

Structural hedges and shrub planting

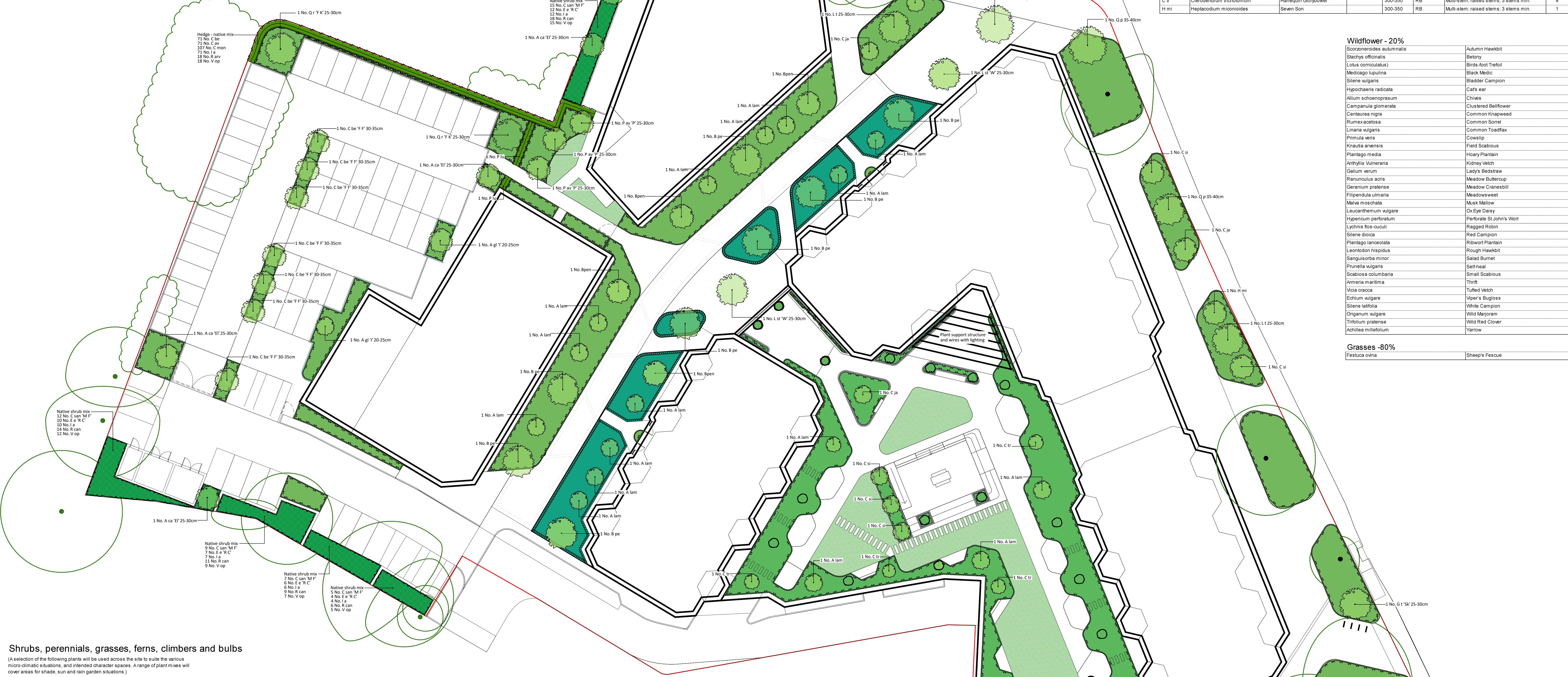
Native hedge mix							
Abbrev	Species	Common Name	Height cm	Root Zone	Specification	Mx %	m Ctrs x2
C be	Carpinus betulus	Common Hornbeam	100-125	B	1+0; Transplant - seed raised	20.00	0.3
C av	Corylus avellana	Common Hazel	100-125	B	1+2; Transplant - seed raised; branched; 4 brks	20.00	0.3
C mon	Crataegus monogyna	Common Hawthorn	100-125	B	1+2; Transplant - seed raised	30.00	0.3
I a	Ilex aquifolium	Common Holly	100-125	10L	Leader with laterals	20.00	0.3
R av	Rosa anvensis	Field Rose	100-125	B	1+1; Transplant - seed raised; branched; 2 brks	5.00	0.3
V op	Viburnum opulus	Guelder Rose	100-125	B	1+2; Transplant - seed raised; branched; 3 brks	5.00	0.3

