



PERFECT GARDEN

General Landscape Specification

Landscape Works

Prepared By Peter Wilkinson
Perfect Garden

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- **GENERAL**

- 1. SCOPE**

OUTLINE DESCRIPTION: Including but not necessarily limited to:

- Preparation, cultivation of landscape areas,
- Supply and spreading of topsoil and mulch,
- Supply and planting of advanced trees, trees, shrubs and groundcovers,
- Supply and laying turf,
- Grassing,
- Maintenance

- 2. STANDARDS**

REFERENCED DOCUMENTS: The following standards are referred to in this Section:

- BS 1377 4 - Methods of Testing Soils for Engineering Purposes
- BS 4428:1989 - General Landscape Operations
- BS EN 844 - Timber - Preservative Treated - Sawn and Round
- BS 8417:2011+A1:2014 - Preservative Treated Farm Fencing Timber
- BS 3882:2015 - Soils for Landscaping and Garden Use
- BS PAS 100 - Composts, Soil Conditioners and Mulches
- BS 8545:2014 - Trees from Nursery to Independence
- BS 3998:2010 - Tree Works - Recommendations

- 3. SAMPLES**

REQUIREMENT: Submit representative samples of the plants and other materials and products specified in the SAMPLES SCHEDULE.

PLANT SAMPLES: Submit each plant sample in the condition in which it is proposed to supply it to the site.

REJECTION: Replace, at no additional cost, plant samples rejected as unsuitable for use, including samples rendered unsuitable by the process of examination (e.g. for root condition). Samples not rejected may be included in plant material for use in the Works.

4. APPROVED SUPPLIERS

PLANT MATERIAL: Obtain plant material, including plants, seeds and mulch from approved suppliers. Furnish proof of ordering if requested. No extension of time will be granted if plant material is not available because of late ordering. Advise immediately if supply difficulties are encountered.

5. INSPECTION

NOTICE: Give not less than 48 hours' notice so that inspection may be made of the following, as applicable:

- Plant materials delivered to the site
- Setting out completed
- Clearing completed
- Sub-grades cultivated and/or prepared prior to placing topsoil.
- Grassing bed prepared prior to turfing, seeding, or temporary grassing
- Tree holes excavated and prepared for planting
- Plant material set out before planting
- Grassing or turfing completed
- Practical completion
- Upon completion of Defects Liability work.

PERIODIC INSPECTIONS: There will be regular periodic inspections at the beginning of each month during the establishment period and the Defects Liability Period.

6. PROTECTION

TREES AND SHRUBS: Specified in WORK NEAR TREES

7. TREES TO BE RETAINED

MARKING: Mark trees to be retained with tags. At the end of the Contract they will be checked and tags removed.

WORK NEAR TREES: Specified in WORK NEAR TREES

WORK ON TREES: If it is considered necessary to perform any work on trees, including pruning, root cutting, repair or removal, apply for permission and await instructions.

QUALIFIED PERSONNEL: Any work permitted to be done on trees to be retained shall be performed by an approved arborist.

PRUNING: If tree branches are directed to be removed, they must be pruned in accordance with BS 3998:2010.

REPAIR: If the Superintendent permits repair work to be attempted on a tree damaged during the work under the Contract, perform the repair work at no extra cost.

REMOVAL: If repair work is considered impracticable, or is attempted and fails, and if so directed, remove the tree and root system. Make good as necessary, and either replace the tree or pay damages as specified below.

REPLACEMENT: If so directed, provide, plant and establish, as part of the Works, at no extra cost, a replacement tree of the same species and similar size.

DAMAGES: If replacement as part of the Works is not approved, pay, for any tree removed pursuant to the above, damages assessed by the Superintendent as the cost of replacement by others. If replacement with a smaller tree is permitted as part of the Works, pay damages assessed as the difference between the replacement costs of the smaller and larger trees up to a limit, if any, specified in the ENVIRONMENTAL PROTECTION SCHEDULE.

