LEGEND Hard Landscape

Proposed Paving

NOTE: Sub-base and base design to be suitable for vehicular or pedestrian usage to be determined by engineer. Specification and detail to engineers information.

- PT1 — **Paving Type 1:** Vehicular Tarmacadam. Colour: Grey. Specification: to engineers detail
- PT2 — **Paving Type 2:** Pedestrian Tarmacadam. Colour: Grey. Specification: to engineers detail
- PT3 — **Paving Type 3 - Concrete block Paving.** Product: Keyblock. Supplier: Marshalls or similar approved. Size/Colour/Bond: 240mm x 160mm/ Bracken / Herringbone. Note: All concrete block paving to meet BS EN 1338:2003 requirements
- PT4 — **Paving Type 4 - Concrete block Paving.** Product: Keyblock. Supplier: Marshalls or similar approved. Size/Colour/Bond: 240mm x 160mm/ Brindle / Herringbone. Note: All concrete block paving to meet BS EN 1338:2003 requirements
- PT4a — **Paving Type 4a - Concrete block Paving.** Product: Keyblock. Supplier: Marshalls or similar approved. Size/Colour/Bond: 240mm x 160mm/ Brindle / Stacked. Note: All concrete block paving to meet BS EN 1338:2003 requirements (Rev 3)
- **Header Course** - To match paving type. Supplier: Marshalls or similar approved. Note: All concrete block paving to meet BS EN 1338:2003 requirements
- PT5 — **Paving Type 5:** Concrete Slab Paving. Size/ Colour/ Bond: 450x450 / Silver Grey / Stacked. Slab paving to meet BS EN 1339:2003
- PT6 — **Paving Type 6:** Tumbled Concrete Setts. Size/Colour: 200x100mm / Anthracite Basalt or Grey Granite. Note: All blocks to meet BS EN 1338 requirements
- PT7 — **Paving Type 7 - Reinforced Grass Geogrid.** Product: Geo-grid / Supplier: Grassform or similar. Note: Timber sign to be located close to area of geogrid and to read "No parking. Emergency vehicles only" (Rev 3)
- PT8 — **Paving Type 8 - Self Binding Gravel.** Product: Breedon gravel or similar. Supplier: local source to be approved. Note: No dig where required
- PT9 — **Paving Type 9 -** Gravel Safe safety surfacing to Nature Park Play Area
- PT10 — **Paving Type 10 -** Dry River bed created using Scottish River Washed Cobbles 80-120mm
- PT11 — **Paving Type 11 -** Gravel. Product: Loose Gravel / Supplier: Local source to be approved. Size/Colour: 10-14mm/ Golden

Proposed Fencing and Boundaries

NOTE: All fencing to relevant part of BS 1722.

- 1 — **Boundary Type 1:** Close Board Fencing. Height: 1.8m
- 1a — **Boundary Type 1a:** Close Board Fencing. Height: 1.8m reduces to 1.5m after 2m from rear wall.
- 2 — **Boundary Type 2:** Brick Wall with Brick Piers. Height: 1.8m. Note: To architects detail and specification
- 3 — **Boundary Type 3:** Brick Wall with Brick Piers with timber panel infill. Height: 1.8m. Note: To architects detail and specification
- 4 — **Boundary Type 4:** Mesh Fence 1.8m high
- 5 — **Boundary Type 5:** Metal fence 1.8m high
- 6 — **Boundary Type 6:** Timber stock proof fence 1.2m high with wire mesh to base, prevent dog access
- **Gate -** Single or double Gate. Product: To match boundary type

Proposed Street Furniture

- S1 — **Timber Bench.** Dimensions / Material: 2000 x 400 x 500mm / Timber
- LB1 — **Timber Litter Bin**
- **Timber Picnic Bench**
- **Natural Play Features - Stone boulders.** Product: Rounded glacial boulders or similar and approved
- **Play Features**
- **Bird Watching platform**
- B1 — **Removable Timber Bollards.** Supplier: Woodscape or similar approved. Size: 300mm (w) x 1000mm (h). Note: Square shape, chamfered top, reflective band, FSC certified timber (Rev 3)

Proposed Edging and Kerbs

NOTE: All substructure information to engineer's detail and specification

- **Road Kerb.** Note: refer to engineers detail and specification
- **Pin Kerb.** Note: refer to engineers detail and specification

