www.toha.co.uk
Subsoil to be in accordance with BS 3682 'Specification for topsoil'. For trees planted in hard landscape a load bearing growing medium will be necessary. This will be Urban tree planting medium, Grade: 0.6-2 mm. Green compost for soil amelioration to be incorporated into soil for tree and shrub planting to be in accordance with BS1 PAS 100:2011 or current revision and sourced from a PAS 100 compliant facility. Fertilizer to be incorporated into soil for tree and shrub planting: Scotts Enmag CRF (11%N:22%P2O5:9%K2O:6%MgO). Prepare undisturbed topsoil in accordance with BS 4428 'Code of Practice for general landscape operations': Break up hard ground thoroughly, remove visible roots and large stones with a diameter greater than 50 mm, dig areas covered with turf over to full depth of topsoil and treat weeds at appropriate times with a suitable translocated non-residual herbicide. Prepare subsoil by excavating/placing fill to the required profiles, loosening thoroughly when ground conditions are reasonably dry to a depth of 450mm and removing stones larger than 50mm, arisings, contaminants, debris and builders' rubble. Spread topsoil in layers of layers of 150 mm maximum depth and gently firm each layer before spreading the next. After spreading topsoil, when weather and ground conditions are suitably dry and non-plastic, the soil profile shall be ripped at 300mm centres to a minimum depth of 300mm (grass areas) or 600mm (shrubs beds, hedges) to decompact the soils and key in the topsoil and subsoil layers. Any large, compacted lumps of soil shall be broken down by further appropriate cultivation (in accordance with BS 4428) to produce a fine tilth suitable for planting (<30mm), turfing and seeding (<10mm). Cultivations shall ensure that the topsoil is fully aerated. In order to avoid physical degradation to the soil during all phases of soil handling (e.g. spreading, cultivation, amelioration, planting, turfing and seeding), soil handling operations shall be carried out when soil is non-plastic (friable) in consistency (i.e. at least 5% below the soil's lower plastic limit). Soil shall not be unnecessarily compacted by trampling or trafficking by site machinery or handled when frozen or during and after heavy rainfall.

Timing
• Deciduous trees and shrubs: Late October to late March. Field-grown trees and shrubs planted out of season to be spring-ringed at nursery.
• Conifers and evergreens: September/ October or April/ May.
• Herbaceous plants: September/ October or March/ April.
• Container grown plants: At any time if ground and weather conditions are favourable. Provide watering and weed control as necessary.
• Dried bulbs, corms and tubers: September/ October.

Standard
All planting to be carried out in accordance with BS 4428 and during suitable weather conditions. Do not use mechanical tools within 100 mm of tree and plant stems. Water as necessary to ensure establishment and continued thriving of planting.
Plants to be materially undamaged, sturdy, healthy and vigorous specimen, of good shape and without elongated shoots, grown in a suitable environment and hardened off and free from pests, diseases, discoloration, weeds and physiological disorders. Plant standard to BS 3936 'Nursery stock'. Name, forms, dimensions, provenance and other criteria as scheduled and defined in the National Plant Specification. Plant handling shall be in accordance with HTA 'Handling and establishing landscape plants'.
Turf
Turf to be healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease to BS 3969 'Recommendations for Turf for general purposes'. Turf shall be laid in accordance with BS 4428 'Code of Practice for general landscape operations'.
Groundcover
Geotextile fabric to all beds to be laid before planting. Cut flaps neatly for planting and refit closely around plant stems. Mulch with Melcourt Mini Pine Mulch, 60mm depth. Finished level of mulch to be 30 mm below adjacent grassed or paved areas.

Hedges
Planting bed depth to be 450mm minimum. Geotextile fabric to all hedges beds to be laid before planting. Cut flaps neatly for planting and refit closely around plant stems. Mulch with Melcourt Mini Pine Mulch, 60mm depth. Finished level of mulch to be 30 mm below adjacent grassed or paved areas.

Native hedge
All native hedge planting to be undertaken in accordance with BS 8545 'Trees from nursery to independence in the landscape. Recommendations'. Tree pits to be excavated in grass to be 450x450x450mm. Backfill with ameliorant (1 m³ per 10 m³ of topsoil) and fertilizer as specified.

