

**Draft Planting Schedules and Specification Notes**

**Grass Areas**

**EE L1.1: 3.0m Verge/Swathes (Sowing rate = 10g/m2\*)**

Species	Size (cm)	% of Mix
Agrostis capillaries	Common bent	10
Festuca rubra	Red fescue	40
Festuca ovina	Sheeps fescue	25
Lolium perenne	Perennial ryegrass	5
Poa pratensis	Smooth stalked meadow grass	18
Rhinanthus minor	Yellow rattle	2

\*or as manufacturers / suppliers recommendations if greater

**EE L1.5/E01: Open Grassland (sowing rate = 10g/m2\*) and 2.0m along fences**

Species	Size (cm)	% of Mix
Ambrosianthus odoratum	Sweet vernal grass	7.5
Cynosurus cristatus	Crested dogstail	30
Festuca rubra	Red fescue	45
Phleum pratense	Timothy	7.5
Acilisa millefolium	Yarrow	1
Centaurea nigra	Common Knapweed	2
Leontodon autumnalis	Autumn Hawkbit	0.5
Prunella vulgaris	Selfheal	2
Ranunculus acris	Meadow Buttercup	2
Trifolium pratense	Red Clover	1
Rhinanthus minor	Yellow rattle	1.5

\*or as manufacturers / suppliers recommendations if greater

**L1.1 & L1.5 Specification Notes**

- Ground Preparation for grass areas - Vegetation Clearance (Clause 3004, 1-4), Subsoil Treatment (Clause 3004, 5-6) and Final Preparation of soil (Clause 3004, 7-11)
- Sowing Season - during the period 1 March to 31 May or 1 September to 31 October (Clause 3005.1)
- Final cultivation - upper 50mm of area to be seeded to be reduced to a fine tilth (Clause 3005.2)
- Seed - native sources (UK provenance) should be used and certificates provided (Clause 3005.7)
- Hydraulic seeding - allowed for all areas (Clause 3005.10)
- Grass seed germination - (Clause 3005.11)
- Establishment cuts - To all seeded areas (Clause 3005.29)
- Roundabout islands and verges adjacent to footways - Medium frequency - 7 cuts per annum (Clause 3007.13)

**Tree and Shrub Planting**

**EE L2.2/E02: Individual Trees (Planted @ 6m centres)**

Species	Size (cm)	Type	Tube/Guard/Collar (cm)	% of Mix
<b>Climax Species - Trees (100%)</b>				
Carpinus betulus	20-25	RB Semi mature	Plastic Collar	100

**L2.2 Specification Notes**

- Ground Preparation for tree and shrub planting - Vegetation Clearance (Clause 3004, 1-4), Subsoil Treatment (Clause 3004, 5-6) and Final Preparation of soil (Clause 3004, 7-11)
- Tree pit - 2000x2000x800mm (Clause 3006.24, Table 30/1)
- Pit backfill - topsoil (Clauses 3006.12 & 3006.25) and mixed with compost (Clause 3006.14) and slow release fertilizer (Clause 3006.15) at a ratio of 80% topsoil and 20% compost (3006.46)
- Pit drainage layer - 200mm drainage layer (Clause 3006.27) subject to ground conditions.
- Permeable membrane between growing medium and drainage layer
- Tree Supports - Underground guying system (Clause 3006.45 & Dwg. HCD K5).
- Watering - provide flexible irrigation pipe (Clause 3006.50).
- Water in immediately after planting (Clause 3006.49). Each tree shall receive a minimum of 25 litres / m2.
- Mulch to pit surface - Organic mulch (Clause 3006.55 (ii)).
- Trees in grass areas shall be provided with a plastic collar to reduce the risk of damage by strimming
- Tree marker post shall be erected in accordance with clause 3006.80 in the centre of each tree pit,
- Root barriers(1) - Where trees are planted within 3.0m of drainage ditches / pipes, paved areas and service corridors a root barrier will be required to restrict tree root growth (Clause 3006.38).

Note 1. The actual location of root barriers cannot be ascertained at this stage and therefore an assumption is that it will be required to run along one side of the area to be planted.

