

SPECIFICATION

1.0 GENERALLY

- 1.1. All operations to be carried out at appropriate seasonal times and in appropriate weather condition for the work in hand.
- 1.2. All planting works shall be carried out in accordance with BS 4043, BS 4428 and BS 8545:2014.
- 1.3. Bare-root plants to only be planted during the months of October - March. Container grown plants may be planted at any time of year if ground and weather conditions are favourable and there is a commitment to additional establishment maintenance, watering and replacement of plant failures.
- 1.4. Workmanship and materials not specified shall conform to the appropriate British Standards.
- 1.5. All work shall be carried out in accordance with good horticultural practice, and by competent, experienced and skilled work people.

2.0 TOPSOIL

- 2.1. Ensure that the following depths of specified quality site topsoil have been previously laid by the main contractor to all planted areas. Topsoil shall have been laid over decompacted, free-draining subsoil, cleared of all builders materials, rubble, rubbish and the like. Draw any shortfall, drainage problems to contamination to the attention of the Contract Administrator (CA) before commencing cultivation and planting operations:

Hedges and Ornamental planted areas: 400mm depth

Grass seeded / Turf areas: 150mm depth

Within 4m of newly planted trees: 400mm depth

- 2.2. Provide laboratory analyses of existing and imported site topsoil(s) to BS3882 Annex E. Imported topsoil shall comply with BS3882 Classification for Multi-Purpose topsoil. The testing laboratory shall provide a report detailing their recommendations for soil amelioration tailored to suit the project specific planting proposals. With the written instruction of the CA, amend soil ameliorants to suit testing laboratory recommendations.
- 2.3. Commencement of planting operations will be taken to signify acceptance of the ground conditions.

3.0 **PLANTS**

- 3.1. All plants to be supplied to BS 3936 Parts 1 to 10 as relevant, BS 4043, and the National Plant Specification, published by the Horticultural Trades Association, to the sizes and specified types. All plants shall be British grown, preferably from local provenance. Suppliers of plant material to be agreed prior to order with the Employer's Agent.
- 3.2. Plant handling shall be in accordance with the National Plant Specification – Handling and Establishment, except where specified otherwise.
- 3.3. Plants to be protected from drying out/water logging/scorch or any other damage whilst awaiting planting in accordance with the National Plant Specification – Handling and Establishment.
- 3.4. All plants shall be well rooted and sturdy with a well developed and evenly branched branch system.
- 3.5. All bare root plants shall be supplied in coextruded polyethylene bags with black interior and white exterior. Plants shall be placed in bags IMMEDIATELY UPON LIFTING and retained in their bags until IMMEDIATELY BEFORE PLANTING. Plants which are not to be planted on day of delivery shall be protected and heeled in - bundles shall be opened and the plants spread out and heeled into trenches in topsoil, min. depth 300 mm, with the entire root systems in full contact with the soil, and kept thoroughly watered.
- 3.6. Trees shall be evenly and well furnished with branches and with a strong central leader (appropriate to species). Trees of the same species shall match each other in form, size and shape.
- 3.7. Plants shall be made available for inspection and approval by the CA on delivery to site, prior to planting.

4.0 **PREPARATION FOR PLANTING**

- 4.1. Clear site of long grass, rubble, glass and rubbish.
- 4.2. All developed weed growth to be eliminated with a suitable weed killer (to be specified and applied by a registered contractor who holds an appropriate, current, NPTC Certificate of Competence. Chemicals are to be used strictly in accordance with current legislation and relevant codes of practice). Allow recommended dying off period to elapse prior to cultivation/clearance. Repeat process if not fully effective.
- 4.3. Cultivate all planting areas (except within tree protection zones) to a depth of 300mm removing all stones over 50mm diameter and all other rubbish.
- 4.4. Provide top copies of receipts/delivery dockets for all soil ameliorants to CA.
- 4.5. Unless recommended otherwise by the soil testing laboratory, add to planting areas: 50mm depth well-rotted approved organic compost, incorporating organic fertiliser - Melcourt Topgrow compost, or equal and approved.
- 4.6. Within tree protection zones cultivation shall be limited to site clearance as above. Plants to be individually pit planted. Pits dug by hand. Incorporate 2 no. Scotts Sierrablen Flora Tablets to each plant.

5.0 PLANTING - TREES

- 5.1. Tree pits shall be in accordance with the below sizes. Enlarge as necessary to accommodate root spread dimensions plus overall 400mm wider and 250mm deeper. The base of tree pit is to be lightly forked to break up smear pans/glazed sides to encourage root development. Report any signs of poor drainage to the Contract Administrator.