Ornamental hedges

Abbrev	Species	Common Name	Height cm	Root Zone	Specification	Mx %	per m	Number
P lu	Prunus lusitana	Portuguese Laurel	120-140	76L	Instant hedging; 40cm wide x 100cm long; pre-formed with continuous root-strip; dense, straight-sided, feathered to base, neatly clipped		1	7

Native shrub mix

Abbrev	Species	Common Name	Height cm	Root Zone	Specification	Mx %	per m²	Number
C san M F	Cornus sanguinea 'Midwinter Fire'	Dogwood 'Midwinter Fire'	80-100	10L	Branched; 5 brks	25.00	1	48
E a R C	Eucornium europaeus 'Red Cascade'	Spiral Tree 'Red Cascade'	80-100	10L	Branched; 5 brks	20.00	1	39
I a	Ilex aquifolium	Common Holly	80-100	10L	Leader with laterals	20.00	1	39
R can	Rosa canina	Dog Rose	40-60	3L	Branched; 5 brks	10.00	3	58
V op	Viburnum opulus	Guelder Rose	60-80	10L	Branched; 5 brks	25.00	1	48



Shrubs, perennials, grasses, ferns, climbers and bulbs

(A selection of the following plants will be used across the site to suite the various micro-climatic situations, and intended character spaces. A range of plant mixes will cover areas for shade, sun and rain garden situations.)

Large multi-stem shrubs (min. 45L)

Cercis canadensis 'Forest Pansy'	Acanthus mollis 'Rue Ladan'
Cornus kousa 'Milky Way'	Aemonea x hybrida 'Honoriae' Jobert
Cotinus coggygia 'Grace'	Aemonea x hybrida 'Königin Charlotte'
Eucornium europaeus 'Red Cascade'	Aconitum 'Honorat'
Hamamelis x intermedia 'Jolema'	Acaun europaeum
Rhus typhina 'Tiger Eyes'	Astranta major 'Shaggy'
Viburnum plicatum 'Mariesii'	Bistorta amplexicaulis 'Alba'

Medium sized shrubs (10-45L)

Choisya x dewlandiae 'White Goddess'	Cypripedium x peralchicum 'Frohneleiten'
Cotinus coggygia 'Young Lady'	Euphorbia amygdaloides var. robbiae
Eucornium alatum 'Compactus'	Euphorbia divaricata
Fatsia polyparpa	Fragaria vesca
Hebe parriflora angustata	Galium odoratum
Hydrangea paniculata 'Quartz'	Geranium macrorrhizum 'Spassart'
Maloma eurpachodacta subsp. garpinensis 'Sot Carass'	Geranium macrorrhizum 'White-Ness'
Salvia rosmarinus 'Miss Jessopp's Upright'	Geranium nodosum
Viburnum opulus 'Compactum'	Gillenia trifoliata

Low growing shrubs (10-25L)

Daphne x transatlantica 'Santal Fragrans'	Hebe 'Red Edge'
Hydrangea paniculata 'Conferi'	Hebe parriflora angustata
Hydrangea paniculata 'Little Lime'	Hydrangea quercifolia 'Pae Wee'
Hydrangea quercifolia 'Pae Wee'	Pinus mugo 'Mops'
Salvia rosmarinus 'Prostratus Group'	Sarcococca humilis 'Fragrant Valley'
Sarcococca humilis 'Fragrant Valley'	Urtica minor 'Gentle De Jolly'

Perennials (sun) (9cm-5L)

Allium 'Millenium'	Asplenium scolopendrium
Allium 'Summer Beauty'	Athyrium filix-femina
Camassia amandii 'Apple Blossom'	Blechnum spicant
Clematis tangutica 'Bill Mackenzie'	Dryopteris erythrosora
Carex oshimensis 'Evergreen'	Dryopteris waltchiana
Bistorta affinis 'Superba'	Salvia 'Little Spire'
Bistorta amplexicaulis 'Firetail'	Salvia nemerosa 'Amethyst'
Erigeron karwinskianus	Salvia nemerosa 'Carissima'
Eupatorium maculatum 'Atropurpureum'	Sanguisorba officinalis 'Tanna'
Euphorbia characias 'Munro'	Stachys byzantina 'Big Ears'
Euphorbia x martinii	Symphyotrichum 'Little Carolus'
Malva sylvestris 'Alba'	Verbena bonariensis 'Lollipop'
Muscari muscari 'Dwarf'	Verbena officinalis var. grandiflora 'Bampton'
Polystichum setiferum 'Dahlem'	

Grasses (2-5L)