WARNING SIGN: Display a sign in a prominent position at each entrance to the site, warning that trees and plantings are to be protected during the currency of the Contract. Remove on completion.

Lettering: 100 mm high, in red on a white background.

8. WORK NEAR TREES

PROTECTION: Adequately protect from damage all trees and other plants which need not be removed or destroyed for construction operations, or which are shown on the Drawings and/or specified to be retained, or which are beyond the limits allowed to the Contractor as shown or specified.

Protect trees specified or shown to be retained from damage by groundwork's. Take necessary precautions, including the following:

- Fence off the tree: Install a fence at the drip line. Do not allow storage of materials nor access within the fenced area.
- Harmful materials: Do not store, stockpile, dump, or otherwise place under or near trees, bulk materials and harmful materials including oil, paint, waste concrete, clearings, boulders and the like. Do not place spoil from excavations against tree trunks, even for short periods. Prevent wind-blown materials such as cement from harming trees and plants.
- Damage: Prevent damage to tree bark. Do not attach stays, guys and the like to trees.
- Work under trees: Do not remove topsoil from within the drip line of trees unless otherwise specified. If it is necessary to excavate within the drip line, use hand methods such that root

systems are preserved intact and undamaged. Open up excavations under tree canopies for as short a period as possible.

- **Roots:** Do not cut tree roots exceeding 25 mm diameter unless permitted by the Project Manager. Where it is necessary to cut tree roots, use a chain saw, handsaw or similar means.
- **Backfilling:** Backfill to excavations around tree roots with topsoil mixture as specified in TOPSOIL. Place the backfill in layers, each of 300 mm maximum depth, compacted to a dry density similar to that of the original or surrounding soil. Do not backfill around tree trunks to a height greater than 50 mm above the original ground surface. Immediately after backfilling, thoroughly water the root zone surrounding the tree.
- **Compacted ground:** Avoid compaction of the ground under trees. If the ground under trees has been unduly compacted during the work under the Contract, for example by the operation of heavy constructional plant, loosen the soil by coring.
- **Coring:** Carry out coring by forming 75 mm diameter 300 mm deep core holes at 900 mm centres for the whole of the area affected and backfilling the core holes with sand watered in.

1. DEMOLITION

Retain salvaged items for further direction from Project Manager

2. EARTHWORKS

1. EROSION CONTROL

EROSION CONTROL: Prevent erosion of soil from any lands used or occupied in the execution of the work under the Contract.

NECESSARY MEASURES: Adopt such measures as may be necessary for erosion control, including the following where applicable:

- Staging of operations (e.g. clearing);
- Progressive restoration of disturbed areas;
- Temporary drains;
- Diversion and dispersal of concentrated flows to points where the water can pass through the site without damage;

- Spreader banks: or other structures to disperse concentrated run-off;
- Construction and maintenance of silt traps to prevent the discharge of scoured materials to downstream areas;
- Temporary grassing: or other treatments to disturbed areas (e.g. contour ploughing);

REMOVAL: Remove temporary works when they are no longer required.

2. SITE CLEARING

LOCATION: Clear only the site areas occupied by works such as buildings, paving, excavations, regrading and the like, and areas shown on the Drawings or specified below as areas to be landscaped or cleared.

CLEARING OPERATIONS: General clearing: Remove everything on or above the site surface, including rubbish, vegetable matter and organic debris, scrub, timber, stumps, boulders, rubble, and the like.

Grubbing: Grub out stumps and roots over 50 mm diameter to a minimum depth of 500 mm below sub grade under buildings or paving, or 300 mm below finished surface in unpaved areas.

Old works: Break up if necessary and remove old slabs, foundations, paving's, drains, manholes and the like found on the surface.

Surface layer: Remove the surface layer of the natural ground.

All topsoil is to be stripped and stockpiled for reuse.

TREES: Site clearing operations are subject to the restrictions specified in TREES TO BE RETAINED and WORK NEAR TREES.