Semi Mature = 2000mm square minimum x 1050mm depth

Extra Heavy Standard and multi-stemmed = 1400mm square minimum x 1050 depth

Heavy standard trees = 1400mm square minimum x 1050mm depth

Standard and large feathered trees = 900mm square minimum x 1050mm depth

Feathered trees, light and half standards = 600mm square minimum x 450mm deep

Whips = 450mm square minimum x 450mm deep.

- 5.2. Backfill material shall comprise topsoil and subsoil as found on site. During excavation of tree pit subsoil and topsoil to be carefully separated and then placed back in the tree pit subsoil first and then topsoil in 150mm layers and gently firmed to ensure soil contact with the rootball/root system of the tree.
- 5.3. Where scheduled, trees shall be secured upright with 2no. 90mm dia. treated softwood stakes driven 1500mm into ground to finish 600mm above ground level. Stakes to be linked by flat horizontal timber bar 100 x 38mm section 50mm from top of stakes. Secure tree stem to flat bar with Toms 50mm wide special nylon reinforced rubber belt and big block (ref. 03) in accordance with manufacturers recommendations. Toms (Tel: 01233 770066).
- 5.4. Where scheduled, trees shall be secured upright with 1 no. 70mm dia. Treated softwood stakes driven 1500mm into ground to finish 600mm above ground level. Secure tree stem to stake with Toms 37.5mm special nylon reinforced rubber belt (Ref L5) and Toms extra large pad (Ref L1) in accordance with manufacturers recommendations. Toms (Tel: 01233 770066).
- 5.5. Thoroughly water in all trees immediately after planting but prior to mulching.
- 5.6. The trees shall be watered throughout the year, as necessary, to ensure the trees do not reach wilting point and to encourage the outward development of roots to aid establishment. Water must be applied equally across the rooting/mulched area of the trees at a rate that will allow the water to seep through the soils to bring it up to field capacity. Run off and water logging must not be allowed to occur.

6.0 PLANTING - INDIVIDUAL AND SPECIMEN SHRUBS

- 6.1. Pits for individual or specimen shrubs shall be minimum 600 x 600 x 600mm deep. Enlarge as necessary to accommodate root spread dimensions plus overall 400mm wider and 250mm deeper. The base of tree pit is to be broken up to 200mm depth. Report any signs of poor drainage to the Contract Administrator.
- 6.2. Backfill material shall comprise topsoil and subsoil as found on site.
- 6.3. Backfill material shall be carefully packed around the rootball in layers not deeper than 150mm. Each layer shall be lightly consolidated in the pit, leaving the final level 50mm above surrounding paving or ground level and the top layer firmly heeled around the root collar.
- 6.4. Where scheduled, plants shall be secured upright with 1 or 2 no. (depending on form of plant and size of root ball) 50mm dia. treated softwood stakes driven 900mm into ground to finish 600mm above ground level. Secure tree stem to stake with Toms Supersoft Tree Ties, appropriate to the size of the plant, in accordance with manufacturers recommendations. Toms (Tel: 01233 770066).
- 6.5. Thoroughly water in all plants immediately after planting but prior to mulching.

7.0 PLANTING - NATIVE TRANSPLANTS AND SHRUBS

- 7.1. Bare root transplants and feathered trees shall be dipped in Seanure Root Dip anti-desiccant and MicorForce Whip Dip mycorrhizal root dip all to manufacturer's instructions prior to planting.
- 7.2. Native transplants and shrubs to be set out in single random groups of 3 - 7 of single species in accordance with the group size and spacing specified on the drawings.
- 7.3. Bare root transplants to be 'T' notch planted, ensuring a notch of sufficient size to avoid damage to roots. Add 10gms Scotts Enmag CRF to each transplant plant pit. Container plants shall be pit planted in holes large enough for rootball. Fertilisers are only required where there has been a diagnosed soil macro/micro nutrient deficiency.
- 7.4. All native transplants, trees and shrubs are to be protected with green laminate Tubex Shelterguards for trees. Guards for all trees are to be cut from roll to comfortably suit furnished tree diameter. Softwood stakes. All as supplied by Tubex. Telephone - 01621 874201 www.tubex.com. Install in accordance with manufacturer's recommendations, using manufacturer's standard accessories.

