

Project: Rheda Park Phase 2
Client: KCS Agriculture Ltd
Document no: 17



Eden Environment Ltd

The below description of plant material and soft landscape operations is for the purpose of planning application **only**, and is not a substitute for the more detailed specification which would be required for the purpose of commercially tendering, implementing, establishing and maintaining a soft landscape contract.

Individual Trees										Totals for each species
see planting plan for locations					RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter					
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Planting density / m ²		
Aesculus hippocastanum (Horse Chestnut)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	1	
Betula pendula (Birch)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	1	
Castanea sativa (Sweet Chestnut)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	1	
Fagus sylvatica Beech)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	1	
Ilex aquifolium (Holly)		n/a	80 -100	n/a	C2	n/a	n/a	n/a	3	
Pinus sylvestris (Scots Pine)		4X	125 - 150	n/a	RB	n/a	n/a	n/a	3	
Prunus avium (Wild Cherry)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	1	
Quercus petraea (Sessile Oak)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	2	
							n/a	n/a		
Total									13	

Individual Trees										Totals for each species
see planting plan for locations					RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter					
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Planting density / m ²		
Acer pseudoplatanus (Sycamore)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	2	
Aesculus hippocastanum (Horse Chestnut)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	1	
Amelanchier lamarckii (Snowy Mespilus)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	2	
Amelanchier alnifolia Obelisk (columnar Snowy Mespilus)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	5	
Betula pendula (Birch)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	7	
Carpinus betulus Frans Fontaine (columnar Hornbeam)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	3	
Castanea sativa (Sweet Chestnut)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	1	
Crataegus persimilis Prunifolia (Broadleaf Cockspur Thorn)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	2	
Fagus sylvatica(Beech)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	2	
Fagus sylvatica Dawk (Columnar Beech)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	1	
Ilex aquifolium (Holly)		n/a	80 -100	n/a	C2	n/a	n/a	n/a	9	
Malus sylvestris (Common Wild Crabapple)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	3	
Prunus avium (Wild Cherry)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	11	
Prunus padus (Bird Cherry)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	4	
Quercus petraea (Sessile Oak)	Heavy Standard	3x	300 to 425	12 to 14	BR RB or C45	5 6 or 7	n/a	n/a	2	
Sorbus aria Lutescens (Whitebeam)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	1	
Sorbus aucuparia (Rowan)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	10	
Sorbus aucuparia Streetwise (columnar Rowan)	Select Standard	2x	300 to 350	10 to 12	BR or C30	4 5 or 7	n/a	n/a	4	
							n/a	n/a		
Total									70	

Specimen / clipped trees and shrubs									Totals for each species
see planting plan for locations					RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter				
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Planting density / m ²	
Ilex aquifolium (Holly)	clipped	4X	125 to 150	n/a	RB	n/a	n/a	n/a	
Taxus baccata (Yew)	clipped	4X	125 to 150	n/a	RB	n/a	n/a	n/a	2
Total									10