**EE L2.3/E01/E02/E03: Linear belts of Trees and Shrubs (Planted @ 1.5m centres)**

Species	Size (cm)	Type	Tube/Guard/Collar (cm)	% of Mix
<b>Climax Species - Trees (30%)</b>				
Quercus robur	06-Aug	Light Standard	Spiral guard	5
Quercus robur#	100-120	1+2 BR Transplant		5
Quercus robur	250-270	Feathered	Spiral guard	5
Quercus robur#	100-120	1+2 BR Transplant		5
Tilia cordata	250-270	Feathered	Spiral guard	5
Tilia cordata#	100-120	1+2 BR Transplant		5
Pinus sylvatica*		CG	Tube 60 high x 160 dia.	7.5
Pinus sylvatica#	100-120	1+2 BR Transplant		7.5
Carpinus betulus	250-270	Feathered	Spiral guard	7.5
Carpinus betulus#	100-120	1+2 BR Transplant		7.5
<b>Climax Species - Shrubs (70%)</b>				
Ilex aquifolium**	40-60	2L CG	Tube 60 high x 160 dia.	10/0**
Viburnum opulus	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	5
Ligustrum vulgare**	60-80	1+1 BR Transplant	Tube 60 high x 160 dia.	7.5/0**
Crataegus monogyna	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	15
Corylus avellana	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	12.5
Prunus spinosa	40-60	1+0 BR Transplant	Tube 60 high x 110 dia.	5/00**
Sambucus nigra	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	5
Replacements for low lying wet areas				
Alder glutinosa*	125-150	Feathered	Spiral guard	7.5

#Agreed planting specification for compacted granular fill areas only.

**EE L2.6/E01 Shrubs (Planted @ 1.5m centres)**

Species	Size (cm)	Type	Tube/Guard/Collar (cm)	% of Mix
<b>Crataegus monogyna*</b>				
	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	40/35*
<b>Corylus avellana*</b>				
	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	40/35*
<b>Sambucus nigra*</b>				
	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	20/10*
Replacements for low lying wet areas				
Salix cinerea*	60-80	0+1 BR Cutting	Tube 60 high x 160 dia.	20

**EE L2.7/E01: Shrubs with intermittent Trees (Planted @ 1.5m centres)**

Species	Size (cm)	Type	Tube/Guard/Collar (cm)	% of Mix
<b>Climax Species - Trees (10%)</b>				
Quercus robur	250-270	Feathered	Spiral guard	4
Carpinus betulus	250-270	Feathered	Spiral guard	3.5
Tilia cordata	250-270	Feathered	Spiral guard	2.5
<b>Climax Species - Shrubs (90%)</b>				
Crataegus monogyna	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	35
Corylus avellana	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	25
Viburnum opulus	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	10
Ilex aquifolium*	40-60	2L CG	Tube 60 high x 160 dia.	10/0*
Prunus spinosa	40-60	1+0 BR Transplant	Tube 60 high x 110 dia.	10/0*
Replacements for low lying wet areas				
Salix cinerea*	60-80	0+1 BR Cutting	Tube 60 high x 160 dia.	20

**EE L2.9/E01/E02: Woodland (Planted @ 1.5m centres)**

Species	Size (cm)	Type	Tube/Guard/Collar (cm)	% of Mix
<b>Climax Species - Trees (40%)</b>				
Quercus robur	250-270	Feathered	Spiral guard	15
Pinus sylvestris		CG	Tube 60 high x 160 dia.	10/0*
Tilia cordata	250-270	Feathered	Spiral guard	7.5
Carpinus betulus	250-270	Feathered	Spiral guard	7.5
<b>Climax Species - Shrubs (60%)</b>				
Crataegus monogyna	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	17.5
Corylus avellana	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	10
Viburnum opulus	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	7.5
Ilex aquifolium	40-60	2L CG	Tube 60 high x 160 dia.	10/0**
Ligustrum Vulgare	60-80	1+1 BR Transplant	Tube 60 high x 160 dia.	10/0**
Sambucus nigra	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	5
Replacements for low lying wet areas				
Ainus glutinosa*	125-150	Feathered	Spiral guard	10
Salix cinerea**	60-80	0+1 BR Cutting	Tube 60 high x 160 dia.	20