Plant Type	Shelter Height	Diameter	Plant/Shelter Support
Feathered Trees	1.2m	Cut from roll to suit	1.2m x 90mm diam. knee stake with pvc buckle tie and 1.8m x 32 x 32mm shelter support with 3 x nylon ties
Transplants	0.6m	80-110mm	
Shrubs/Conifers	0.6m	Cut from roll to suit	

- 7.5. Thoroughly water in all plants immediately after planting.

8.0 PLANTING – ORNAMENTAL SHRUBS, ORNAMENTAL HEDGES and HERBACEOUS PERENNIALS

- 8.1. Set out shrub planting carefully and evenly over indicated areas. Remove plants from pots and plastic containers, plant and water in thoroughly. Shrubs shall be individually pit planted in prepared pits sized to accommodate full spread of roots. Plants shall be evenly spaced over the planting area. Very pot bound plants shall be rejected and replaced. Lightly pot bound plants should have their roots teased out to encourage lateral growth. Firm backfill by treading, ensuring the ground is not overly compacted and that the plant is positioned upright.
- 8.2. Climbers to be set 300mm from base of wall and trained to climber wires comprising 3 no galvanised horizontal wires fixed 400mm apart. Width of climber wire construction - 2000mm. Vine eyes at 400mm centres.
- 8.3. Hedera canariensis / Noise Barrier Planting. Prepare planting stations as for shrubs. Individually plant specimen climbing plants in pits 600 x 600 x 600mm, or greater to accommodate full root spread. Plants to be positioned 450mm away from screen fence and trained back to fence using

canes. Neatly spread and attach climber stems over the screen fence.

8.4. Thoroughly water in all plants immediately after planting but prior to mulching.

9.0 POST PLANTING AND MULCHING

9.1. On completion of planting cultivate and rake the surface of the soil, ensuring that there is no compaction. Apply fresh clean wood chip laid to a depth of 75-100mm and topped up annually to maintain a depth between 75-100mm to all planting areas including hedges.

9.2. Carefully and neatly trim turf back from individual shrubs and climbers in grass planted in grass to 300mm radius, centered on the plant. Cultivate the soil surface and finish with 50mm depth of specified mulch. Sweep up surplus from surrounding paved or grass areas.

9.3. Carefully and neatly trim turf back from trees planted in grass to 600mm radius, centered on the tree. Cultivate the soil surface and finish with 50mm depth of specified mulch. Sweep up surplus from surrounding paved or grass areas.

10.0 ROOT BARRIERS

10.1. Trees and Hedges outside the limits specified in appendix 4.2-H by the NHBC Standards document shall be provided with root barriers. These shall be specified by the manufacturer in relation to actual site conditions and shall be installed strictly in accordance with his printed instructions. As supplied by Greenleaf (01424) 717797.

11.0 GRASS

11.1. Seed and turf areas, except within tree protection zones, shall be cultivated to a depth of 150mm to leave a fine tilth, free from stones over 30mm and firmed by treading or rolling without compacting the soil. The finished surface shall be free from any irregularities, bumps or hollows.

11.2. Turf areas within tree protection zones shall be carefully scarified to form a seed bed. Adjust levels only by filling minor hollows with sandy topsoil – sufficient to give a smooth final profile.

11.3. All grass areas shall be treated with Germinal Seeds Agrosil LR pre-seeding granular fertiliser, applied at a rate of 50g/m² (seeding) or 100g/m² (turf) applied fully in accordance with manufacturers latest printed instructions. Germinal Seeds (Tel: 01522 868714).

11.4. Seeded areas shall be sown with Germinal Seeds Mix A19 at a rate of 50g/m². After sowing the seed shall be lightly raked and harrowed to cover seed. Germinal Seeds (Telephone 01522 868714).

11.5. Turf shall be well-rooted medium/fine textured cultivated downland fescue turf, suitable for ordinary lawns. Ryegrass content shall be limited to maximum 30% of a dwarf creeping species. The Con-

tractor shall provide suppliers details and turf analysis to the CA for approval prior to ordering.

- 11.6. Turf within tree protection zones shall be approved shade tolerant mix.
- 11.7. All turf shall be of close texture, even density and showing no signs of discolouration.
- 11.8. Turf shall be laid in rows to broken/stretcher bond. Turfs shall be laid closely butted. Turves to be well watered immediately after laying.
- 11.9. Any irregularities in turf laying shall be corrected by lifting turfs, adjusting levels by the addition or taking away of underlying the turf and relaying the turf. Levels shall not be achieved by rolling.
- 11.10. Seed/turf areas to finish 30mm above adjoining pavings and 150mm below any damp-proof course. Grass/turf edges shall be cleanly trimmed to an even, geometrical line, in accordance with the contract drawings. Prior to Practical Completion, all grass areas shall be cut to 30mm when the grass has reached a height of 75mm. All clippings shall be collected and disposed of off site.