Shrub Beds

Plant in random groups of 9 - 13 RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter									Bed reference number														Totals for each species		
									1	2 & 3	4	5	6	7	8	9	10 & 11	12	13 & 14	15 & 16	17	18			
									Bed size(s) in m ²																
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Planting density / m ²																	
TALLER FOR BACK OR CENTRE OF BEDS																									
Aucuba japonica Crotonifolia			60 - 80		C10	3 to 6	n/a	3		20					5			75		100					
Eleagnus x Ebbingei Limelight			60 - 80		C10	3 to 6	n/a	3				30							25	55					
Escallonia ivelyi			60 - 80		C10	3 to 6	n/a	3					45							45					
Griselinia littoralis			60 - 80		C10	3 to 6	n/a	3	30								30			60					
Mahonia media Winter Sun			60 - 80		C10	3 to 6	n/a	3		20										20					
Prunus lusitanica			60 - 80		C10	3 to 6	n/a	3		30										30					
MEDIUM																									
Euonymus fortunei Emerald Gaiety			40 - 60		C5	3 to 6	n/a	4				35								35					
Photinia fraseri robusta Compacta			40 - 60		C5	3 to 6	n/a	4			20					30				50					
Prunus laurocerasus Otto Luyken			40 - 60		C5	3 to 6	n/a	4	45				50	25			60	25		205					
Viburnum mariesii Plicatum			40 - 60		C5	3 to 6	n/a	4				20								20					
LOW GROUND COVER PLANTS																									
Cotoneaster procumbens Queen of Carpets			30 - 40		C2	3 to 5	n/a	5		40				60		45	80			225					
Euonymus fortunei Darts Blanket			30 - 40		C2	3 to 5	n/a	5	45									85		130					
Hedera colchica Dentata Variegata			20 - 30		C1	3 to 5	n/a	5						65	35					100					
Pachysandra terminalis			20 - 30		C1	3 to 5	n/a	5			25				30	40				95					
Percentages and bed totals											120	110	20	110	95	25	60	65	70	115	170	25	160	25	1170

Woodland shrub mix 70m²

Shrubs and shrub beds to be micrositied among existing mature trees to avoid tree roots etc.						RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter				Totals for each species
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Plants / linear metre		
Corylus avellana	Transplant	1+1	n/a	40-60	BR		20%	0.5	10	
Crataegus monogyna (hawthorn)	Transplant	1+1	n/a	40-60	BR		30%	0.5	15	
Ilex aquifolium (holly)	-	-	n/a	40-60	3L		30%	0.5	15	
Vibrunum opulus	Transplant	1+1	n/a	40-60	BR		20%	0.5	10	
						Total	100%	Total	50	

Semi-mature laurel hedge for western perimeter of site - Hedge refs A 13 lin m and H 124 linear m

see planting plan for location	
Semi mature laurel instant trough-grown hedge 1.5m tall or taller.	70 linear metres supplied in 1m long troughs
All preparation, planting and aftercare to be in accordance with specialist nursery supplier's instructions	

Native hedgerow for northern perimeter of site - Hedge ref T 198 linear m

see planting plan for locations						RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter			Totals for each species
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Plants / linear metre	
<i>Corylus avellana</i>	Transplant	1+1	n/a	40-60	BR		5%	5	50
<i>Crataegus monogyna</i> (hawthorn)	Transplant	1+1	n/a	40-60	BR		50%	5	500
<i>Fagus sylvatica</i> (beech)	Transplant	1+1	n/a	40-60	BR		10%	5	100
<i>Ilex aquifolium</i> (holly)	-	-	n/a	40-60	3L		10%	5	100
<i>Lonicera periclymenum</i>	-	-	-	20-30	2L		5%	5	50
<i>Prunus padus</i>	Transplant	1+1	n/a	40-60	2L		5%	5	50
<i>Prunus spinosa</i> (blackthorn)	Transplant	1+1	n/a	40-60	BR		5%	5	50
<i>Rosa canina</i>	Transplant	1+1	n/a	40-60	BR		5%	5	50
<i>Viburnum opulus</i>	Transplant	1+1	n/a	40-60	BR		5%	5	50
						Total	100%	Total	1000