Calamagrostis x acutiflora 'Karl Foerster'	Allium 'Purple Sensation'
Calamagrostis brachytricha	Allium sphaeroccephalum
Clematis tangutica 'Bill Mackenzie'	Crocus tommasinianus
Carex oshimensis 'Evergreen'	Nardosus 'Acacia'
Bistorta affinis 'Superba'	Nardosus 'Thalia'
Bistorta amplexicaulis 'Firetail'	Silene latifolia
Erigeron karwinskianus	Stachys byzantina 'Big Ears'
Eupatorium maculatum 'Atropurpureum'	Symphyotrichum 'Little Carolus'
Euphorbia characias 'Munro'	Verbena bonariensis 'Lollipop'
Euphorbia x martinii	Verbena officinalis var. grandiflora 'Bampton'

Climbers (10-25L)

Akebia quinata	Allium 'Purple Sensation'
Clematis amandii 'Apple Blossom'	Allium sphaeroccephalum
Clematis tangutica 'Bill Mackenzie'	Crocus tommasinianus
Hydrangea anomala petiolaris	Nardosus 'Acacia'
Parthenocissus henryana	Nardosus 'Thalia'
Trachelospermum jasminoides	Silene latifolia
	Stachys byzantina 'Big Ears'
	Symphyotrichum 'Little Carolus'
	Verbena bonariensis 'Lollipop'
	Verbena officinalis var. grandiflora 'Bampton'

Bulbs

Allium 'Purple Sensation'	Allium sphaeroccephalum
Crocus tommasinianus	Nardosus 'Acacia'
Nardosus 'Thalia'	Silene latifolia
Stachys byzantina 'Big Ears'	Symphyotrichum 'Little Carolus'
Verbena bonariensis 'Lollipop'	Verbena officinalis var. grandiflora 'Bampton'

Ferns (2-5L)

Asplenium scolopendrium	Athyrium filix-femina
Blechnum spicant	Dryopteris erythrosora
Dryopteris waltchiana	Salvia 'Little Spire'
Salvia nemerosa 'Amethyst'	Salvia nemerosa 'Carissima'
Sanguisorba officinalis 'Tanna'	Stachys byzantina 'Big Ears'
Symphyotrichum 'Little Carolus'	Verbena bonariensis 'Lollipop'
Verbena bonariensis 'Lollipop'	Verbena officinalis var. grandiflora 'Bampton'

PLANT SCHEDULE

Trees

Key motif tree

Abbrev	Species	Common Name	Girth/Dia. cm	Height cm	Root Zone	Specification	Number
G1'Sk	Gleditsia triacanthos 'Skyline'	Honey Locust 'Skyline'	25-30	550-600	RB	4x; Semi-mature; clear stem min. 200cm	1
L st W	Liquidambar styraciflua 'Worpleston'	Sweet Gum 'Worpleston'	25-30	550-600	RB	4x; Semi-mature; clear stem min. 200cm	2
L t	Liriodendron tulipifera	Tulip Tree	25-30	min 450	RB	4x; Semi-mature; clear stem min. 200cm	2
Q p	Quercus palustris	Pin Oak	35-40	600-700	RB	4x; Semi-mature; clear stem min. 200cm	3

Structural native tree

Abbrev	Species	Common Name	Girth/Dia. cm	Height cm	Root Zone	Specification	Number
A ca 'E'	Acer campestre 'Elae'p'	Field Maple	25-30	500-550	RB	4x; Semi-mature; clear stem min. 200cm	5
A gl 'I'	Ainus glandulosa 'Imperial'	Alder	20-25	500-550	RB	3x; Semi-mature; clear stem min. 200cm	2
B pe	Betula pendula	Silver Birch	20-25	600-700	RB	4x; Multi-stem; bushy; 3 stems min.	8
BEPE	Betula pendula	Silver Birch	20-25	500-550	RB	3x; Semi-mature; clear stem min. 200cm	2
B pen	Betula pendula	Silver Birch	20-25	400-450	RB	3x; Semi-mature; clear stem min. 200cm	4
C be F F	Carpinus betulus 'Frans Fontaine'	Hornbeam	30-35	600-650	RB	4x; Semi-mature; clear stem min. 200cm	7
P av 'P'	Prunus avium 'Piana'	Double Dean	25-30	550-600	RB	4x; Semi-mature; clear stem min. 200cm	3
Q r F K	Quercus robur 'Fastigata Koster'	Oak	25-30	min 550	RB	4x; Large Feathered	2