12.0 MAINTENANCE

- 12.1. Pre-practical completion maintenance to conform to the specification for post-practical completion maintenance.
- 12.2. All work shall be carried out in accordance with good horticultural and landscape management practice, and by competent, experienced and skilled operatives.
- 12.3. Carry out all operations necessary to ensure the establishment and continued thriving of all plant material (including grass and wild flower). Any operations not specifically described to be drawing to the attention of the Employer's Agent for instruction.
- 12.4. WATERING: Water as necessary to ensure the continued thriving of all planting. In the first two years after planting, weekly watering is required during the growing seasons. Trees 8-10 girth will need approx. 20 litres and those 12-14cm girth will need approx. 25 litres weekly. Shrubs should be watered at approx 30 litres per square metre. Newly planted grass areas will need regular watering to promote proper establishment. After the first two years watering is as necessary to ensure continued growth.
- 12.5. LITTER: Remove litter from planted and grass areas at each visit.
- 12.6. WEED CONTROL: At each visit ensure all planting stations are weed free and that a weed free area of soil is maintained around all transplants 0.5m diameter. Maintain grass between individual trees and transplants at maximum 50mm height.

WEED CONTROL - ORNAMENTAL PLANT BEDS AND TREES: Weed by hand all ornamental planting areas and remove arisings so that at the end of each visit, all ornamental planting beds are weed free and tidy.

WEED CONTROL - GRASS: Remove all competing pernicious weeds that are not part of the original seed/planting mix by hand or spot weed killer, including dock, thistle and bramble.

- 12.8. PESTS AND DISEASES: ensure that all tree and shrub stock is treated or protected as necessary against attack by insects/mammalian pests or disease.
- 12.9. EXISTING TREES AND HEDGEROWS: No specific maintenance operations required during the first 12 months except for the owner to monitor their growth, condition and health/safety and to draw the attention of the Employer's Agent to any actions that need to be carried out.

Ensure that no branches or vegetation encroaches onto highways or public footpaths by careful pruning at the appropriate time.

TPO TREES - Approval must be sought from the Local Planning Authority for ANY proposed works to trees subject to TPOs.

- 12.10. TREE STAKES AND TIES AND PLANT SHELTERS: Inspect at approximately monthly intervals and carry out the following: Check stakes and supports for looseness, breaks and decay and replace as necessary to original specification. Adjust, refix or replace loose or defective ties as necessary, allowing for growth since planting and to prevent chafing. Where chafing has occurred, reposition or replace ties to prevent further chafing. Replace missing or damaged components. Tree stakes should be removed following proper establishment of the tree, typically after 3rd growing season.
- 12.11. COMPACTION: Decompact and re-cultivate any areas compacted by trampling or other means.
- 12.12. MULCH: Maintain an even cover of 75-100mm fresh clean wood chip to be topped up annually to maintain a depth between 75mm and 100mm. Sweep up from paved surfaces.
- 12.13. PLANTING: Firm all loosened plants, tighten/replace tree ties/stakes, attach climbers to wires, adjust/replace missing or damaged spiral guards.
- 12.14. HEDGES: Trim hedges in July - August. Prune shrubs as necessary to maintain an even shape and to encourage dense growth.
- 12.15. GRASS: Cut grass to 25mm at each visit - twice per month from 1 April to 31 October. Clippings shall be blown. Maintain grass areas free of broad leaved weeds by the application of suitable selective herbicide.

Re-define edges to planting areas and tree pits in grass at each visit.

Re-cultivate and re-seed/re-turf any bare/failed grass areas to the original specification.