LEGEND Soft Landscape

Existing Trees

refer to arboricultural information for further details

- **Existing trees to be retained and protected** in accordance with BS 5837:2012 'Trees in Relation to Design, Demolition and Construction Recommendations' refer to arboricultural information for further details - Barrell Tree Consultancy, Tree protection plan 16270-BT2
- **Existing trees and vegetation proposed to be removed** refer to arboricultural information for further details - Barrell Tree Consultancy, Tree protection plan 16270-BT2
- **Root Protection Areas. Note: Refer to arboricultural drawings for full extent of root protection areas**

Proposed Soft Landscape

refer to typical plant schedule and specification for further details

- **Proposed large tree species**
- **Proposed large tree compact species**
- **Proposed medium / small tree species**
- **Proposed Specimen Shrubs.** Product: Container grown nursery stock (unless otherwise stated)
- **Proposed Native Shrub Planting.** Product: Container grown nursery stock (unless otherwise stated)
- **Proposed Shrub Planting.** Product: Container grown nursery stock (unless otherwise stated)
- **Proposed Native Hedge Planting.** Product: Container grown nursery stock (unless otherwise stated)
- **Proposed Hedge Planting.** Product: Container grown nursery stock (unless otherwise stated)
- GT1 — **Grass Type 1:** Existing Grass. Retained
- GT2 — **Grass Type 2:** Proposed Amenity Grass. Supplier: British Seed Houses or similar & approved. Product: A22 Hard Wearing Seed Mixture
- **Proposed Mown Grass Path through Meadow / Long Grass**
- GT3 — **Grass Type 2:** Proposed Amenity Grass (Long Grass). Supplier: British Seed Houses or similar & approved. Product: A22 Hard Wearing Seed Mixture
- GT4 — **Grass Type 4: Proposed** Basic General Purpose Meadow Mixture. Supplier: Emorsgate Seeds. Product: EM1. Size/Spec: Refer to plant schedule for details
- GT5 — **Grass Type 5: Proposed Wild Flowers for Wetlands.** Supplier: Emorsgate Seeds. Product: EM8. Size/Spec: Refer to plant schedule for details
- **Bulb Planting**
- **Climbing Plants**

General

- **Site Boundary**
- PG — Private Garden to be cleared and graded
- Junction Visibility Splays refer to engineers information for further details- Roger Cory Partnership Ltd drawing BSO/E4519/012 E
- Forward Visibility Splays refer to engineers information for further details- Roger Cory Partnership Ltd drawing BSO/E4519/012 E

NOTE: Sheds, paths and bin storage area illustrated within rear gardens. (Rev 3)

Note for Contractors

This drawing should be considered along with the risk information contained in the CDM Pre-construction Information. This information will include details of the SIGNIFICANT risks which fabrik has identified which may arise from constructing their designs shown on this drawing. A Competent Contractor should be aware of the typical risks associated with doing this work.

Note for Workers

DO NOT START YOUR WORK unless you know the Risks and Controls relating to the work on this drawing (including SAFE SEQUENCES OF WORK and EQUIPMENT).

STOP — Do not issue copies of parts of this drawing without the above Note for Workers (unless you are sure that the Workers can undertake the work safely).

PLANT SCHEDULE

Development

Proposed Tree Planting

Proposed large tree species (Rev 3)

Species	Common Name	Size/Spec	Condition
Fagus sylvatica	Beech	18-20cmg	RB :Std :Clear Stem 200
Fagus sylvatica f. purpurea	Copper beech	18-20cmg	RB :Std :Clear Stem 200
Liquidambar styraciflua	Sweet gum	18-20cmg	RB :Std :Clear Stem 200
Pinus pinaster	Maritime pine	18-20cmg	RB :Std :Clear Stem 200
Quercus petraea	Sessile oak	18-20cmg	RB :Std :Clear Stem 200
Quercus robur	Common oak	18-20cmg	RB :Std :Clear Stem 200
Tilia platyphyllos	Large leaf lime	18-20cmg	RB :Std :Clear Stem 200

Proposed large tree compact species

Species	Common Name	Size/Spec	Condition
Tilia cordata 'Green Spire'	Small leaf lime	18-20cmg	RB :Std :Clear Stem 200

Proposed medium / small tree species

Species	Common Name	Size/Spec	Condition
Acer campestre	Field maple	14-16cmg	RB :Std :Clear Stem 175-200
Alnus glutinosa	Alder	18-20cmg	RB :Clear Stem 175-200
Betula pendula	Silver Birch	14-16cmg	RB :Std :Clear Stem 175-200
Crataegus monogyna	Hawthorn	14-16cmg	RB :Std :Clear Stem 175-200
Ginkgo biloba	Maidenhair tree	20-25cmg	RB :Std :ClearStem200
Ulmus carpinifolia 'New Horizon'	Elm	20-25cmg	RB :Std :Clear Stem 200