**EE L2.10/E03: Woodland Edge (Planted @1.5m centres)**

Species	Size (cm)	Type	Tube/Guard/Collar (cm)	% of Mix
<b>Climax Species - Trees (20%)</b>				
Quercus robur	250-270	Feathered	Spiral guard	7.5
Tilia cordata*	250-270	Feathered	Spiral guard	5
Carpinus betulus	250-270	Feathered	Spiral guard	5
Prunus avium	125-150	Feathered	Spiral guard	2.5
<b>Climax Species - Shrubs (80%)</b>				
Crataegus monogyna	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	25
Corylus avellana	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	20
Prunus spinosa	40-60	1+0 BR Transplant	Tube 60 high x 110 dia.	12.5/0*8
Viburnum opulus	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	10
Ilex aquifolium**	40-60	2L CG	Tube 60 high x 160 dia.	5/0**
Sambucus nigra	40-60	1+1 BR Transplant	Tube 60 high x 160 dia.	7.5
Replacements for low lying wet areas				
Ainus glutinosa*	125-150	Feathered	Spiral guard.	3.5
Salix cinerea**	60-80	0+1 BR Cutting	Tube 60 high x 160 dia.	17.5

**Abbreviations** BR = Bare root CG = Container grown

**L2.3/L2.6/L2.7/L2.9 & L2.10 Specification Notes**

**Trees**

- All feathered and standard trees shall be pit planted (Clause 3006.24 and Table 30/1). Arisings from the pit excavation shall be spread evenly over the adjacent planting area.
- All tree pits shall be 700x700x600mm
- Pit backfill - topsoil (Clauses 3006.12 & 3006.25) as found on site and mixed with compost (Clause 3006.14) and slow release fertilizer (Clause 3006.15) at a ratio of 75% topsoil and 25% compost (3006.46)
- Pit drainage layer - 200mm drainage layer (Clause 3006.27) subject to ground conditions.
- Permeable membrane between growing medium and drainage layer
- Tree Support - Single stake (Clause 3006.40 to 3006.42).
- Water in immediately after planting (Clause 3006.49). Each tree shall receive a minimum of 25 litres / m2.
- Mulch mats shall be used in the size of 1000mm x 1000mm (Clause 3006, 58-60).
- All feathered and standard trees shall be protected with spiral guards.
- Tree marker post shall be erected in accordance with clause 3006.80 in the centre of each tree pit.
- Tree species will be planted in groups of 3 and 5 at 3m centres. All individual shrubs shall be protected with protective tubes to the sizes set out in the planting schedules.
- All individual trees shall be protected with tubes/guards as set out in the planting schedules.
- No trees shall be planted within 3.0m of the verge, drainage ditches / pipes, fence lines, environmental barriers and back of sight lines.
- Root barriers(1) - At restricted locations where tree planting is required and is within 3.0m of drainage ditches / pipes, paved areas and service corridors a root barrier will be required to restrict tree/ shrub root growth (Clause 3006.38).

Note 1. The actual location of root barriers cannot be ascertained at this stage and therefore an assumption is that it will be required to run along one side of the area to be planted.

**Shrubs**

- All Corylus, Crataegus, Salix, Sambucus and Viburnum species shall be cut back to 150mm immediately after planting.
- All evergreen plants shall be supplied having been treated with an anti-transpirant spray (Clause 3006.16).
- All bare root transplants shall be treated with a root dip or an anti-desiccant soil additive incorporated in to the planting pit (Clause 3006.16)
- Mulch mats shall be used in the size of 1000mm x 1000mm (Clause 3006, 58-60).
- All individual shrub plants shall be protected with protective tubes to the sizes set out below.
- All bare root transplants shall be pit planted (Clause 3006.24 and Table 30/1). Arisings from the pit excavation shall be spread evenly over the adjacent planting area.
- Pit backfill - topsoil (Clauses 3006.12 & 3006.25) as found on site and mixed with compost (Clause 3006.14) and slow release fertilizer (Clause 3006.15) at a ratio of two thirds topsoil and one third compost (3006.46)
- All individual shrubs shall be protected with protective tubes to the sizes set out in the planting schedules.
- All individual tube protectors shall be translucent and coloured brown for deciduous plants and green for evergreen plants. Each individual guard shall be fixed using two stakes. Stakes shall be a minimum 600mm longer than the length of the tube (Clause 3006.52).
- No shrubs shall be planted within 2.0m of the verge, drainage ditches / pipes, fence lines, environmental barriers, back of sight lines.
- Root barriers(1) - At restricted locations where shrub planting is required and is within 2.0m of drainage ditches / pipes, paved areas and service corridors a root barrier will be required to restrict tree/ shrub root growth (Clause 3006.38).

Note 1. The actual location of root barriers cannot be ascertained at this stage and therefore an assumption is that it will be required to run along one side of the area to be planted.