CONTRACTOR'S SITE AREAS: If not included within the areas specified above, clear generally only to the extent necessary for the performance of the Works.

MULCH: Put approved cleared vegetation through a chipper. Reduce to pieces not larger than 75 x 50 x 15 mm and stockpile for re-use as mulch where directed.

3. ROCK LANDSCAPING

ROCK OUTCROPS: If rock, rock shelves and rock outcrops are shown on the Drawings as landscape features, protect them from mechanical damage and surface defacement by fire, paint, cement and the like. Provide temporary fences where shown on the Drawings or if required and remove on completion.

Restoration: If landscape feature rocks are damaged or defaced during the course of the Works, restore them by such means as the Project Manager may direct, or replace them if so directed, without extra charge.

Damages: If landscape feature rocks cannot be satisfactorily restored or replaced, pay the necessary damages.

PLACED ROCK: Place rocks where shown on the Drawings, after ground formation work has been carried out (topsoil or surface soil layers finished to final levels). Placed rock shall be approved site rock if available, otherwise provide imported rock as specified below. Protect the weathered faces from damage.

SITE ROCK: Salvage approved rocks of 0.5 m³ in volume or greater resulting from the work under the Contract. Stockpile the approved rocks so that they are accessible to a lifting device for future removal. Remove other site rock as specified in DISPOSAL OF SPOIL.

IMPORTED ROCK: Shall be selected prior to delivery from an approved source.

4. WEED ERADICATION

METHODS: Eradicate weeds by environmentally acceptable methods. Continue eradication throughout the course of the Works and during the establishment and Defects Liability periods.

5. FILLING

SOURCE: Provide filling free from perishable matter, imported on to the site from an approved source unless the specified filling type can be provided from spoil recovered from the excavations.

FILLING TYPES: General Filling: Graded material, maximum particle size 75 mm.

Landscape Filling: Material sourced from the 'B' horizon and not containing building rubble or the like and free of deleterious matter, or topsoil not meeting the specification.

6. PREPARATION FOR FILLING

GENERALLY: Suitably prepare the ground surface to receive filling, including topsoil filling where applicable.

UNDER SLABS OR PAVING: Water and roll the sub grade to achieve the densities stated for these locations in DRY DENSITY RATIO.

7. PLACING FILLING

EXTENT: Place and compact filling to the dimensions, levels, grades and cross section as required by or as shown on the Drawings, and so that the surface is constantly self draining.

LAYERS: Place filling in layers not exceeding the thickness stated below when measured loose, and compact each layer as specified in COMPACTION.

Maximum layer thickness: 150 mm

PLACING AGAINST CONCRETE: Do not place filling against concrete until the concrete has been in place for fourteen days, unless otherwise approved.

8. SPOIL

SURPLUS EXCAVATED MATERIAL: Remove from the site, including debris resulting from site clearance, and excavated material not re-useable as topsoil, filling, mulch or the like, unless otherwise specified or directed.

DISPOSAL: The Contractor shall be solely responsible for the safe and harmless disposal of surplus excavated material away from the site.

BURNING: Do not burn without permission.

BURIAL: Boulders, concrete fragments and the like materials may not be disposed of by burial and are to be disposed of offsite.

RE-USABLE SPOIL: Store where directed.

9. EARTH MOUNDS

LOCATION: Form earth mounds in the positions and to the contours shown on the Drawings.

CONSTRUCTION: Filling as specified in FILLING, in layers approximately 150 mm thick compacted to 85% of the dry density ratio of the surrounding soil as determined by AS 1289, to minimise slumping and further internal packing down. Corners and intersections of planes shall be rounded and gradual. To grading from edgings provide horizontal shoulders, minimum width 500 mm, before any change of level.

TOPSOIL COVER: For mass planted surfaces allow for 450 mm total topsoil plus mulch. For grassed surfaces allow for 150 mm total topsoil plus turf.

10. REINSTATEMENT

REQUIREMENT: Unless otherwise specified, restore the developed and undeveloped ground surfaces of the site to the condition existing at the commencement of the work under the Contract and backfilling under WORK NEAR TREES.

