

INDICATIVE PLANT PALETTE

TREES				
Species	Common Name	Girth	Condition	Density
Sorbus aria 'Majestica'	Whitebeam 'Majestica'	18-20cm	BR :Standard :Clear Stem 175-200	Counted
Prunus subhirtella 'Autumnalis Rosea'	Autumn Cherry 'Rosea'	14-16cm	BR :Clear Stem 150-175 :Standard	Counted
Prunus serrula 'Tibetica'	Tibetan Cherry	14-16cm	BR :Clear Stem 150-175 :Standard	Counted
Prunus serrula 'Plena'	Bird Cherry	14-16cm	BR :Clear Stem 150-175 :Standard	Counted
Prunus 'Sunset Boulevard'	Flowering Cherry	14-16cm	BR :Clear Stem 150-175 :Standard	Counted
Malus domestica 'Rosemary Russet'			MM106 Root stock :2 Tier :1m clear stem 45cm between branches :Espalier :C	Counted
Malus domestica 'Cornish Aromatic'	Apple		MM106 Root stock :2 Tier :1m clear stem 45cm between branches :Espalier :C	Counted
Malus dom' 'Fair Maid of Devon'			MM106 Root stock :2 Tier :1m clear stem 45cm between branches :Espalier :C	Counted
Malus dom' 'Devonshire Quarrenden'			MM106 Root stock :2 Tier :1m clear stem 45cm between branches :Espalier :C	Counted
Malus dom' 'Beauty of Bath'			MM106 Root stock :2 Tier :1m clear stem 45cm between branches :Espalier :C	Counted
Malus 'Discovery'	Apple		MM106 Root stock :2 Tier :1m clear stem 45cm between branches :Espalier :C	Counted
Liquidambar styraciflua 'Worpleston'	Sweet Gum 'Worpleston'	20-25cm	RB :Standard	Counted
Cornus kousa var. 'Chinensis'		Multi-Stem	Multi Stem :3 Stems :C	Counted
Carpinus betulus 'streetwise'		16-18cm	BR :Clear Stem 175-200	Counted
Carpinus betulus 'Frans Fontaine'	Hornbeam	16-18cm	BR :Clear Stem 175-200	Counted
Betula utilis var. 'jacquemonti'	Birch	16-18cm	Standard :Clear Stem 175-200 :RB	Counted
Betula nigra	River birch	Multi-Stem	Multi Stem :C :RB	Counted
Betula albosinensis 'Fascination'	Chinese Red Birch	16-18cm	Standard :Clear Stem 175-200 :RB	Counted
Betula albosinensis		16-18cm	Standard :Clear Stem 175-200 :RB	Counted
Amelanchier lamarckii	Snowy Mesplius		Multi Stem :Branched :C	Counted
Acer x freemanii 'Autumn Blaze'	Red Acer	12-14cm	RB :Standard	Counted
Acer campestre 'Queen Elizabeth'	Field Maple 'Queen Elizabeth'	12-14cm	RB :Standard :Clear Stem 125-150cm	Counted
Platanus x hispaicus	London Plane	20-25cm	RB :Standard :Clear Stem 200cm	Counted
SHRUBS				
Species	Common Name	Height	Pot Size	Root Condition
Hebe rakaiensis	Shrubby Veronica		5L	5/m²
Hydrangea arborescens 'Annabelle'	Sevenbark 'Annabelle'		5L	5/m²
Viburnum opulus	European cranberrybush		5L	5/m²
Sarcococca confusa	Christmas box	40-60cm	C5	Bushy
Cornus sanguinea 'Midwinter Fire'	Dogwood	60-80cm	C10	Bushy
Viburnum davidii	Viburnum	40-60cm	C15	Bushy :6 brks
HEDGING				