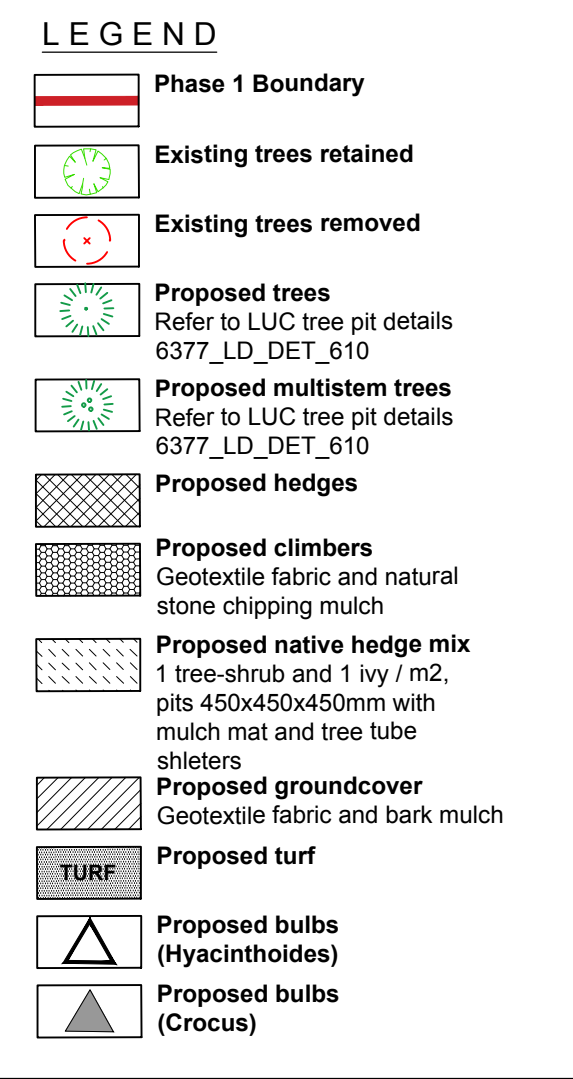
All plants to be protected with Tubex, Shrubshelter and Treeshelter, 60cm high with single timber stakes. Ensure that protection methods do not impede natural movement of trees and shrubs or restrict growth. Tubex 500x500mm biodegradable hessian mulch mats to be installed to each pit with galvanised steel pegs.

Climbers and ornamental shrubs
Planting bed depth to be 450mm minimum. Geotextile fabric to all hedges beds to be laid before planting. Cut flaps neatly for planting and refit closely around plant stems. Mulch with Melcourt Mini Pine Mulch, 60mm depth. Finished level of mulch to be 30 mm below adjacent grassed area. Shrubs to be grouped by 3 to form irregular 'natural' layout.
Trees
All tree planting to be undertaken in accordance with BS 5837 'Trees in relation to design, demolition and construction. Recommendations' and BS 8545 'Trees from nursery to independence in the landscape. Recommendations'. For detail of tree pit including root barrier, guying system and aeration and irrigation pipe refer to LUC drawing 5377-LD-DET-610. Trees in hard landscape to be planted in load bearing growing medium as specified with tree grilles (Furnitubes - Portman steel). Semimature trees to be root prepared and transplanted to BS 4043 'Recommendations for transplanting root-balled trees'. All standard trees to be secured with 2 no. stake. Stakes to be 50mm diameter softwood, pointed chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end with nails to BS 1202. All multistem trees to be secured using Platypus rootball anchoring kits. Backfill with ameliorant (1 m³ per 10 m³ of topsoil) and fertilizer as specified. Mulch with Melcourt Mini Pine mulch. Finished level of mulch to be 70 mm below adjacent grassed or paved areas.
MAINTENANCE
For general soft landscape maintenance - including native hedge, hedges, groundcover, climbers and lawn - refer to LUC Landscape Management Plan.
Trees
Newly planted trees across the site will need to be watered regularly by hand during establishment i.e. for 3 years after planting. Soil around the base of trees in grass will be kept clear of weeds. Stakes/ties/ guys will be inspected and maintained in good order, adjusted and repaired where necessary to prevent rubbing of bark and removed when no longer required. Trees will be visually inspected on routine maintenance visits for damage and general safety and security issues. Damaged branches will be removed from both tree and ground promptly to minimise damage to the tree and danger/obstruction to users of the site.