Proposed Shrub Planting

Species	Common name	Size/Spec	Condition	Density
Rosa rugosa 'Alba'	White Japanese rose	60-80cm	15L	5/m
Berberis atropurpurea 'Hellond Pillar'	Japanese barberry	40-60cm	10L	5/m
Choysia ternata 'Aztec Pearl'	Mexican orange	60-80cm	10L	3/m
Buddleja 'Black Knight'	Butterfly bush	60-80cm	10L	3/m
Eleagnus x ebbingii	Ebbinge's silverberry	60-80cm	10L	3/m
Pittosporum Tom Thumb	Tawhiwhi 'Tom Thumb'	40-60cm	10L	5/m
Abelia x grandiflora	Abelia	40-60cm	10L	5/m
Lavander angustifolia 'Hidcote'	Lavender	30-40cm	5L	7/m
Santolina chamaecyparissus 'Nana'	Dwarf lavender cotton	30-40cm	5L	9/m
Perovskia atriplicifolia 'Blue Spire'	Russian sage	30-40cm	5L	5/m
Calluna vulgaris	Heather	10-15cm	5L	9/m
Cornus sericea 'Flaviramea'	Golden-twig dogwood	60-80cm	10L	5/m
Pachysandra terminalis 'Green Carpet'	Japanese spurge	10-20cm	3L	12/m
Hydrangea paniculata 'Grandiflora'	White-flower hydrangea	60-90cm	10L	5/m
Sambucus nigra 'Black Beauty	Purple leaf elder	60-80cm	5L	3/m
Euonymus fortunei 'Emerald Gaiety'	Spindle 'Emerald Gaiety'	30-40cm	5L	7/m
Exochorda macrantha 'The Bride'	Pearlbush 'The Bride'	80-100cm	10L	5/m
Viburnum plicatum 'Pink Beauty'	Japanese snowball	60-80cm	10L	5/m
Vinca major	Lesser periwinkle	30-40cm	5L	5/m²

Proposed Herbaceous Planting

Species	Common Name	Size	Density
Acanthus spinosus	Acanthus	5L	7/m
Achillea filipendulina 'Cloth of Gold'	Yarrow 'Cloth of Gold'	5L	7/m
Achillea 'Terracotta'	Yarrow 'Terracotta'	3L	9/m
Agapanthus africanus	African Lily	3L	5/m
Aster sedifolius 'Nana	Aster	2L	5/m
Astilbe 'Deutschland'	Astilbe	3L	9/m
Echinops 'Veitch's Blue'	Globe thistle	3L	9/m
Eryngium yuccifolium	Button snakeroot	2L	5/m
Gaura lindheimeri	White gaura	3L	9/m
Helenium 'Waltraut'	Sneezeweed	3L	9/m
Iris 'Sultan's Palace'	Iris	3L	9/m
Kniphofia 'Tawny King'	Red Hot Pokers	3L	9/m
Nepeta 'Six Hill's Giant'	Full Pot	3L	9/m
Salvia nemorosa 'Ostfriesland'	Salvia	3L	9/m
Salvia × sylvestris 'Mainacht'	Salvia	3L	9/m
Stachys byzantina 'Silver Carpet'	Lambs Ears	2L	9/m
Verbena bonariensis	Purple Top	1-1.5L	5/m

Proposed Ornamental Grasses

Species	Size/Spec	Density
Festuca glauca	1-1.5L	5/m
Luzula nivea	2L	5/m
Miscanthus sinensis 'Flamingo'	2L	5/m
Molinia caerulea 'Edith Dudzus	2L	5/m
Stipa tenuissima 'Pony Tails'	1-1.5L	5/m

Proposed Climbing Plants

Species	Common name	Spec	Condition	Density
Clematis montana	Clematis	2m	Tripod20L	AsShown
Garrya elliptica	Silk Tassel Bush	1.75x1.75m	Screen65L	As Shown
Hydrangea petiolaris	Hydrangea	2m	Frame20L	As Shown
Lonicera peryclimeum	Honeysuckle	2m	Tripod20L	As Shown
Parthenocissus tricuspidata	Japanese creeper	2m	Tripod20L	As Shown
Ribes speciose	Californian fuchsia	1.75x1.75m	Screen65L	As Shown
Rubus fruiticosa	Silvanberry	2m	Frame20L	

Proposed Native Hedge Planting

Species	Common name	Size/Spec	Condition	Density
Acer campestre	Field Maple	90-120cm	B.R	5per liner m
Alnus glutinosa	Alder	90-120cm	B.R	5per liner m
Corylus avellana	Hazel	90-120cm	B.R	5per liner m
Crataegus monogyna	Hawthorn	90-120cm	B.R	5per liner m
Prunus spinosa	Blackthorn	90-120cm	B.R	5per liner m
Salix caprea	Goat Willow	90-120cm	B.R	5per liner m