11. CULTIVATION

PREPARATION: Prepare the sub-grade to receive topsoil as specified in PLACING TOPSOIL. Remove existing weeds as specified in WEED ERADICATION.

CULTIVATION: Cultivate by ripping to the depths specified below, to loosen the compacted ground. Do not disturb services or tree roots; if necessary cultivate these areas by hand. During cultivation, thoroughly mix in any materials specified to be incorporated into the sub-grade.

STEEP BATTERS: Cultivate finished profiles by dragging a toothed bucket at right angles to the slope (horizontal or on contour). Ripping should achieve a minimum score of 50 mm.

Deleterious material: Remove stones exceeding 50 mm, and any other deleterious material brought to the surface during cultivation, including roots, sticks, weeds and the like.

SUB-GRADE SURFACES: Trim after cultivation to shapes and levels such that the required depth of topsoil can be placed to the specified finished surface levels.

CULTIVATION DEPTHS: Cultivate to the minimum depths specified below, as applicable:

1. Previously excavated areas: (For grassing and mass planting): Cultivate sub-grade 150 mm.
2. Unexcavated areas (natural soil):
 - Grassed areas: (Seeded, turf,): 150 mm. Cultivate the whole area to be planted. Finely cultivate the surface. Rake free of clods.
 - Mass planted areas: 300 mm below finished levels. Add site topsoil as necessary to bring the sub-grade surface to 100 mm below the required finished levels.
 - Temporary grassing: 25mm below finished levels.

12. TOPSOIL

DEFINITIONS:

Topsoil: General purpose soil to BS 3882:2015.

Top dressing: To BS 3882:2015.

Planting Mixture: Three parts by volume of organic soil and one part of compost as specified in COMPOST, thoroughly mixed before placing.

Topsoil type in planting mixture: organic soil

SOURCE: Import topsoil on to the site from an approved source unless the specified topsoil type can be provided from material recovered from the excavations.

TOPSOIL TYPES: General purpose soil.

TOPSOIL STOCKPILES: Stockpile site topsoil approved for re-use, and imported topsoil where necessary, before placing as specified in PLACING TOPSOIL. Establish stockpiles to sizes and in locations as directed, to heights not exceeding 1.5 m. Provide adequate drainage and aeration.

LOCATIONS: Shown on the Drawings.

13. PLANT MATERIALS

14. COMPOST

DESCRIPTION: As described in BS PAS 100 -well rotted compost or manure, with a neutral pH value, or other approved material, free from harmful chemicals, grass and weed growth. Provide a certificate of proof of compost pH value on request.

15. FERTILIZER

SUPPLY: Deliver fertiliser to the site in sealed bags, branded with the type and manufacturer's name.

FERTILIZER TYPES: Specified in the FERTILIZER SCHEDULE.

Grassing: At time of sowing or not more than 48 hours before: Spread fertiliser evenly over the prepared seed bed and rake lightly into the surface.

Individual plantings: Place fertiliser pellets in the pit of the plant, at the rate recommended by the manufacturer.

Planting beds: Place prolonged release type fertiliser around the plants at the time of planting, at the rate recommended by the manufacturer

16. MULCH

GENERALLY: Mulch shall be free of deleterious and extraneous matter, including soil, weeds, rocks, twigs and the like and complies with BS PAS 100.

LOCATION: Mulch the areas shown on the Drawings.

APPLICATION: Place mulch so that it is not in contact with the stems of plants.

MULCH TYPES: Brush chippings and leaf litter: Approved vegetative material (which may include leaf matter and tree loppings from Pinus or other suitable species), processed through a chipper to pieces not larger than 75 x 50 x 15 mm. Materials answering this description may be recovered from the site as specified in SITE CLEARING. Do not use privet, laurel, poplar, willow, or noxious weeds. Pine flake: Pinus species sapwood slivers of size range 250 x 25 to 30 x 3 mm, graded with fines and bark. Pine bark: From mature trees, graded in size from 50 x 50 x 25 mm to 25 x 15 x 15 mm, free from wood slivers.