For newly planted trees formative pruning work will be carried out as required and as appropriate for the species to remove branches overhanging or obstructing access and to maintain the form and health of the tree. All pruning to be carried out by a Member of the Arboricultural Association and in accordance with BS 7370 'Grounds maintenance. Recommendations for maintenance of soft landscape'.



Native hedge tree shelters and weed mat



J	09.06.17	Planning	ML	JR	EP
I	22.03.17	Planning	ML	JR	EP
H	07.02.17	Planning	ML	JR	EP
G	02.02.17	Planning	ML	JR	EP
F	09.12.16	Planning	ML	JR	EP
E	08.08.16	Update to planting schedule	ML	JR	EP
D	21.07.16	Update to planting schedule	AS	JR	EP
C	14.07.16	Update to notes	JR	JR	EP
B	05.07.16	Pergola amended, ornamental shrub planting added	AS	JR	EP
A	15.06.16	First issue	AS	JR	EP
Iss	Date	Issue Notes	Drn	Chk	Appr

LUC 43 Chalton Street
London, NW11 4JD
T: 020 7383 5784
F: 020 7383 4798
London@landuse.co.uk
www.landuse.co.uk

Project
Richmond Upon Thames College
Phase 1

Client
Atkins

Title
Soft Landscape

Scale
1:250 @ A1

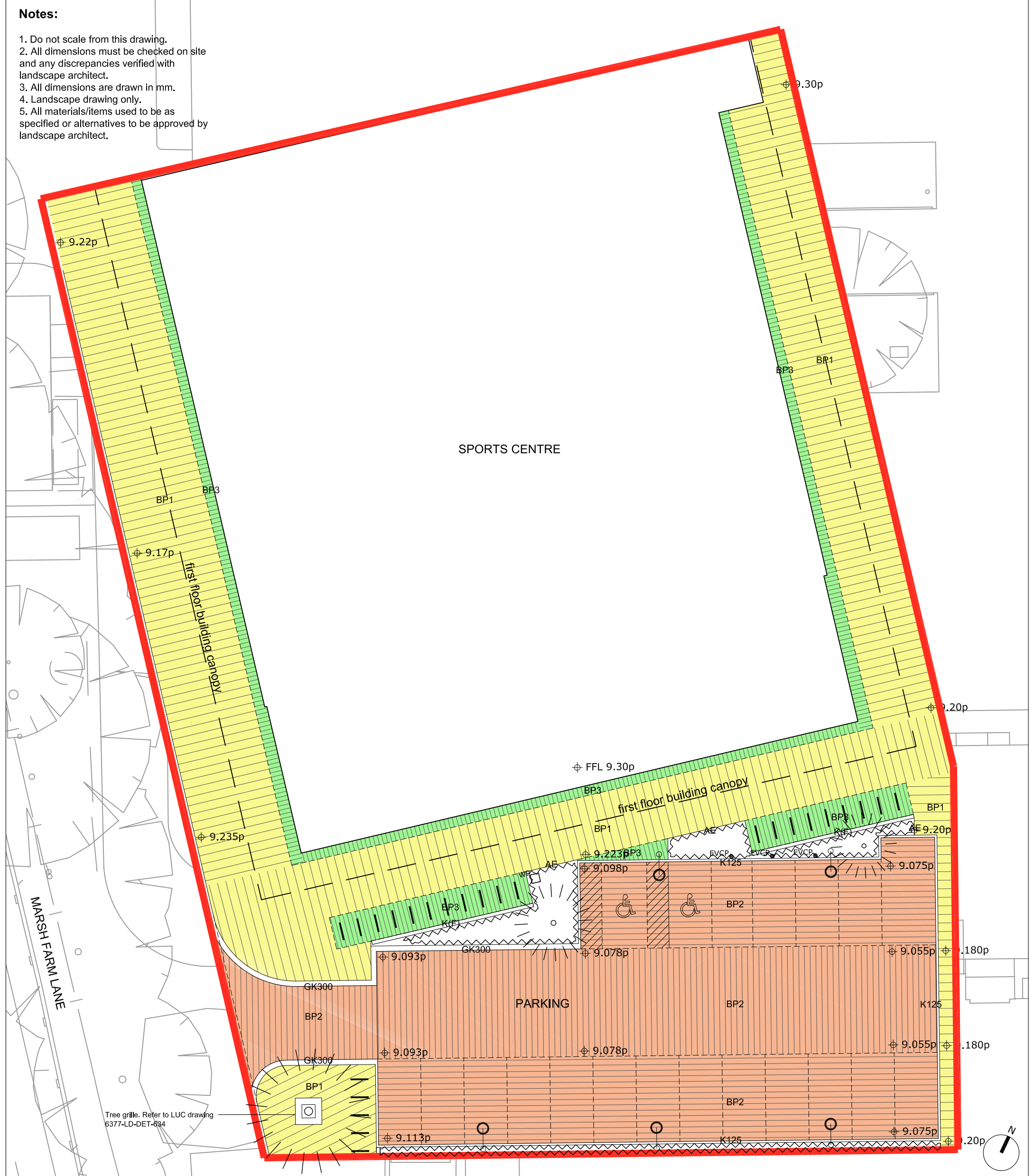
Status
for Planning

Job No. **6377** Drawing No. **LD PLN 401** Issue **J**

Do not scale from this drawing.
© Drawing & Design Copyright of LUC

Notes:

1. Do not scale from this drawing.
2. All dimensions must be checked on site and any discrepancies verified with landscape architect.
3. All dimensions are drawn in mm.
4. Landscape drawing only.
5. All materials/items used to be as specified or alternatives to be approved by landscape architect.