Small ornamental multi-stem tree

Abbrev	Species	Common Name	Girth/Dia. cm	Height cm	Root Zone	Specification	Number
A lam	Amelanchier lamarkii	Juneberry	400-450	RB	6x; Umbrella shape; Multi-stem; 200-300cm wide; clear stems 150-200cm; clipped	19	
C ja	Cercidiphyllum japonicum	Katsura Tree	400-450	RB	Multi-stem; raised stems; 3 stems min.	3	
C si	Cercis siliquastrum	Judas Tree	300-350	RB	Multi-stem; raised stems; 3 stems min.	6	
C tr	Clerodendrum trichotomum	Harlequin Glorybower	300-350	RB	Multi-stem; raised stems; 3 stems min.	4	
H mi	Heptacodium miconioides	Seven Son	300-350	RB	Multi-stem; raised stems; 3 stems min.	1	

Wildflower - 20%

Species	Common Name
Scorzoneroidea autumnalis	Autumn Hawkbit
Stachys officinalis	Betony
Lolium comolatus	Bird-foot Trefoil
Medicago lupulina	Black Medic
Silene vulgaris	Bladder Campion
Hypochaeris radicata	Cafe ear
Allium schoenoprasum	Chives
Campanula glomerata	Clustered Bellflower
Centauria nigra	Common Knapweed
Rumex acetososa	Common Sorrel
Linaria vulgaris	Common Toadflax
Primula veris	Cowslip
Knautia anvensis	Field Scabious
Plantago media	Hoary Plantain
Antirrhyn Veneraria	Kidney Vetch
Galium verum	Lady's Bedstraw
Ranunculus acris	Meadow Buttercup
Geranium pratense	Meadow Cranesbill
Filipendula ulmaria	Meadowsweet
Malva moschata	Musk Mallow
Leucanthemum vulgare	Ox-eye Daisy
Hypericum perforatum	Perforate St John's Wort
Lychnis flos-oculi	Ragged Robin
Silene dioica	Red Campion
Plantago lanceolata	Ribwort Plantain
Leonodon hispidus	Rough Hawkbit
Sanguisuta minor	Saltwort
Primula elatior	Self-heal
Scabiosa columbaria	Small Scabious
Armeria maritima	Thrift
Vicia cracca	Tufted Vetch
Echium vulgare	Viper's Bugloss
Silene latifolia	White Campion
Origanum vulgare	Wild Marjoram
Trifolium pratense	Wild Red Clover
Achillea millefolium	Yarrow

Grasses -80%

Festuca ovina	Sheep's Fescue
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KEY

- Existing trees - refer to arboricultural impact assessment
- Proposed tree planting
- Proposed specimen shrub planting
- Proposed ornamental hedge planting
- Proposed native hedge mix planting
- Proposed native shrub planting
- Proposed ornamental shrub and herbaceous planting
- Proposed rain garden planting
- Proposed amenity grass turf (Rolawn Medallion® Turf or similar approved)
- Proposed WFT-Roof-34-Bio Wildflower Turf Roof Turf from Wildflower Turf Ltd

PLANTING NOTES

- Responsibilities
 - The groundworks contractor is responsible for preparing the formation levels and removing unwanted spoil from the site. The landscape contractor is responsible for digging of tree pits, subsoiling, topsoiling, planting, turling, mulching and maintenance work.
 - Landscape Architect to advise on supply of plant material and supervise setting out of plant masses on site.
- Groundworks and Soils
 - Prior to topsoiling operations, subgrade/subsoil to be prepared in accordance with BS 4428 scarified or ripped to 200mm depth prior to spreading of topsoil. Imported and as saved topsoil to be in accordance with BS 3882: 2015. Grass areas to have minimum topsoil depth of 150mm, proposed shrub and hedge planting areas to have minimum topsoil depth of 300mm. Any weed / grass growth to be sprayed out with appropriate herbicide at least 10 days prior to cultivation.
 - N.B Proposed services (electric, water, gas etc) in landscape areas should be installed as a minimum below the required topsoil depths and clearly identified in accordance with service / utility requirements.
- Existing trees
 - Retained trees should be subject to a full arboricultural inspection to assess condition and safety. Retained trees shall be protected from damage by erection of fencing in accordance BS 5837:2012 in relation to design, demolition and construction. These barriers shall be maintained in position and in good condition until works are complete. Refer to Tyler Grange AIA for further detail.
- Tree surgery / removal
 - Tree surgery and tree removal to be carried out by an Arboricultural Association approved Tree surgeon in accordance with BS 3998:1989. Arrangements to be removed to a licensed tip.
- Trees
 - Prepare trees and transplant in accordance with BS 8545: 2014.
 - Trees 25-35cm girth - planting hole 1500mm x 1500mm x 800mm deep.
 - Multi-stems 1.5-3.0m - planting hole 1200mm x 1200mm x 700mm deep.
 - Multi-stems 3.5-4.0m - planting hole 1500mm x 1500mm x 800mm deep.
 - Tree pits to be 500mm wider than, and the same depth as the rootball. Excavated material to be separated into topsoil and subsoil and stockpiled for backfilling. Pits to be excavated with slightly raised centre; bottom to be scarified to a depth of 200mm, with soil ameliorant worked into base. Tree pit sides to be scarified. Tree pits to be backfilled with excavated material from tree pit, installed to original soil profiles in accordance with BS 8545: 2014.
 - Where trees are positioned within hard landscape, they will be planted in appropriate tree pits incorporating structural soil support cells providing adequate uncompacted soil root zone to allow trees to thrive in a hard paved setting. TreeParker Cell System or GreenBlue Urban ArborSystem or similar approved.
 - Appropriate root barriers will be provided where there is potential for 'root heave' to surrounding surfaces, or conflict between tree roots and service runs.
 - Imported Soils: The base of the tree pit is to be backfilled with the specified landscape sub-soil; and the final 400mm of the pit backfilled with the specified landscape topsoil.