17. PLANTS

GENERALLY: Plants shall be vigorous, well established, hardened off, of good form consistent with species or variety, not soft or forced, free from disease and insect pests, with large healthy root systems and no evidence of having been restricted or damaged. Trees shall have a single leading shoot.

SUBSTITUTIONS: Make no substitutions unless approved in writing. Substitutions will not be approved if the Contractor has not complied with the Specification.

LABELLING: Label at least one plant of each species or variety in a batch with a durable, readable tag.

REPLACEMENTS: Order sufficient quantities to allow for plant failures. Replace, with plants of the same specified type, quality and size, any plants which fail or are damaged during the work under the Contract.

WARRANTY: Furnish a warranty from the supplier attesting that the plants are true to the specified species and type, and free from diseases, pests, weeds and the like.

STORAGE: Wherever possible, plants shall be planted immediately after delivery to the site. If this is not possible, keep them in good condition by appropriate storage methods, or as may be directed. Prevent theft, drying out or damage from any cause including frost, wind, sun, vermin, animals and the like. Provide an on-site nursery for holding plant stock on site for more than 48 hours, of sufficient size, with provision for watering.

18. PLANT CONTAINERS

SIZES: Supply plants in weed-free containers of the sizes specified in the PLANT SCHEDULE.

19. GRASS SEED

GENERALLY: Grass seed mixtures shall be thoroughly pre-mixed, and shall include a bulking material such as safflower meal or an approved equivalent if required by the method of sowing. Submit a certificate of germination before sowing. Deliver to the site in standard sized bags marked to show weight, seed species and vendor's name.

SEED MIXTURES AND APPLICATIONS: Specified in the GRASS SEED SCHEDULE.

3. PLANTING WORKS

1. GRASS SOWING

APPROVAL: Sow grass only when approved. Do not sow if frost is likely before the grass has reached an established state, or in periods of extreme heat, cold or wet, or when wind velocities exceed 8 km/h, unless otherwise approved.

PREPARATION: Prepare the areas to be sown as specified in TOPSOIL SPREADING and FERTILIZER. If a prepared area becomes compacted from any cause before sowing can begin, rework the ground surface as specified in CULTIVATION before sowing the seed.

SOWING: Sow the seed by a method which achieves the specified application rate and even distribution. Sowing machinery shall be purpose made. Lightly rake the surface to cover the seed. Roll the seed bed immediately after sowing with a roller weighing not more than 90 kg/m of width for clay soils (or any soils having a tendency to pack) and not more than 300 kg/m of width for sandy or light soils.

2. GRASS ESTABLISHMENT

GERMINATION: Shall mean an even sward of healthy grass over the whole of the seeded area, with no bare patches.

WATERING: Thoroughly water the seeded area with a fine spray immediately after rolling until the soil is moistened to a depth of 150 mm. Continue watering until germination as necessary to keep the surface damp and the soil moist but not waterlogged. Then water as necessary to maintain the grass in a healthy condition, progressively hardened off to the natural climatic conditions prevailing in the locality at the time.

PROTECTION: Protect the newly sown areas against traffic until the grass is well established.

POST-GRASSING FERTILIZER: Specified in FERTILIZER.

RESEEDING: Rake over and reseed areas where the grass seed fails to germinate within one month of the date of the original sowing.

MOWING: Make the first cut and subsequent mowings to maintain the grass within the specified height range throughout the contract period.

WEEDING: Remove weeds that emerge in the grassed areas, or where directed spray with a selected herbicide for broad leaved weeds, to manufacturer's recommendations.

3. TURFING

TURF TYPE: As shown on the drawing.

SUPPLY: Obtain turf from a specialist grower of cultivated turf. Furnish a warranty from the grower that the turf is free from weeds and other foreign matter.