Proposed Garden Low Hedge Planting

Species	Common Name	Size	Condition	Density
Ligustrum ovalifolium	Privet	40-60cm	B.R	5per liner m

Proposed Garden Hedge Planting

Species	Common Name	Size	Condition	Density
Griselinia littoralis	Kapuka60-80cm	C10	5per liner m	

Proposed Bulb Mix Planting

Species	Common Name	%Mix	Density
Allium 'Purple Sensation'	Allium	10	25/m²
Allium ursinum	Allium	10	25/m²
Ranunculus ficaria	Pilewort	10	25/m²
Galanthus nivalis	Snow Drop	10	25/m²
Narcissus pseudonarcissus	Wild Daffodil	10	25/m²
Narcissus 'Tête-à-tête'	Daffodil 'Tête-à-tête'	10	25/m²
Narcissus 'Carlton'	Daffodil 'Carlton'	20	25/m²
Hyacinthides nonscripta	Bluebell	10	25/m²
Anemone nemerosa	Lady's nightcap	10	25/m²

Proposed Specimen Shrub

Species	Common name	Size/Spec	Condition	Density
Choisya ternata 'Sundance'	Mexican Orange Blossom	80-120cm	C15	As Shown
Laurus nobilis (cone)	Laurel	150-175cm	C50	As Shown
Phormium cookianum 'Tricolor'	Phormium	100-125cm	C35	As Shown
Phormium tenax	Phormium	100-125cm	C35	As Shown

Note: All species subject to soil test.

Nature Park

Proposed Native Tree Planting

Proposed large tree species

Species	Common Name	Size	Size/Spec Condition
Betula nigra	Black Birch	14-16cmg	RB :Std :Clear Stem 175-200
Taxodium distichum	Swamp cypress	14-16cmg	RB :Feathered
Quercus petraea	Sessile oak	18-20cmg	RB :Std :Clear Stem 200
Quercus robur	Oak	18-20cmg	RB :Clear Stem 175-200

Proposed medium / small tree species

Species	Common Name	Size/Spec	Condition
Acer campestre	Field maple	14-16cmg	RB :Std :Clear Stem 175-200
Alnus glutinosa	Alder	18-20cmg	RB :Clear Stem 175-200
Betula pendula	Silver Birch	14-16cmg	RB :Std :Clear Stem 175-200
Crataegus monogyna	Hawthorn	14-16cmg	RB :Std :Clear Stem 175-200
Betula nigra multistem	Black Birch	3.0-4.0m	RB :Multi-Stem
Corylus avellana multistem	Hazel	3.0-4.0m	RB :Multi-Stem

Proposed Orchard / Nuttery tree species

Species	Common Name	Size/Spec	Condition
Malus sylvestris	Apple	14-16cmg	RB :Std :Clear Stem 175-200
Malus x domestica 'Cox's Self Fertile'	Apple	14-16cmg	RB :Std :Clear Stem 175-200
Malus x domestica 'Egremont Russet'	Apple	14-16cmg	RB :Std :Clear Stem 175-200
Damson 'Merryweather'	Apple	14-16cmg	RB :Std :Clear Stem 175-200
Kent Cob 'Webb's Prize Cob	Cobnut	14-16cmg	RB :Std :Clear Stem 175-200
Corylus avellane	Hazel	14-16cmg	RB :Std :Clear Stem 175-200
Juglans regis	Walnut	14-16cmg	RB :Std :Clear Stem 175-200

Proposed Shrub Planting

Species	Common name	Size/Spec	Condition	Density
Cornus alba	White dogwood	60-80cm	10L	5/m
Cornus sanguinium 'Midwinter Fire'	Dogwood	60-80cm	10L	5/m
Corylus avellana Cosford	Hazel	90-120cm	20L	1/m
Crataegus monogyna	Hawthorn	60-90cm	BR	5/m
Erica and Calluna sp.		10-20cm	3L	9/m
Escallonia angustifolia 'Quicksilver'	Escallonia	60-80cm	10L	5/m
Escallonia Iveyi	Escallonia	60-80cm	10L	5/m
Olearia macradonta	New Zealand holly	60-80cm	10L	5/m
Prunus spinosus	Blackthorn	60-90cm	BR	5/m
Rosa rugosa 'Alba'	Rosa	60-80cm	15L	3/m
Salix alba subsp. vitellina 'Britzensis	Willow	60-80cm	10L	5/m
Spiraea japonica 'Little Princess'	Japanese spirea	30-40cm	5L	7/m