Species	Common Name	Height	Pot Size	Root Condition
Ilex aquifolium	Common Holly	90-120cm		Instant Trough :Finished
Carpinus betulus	Common Hornbeam	100cm	As Supplied	Height 1m Bushy :Instant Hedge :Finished
Taxus baccata	Common Yew	60-90cm	RB	Height 1.2m Bushy :4 brks :Finished Height 1m
NATIVE SUCCESSIONAL BULB MIX				
Species	Abbreviation	Percentage Contribution	Specification	Density
Anemone nemorosa		5%	Grade 6/7	7/m²
Crocus mix	CRO	20%	Grade 6/7	7/m²
Galanthus nivalis		25%	Grade 6/7	7/m²
Hyacinthoides non scripta		20%	Grade 6/7	7/m²
Narcissus 'February Gold'		15%	Grade 6/7	7/m²
Narcissus 'Tete a Tete'	NARTT	15%	Grade 6/7	7/m²
SHADE MIX 1				
Species	Abbreviation	Percentage Contribution	Specification	Density
Anemone hybrida 'Honorable Jobert'	AHS	5%	Full Pot	7/m²
Anemone x hybrida 'Konigin Charlotte'		5%	Full Pot	7/m²
Anthriscus sylvestris 'Ravenswing'	ANTSY	5%	Full Pot	7/m²
Aquilegia vulgaris var. 'stellata 'White Barlow'		5%	Full Pot	7/m²
Asplenium scolopendrium		5%	Full Pot	7/m²
Bergenia 'Bressingham White'	B'BW'	9%	Full Pot	7/m²
Brunnera macr. 'Jack Frost'		5%	Full Pot	7/m²
Dryopteris affinis		7%	Full Pot	7/m²
Geranium phaeum 'Album'		10%	Full Pot	7/m²
Geranium phaeum 'Album'		8%	Full Pot	7/m²
Hosta 'Royal Standard'	HOSRS	7%	Full Pot	7/m²
Liriope muscari 'Monroe White'		10%	Full Pot	7/m²
Lonicera nitida 'May Green'	LONNIMG	5%	Bushy :C	7/m²
Luzula nivea		9%	Full Pot	7/m²
Sarcococca confusa	SARCO	5%	Bushy :C	7/m²
SHADE MIX 2				
Species	Abbreviation	Percentage Contribution	Specification	Density
Asplenium scolopendrium	ASPSC	10%	Full Pot	7/m²
Cornus canadensis	CORCA	10%	Bushy :Full Pot	7/m²
Dryopteris affinis		10%	Full Pot	7/m²
Epimedium rubrum	EPIRU	5%	Full Pot	7/m²
Hakonechloa macra		15%	Full Pot	7/m²
Helleborus niger	HELN1	5%	Full Pot	7/m²
Helleborus orientalis	HELLOR	5%	Full Pot	7/m²
Liriope muscari 'Monroe White'		10%	Full Pot	7/m²
Luzula nivea	Lni	15%	Full Pot	7/m²
Sarcococca hookeriana var. humilis	SARHOHU	10%	Bushy	7/m²
Viburnum opulus	VIBOP	5%	Bushy :Branched :C	7/m²
SHADE MIX 3				
Species	Abbreviation	Percentage Contribution	Specification	Density
Anthriscus sylvestris 'Ravenswing'	ANTSY	5%	Full Pot	7/m²
Aquilegia vulgaris var. 'stellata 'White Barlow'		6%	Full Pot	7/m²
Asplenium scolopendrium		7%	Full Pot	7/m²
Bergenia 'Bressingham White'	B'BW'	9%	Full Pot	7/m²
Digitalis lutea	DIGLU	6%	Full Pot	7/m²
Dryopteris affinis		7%	Full Pot	7/m²
Geranium phaeum 'Album'		8%	Full Pot	7/m²
Hakonechloa macra 'Aureola'		6%	Full Pot	7/m²
Helleborus 'Havington Mix'		5%	Full Pot	7/m²
Hosta 'Royal Standard'	HOSRS	7%	Full Pot	7/m²
Liriope muscari 'Monroe White'		10%	Full Pot	7/m²