MAINTAINING CONDITION: Deliver turf to the site within 24 hours of cutting, and prevent it from drying out between cutting and laying. If possible, lay it within 36 hours of cutting. If it is not laid within 36 hours, roll it out on a flat surface with the grass up, and water as necessary to maintain a good condition.

LAYING: Prepare the areas to be turfed as specified in CULTIVATION, TOPSOIL, and FERTILIZER. Lay the turf along the land contours with staggered, close butted joints, and so that the finished turf surface is flush with adjacent finished surfaces of paving and the like. As soon as practicable after laying, roll the turf with a roller weighing not more than 90 kg/m of width. On slopes too steep for rolling, lightly tamp the turf into place.

WATERING: As soon as possible after rolling, irrigate thoroughly with a fine spray to a depth of 150 mm. Continue as necessary to maintain moisture to this depth and to maintain the grass in a healthy condition.

MAKING GOOD: Lift failed turf and relay with new turf.

TOP DRESSING: When the turf is established, mow closely; remove cuttings and lightly top dress to a depth of 10 mm with topsoil as specified in TOPSOIL. Rub the dressing well into the joins and correct any unevenness in the turf surface.

4. TEMPORARY GRASSING

SEED MIX TYPE: Specified in GRASS SEED.

FERTILIZER: Specified in FERTILIZER.

PREPARATION: As specified in CULTIVATION. Topsoil spreading shall not be required.

METHOD: Use purpose-made equipment where appropriate. Evenly distribute the seed and fertiliser, and provide appropriate cover to it.

WATERING: As necessary to ensure germination. Watering should not be necessary except in very dry conditions.

TIME LIMIT: Maintain temporary grassing until the expiration of the time limit specified in the TEMPORARY GRASSING SCHEDULE.

5. EXCAVATING FOR PLANTING

MASS PLANTING AREAS: Excavate a hole for each plant large enough to provide not less than 100mm all round the root system of the plant, or as shown on the Drawings.

INDIVIDUAL PLANTINGS IN GRASSED AREAS: Excavate a hole 100 mm deeper and 600 mm wider than plant containers of 5 L and over, or 450 mm diameter x 200 mm deep for pots and tubes, unless otherwise shown on the Drawings. Break up the base of the hole to a further depth of 100mm, and loosen compacted sides of the hole, as necessary to prevent confinement of root growth to the hole.

6. PLANTING

LOCATIONS: Do not vary the plant locations from those shown on the Drawings unless otherwise directed. If it appears necessary to vary the locations and spacing's to avoid service lines, or to cover the area uniformly, or for similar reasons, apply for directions.

PLANTING CONDITIONS: Do not plant in unsuitable weather conditions such as extreme heat, cold, wind or rain. Suspend excavation in other than sandy soils when the soil is wet, or during frost periods.

FERTILIZING: Specified in FERTILIZER.

WATERING: Thoroughly water the plants before planting begins, immediately after planting, and thereafter as required to maintain growth rates free of stress.

DEPTH OF PLANTING: When the plant is in its final position in its hole or bed the top soil level of the plant root ball shall be level with the finished surface of the soil surrounding the hole or bed. Test the depth by measuring the sides of containers. If backfilling is required to correct the depth, use topsoil mixture as specified in TOPSOIL.

PLACING: When the hole or bed appears to be of correct size, and not before, remove the plant from the container with minimum disturbance to the root ball, and place it in its final position, in the centre of the hole and plumb.

BACKFILLING: Backfill with topsoil mixture as specified in TOPSOIL. Lightly tamp down the mixture and water to eliminate air pockets.

WATERING BASINS: Except in irrigated grassed areas, construct a watering basin around the base of each individually planted tree, consisting of a raised ring of soil capable of holding a minimum of 10L.

Mulch: To watering basins of trees planted in dry land grass areas, provide mulch 100 mm.

7. TRANSPLANTING

CONDITIONS: Obtain approval before commencing transplanting. Select a time having regard to the appropriate season, time of actual operation, root ball diameter and depth, lifting methods, and the like. Approval may be deferred if the time is unfavourable because of these factors, or because of weather conditions.