Proposed Herbaceous Planting

Species	Common Name	Size	Density
Acanthus spinosa	Acanthus	3L	5/m
Anthriscus sylvestris 'Ravenswing	Cow parsley	3L	9/m
Aster novi-belgii 'Blue Lagoon'	Aster	2L	7/m
Campanula persicifolia	Fairy bellflower	3L	7/m
Campanula persicifolia var. alba	Fairy bellflower	2L	7/m
Iris sibirica	Iris	2L	9/m
Salvia nemerosa	Salvia	2L	12/m

Proposed Ornamental Grasses

Species	Size/Spec	Density
Anemanthele lessoniana	2L	5/m
Briza media	1L	7/m
Calamagrostis 'Karl Foerester'	5L	5/m
Carex 'Evergold'	3L	5/m
Deschampsia 'Goldtau'	3L	5/m
Hakonechloa macra	2L	9/m
Hordeum jabatum	1L	7/m
Luzula nivea	3L	9/m
Miscanthus 'Gracillimus'	5L	5/m
Pennisetum setaceum 'Purpureum'	3L	5/m
Pennisetum setaceum	3L	5/m

Proposed Bulb Mix Planting

Species	Common Name	%Mix	Density
Allium 'Purple Sensation'		10	25/m²
Allium ursinum		10	25/m²
Ranunculus ficaria		10	25/m²
Galanthus nivalis		10	25/m²
Narcissus pseudonarcissus		10	25/m²
Narcissus 'Tête-à-tête'		10	25/m²
Narcissus 'Carlton'		20	25/m²
Hyacinthides nonscripta		10	25/m²
Anemone nemerosa		10	25/m²

A4 - Proposed Amenity Seed Mixture (GT2 & GT3)

A4 is suitable for creating natural grassland landscapes where minimal maintenance is required. It is adaptable to a range of cutting heights making it ideal for whip plantings or left to grow to form an attractive seed head canopy. Wild flower species can also be added to this mixture for increased diversity. For very low nutrient situations ABERACE miniature leaved white clover can be incorporated to provide a free constant supply of nitrogen.

Grasses (100%)

Common Name	%	Grams/m²
Aniset Strong Creeping Red Fescue	40	35
Raisa Chewings Fescue	30	35
Mentor Hard Fescue	25	35
Highland Bent Grass	5	35

EM1 - Proposed Basic General Purpose Meadow Mixture **(GT4)**

EM1 This is a simple low cost meadow mixture suitable for a wide range of soil types. The wild flowers are robust and showy, and the grasses are fine and slow growing. Sown at 1.5 grams per m².

Wild Flowers (100%)

Species	Common Name	%
Achillea millefolium	Yarrow	1.0
Centaurea nigra	Common Knapweed	5.0
Daucus carota	Wild Carrot	1.0
Galium verum	Lady's Bedstraw	4.0
Leucanthemum vulgare	Oxeye Daisy	0.5
Poterium sanquisorba	Salad Burnet	2.0
Prunella vulgaris	Selfheal	1.0
Ranunculus acris	Meadow Buttercup	3.0
Rumex acetosa	Common Sorrel	0.5
Silene dioica	Red Campion	2.0

Grasses

Species	Common Name	%
Agrostis capillaris	Common Bent	8
Cynosurus cristatus	Crested Dogstail	40
Festuca rubra	Slender-creeping Red-fescue	28
Phleum bertolonii	Smaller Cat's-tail	4

EM8 - Proposed Wild Flowers for Wetlands (GT5)

EM8 contains species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain and water meadows. Soils in wet meadows may flood for short periods in winter, but are usually well drained in summer.

Sown at 1.5 grams per m².

Wild Flowers (100%)

Species	Common Name	%
Achillea millefolium	Yarrow	0.5
Achillea ptarmica	Sneezewort	0.2
Betonica officinalis	Betony	1
Centaurea nigra	Common Knapweed	2.5
Filipendula ulmaria	Meadowsweet	2
Galium verum	Lady's Bedstraw	1.5
Geum rivale	Water Avens	0.4
Leucanthemum vulgare	Oxeye Daisy	0.5
Lotus pedunculatus	Greater Birdsfoot Trefoil	0.6
Plantago lanceolata	Ribwort Plantain	1.0
Primula veris	Cowslip	1.0
Prunella vulgaris	Selfheal	1.0
Ranunculus acris	Meadow Buttercup	2.0
Rhinanthus minor	Yellow Rattle	1.5
Rumex acetosa	Common Sorrel	1.0
Sanguisorba officinalis	Great Burnet	2.0
Silene flos-cuculi - (Lychnis flos-cuculi)	Ragged Robin	0.2
Succisa pratensis	Devil's-bit Scabious	0.6