12.16. MAINTENANCE SCHEDULE:

TASK	Minimum number times task to be performed each month												Practical Com-
	JANUARY	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Remove rubbish and sweep up mulch	1	1	1	2	2	2	2	2	2	2	1	1	1
Cut grass		1	1	2	2	2	2	2	2	2	1		1
Trim grass edges			1			1			1				1
Apply specified spring feed to grass areas				1									
Weedkill grass areas (if required)				1				1					
Weed planted areas	1	1	1	1	1	1	1	1	1	1	1	1	1
Firming loose plants. Check and replace shelters, guards and plant supports	1	1	1	1	1	1	1	1	1	1	1	1	1
Formative pruning (exact timing dependent on species)	1	1											1
Cultivate soil surface and top up mulch to 50mm depth (all areas)													1
Watering	As many visits as are required to ensure establishment and continuing active growth of plants												
Plant Failure Inspection									1				1
Plant Failure Replacements (First planting season after plant failure inspection)	(First planting season after plant failure inspection)												

13.0 PLANT REPLACEMENT

13.1. PLANT REPLACEMENTS / DEFECTS: At the end of each growing season, prior to leaf fall, an inspection shall be made with the Contract Administrator. Any plants found to have died, are diseased, badly damaged or not making satisfactory growth, shall be replaced. Plant replacements shall be to the original specification and shall be carried out in the first suitable planting season after the inspection carried out (this may take replacement planting outside the 5 year defects period for the contractor).

14.0 HANDOVER (At the end of the Defects Liability Period):

14.1. All grassed areas, shall be handed over in a healthy, well cut and weed-free condition. The surface shall be free of irregularities. All plants and trees must be in place, undamaged, and showing satisfactory, healthy growth. Trees shall be securely staked. Mulch shall be made up to 50mm depth. The site shall be neat, tidy and free of litter, rubbish, weeds and contractors debris. Paved areas shall be free of mulch and contractors debris.

Plant Schedule					
Latin Name	Common Name	Specification	QTY	Mulch	Planting Accessories
Trees					
Malus sylvestris	Crab apple	CG, G8-10 Ht 250cm min, c/s 200cm min	2	Yes - minimum 500mm radius from centre of tree	Double stake and cross bar
Prunus padus	Bird Cherry	CG, G6-8 Ht 250cm min, c/s 200cm min	2	Yes - minimum 500mm radius from centre of tree	Double stake and cross bar
Sorbus aucuparia	Rowan	CG, G8-10 Ht 250cm min, c/s 200cm min	1	Yes - minimum 500mm radius from centre of tree	Double stake and cross bar
Photinia x fraseri	Red Robin	CG, G6-8 Ht 250cm min c/s 150cm min	8	Yes - minimum 500mm radius from centre of tree	Double stake and cross bar
Pyrus calleryana	Chanticleer Pear	CG, G8-10 Ht 250cm min c/s 150cm min	3	Yes - minimum 500mm radius from centre of tree	Double stake and cross bar
Euonymus europaeus	Spindle	CG, G8-10 Ht 250cm min c/s 150cm min	3	Yes - minimum 500mm radius from centre of tree	Double stake and cross bar
Hedging					
Elaeagnus x ebbingei	Oleaster	BR, Ht 60-90cm	80	Yes	
Prunus laurocerasus rotundifolia	Hornbeam	BR, Ht 60-90cm	79	Yes	
Ligustrum vulgare	Common Privet	BR, Ht 60-90cm	6	Yes	
Sambucus nigra	Elder	BR, Ht 60-90cm	6	Yes	
Shrubs					
Aucuba japonica 'Variegata'	Variegated Gold Dust Plant	5L	40	Yes	
Artemisia 'Powis Castle'	Wormwood	5L	42	Yes	
Hebe 'Pewter Dome'	Hebe	5L	45	Yes	
Mahonia aquifolium 'Appollo'	Oregon Grape Holly	5L	52	Yes	
Elaeagnus x fortunei 'Silver'	Spindle Silver Queen	5L	18	Yes	
Choisya x dewitteana 'Aztec Pearl'	Mexican Orange Blossom	5L	26	Yes	
Skimmia x confusa 'Kew Green'	Japanese Skimmia	5L	16	Yes	
Skimmia japonica 'Rubella'	Japanese Skimmia	5L	0	Yes	
Groundcover					
Juniperus squamata 'Blue Carpet'	Juniper	5L	20	Yes	
Phalaris arundinacea 'Feesey'	Ribbon Grass	5L	14	Yes	
Artemisia schmidtiana 'Nana'	Dwarf Schmidt Wormwood	5L	14	Yes	
Geranium renardii	Geranium	5L	10	Yes	
Cotoneaster 'Coral Beauty'	Cotoneaster	5L	14	Yes	
Ceanothus thyrsitlorus Repens	Creeping Blue Blossom	5L	10	Yes	
Hebe rakiensis	Hebe	5L	14	Yes	
Total Plants/Trees			525		