ROOT BALL: Two days prior to transplanting of each specimen, thoroughly irrigate it to the full depth of the root ball. Select the diameter and depth of cut for the root ball to be lifted to minimise the cutting of roots. Maintain the ball of soil around the root system in firm condition during transplanting by wrapping in hessian or other appropriate open weave material, securely tied.

ROOT CUTTING: Cut roots with sharp tools. Do not fracture the root ball.

PRUNING: If selective pruning of branches appears necessary, obtain prior approval, and prune only as directed, and as specified in TREE SURGERY.

PLANTING: Plant as specified in PLANTING. Remove the root ball wrapping and ties by cutting, to avoid disturbance to the root ball.

8. MULCH SPREADING

GENERALLY: Spread mulches evenly to the depths shown on the Drawings, and rake smooth to finish 25 mm below surrounding finished levels unless otherwise specified. Grade the finished surface evenly between design surface levels. Mulch to be kept clear of stems of plants.

INDIVIDUAL PLANTING'S. Provide a 1500 mm diameter circle of mulch to individual planting's in grass.

9. SPRAYING

REPORTING: Report any evidence of insect attack or disease amongst plant material immediately it is noted.

SPRAYING: If so directed, spray with an insecticide and/or fungicide approved prior to use, in accordance with manufacturer's recommendations, and to comply with statutory requirements.

10. STAKES AND TIES

STAKES: Pressure treated softwood, in accordance with BS 8417:2011+A1:2014, straight, free from twists, pointed at one end.

Driving: Drive stakes 600 mm into the ground on the windward side of the plant, either before the plant is placed, or in such a manner as to avoid damage to the root system.

Sizes:

- For Adv. trees: 75 x 75 x 1800mm.
- For small trees (less than 2.5 m): 50 x 50 x 1800 mm, with ties spaced approximately 300 mm apart.
- For large trees double stake or underground fixing method, as directed.

TIES: Approved rubber or plastic strapping suitable to tree size should be used.

11. TREE SURGERY

GENERALLY: Tree work required to maintain trees on site shall be carried out by a tradesman qualified in arboriculture techniques, in a safe and if necessary progressive manner, and subject to prior approval.

OPERATIONS: All works on trees must comply with BS 3998:2010

PRECAUTIONS: Avoid damage to trees being treated or to nearby trees and surroundings. Do not use trees to be retained as anchors for winching operations or bracing.

DISPOSAL: Specified in SPOIL. Possible re-use as mulch is specified in SITE CLEARING.

ROOT PRUNING: Specified in WORK NEAR TREES.

4. ESTABLISHMENT

1. PLANTING ESTABLISHMENT METHOD

COMMENCEMENT: The planting establishment period stated in the PLANTING ESTABLISHMENT SCHEDULE shall commence from the Date of Practical Completion of the Works or from the Date of Practical Completion of the planting works (hereby specified to be a separable part of the Works), whichever is the later.

PRACTICAL COMPLETION OF PLANTING: Practical Completion of the planting works shall include but not be limited to the germination of grassed areas, establishment of turfed areas, and replacement of plants which have failed or been damaged or stolen during the work under the Contract.

2. PLANTING ESTABLISHMENT

RECURRENT WORKS: Throughout the establishment period continue to carry out recurrent works of a maintenance nature specified elsewhere in this Section, including but not limited to watering, mowing, weeding, fertilising, pest and disease control, reseeding, returfing, staking and tying, replanting, cultivating, pruning, hedge clipping, aerating, renovating, top dressing, keeping the site neat and tidy, and the like.

REPLACEMENTS: Continue to replace failed, damaged or stolen plants as specified in PLANTS.

MULCHED SURFACES: Maintain in a clean and tidy condition and reinstate the mulch as necessary.

STAKES AND TIES: Adjust and/or replace as required. Remove at the end of the planting establishment period if directed.

