

PLANT SCHEDULE

PROPOSED TREES					
Species	Symbol	Girth	Height	Specification	Qty.
Acer campestre 'Queen Elizabeth'	AcQ	14-16cmg	4.0-4.5m	Extra Heavy Standard	3 No.
Betula pendula 'Fastigiata'	BpF	14-16cmg	3.5-4.0m	Extra Heavy Standard	2 No.
Betula utilis jacquemontii	Buj	14-16cmg	4.0-4.5m	Multi-Stemmed	4 No.
Carpinus betulus	Cb	14-16cm	2.5-3.0m	Clear Stem min. 200: Pleached tree head 180cm H 120cm W	6 No.
Castanea sativa	Cs	16-18cmg	4.0-5.0m	Extra Heavy Standard	1 No.
Corylus colurna	Cc	16-18cmg	4.0-5.0m	Extra Heavy Standard	6 No.
Crataegus laevigata 'Paul's Scarlet'	CPS	10-12cmg	3.0-3.5m	Standard	3 No.
Prunus 'Sunset Boulevard'	PSB	14-16cmg	4.0-4.5m	Extra Heavy Standard	4 No.
Prunus subhirtella 'Autumnalis'	PsA	12-14cmg	3.5-4.0m	Heavy Standard	3 No.
Quercus robur 'Fastigiata'	QrF	16-18cmg	4.0-5.0m	Extra Heavy Standard	2 No.
Sorbus aria 'Majestica'	SaM	14-16cmg	4.0-4.5m	Extra Heavy Standard	3 No.
					Total :37 No.

PROPOSED SPECIMENS				
Species	Height	Condition	Density	Qty.
Garrya elliptica 'James Roof'	80-100cm	15L	Counted	3 No.
Juniperus scopulorum 'Blue Arrow'	80-100cm	15L	Counted	6 No.
				Total :9 No.

PROPOSED SHRUBS				
Species	Height	Condition	Density	Qty.
Carpinus betulus	60-80cm	BR	5/m²	83 No.
Ceanothus thyrsiflorus 'Skylink'	30-40cm	5L	5/m²	14 No.
Choisya 'Aztec Pearl'	60-80cm	5L	5/m²	8 No.
Choisya ternata	60-80cm	5L	5/m²	17 No.
Cornus alba 'Elegantissima'	60-80cm	10L	7/m²	21 No.
Cornus alba 'Kesselringii'	30-40cm	5L	5/m²	97 No.
Cornus sanguinea 'Midwinter Fire'	30-40cm	5L	5/m²	114 No.
Elaeagnus ebbingei 'Limelight'	80-100cm	20it	5/m²	22 No.
Euonymus fortunei 'Emerald Gaiety'	30-40cm	6L	5/m²	180 No.
Garrya elliptica 'James Roof'	80-100cm	15L	Counted	3 No.
Garrya elliptica 'James Roof'	80-100cm	20it	5/m²	33 No.
Hebe 'Emerald Green'	30-40cm	5L	5/m²	91 No.
Hebe 'Nicola's Blush'	30-40cm	5L	5/m²	10 No.
Hebe 'Sapphire'	40-50cm	5L	5/m²	24 No.
Lavandula angustifolia 'Hidcote'	30-40cm	5L	5/m²	34 No.
Ligustrum ovalifolium	30-40cm	5L	5/m²	16 No.
Lonicera nilla 'May Green'	30-40cm	5L	5/m²	67 No.
Nandina domestica 'Firepower'	30-40cm	5L	5/m²	14 No.
Pachysandra terminalis 'Green Carpet'	30-40cm	3L	9/m²	266 No.
Philadelphus 'Manteau d'Hermine'	30-40cm	5L	5/m²	16 No.
Potentilla fruticosa 'Pink Charm'	30-40cm	5L	5/m²	10 No.
Prunus cistena	40-60cm	5L	5/m²	44 No.
Rosmarinus 'Miss Jessop's Upright'	30-40cm	5L	5/m²	28 No.
Sarcococca confusa	40-60cm	5L	5/m²	38 No.
Sarcococca hookeriana digyna	30-40cm	5L	5/m²	156 No.
Skimmia confusa 'Kew Green'	40-60cm	5L	5/m²	217 No.
Skimmia japonica 'Nymans'	40-60cm	5L	5/m²	24 No.
Skimmia japonica 'Rubella'	40-60cm	5L	5/m²	21 No.
Viburnum davidii	30-40cm	5L	5/m²	79 No.
Viburnum opulus 'Compactum'	40-60cm	5L	5/m²	146 No.
Viburnum tinus 'Eve Price'	40-60cm	5L	5/m²	116 No.
Vinca difformis	5-10cm	3L	7/m²	81 No.
				Total :2110 No.

PROPOSED HEDGING				
Species	Height	Condition	Density	Qty.
Ilex crenata	80-100cm	5L	0.3Ctr	160 No.
				Total :160 No.