Sports Centre Boundary

BP1
Block paving (Impermeable)
Ecogranite combined block paving by Formpave in 'Cornish' to BS7533/2. 80mm thick mix of sizes; 150x100/150/250mm.

BP2
Block paving (Impermeable)
Formpave Ecogranite In 'Cornish' by Formpave to BS7533/2. Vehicle loading, 100x200x80mm. Formpave Royal Forest (yellow) used to delineate parking bays. Build ups to engineers specification.

BP3
Block paving (Impermeable)
Formpave Ecogranite longsetts by Formpave In 'Cornish' to BS7533/2. 80mm thick mix of sizes; 100x250/300/350mm. Build ups to engineers specification.

GK300
GK300 - 50mm upstand Stone kerb. 300 x 225 x 915mm. Please refer to LUC drawing 6377-LD-DET-631. Build ups to engineers specification.

K125
K125 - 125mm upstand PCC kerb. 915 x 125 x 255mm. Please refer to LUC drawing 6377-LD-DET-631. Build ups to engineers specification.

K(F)
K(F) - Standard PCC channel, as above, flush with paving. Please refer to LUC drawing 6377-LD-DET-631. Build ups to engineers specification.

AE
AE - Aluminium edging 120x70x7mm. By Kinley Systems 'AluExcel 120mm Flexible' with 400mm anchor pins. Please refer to LUC drawing 6377-LD-DET-631. Build ups to engineers specification.

Sheffield cycle stands, 800 x 715mm. 305 grade stainless steel, on concrete pad foundations.

EVC
Electric Vehicle Charging Points (EVC)

WP
Irrigation point

L
Lighting column, pole mounted luminaire. 6m height CHS posts RAL 9007 with denver holophane luminaire (or similar). Lighting locations are indicative. Refer to engineers detail & specification.