Grasses

Species	Common Name	%
Agrostis capillaris	Common Bent	10
Alopecurus pratensis	Meadow Foxtail (w)	2
Anthoxanthum odoratum	Sweet Vernal-grass (w)	2
Briza media	Quaking Grass (w)	2
Cynosurus cristatus	Crested Dogstail	32
Deschampsia cespitosa	Tufted Hair-grass (w)	1
Festuca rubra	Slender-creeping Red-fescue	24
Hordeum secalinum	Meadow Barley (w)	1
Schedonorus pratensis - (Festuca pratensis)	Meadow Fescue (w)	6

Tree Handling

It is recommended that companies that do not have experience with handling large trees or the required equipment to do so seek advice from the landscape architect or tree supplier. Furthermore, specialist hauliers are to be used who will have the correct lifting equipment to deal with unloading large trees.

The landscape contractor must follow the industry guidance method for handling trees. Below are recommended industry standards.

Dormant trees sizes of 12-16cmg

These can be lifted and unloaded using a root hook and hoist. Even when the tree is dormant it is recommended to wrap the stem in hessian for additional protection when unloading maintaining the lifting weight on the root hooks.

Dormant trees sizes of 18-20cmg - 25-30cmg

These can be lifted and unloaded using a 3 tonne sling in combination with a chain and root hooks. Even when the tree is dormant it is recommended to wrap the stem in hessian for additional protection when unloading.

Tree Planting

The tree supplier is to be approved by landscape architect prior to any ordering of stock. All trees are to be planted in the first available planting season after construction as root balled stock unless otherwise specified and agreed with the client. All tree pits are to be excavated 24 hours prior to delivery to reduce the time the rootball is out of the ground. All tree pits are to be excavated under favourable weather conditions to avoid deterioration of the soil structure and glazing. All excavations are to be carried out using a toothed bucket ensuring tree pit walls are not glazed, the walls of the tree pit can also be loosened with hand held tools.

Tree pit dimensions are subject to soil conditions, soil report provided by agronomist and rootball size. Tree pits can never be excavated too wide in an unrestricted space (open ground), however they can be too deep.

All trees are to be planted at the correct height which is the same depth as the tree was growing on the nursery. The root collar must remain visible. Tree pit sizes are to be agreed with landscape architect prior to excavations. All tree pits are to be inspected by the landscape architect prior to planting. All tree pits are to have suitable irrigation pipe and end cap and aeration tubes if required (aeration tubes tend to be required for trees planted in a hard landscape environment). They are only required for the first two years after which they are superfluous. All irrigation pipes are to be placed as high as possible not at the base of the rootball. The tree would also benefit from an earth reservoir around the rootball on the surface to aid watering. The reservoir is best backfilled with bark mulch to avoid soil glazing on the surface.

Note: Trees may sink after planting due to soil settlement. With sandy soils generally there will be a settlement of 10% and clay soils 20%, this will need to be considered by the landscape contractor when planting and therefore the tree may need to be planted slightly higher to accommodate soil settlement.

Note: Never excavate deeper than the highest water table to ensure organic matter does not come in contact with groundwater resulting in anaerobic digestion within the soil.

All hessian and wire supports around the rootball are to remain in place when planting (in some case it may be required to loosen the hessian and wire). The hessian will quickly decompose. The wire will oxidize and also disappear in the soil eventually.

The landscape architect is to inspect all tree pits prior to planting.

Trees are to be supported either by high anchoring, low anchoring or underground anchoring systems. The type of anchoring system is to be agreed with the landscape architect and detailed within the specification of works. For trees that are <10-12cmg use 1no untreated softwood stake at min 10cm diameter driven into the ground at least 1m depth (30cm of which must be in undisturbed ground), the stake is to be placed on the side of the prevailing wind. Trees >10-12cmg use 2no untreated softwood stakes at min 10cm diameter driven into the ground at least 1m depth with horizontal bracing bar. Trees >25-30cmg use 3no stakes in a triangle around the tree (1.4m above ground level) with horizontal bracing bars, tree bands are to be secured to the posts with galvanised nails.

Underground anchoring systems are to be used for large compact rootballs or trees within hard landscape with tree grilles to BS 4043: 1989' Recommendations for Transplanting Root-Balled Trees'. The type of anchoring system is to be agreed with the landscape architect. Biodegradable anchoring straps are to be used to ensure the straps do not grow into the trunk.