Lonicera nitida 'May Green'	LONNIMG	5%	Bushy :C	7/m²
Luzula nivea		9%	Full Pot	7/m²
Pachysandra terminalis 'Green Carpet'		5%	Full Pot	7/m²
Sarcococca confusa	SARCO	5%	Bushy :C	7/m²

SUN MIX 1				
Species	Abbreviation	Percentage Contribution	Specification	Density
Achillea millefolium 'Cerise Queen'	ACHMICQ	10%	Full Pot	7/m²
Actaea simplex Atropurpurea Group 'Brunette'		3%	Full Pot	7/m²
Artemisia 'Powis Castle'	APCa	9%	Full Pot	7/m²
Astrantia major 'Ruby Wedding'	ASTMARUW	7%	Full Pot	7/m²
Calamagrostis x karutiflora 'Karl Foerster'		7%	Full Pot	7/m²
Centaurea nigra		9%	Full Pot	7/m²
Geranium phaeum		10%	Full Pot	7/m²
Hylotelephium 'Matrona'		7%	Full Pot	7/m²
Lupinus 'Gallery White'	LUPGW	5%	Full Pot	7/m²
Nepeta racemosa 'Walkers Low'	NEPRAWAL	10%	Full Pot	7/m²
Pennisetum alopecuroides 'Hameln'		10%	Full Pot	7/m²
Potentilla fruticosa 'Pink Charm'	POTFRPIC	5%	C :Bushy	7/m²
Stachys byzantina 'Silver Carpet'	SbSC	5%	Full Pot	7/m²
Stipa gigantea		3%	Full Pot	7/m²
SUN MIX 2				
Species	Abbreviation	Percentage Contribution	Specification	Density
Achillea millefolium 'Cerise Queen'	ACHMICQ	10%	Full Pot	7/m²
Allium aff. 'Purple Sensation'		5%	Full Pot	7/m²
Echinacea purpurea	ECHPU	15%	Full Pot	7/m²
Hebe rakaiensis	HEBRA	3%	Bushy :C	7/m²
Hemerocallis 'Summer Wine'	HEMSW	5%	Full Pot	7/m²
Lavandula angustifolia 'Hidcote'	LH1	7%	C :Bushy	7/m²
Nepeta racemosa 'Walkers Low'	NEPRAWAL	10%	Full Pot	7/m²
Philadelphus 'Manteau d'Hermine'	PHIDHEA	3%	Bushy :C	7/m²
Phlomis russelliana	PHLRU	10%	Full Pot	7/m²
Spiraea nipponica 'June Bride'	SPINIJB	3%	Bushy :C	7/m²
Stachys byzantina 'Silver Carpet'	SbSC	10%	Full Pot	7/m²
Stipa tenuissima		10%	Full Pot	7/m²
Verbena bonariensis	VERBO	9%	Full Pot	7/m²
SUN MIX 3				
Species	Abbreviation	Percentage Contribution	Specification	Density
Acanthus mollis 'Niger'	ACAMONI	3%	Full Pot	7/m²
Achillea millefolium 'Cerise Queen'	ACHMICQ	10%	Full Pot	7/m²
Actaea simplex Atropurpurea Group 'Brunette'		7%	Full Pot	7/m²
Artemisia 'Powis Castle'	APCa	9%	Full Pot	7/m²
Astrantia major 'Ruby Wedding'	ASTMARUW	7%	Full Pot	7/m²
Calamintha nepeta nepeta 'Dwarf'	CALNED	10%	Full Pot	7/m²
Centaurea nigra		9%	Full Pot	7/m²
Cistus purpureus 'Alan Fradd'	CISPUAF	5%	C :Bushy	7/m²
Geranium phaeum 'Samobor'		10%	Full Pot	7/m²
Hylotelephium 'Matrona'		7%	Full Pot	7/m²
Nepeta racemosa 'Walkers Low'	NEPRAWAL	10%	Full Pot	7/m²
Pennisetum alopecuroides 'Hameln'		10%	Full Pot	7/m²
Stipa gigantea		3%	Full Pot	7/m²
SUN-SHADE MIX				
Species	Abbreviation	Percentage Contribution	Specification	Density
Achillea 'Credo'	ACHCR	5%	Full Pot	7/m²
Allium 'Purple Sensation'		7%	Full Pot	7/m²
Astrantia major 'Alba'		5%	Full Pot	7/m²