GRASSED AREAS: Continue to carry out the works specified under GRASS ESTABLISHMENT. Water and weed as required to maintain healthy and weed free growth. Mow as required to maintain grass height within the specified height range. Apply lawn fertiliser as specified in FERTILIZER at the completion of the first and last mowings, and at other times as necessary to maintain healthy grass cover. Carry out the last mowing and fertilisation not less than seven days before the end of the planting establishment period. Remove grass clippings from the site.

MAINTENANCE PROGRAM: Furnish a proposed planting maintenance program, and amend it as required until approved. Comply with the approved program.

MAINTAINING EXISTING GRASS: Where shown on the Drawings, maintain existing grass within the contract area as specified for the corresponding classifications of new grassland.

3. WEEDING AND RUBBISH REMOVAL

CONTAINERS: Collect empty plant containers daily during planting operations and remove or store on site for later removal if permitted, but ensure they are not able to be scattered by wind or other causes.

WEED GROWTH: Regularly remove, by hand, rubbish and weed growth that may occur or recur throughout grassed, planted and mulched areas. Remove weed growth from an area 1500 mm diameter around the base of the trees in grassed areas.

5. TRIM

1. SAWN EDGING

MATERIAL: Sawn hardwood or softwood of Durability Class 1 as defined in Appendix D of BS EN 844

SIZE: 150 x 50 mm nominal edgings, 50 mm square pegs, pointed one end.

INSTALLATION: Set edgings flush with adjoining surfaces as shown on the Drawings to define planting and/or grass areas. Fix to pegs with galvanised nails, or treated pine self drilling screws, two per fixing. Drive pegs 400 mm into the ground, 25 mm below finished level at 1200 mm centres on the planting side of the edging and with the top of pegs 25 mm below the top of the edging.

CURVING: Where the timber edge is to be curved, space pegs to hold it to a uniform curve. Reduce edging thickness to 15 mm if required to enable it to be bent.

6. LANDSCAPE WORKS SCHEDULES

1. SAMPLES SCHEDULE

Requirement: Submit the following samples:

Item	Minimum specimen size and/or quantity:	Minimum period for consideration:
Plants	1 per 100 of each species	5 days
Mulch	2.5 kg of each type	5 days
Topsoil	2.5 kg	5 days
Planting mixture	2.5 kg	5 days

2. TOPSOIL SCHEDULE

Location:	Topsoil type:	Topsoil depth:
Grassed areas	general purpose soil	150
Planting areas	general purpose soil	450
Planting backfill	planting mix	as required

3. FERTILIZER SCHEDULE

Location:	N:P:K ratio:	rate:
Grass:		
-@ time of sowing	11:34:11	300 kg/ha
-after germination	10:4:6	400 kg/ha

Turf: before laying	8:4:10	5 kg/100m ²
After laying	8:4:10	5 kg/100m ²
Advanced trees	12 month slow release	mfg rec
Trees	12 month slow release	mfg rec
Shrubs	12 month slow release	mfg rec
Groundcovers	12 month slow release	mfg rec

* Note slow release fertiliser should be species specific, i.e. native or non native.

4. GRASS ESTABLISHMENT SCHEDULE

MOWING:

Mowing intervals: as required

Height range: 50 – 75 mm

5. TEMPORARY GRASSING SCHEDULE

Location: all

Time limit: practical completion

6. PLANTING ESTABLISHMENT SCHEDULE

PLANTING ESTABLISHMENT PERIOD: 12 months

7. MEASUREMENT FOR PAYMENT

Payment shall be based on the Schedule of Rates as tendered for the contract. The following unit of measurement will be used in the preparation of the Schedule of Rates if lump sum Prices are not required. The schedule of rates shall include maintenance of the landscaped area throughout the defects liability period.

- Placing topsoil including fertilisers and seeding is measured in square metres.
- Existing topsoil on site is measured in cubic metres.
- Tree planting, shrubs and cover are measured in numbers.
- Turfing is measured in square metres.
- Cultivation is measured in square metres.