PROPOSED HERBACEOUS				
Species	Spread	Condition	Density	Qty.
Allium sphaerocephalon	6-10cm	2L	Counted	36 No.
Anemone hybrida 'Hononine Jobert'	3L	Counted	Counted	12 No.
Bergenia 'Siberlicht'	15-20cm	3L	5/m²	9 No.
Bergenia cordifolia 'Purpurea'	15-20cm	3L	5/m²	10 No.
Digitalis purpurea 'Alba'	2L	Counted	Counted	63 No.
Geranium phaeum	15-20cm	3L	7/m²	40 No.
Geranium phaeum 'Album'	15-20cm	3L	7/m²	7 No.
Geranium pratense	15-20cm	3L	7/m²	8 No.
Heuchera 'Palace Purple'	20-30cm	6L	5/m²	84 No.
Hosta 'Francee'	15-20cm	3L	5/m²	60 No.
Perovskia 'Blue Spire'	3L	Counted	Counted	12 No.
Perovskia 'Blue Spire'	3L	5/m²	5/m²	102 No.
Polygonatum multiflorum	15-20cm	3L	Counted	59 No.
Stachys byzantina	15-20cm	3L	7/m²	50 No.
Verbena bonariensis	15-20cm	2L	Counted	17 No.
				Total :569 No.

PROPOSED CLIMBERS				
Species	Symbol	Height	Condition	Qty.
Clematis 'Arctic Queen'	CAQ	80-100cm	C10:framed	4 No.
Clematis montana	Cm	40-60cm	3L	3 No.
Hedera helix 'Buttercup'	HtB	40-60cm	3L	5 No.
Hedera helix 'Glacier'	HtG	40-60cm	3L	2 No.
Hydrangea petiolaris	Hp	40-60cm	3L	9 No.
Lonicera japonica repens	Ljr	80-100cm	C10:framed	2 No.
				Total :25 No.

PROPOSED CONIFERS				
Species	Height	Condition	Density	Qty.
Juniperus scopulorum 'Blue Arrow'	80-100cm	15L	Counted	6 No.
				Total :6 No.

PROPOSED GRASSES				
Species	Specification	Condition	Density	Qty.
Anemanthelle lessoniana	30-40cm	3L	5/m²	53 No.
Deschampsia cespitosa 'Goldtau'	40-60cm	3L	5/m²	52 No.
Luzula nivea	Full Pot	3L	7/m²	158 No.
Miscanthus sinensis 'Malepartus'	40-60cm	5L	5/m²	127 No.
Miscanthus sinensis 'Morning Light'	40-60cm	5L	5/m²	92 No.
				Total :482 No.

PLANTING SPECIFICATION

Proposed Tree Planting

Nursery Stock and Selection

All trees and planting are to be selected and tagged by the landscape architect prior to any stock being delivered to site. All planting should comply with the requirements specified in BS 3936:1992 'Nursery Stock' (Part One). All nursery stock and trees are to be free of pest and diseases prior to being delivered to site. All delivered stock is to be inspected by the landscape architect prior to any planting being carried out.

The Landscape architect reserves the right to reject trees and nursery stock that do not meet specifications as set out in the requirements and guidelines in BS 3936:1992 or in accordance with the landscape architects drawings. If a particular defect or substandard element can be corrected easily, appropriate remedies shall be applied and agreed with the landscape architect. If destructive inspection of a root ball is to be carried out, agreement should be in place prior as to the time and place of inspection. Inspection of shrub roots in containers or rootball can be carried out on site if required.

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.

Trees planted within hard landscape areas are to have tree grilles and guards where specified. Subterranean cellular product is to be used to ensure the tree has a minimum of 6m3 growing area. Type and manufacture is to be agreed with the client and landscape architect prior to installation. 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 3882:2015 '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 (Vitag Q4HN) or similar approved at a ratio of 10 -7.5 -10.2 + TE. 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)
10-12 cmg	40x40cm	50x60x60cm
12-14 cmg	40x40cm	60x60x65cm
14-16 cmg	50x50cm	60x80x65cm
16-18 cmg	50x50cm	80x80x65cm
18-20 cmg	60x60cm	80x80x75cm

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 organism 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 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 slated otherwise.

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.
- If planting is to be carried out during 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.
- All landscaped areas are to be maintained for 24 months following practical completion of the phase or until the plants have established, all tree planting to be maintained for 36 months.
- All planted areas to be kept clear of weeds at all times throughout maintenance period.
- All 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 Architect to promote healthy growth and to remove dead and diseased wood.
- Watering as required to maintain healthy growth.
- Any species that dies or fails to establish in the first five years should be replaced by an identical species., or alternative species as agreed with LPA.

Additional Notes

- Existing levels to be preserved around existing trees and vegetation to be retained.
- Existing trees and vegetation to be retained are to be protected during construction to BS 5837:2012 'Trees in Relation to Design, Demolition and Conservation Recommendations'.
- Any necessary tree works to be carried out by an approved tree surgeon to BS 3998:2010 'Recommendations for Tree Works'.
- Final location and tree species selection will be subject to service report and foundation depths to be provided by engineers.
- Edge treatment to deter casual parking to include straight / bulbnose kerb

Notes

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2. Only figured dimensions are to be taken from this drawing. All contractors must visit site and be responsible for taking and checking all dimensions related to the works shown on the drawing.

03	28.06.2017	BS reference amended	JC
02	14.06.2017	Amends to plant numbers following updates to site entrance	JC
01	11.05.2017	Amends to plant numbers following updates to site layout & planting plan	ah
No.	Date	Reason	Name
Revisions			
External References:			
• N/A			

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Project

D2493 Silver & Crown Street, Reading
for Thomas Homes

Drawing

Detailed Plant Schedule & Specification
to be read with L.300

Scale	Date	Checked	Drawn
N/A	May '17	SG	AH
Drawing No.			Revision
D2493 L.001			03
☐ Preliminary ☒ Issued for Planning Approval ☐ Issued for Construction ☐ Issued for Design/Information ☐ Issued for Tender ☐ As Built			