Carex oshimensis 'Evergold'		7%	Full Pot	7/m²
Carex pendula	CARPE	5%	Full Pot	7/m²
Convallaria majalis 'Albostriata'		5%	Full Pot	7/m²
Dryopteris filix		5%	Full Pot	7/m²
Euphorbia amygdaloides robbiae	Ear	7%	Full Pot	7/m²
Galium odoratum	GALOD	5%	Full Pot	7/m²
Geranium pratense	GERPR	7%	Full Pot	7/m²
Hedera helix		5%	Full Pot	7/m²
Lamium maculatum 'Beacon Silver'	LAMMABS	7%	Full Pot	7/m²
Leucanthemum vulgare		7%	Full Pot	7/m²
Liriope muscari	LIRMU	7%	Full Pot	7/m²
Ophiopogon planiscapus 'Nigrescens'		4%	Full Pot	7/m²
Origanum vulgare		5%	Full Pot	7/m²
Sanguisorba officinalis		7%	Full Pot	7/m²
Podium - Mix 1				
Species	Abbreviation	Percentage Contribution	Specification	Density
Aster 'Little Calow'		10%		7/m²
Festuca glauca 'Elijah Blue'	Fgeb	15%	Full Pot	7/m²
Hebe 'Midsummer Beauty'	HEBBEAA	7%	Bushy	7/m²
Hemerocallis citrina		5%	Full Pot	7/m²
Miscanthus sinensis 'Gracillimus'		10%	Full Pot	7/m²
Miscanthus sinensis 'Kleine Silberspinne'	MISSIKS	7%	Full Pot	7/m²
Ophiopogon planiscapus 'Nigrescens'		10%	Full Pot	7/m²
Pennisetum alopecuroides 'Hameln'	Pah	7%	Full Pot	7/m²
Perovskia atripl. 'Little Spire'		4%	Bushy :Branched	7/m²
Phormium tenax 'Purpureum'	PHOPURA	2%	C	7/m²
Salvia officinalis 'Purpurascens'		4%	Full Pot	7/m²
Salvia x sylvestris 'mainacht'		5%		7/m²
Stachys byzantina 'Silver Carpet'	SbSC	7%	Full Pot	7/m²
Verbena bonariensis	VERBO	10%		7/m²
Podium - Mix 2				
Species	Abbreviation	Percentage Contribution	Specification	Density
Anemanthe lessioniana		7%	Full Pot	7/m²
Asplenium scolopendrium	ASPSC	6%		7/m²
Euphorbia robbiae		10%	Full Pot	7/m²
Festuca glauca		7%	Full Pot	7/m²
Luzula nivea		7%	Full Pot	7/m²
Nepeta 'Six Hills Giant'	NEPGIAA	10%		7/m²
Pachysandra terminalis 'Green Carpet'	PACTEGC	10%	Bushy	7/m²
Pennisetum alopecuroides 'Hameln'	Pah	7%	Full Pot	7/m²
Phlomis tuberosa 'Amazone'		8%	Full Pot	7/m²
Pinus strobus 'Nana'	PINSTNA	1%	Multistem :Branched	7/m²
Polystichum setiferum	POLSE	10%		7/m²
Rhus copallina		3%	Branched :C	7/m²
Sarcococca hookeriana var. humilis	SARHOHU	7%	Bushy	7/m²
Vinca minor	VINMI	7%	Bushy	7/m²

SOFT SPECIFICATION NOTES

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 3m3 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 (Vifax 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)
14-16 cmg	50x50cm	80x80x65cm
16-18 cmg	50x50cm	80x80x65cm
18-20 cmg	60x60cm	80x80x75cm
20-25 cmg	70x60cm	90x90x75cm

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. To help 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 the tree is unable to supply the crown with water. 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.