Note: There are benefits to using low level anchoring as field trials have demonstrated that the tree becomes independent in the ground quicker as a result of the wind rocking the tree that encourages root ground. However, this method is not recommended in exposed conditions or coastal locations due to a greater risk of the trunk breaking.

Ties and stakes are to be checked and adjusted every six months or after periods of strong wind and rain.

All topsoil is to conform to BS 3882:2007 'Multipurpose' or similar approved by an agronomist. The tree pit shall be backfilled with previously prepared topsoil excavated from the pit and additional topsoil as required. All backfilled material is to include an organic slow release fertilizer to ensure there is no adverse affect on soil organisms (Vitax) or similar approved. The second application to be made 10-16 weeks after planting depending on soil type and weather conditions.

Tree pit root barrier are to be installed to all trees within 3m of any underground service routes or within 2.0m of kerb lines & hard surfaces & building foundations. Type of root barrier material is to be agreed with the landscape architect. The landscape contractor is to confirm locations of all services prior to implementation of trees. Prior to installation NJUG specification and requirements are to be referred too.

Guidance for Tree Pit Sizes within Soft Landscape Areas

Final tree pit size will vary dependent on size of rootball, tree stock and soil type.

Below are general guidance sizes only. The landscape contractor is to speak to the grower to obtain exact sizes prior to delivery. Landscape Architect to inspect tree pits prior to planting.

Tree pit size guidelines:

Tree size	Rootball Size	Tree pit size (length, width, depth)
14-16 cmg	50x50cm	80x80x65cm
18-20 cmg	60x60cm	80x80x75cm
20-25 cmg	70x60cm	90x90x75cm
30-35 cmg	90x60cm	110x110x75cm

Tree aftercare and pruning

When a tree is lifted/harvested it will lose a percentage of it's root system. As a result the roots are unable to supply the crown with the water demand being placed on the root system which can cause stress to the tree. As a result the tree will respond by reducing the amount of foliage, in some cases when the water storage is great the tree will shed wood from the crown. Watering the tree is important in the first two years after transplanting. In very hot conditions the canopy can dry out even when the rootball is moist simply because there is not enough root development yet. Therefore, the only solution is to reduce the canopy volume to reduce the stress.

All pruning is to be done by removing first and second wood only, all pruning works are to be carried out by appropriately trained landscape contractors.

It is recommended that hessian is placed around the tree stems after planting to prevent the overheating of the trunks.

The flow of water within the bark will normally prevent this, however, after planting less water is transplanted and as a result the trunk is at risk of sunburn. The setting sun will cause the most potential damage. Most of the damage will be visible on the western side of the tree. Trees with smooth bark are more vulnerable to sunburn than trees with rough bark.

Note: This is to only be done as a temporary measure as the tree is establishing, after which the hessian is to be removed.

Monitoring of the trees is to be carried out during the rectification period and as part of the long term management. The following points are to be considered and monitored;

- Watering, trees will require watering for the first two years after planting, after which they will generally look after themselves. The number of times will depend on location, weather conditions and growing season. Therefore, as the tree is a growing organisum the required experience and knowledge will determine the number of times the tree is watered to ensure establishment. It is better to give the tree a lot of water once a week rather than water every day as this will encourage root development and prevent the tree becoming "lazy". Over watering will push oxygen away from the root system preventing root development.
- Soil condition, these can be carried out by a specialist to monitor the oxygen levels (that should ideally be 18-21%, 16-18% will be sufficient levels, 12-16% will be poor levels <5% shows acute root mortality). Soil moisture levels both within the rootball and surrounding ground to also be monitored.
- Soil compaction, traffic over planted areas or areas to be planted are to be limited or ideally avoided completely. When soil compaction is higher than 2.5MPa root development will not be possible.
- Canopy, monitor leaf development, size, colour and the amount of foliage that is within the crown. Length of new growth and bud development and size of buds.

Proposed Ornamental Shrub / Perennial Planting

- To be planted in a minimum of 300mm depth approved topsoil to BS 3882: 2015 'Multipurpose' in the first available planting season after construction.
- All shrubs are to be planted as container stock unless otherwise specified (5 or 10 litre), all stock is to be well rooted into the container but not pot bound.
- All shrubs are to be planted with a slow release organic fertilizer (vitax or similar approved) and backfilled with a mixture of excavated top soil and compost (not peat based). A minimum of 50 mm approved ornamental grade bark mulch is to be applied to planting areas unless stated otherwise.

Proposed Native Shrub Planting

To be planted in a minimum of 300mm depth approved topsoil to BS 3882:2007 'Multipurpose' in the first available planting season after construction.