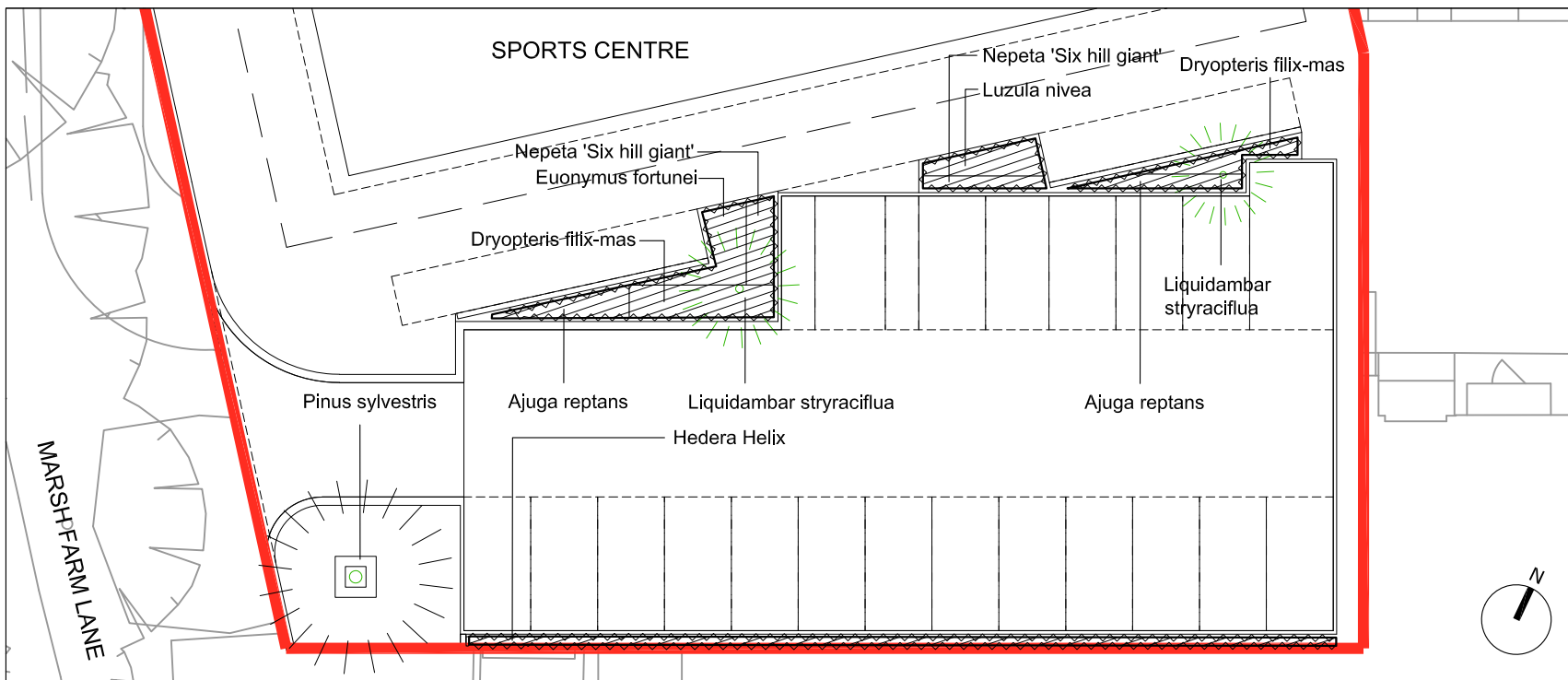
C	29.01.18	Planning - tree grille added	HL	EP	EP
B	08.11.17	Planning - added tree	HL	EP	EP
A	18.05.17	First Issue	HL	EP	EP
Iss	Date	Issue Notes			

LUC 43 Chalton Street
London, NW1 1JD
T: 020 7383 5784
F: 020 7383 4798
london@landuse.co.uk
www.landuse.co.uk

Project
**Richmond Upon Thames College
Sports Centre**
Client
Atkins
Title
Hardworks Plan

Scale	Status	
1:200 @ A3	for Planning	
Job No.	Drawing No.	Issue
6377	LD PLN 231	C

Do not scale from this drawing
© Drawing & Design Copyright of LUC



Legend:

- Sports Centre Boundary
- Proposed trees
Refer to LUC tree pit detail 6377_LD_DET_634
- Proposed groundcover
Geotextile fabric and bark mulch