- For automated watering systems please refer to irrigation strategy drawings.
- Any waterlogged tree pits are to be positively drained before planting.
- Trees and Specimen Multi-Stem Shrubs
 - Trees are to be supplied by Van den Berk Nurseries, Barcham Trees or similar approved. Burns in airports, or as rootballs during the dormant season.
 - All trees secured with underground ptying systems as supplied by Platypus Anchors or similar approved, as per the specification.
- Planting
 - All shrubs, perennials, grasses, ferns, climbers and bulbs areas are to be mulched with 50mm Strulch mineralised straw or similar approved.
 - Base of trees to be covered with 75mm depth bark mulch to 1200mm diameter and kept weed-free.
 - Hedges to be covered with 75mm depth bark mulch and kept weed free 600mm wide and along the full extent of hedge line.
 - All plants to be in accordance with BS 3938 and handled in accordance with CPSE guidelines and planted in accordance with BS 4428.
- Shrubs, perennials, grasses, ferns, climbers and bulbs
 - All shrubs to have a minimum of three breaks. Water plants well immediately after planting and prior to spreading of mulch. Planting areas to be covered with 50mm depth of Strulch mineralised straw or similar approved and kept weed free.
- Hedge planting
 - Hedge plants to be pt planted in double staggered rows 300mm apart at 450mm centres (or as scheduled). Well water plants immediately after planting and prior to spreading of mulch. Planted areas to be covered with 75mm depth bark mulch and kept weed free.
 - Instant hedges to be removed from troughs or bags just before planting and placed centrally within a trench 400mm wide x 300mm deep to ensure hedging units are no deeper than the roots. Backfill with two thirds imported or excavated topsoil in accordance with BS 3882: 2015, and one third Compost PrePlant fertilizer or similar at the recommended rate around the roots. Water plants immediately after planting and prior to spreading of mulch. Planted areas to be covered with 75mm depth bark mulch and kept weed free.
- Native shrub mix planting
 - Subgrade to be cross ripped at 1.2m intervals prior to planting to alleviate compaction. To be planted at 1m centres in random groupings of 3-7 plants. Transplants to be root dipped with Alginate prior to planting. Planted areas to be kept weed free and protected from livestock, with rabbit fence and / or individual mesh tree guards securely fixed to timber stakes(s).
- Turfing
 - Amenity grass turf areas to be Rolawn Medallion® Turf or similar approved cultivated turf, laid in accordance with BS4428. Topsoil to be rotolated and levelled as required and any debris or stones greater than 50mm Ø diameter removed. Pre-turfing fertiliser to be applied in accordance with manufacturers instructions. Turf to be laid from planks with broken joints well butted up, pegged to slopes where relevant. Well water after laying to avoid shrinkage.
 - On podium roofs, turf areas to be installed following consultation with a structural engineer or roofing contractor.
- Wildflower Turf
 - Turf to be WFT-Roof-34-Bio Wildflower roof turf from Wildflower Turf Ltd or similar approved. Prepared and installed as per suppliers specification and in accordance with BS4428.
 - Turf areas to be installed following consultation with a structural engineer or roofing contractor. An appropriate system of waterproof membrane to be laid over the entire roof area, sealing around roof lights, vent stacks and other similar features. Adequate provision for drainage at the bottom of the roof slopes to be provided.
 - Turf to be laid on a minimum of 100mm of WFT-Substrate or similar lightweight and free-draining growing medium to suppliers specification. When laying the turf, care should be taken to ensure that all joints are butted up correctly. Do not overlap the turf at the joints and do not create tension so joints pull apart or shrink.