Semi-native Hedges																							Totals for each species
RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter									Reference number														
									B	C	D	E	F	G	I	J	K	L					
									Lengths														
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Plants / linear metre															
Corylus avellana	Transplant	1+1	n/a	40-60	BR		5%	5	8.0	2.0	9.0	3.0	7.0	5.0	2.0	4.0	4.0	5.0				49	
Cotoneaster lacteus			60 - 80		C10		15%	5	24.0	6.0	26.0	9.0	21.0	15.0	6.0	10.0	11.0	15.0				143	
Crataegus monogyna (hawthorn)	Transplant	1+1	n/a	40-60	BR		35%	5	56.0	14.0	60.0	21.0	49.0	35.0	13.0	23.0	25.0	35.0				331	
Escallonia ivelyi			60 - 80		C10		10%	5	16.0	4.0	17.0	6.0	14.0	10.0	4.0	7.0	7.0	10.0				95	
Fagus sylvatica (beech)	Transplant	1+1	n/a	40-60	BR		10%	5	16.0	4.0	17.0	6.0	14.0	10.0	4.0	7.0	7.0	10.0				95	
Griselinia littoralis			60 - 80		C10		10%	5	16.0	4.0	17.0	6.0	14.0	10.0	4.0	7.0	7.0	10.0				95	
Ilex aquifolium (holly)	-	-	n/a	40-60	3L		5%	5	8.0	2.0	9.0	3.0	7.0	5.0	2.0	4.0	4.0	5.0				49	
Prunus padus	Transplant	1+1	n/a	40-60	2L		5%	5	8.0	2.0	9.0	3.0	7.0	5.0	2.0	4.0	4.0	5.0				49	
Vibrunum opulus	Transplant	1+1	n/a	40-60	BR		5%	5	8.0	2.0	9.0	3.0	7.0	5.0	2.0	4.0	4.0	5.0				49	
Percentages and bed totals									100%														
									160	40	173	60	140	100	39	70	73	100	0	0	0	0	

Native hedges between dwellings																							Totals for each species
RB = Rootballed BR = bare root and bagged C x = Container grown and size Px = Pot and diameter									Reference number														
									M	N	O	P	Q	R	S								
									Lengths														
																		37	12	7	10	11	
Latin and common name	Form or habit	Age	Height (cm)	Girth (cm)	Root protection and size	Number of breaks or branches	% of mix	Plants / linear metre															
Corylus avellana	Transplant	1+1	n/a	40-60	BR		5%	5	10.0	3.0	2.0	3.0	3.0	4.0	3.0							28	
Crataegus monogyna (hawthorn)	Transplant	1+1	n/a	40-60	BR		50%	5	93.0	30.0	18.0	25.0	28.0	40.0	25.0							259	
Fagus sylvatica (beech)	Transplant	1+1	n/a	40-60	BR		10%	5	19.0	6.0	4.0	5.0	6.0	8.0	5.0							53	
Ilex aquifolium (holly)	-	-	n/a	40-60	3L		10%	5	19.0	6.0	4.0	5.0	6.0	8.0	5.0							53	
Lonicera periclymenum	-	-	-	20-30	2L		5%	5	10.0	3.0	2.0	3.0	3.0	4.0	3.0							28	
Prunus padus	Transplant	1+1	n/a	40-60	2L		5%	5	10.0	3.0	2.0	3.0	3.0	4.0	3.0							28	
Prunus spinosa (blackthorn)	Transplant	1+1	n/a	40-60	BR		5%	5	10.0	3.0	2.0	3.0	3.0	4.0	3.0							28	
Rosa canina	Transplant	1+1	n/a	40-60	BR		5%	5	10.0	3.0	2.0	3.0	3.0	4.0	3.0							28	
Vibrunum opulus	Transplant	1+1	n/a	40-60	BR		5%	5	10.0	3.0	2.0	3.0	3.0	4.0	3.0							28	
									0.0	0.0	0.0	0.0	0.0	0.0	0.0							0	
									0.0	0.0	0.0	0.0	0.0	0.0	0.0							0	
Percentages and bed totals							100%		191	60	38	53	58	80	53	0	0	0	0	0	0	533	

Establishment regime

Generally

Avoid the use of herbicides and pesticides - rely on manual, natural or organic measures wherever possible.
Do not use peat-based products.
All plants shall follow the National Plant Specification
All plants shall be fully labelled with supplier details, full botanical name, numbers and specification.
Avoid the use of plastics for tree shelters etc.