SCHEDULE

	Type / Species	Specification	Density/Percentage
Trees			
2	Liquidambar styraciflua	12-14 cm girth, height 300-400cm, RB	As shown
1	Pinus sylvestris	50-60 cm girth, height 600-700cm, RB, semi-mature, clear stem min 200cm	As shown
Groundcover			
35	Ajuga reptans	2l pot	6/m ²
43	Dryopteris filix-mas	2l pot	5/m ²
23	Euonimus fortunei	5l pot	5/m ²
90	Hedera helix	1L pot	10/m ²
23	Luzula nivea	2l pot	6/m ²
30	Nepeta 'Six hill giant'	2l pot	6/m ²

OUTLINE SPECIFICATION NOTES

GENERAL
All supply, planting and other landscape works to be in accordance with relevant British Standards and Codes of Practice. Works to be undertaken by a competent and accredited landscape contractor with 12months Defects Liability/ in contract maintenance. Following that maintenance works shall be undertaken in accordance with the Landscape Management Plan, LUC 2016.

PLANTING METHODOLOGY

Soil
Soil to be free of pests, disease, fungus and foreign matter.
Do not use topsoil contaminated with subsoil, rubbish or other materials that are corrosive, explosive, flammable, hazardous to human or animal life or detrimental to healthy plant growth. The Contractor shall appoint a suitably qualified and approved, independent Soil Scientist to undertake the sampling and testing of the soil materials considered for importation. An approved Soil Scientist is: Tim O'Hare Associates LLP, Howbery Park, Wallingford, Oxon, OX10 8BA, Tel: 01491 822653, www.toha.co.uk
Subsoil to be in accordance with BS 3882 'Specification for topsoil'.
For trees planted in hard landscape a load bearing growing medium will be necessary. This will be Urban tree planting medium, Grade: 0.6-2 mm.
Green compost for soil amelioration to be incorporated into soil for tree and shrub planting to be in accordance with BSI PAS 100:2011 or current revision and sourced from a PAS 100 compliant facility.
Fertilizer to be incorporated into soil for tree and shrub planting: Scotts Enmag CRF (11%N:22%P2O5:9%K2O:6%MgO).
Prepare undisturbed topsoil in accordance with BS 4428 'Code of Practice for general landscape operations': Break up hard ground thoroughly, remove visible roots and large stones with a diameter greater than 50 mm, dig areas covered with turf over to full depth of topsoil and treat weeds at appropriate times with a suitable translocated non-residual herbicide.
Prepare subsoil by excavating/placing fill to the required profiles, loosening thoroughly when ground conditions are reasonably dry to a depth of 450mm and removing stones larger than 50mm, arisings, contaminants, debris and builders' rubble.
Spread topsoil in layers of layers of 150 mm maximum depth and gently firm each layer before spreading the next.
After spreading topsoil, when weather and ground conditions are suitably dry and non-plastic, the soil profile shall be ripped at 300mm centres to a minimum depth of 300mm (grass areas) or 600mm (shrub beds, hedges) to decompact the soils and key in the topsoil and subsoil layers. Any large, compacted lumps of soil shall be broken down by further appropriate cultivation (in accordance with BS 4428) to produce a fine tilth suitable for planting (<30mm), turfing and seeding (<10mm). Cultivations shall ensure that the topsoil is fully aerated.
In order to avoid physical degradation to the soil during all phases of soil handling (e.g. spreading, cultivation, amelioration, planting, turfing and seeding), soil handling operations shall be carried out when soil is non-plastic (friable) in consistency (i.e. at least 5% below the soil's lower plastic limit). Soil shall not be unnecessarily compacted by trampling or trafficking by site machinery or handled when frozen or during and after heavy rainfall.

Timing

- Deciduous trees and shrubs: Late October to late March. Field-grown trees and shrubs planted out of season to be spring-ringed at nursery.
- Conifers and evergreens: September/ October or April/ May.
- Herbaceous plants: September/ October or March/ April.
- Container grown plants: At any time if ground and weather conditions are favourable. Provide watering and weed control as necessary.
- Dried bulbs, corms and tubers: September/ October.