**General Specification Notes**

- The Contractor shall control all injurious weeds throughout the construction period (Clause 3002.1)
- Planting Season shall be 1st November to 31st March (Clause 3006.17)
- Topsoil for tree pits shall be as per topsoil found on site and shall conform to multi-purpose topsoil (BS3882:2007) (Clause 3006.12)
- Topsoil depth within planting areas 300mm, within seeding areas 150mm.
- Notch planting shall **not** be permitted (Clause 3006.23)
- The seed origin of all native trees and shrub species for use on the Scheme shall be sourced from the Forestry Commission Local Seed Zones 402, 403, 404 and 405 (Forestry Commission Practice Note 8: Using Local Stock for Planting Native Trees and Shrubs, Figure 1). Written evidence of provenance shall be provided using a Provenance Certificate pro-forma (Clause 3006.6).
- Plot marker posts shall be erected in accordance with clause 3006.80 for all planting plots.
- Snagging shall be carried out by the Contractor in September for each year of the construction period. The contractor shall record in a schedule all plant failures by the end of September and submit to the Overseeing organisation for approval.
- Weed control shall be carried out in accordance with Clause 3002
- Plant replacement shall be undertaken at the beginning of each planting season from the date of planting to the commencement of the establishment maintenance period (Clause 3006.87).
- Plant circles - Maintain a 500mm radius vegetation free circle around each plant and hand weed tubes / spiral guards (Clauses 3001.7, 3001.8)
- Grass and other herbaceous cover within all planting areas shall be cut twice a year in spring (April / May) and late summer (September) (3007.23 and 3007.25).
- The contractor is responsible for the establishment of all new planting areas from the date of planting to the commencement of the establishment maintenance period. The requirement for watering is at the discretion of the contractor to ensure the successful establishment of the planting so that it achieves the percentage cover of the planting area set out in Appendix 3009, Table 3009.1.

**Establishment Maintenance**

- All existing vegetation plots and tree and shrub planting areas within the Order limits shall be maintained for a period of 60 months from the commencement of the aftercare period (Clause 3009.1).
- The Contractor shall control all injurious weeds throughout the 60 month establishment period (Clause 3002.1)
- The Contractor shall provide quarterly inspection reports (Clause 3001.15) for November to March, April to June, July to August and September to October for each year of the 60 month establishment period.
- Inspect tubes, guards, collars and guys twice a year and remove as and when instructed and no later than the end of the 60 month establishment period (Clause 3009.03 and 3009.04)
- Plant circles (L2.3/L2.6/L2.7/L2.9 & L2.10) - Maintain a 500mm radius vegetation free circle around each plant and hand weed tubes / spiral guards (Clauses 3001.7, 3001.8, 3009.9 & 3009.10)
- Grass and other herbaceous cover within all planting areas shall be cut twice a year in spring (April / May) and late summer (September) (Clause 3007.23 and 3007.25).
- Maintenance cuts - L.1.1 Verges, police observation platforms and emergency refugee areas - Low frequency 4 cuts per annum (Clause 3007.17 & 3006.21)
- Maintenance cuts - L.1.5 Open Grassland (within sightlines to road signs and at junctions - Minimal frequency - 2 cuts per annum (Clause 3007.20 & 3006.21).
- Cutting of grass to banks and drainage ditches - Grass cut shall be carried out in late summer (End of August) subject to the (Clause 3007.22) and presence of species such as water voles or any other control strategy requirements imposed by the Environment Agency.
- The contractor is responsible for the establishment of all new planting areas throughout the 60 establishment period. The requirement for watering is at the discretion of the contractor to ensure the successful establishment of the planting so that it achieves the percentage cover of the planting area (Clause 3008.7 (i) & (ii)).
- Weed control shall be carried out in accordance with Clause 3009, 9-23
- Snagging shall be carried out by the Contractor in September for each year of the establishment period. The Contractor shall record in a schedule all plant failures by the end of September and submit to the Overseeing organisation for approval.
- Plant replacement shall be undertaken at the beginning of each planting season for the duration of the 60 month establishment period (Clause 3006.87).
- Seeding shall be carried out by the contractor in April or September for each year of the establishment period.

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Client



DELIVERING THROUGH



Project SMART MOTORWAYS PROGRAMME  
M4 JUNCTIONS 3-12

Drawing title ENVIRONMENTAL MASTERPLAN  
REGULATION 4(2)(e)  
PLANTING SCHEDULE  
AND SPECIFICATION NOTES

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