All shrubs are to be planted as container stock unless otherwise specified (5litre), all stock is to be well rooted into the container.

All shrubs are to be planted with a slow release organic fertilizer (Vitax or similar approved) and backfilled with a mixture of excavated top soil and compost (not peat based). A minimum of 50mm approved ornamental grade bark mulch is to be applied to planting areas as a one off application.

Proposed Hedge Planting

- To be planted in a minimum of 300mm depth approved topsoil to BS 3882: 2015 'Multipurpose' in the first available planting season after construction.
- All shrubs are to be planted as container stock unless otherwise specified (5litre), all stock is to be well rooted into the container. All hedge are to be planted in double staggered rows.
- All shrubs are to be planted with a slow release organic fertilizer (vitax or similar approved) and backfilled with a mixture of excavated top soil and compost (not peat based). A minimum of 50 mm approved ornamental grade bark mulch is to be applied to planting areas unless stated otherwise.

Proposed Climbing Plants

To be planted in a minimum of 300mm depth approved topsoil to BS 3882:2007 'Multipurpose' in the first available planting season after construction. All climbing plants are to be planted as container stock unless otherwise specified, all stock is to be well rooted into the container.

All climbing plants are to be planted with a slow release organic fertilizer (Vitax or similar approved) and backfilled with a mixture of excavated top soil and compost (not peat based). A minimum of 50mm approved ornamental grade bark mulch is to be applied to planting areas unless stated otherwise. All climbers that are not self supporting are to be supported using vine eyes and plastic coated steel wire, climbers are to be secured using plastic coated clips.

Planting Guidelines

- All planting and landscape operations should comply with the requirements specified in BS 3936-4:2007 'Nursery Stock' (Part One) and BS4428:1989 'Code of Practice for General Landscape Operations' (excluding hard surfaces).
- All topsoil and testing to conform to BS 3882: 2015 'Specification for Topsoil and Requirements for Use'.
- All topsoil used for planting to be tested by an approved Topsoil Analyst and any required amelioration or soil improvements to be carried out in line with Analyst's report.
- All fertilizers are to be applied or supervised by qualified staff to avoid the action of plasmolysis.
- Nurseries to provide protocols for ensuring that plant stock is free of invasive species.
- No planting is to be carried out when the site is covered by frost.
- Irrigation of plant material to be carried out during periods of drought will be required to ensure successful establishment of all plant stock.
- All new planting to be protected from mammal grazing by individual guards or stock proof fencing.
- If planting is to be carried out outside the growing season, all bareroot / rootballed plant stock is to be substituted with containerised stock. Specification to be agreed with Landscape Architect prior to ordering and implementation.

Maintenance Notes - Overview

- Refer to landscape and open space strategy for programme of operations. Detailed landscape maintenance and management plans for each development phase to be submitted to the LA for approval.
- Planting to be protected from mammal and human damage by stock proof fencing.
- All planted areas to be kept clear of weeds at all times throughout maintenance period.
- Planted areas to be forked through regularly to keep soil loose and aerated.
- All litter and debris to be removed from landscaped areas and carted off site.
- Plants pruned as instructed by the Landscape Contractor to promote healthy growth and to remove dead and diseased wood.
- Watering as required to maintain healthy growth.

Additional Notes

- Final location and tree species selection will be subject to poistion of lighting columns, service report and foundation depths, to be provided by engineers.
- Levels information for the areas of open space in relation to the built form FFL's and retaining walls is to Architects drawings and details and co-ordinated with the team.
- Slope profiles to the open space areas are to be no steeper that 1:3 and to considering access for all.
- Locations of lighting columns to be confirmed by others.
- Demarcation of traffic routes to be determined following detail and technical design.
- Contractors to ensure they are working to the latest British Standards as required.

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Revisions

No.	Date	Reason	Name
03	31_08_18	Updated to latest architects base and to address officer comments	cam
02	01_05_18	Updated with the latest arboricultural references, boundary types amended	clk
01	26_04_18	Crocosmia removed from plant schedule	clk

Project: Forty Acre Farm, Bedhampton for Barratt David Wilson Homes Southampton

Drawing: Legend, Planting Schedule & Specification — to be read with General Arrangement Plans L.120-129

Scale	Date	Checked	Drawn
N.T.S @ A0	April '18	pb	clk

Drawing No.: D2434 L.130 — Revision: 03

- [ ] Preliminary
- [x] Issued for Planning Approval
- [ ] Issued for Construction
- [ ] Issued for Design/Information
- [ ] Issued for Tender
- [ ] As Built

Drawing sheet size - A0

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