Standard

All planting to be carried out in accordance with BS 4428 and during suitable weather conditions. Do not use mechanical tools within 100 mm of tree and plant stems. Water as necessary to ensure establishment and continued thriving of planting.
Plants to be materially undamaged, sturdy, healthy and vigorous specimen, of good shape and without elongated shoots, grown in a suitable environment and hardened off and free from pests, diseases, discoloration, weeds and physiological disorders. Plant standard to BS 3936 'Nursery stock'. Name, forms, dimensions, provenance and other criteria as scheduled and defined in the National Plant Specification. Plant handling shall be in accordance with HTA 'Handling and establishing landscape plants'.

Groundcover

Geotextile fabric to all beds to be laid before planting. Cut flaps neatly for planting and refit closely around plant stems. Mulch with Melcourt Mini Pine Mulch, 60mm depth. Finished level of mulch to be 30 mm below adjacent grassed or paved areas.

Ornamental shrubs

Planting bed depth to be 450mm minimum. Geotextile fabric to all hedges beds to be laid before planting. Cut flaps neatly for planting and refit closely around plant stems. Mulch with Melcourt Mini Pine Mulch, 60mm depth. Finished level of mulch to be 30 mm below adjacent grassed area. Shrubs to be grouped by 3 to form irregular 'natural' layout.

Trees

All tree planting to be undertaken in accordance with BS 5837 'Trees in relation to design, demolition and construction. Recommendations' and BS 8545 'Trees from nursery to independence in the landscape. Recommendations'.
For detail of tree pit including root barrier, guying system and aeration and irrigation pipe refer to LUC drawing 6377-LD-DET-634. Semimature trees to be root prepared and transplanted to BS 4043 'Recommendations for transplanting root-balled trees'.
All standard trees to be secured with 2 no. stake. Stakes to be 50mm diameter softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end with nails to BS 1202.
Backfill with ameliorant (1 m³ per 10 m³ of topsoil) and fertilizer as specified.
Mulch with Melcourt Mini Pine mulch. Finished level of mulch to be 70 mm below adjacent grassed or paved areas.

MAINTENANCE

For general soft landscape maintenance - including native hedge, hedges, groundcover, climbers and lawn - refer to LUC Landscape Management Plan.

Trees

Newly planted trees across the site will need to be watered regularly by hand during establishment i.e. for 3 years after planting.
Soil around the base of trees in grass will be kept clear of weeds.
Stakes/ties/ guys will be inspected and maintained in good order, adjusted and repaired where necessary to prevent rubbing of bark and removed when no longer required.
Trees will be visually inspected on routine maintenance visits for damage and general safety and security issues. Damaged branches will be removed from both tree and ground promptly to minimise damage to the tree and danger/obstruction to users of the site.
For newly planted trees formative pruning work will be carried out as required and as appropriate for the species to remove branches overhanging or obstructing access and to maintain the form and health of the tree. All pruning to be carried out by a Member of the Arboricultural Association and in accordance with BS 7370 'Grounds maintenance. Recommendations for maintenance of soft landscape'.

Notes:

1. Do not scale from this drawing.
2. All dimensions must be checked on site and any discrepancies verified with landscape architect.
3. All dimensions are drawn in mm.
4. Landscape drawing only.
5. All materials/items used to be as specified or alternatives to be approved by landscape architect.

Rev	Date	Issue Notes	By	Check
D	04.04.18	Planning - amended planting	HL	EP
C	29.01.18	Planning - amended planting	HL	EP
B	08.11.17	Planting - added tree	HL	EP
A	18.05.17	First Issue	HL	EP

LUC 43 Chalton Street
London, NW1 1JD
T: 020 7383 5784
F: 020 7383 4798
london@landuse.co.uk
www.landuse.co.uk

Project
Richmond Upon Thames College
Sports Centre
Client
Atkins
Title
Soft Landscape

Scale 1:250 @ A3	Status for Planning	
Job No. 6377	Drawing No. LD PLN 431	Issue D