Year 1 establishment (seeding and planting year)

GROUND PREPARATION
Clear ground of all visible weeds, roots and stones with a diameter greater than 50mm
Cultivate ground to full depth of topsoil
Ensure topsoil depths are as follows:
* for amenity grass 150mm deep after firming and settling
* for shrub areas 450mm deep after firming and settling
* for tree planting pits, 1 m³ with bases of pits broken up to allow free drainage
* for hedge and hedgerow trenches, 500mm wide by 500mm deep, with base of trench broken up to allow free drainage
Ensure finished topsoil levels are as follows (after settlement and allowing for mulches):
* above adjoining hard surfaces: 25mm
* below dpc of adjoining buildings: not less than 150mm
* above adjacent to grass areas: 50mm
* adjoining soil areas: marry in
Allow fallow period before undertaking planting and seeding, and carry out final weed clear before those operations
Any imported topsoil shall be in accordance with BS 3882
Handle topsoil only in dry conditions.

SHRUB PLANTING
Carry out planting between November and March, inclusive
Ensure the surface is free of stones, weeds and litter.
Wet the soil to the full depth of topsoil, ensuring that surface is not unduly disturbed.
Incorporate soil ameliorant, conditioner and fertiliser in accordance with manufacturer's instructions, to a depth of 150mm
Ensure shrubs are in good condition, sturdy, healthy and vigorous without elongated shoots, and with balanced root and shoot systems.
Plant shrubs in positions and drifts as indicated on planting plan, at the correct densities, avoiding plants being set out in straight lines or grids.
Protect shrubs with shelters and stakes
Protect new shrub planting in areas vulnerable to short cuts with chestnut pale fencing
Immediately after planting, water thoroughly without displacing plant or growing medium. Refirm soil afterwards
Mulch around the base of shrubs

TREE PLANTING
Carry out planting between November and March, inclusive
Ensure the surface is free of stones, weeds and litter.
Wet the soil to the full depth of topsoil, ensuring that surface is not unduly disturbed.
Incorporate soil ameliorant, conditioner and fertiliser in accordance with manufacturer's instructions, to the full depth of the tree pit.
Ensure trees are in good condition, sturdy, healthy and vigorous without elongated shoots, and with balanced root and branch systems.
Prune any branches which are damaged
Plant trees in positions as shown on planting plan, modifying as necessary to avoid underground services, haunching, existing tree roots etc.
Support and protect trees with double stakes and ties, where possible using short stakes in preference to taller ones.
Protect new tree planting from grazing with stock proof fence
Immediately after planting, water thoroughly without displacing tree or growing medium. Refirm soil afterwards.
Mulch around the base of trees to a diameter of 1 m.
Water regularly for first growing season, especially during drought periods.

HEDGE AND HEDGEROW PLANTING
Carry out planting between November and March, inclusive
Ensure the surface of the trench is free of stones, weeds and litter.
Wet the soil to the full depth of topsoil, ensuring that surface is not unduly disturbed.
Incorporate soil ameliorant, conditioner and fertiliser in accordance with manufacturer's instructions, to a depth of 150mm
Ensure shrubs are in good condition, sturdy, healthy and vigorous without elongated shoots, and with balanced root and shoot systems.
Plant in double staggered row at the correct density.
Protect hedgerow plants with shelters and stakes
Immediately after planting, water thoroughly without displacing plant or growing medium. Refirm soil afterwards.
Protect new hedging along garden frontages with chestnut pale fencing to the road-side of hedge
Protect hedgerows from cattle with stock proof fence
Mulch the full length and width of the hedge/row trench surface.
Water regularly for first growing season, especially during drought periods.
Undertake instant hedge planting in accordance with specialist nursery's detailed instructions

Suggested 5 year maintenance schedule

The below schedule is subject to amendment over the following 10 years to take account of unforeseeable circumstances (e.g. new plant health threats, new building development, changes of use etc.)

Yellow cells indicate the window of time in which to undertake the operation, not necessarily the number of operations required - see notes for each operation

Operation	January	February	March	April	May	June	July	August	Sept.	October	Nov	December	Notes
General site-wide operations													
Inspect and maintain fencing, paying attention to stock proof and roadside fences													
Removal of temporary protective fencing													Inspect fences once each winter when foliage does not obscure fencelines or make repairs difficult.
Litter pick													Remove temporary protective fencing during dormant season when no longer needed, predicted to be after approximately 3 years
													Undertake litter pick once at beginning of winter and once at end of winter, when deciduous foliage does not impede work.
Amenity grass	January	February	March	April	May	June	July	August	Sept.	October	Nov	Dec	
Mowing													First mow of season to be 70mm, thereafter mow fortnightly between May and Oct to 50mm. Reduce mowing and increase height during drought.
Mowing of areas with bulbs													As above but delay first mow till approximately July to allow bulb leaves to replenish the plant.
Thatch and moss removal													Annually if required.
Making good any bare or weed infested areas													Annually if required: re-cultivate ground before sowing seed. Follow original establishment procedures.
Trim and re-form edges around beds etc													Annually if required.
Application of fertiliser													Two applications annually, April and September. Organic fertiliser.
Ground cover and shrubs	January	February	March	April	May	June	July	August	Sept.	October	Nov	Dec	
Inspection for plant failures and losses													Annually. For first five years only. After this it is predicted that the planting beds will be fully established and filled.
Control and reporting of disease or pests													As identified
Checking of stakes and shelters - replacement													Check at beginning of winter. Unless plant still requires protection and support remove all stakes and shelters by the end of year 3
Weed control													Weed once a month or as required during growing season, reducing frequency as plants fill out and bare ground decreases.
Plant replacement													Replace plants as early as possible in dormancy season. Follow same measures as for original establishment.
Application of fertiliser													One application early spring, using slow release organic fertiliser.
Pruning and thinning													Annually. For first five years. theareafter every two years. For appearance and plant health (e.g. diseased branches. overcrowding)
Watering													Water twice monthly between April and October as required for first three years. Beyond three years water only during periods of drought.
Hedges	January	February	March	April	May	June	July	August	Sept.	October	Nov	Dec	
Inspection for plant failures and losses													Annually. For first five years only. After this it is predicted that the planting beds will be fully established and filled.
Control and reporting of disease or pests													As identified
Checking of stakes and shelters - replacement													Check at beginning of winter. Unless plant still requires protection and support remove all stakes and shelters by the end of year 3
Weed control													Weed once a month or as required during growing season, reducing frequency as hedgerow becomes dense and bare ground decreases.
Plant replacement													Replace plants as early as possible in dormancy season. Follow same measures as for original establishment.
Application of fertiliser													One application early spring, using slow release organic fertiliser.
Pruning													Prune annually to create dense informal shape to match appearance, size and shape of existing surrounding hedgerows. Ongoing.
Watering													Water twice monthly between April and October as required for first three years. Beyond three years water only during periods of drought.
Trees	January	February	March	April	May	June	July	August	Sept.	October	Nov	Dec	
Inspection for plant failures and losses													Annually. For first five years only. After this it is predicted that trees should be established.
Control and reporting of disease or pests													As identified
Checking of stakes and shelters - replacement													Check at beginning of winter. Unless tree still requires protection and support remove all stakes and shelters by the end of year 3.
Weed control													Keoo grass short around bases of trees with mulch mats, hand weeding or careful use of weedkiller no greater than 0.5m radius
Plant replacement													Replace trees as early as possible in dormancy season. Follow same measures as for original establishment.
Application of fertiliser													One application early spring, using slow release organic fertiliser.
Pruning and thinning													Annually. For first five years. theareafter every two years. For appearance and plant health (e.g. diseased branches. overcrowding)
Crown lifting for trees close to dwellings.													Suggested precautionary clause for future. First operation only after 5 years. Only to be undertaken to allow light or ease access near doors or windows.
Watering													Water twice monthly between April and October as required for first three years. Beyond three years water only during periods of drought.