

APPENDIX 30/1: LANDSCAPE AND ECOLOGY IN GENERAL

General

- i) Nominated Landscape contractor submitted in Annex in Chapter 2 of Contract Documentation would be required to demonstrate the following.
 - a. Experience
 - b. Locality
 - c. Accreditation
- ii) The Contractor can check with Project Manager (or Tender Enquire Officer) for the Kirklees’s Approved Landscape Contractor list prior to finalising the Pricing Document submission in Chapter 5 of Contract Documentation.
- iii) The Contractor is responsible for obtaining all such relevant information, regarding all underground services and shall satisfy himself as to their positioning before undertaking any excavation works on the development or associated area with same.
- iv) The position of trees or shrub to be agreed Supervisor (or Kirklees’s Landscape Engineer).

Item	Trees/Shrub	Species Name	Size of Tree / Shrub	Location	Drawing Number

APPENDIX 30/4: GROUND PREPARATION

General

- i) Landscaped and tree planting areas are shown on Contract drawing.
- ii) Landscapes and tree planting areas shall be prepared as part of the Highways construction works.
- iii) All necessary excavations shall be carried out to required depths and specifications as part of the Highways construction.

Tree Planting into Hard Landscaping Areas

- i) Excavation / Site Clearance / Ground Preparation

Ensure all survey works, CAT scans and stats locations have been accurately established. Remove all hard surfacing and sub-base layers in areas of tree pits. Excavate tree pits to specified requirements and formation depths.

- ii) TREE

PITS

Sizes	1200 mm x 1200 mm x 750 mm deep.
Sloping ground	Maintain horizontal bases and vertical sides with no less than minimum depth throughout
Pit bottoms	With slightly raised centre. Break up to a depth of [200 mm].
Treatment	[Soil ameliorant worked into pit bottoms] Add 150mm depth of organic compost and work into the soil before planting. Place out all trees/ plants at specified centres before planting
Pit sides	Scarify
Backfilling material	Plant pit backfilling soil system, using a recommended sandy loam soil topsoil mix to BS3882 for areas of hard surfacing and compaction and where load bearing root cell/strata cell structures are used
Accessories	<p>5. Tree pit drainage layer as per drawing; Refer to drawing numbers where standard details are placed.</p> <p>6. Green Blue Urban – GBU 2105:</p> <p>7. Linear tree trench tree pit. Package contains:</p> <p>8. RootSpace 600 (GBURS61A).</p> <p>9. RootRain ArborVent (RRARBV150B).</p> <p>10. RootRain single inlet irrigation system with cast inlet</p> <p>11. Medium RootDirector (RD1000-RSA) Modular system.</p> <p>12. Twin walled geo net (geo-textile) GLTWGNA wrapped around Rootspace units.</p> <p>13. Re Root 600 Root barrier (600mm deep with root defecting ribs-rerjta reroot jointing tape for overlaps)</p> <p>14. Re Root 1000 Root barrier (1000mm deep with root defecting ribs-rerjta reroot jointing tape for overlaps). Depth as required.</p> <p>15. Adur tree grille (ADUR12A).</p> <p>16. Ullswater tree grille (ULLSSP6A).</p>

	17. ArborGuy strapped anchor system (SASAP 12A). 18. 10mm-20mm Clean angular drainage aggregate 19. Topsoil (RootSoil 20). 20. Drainage layer (GBUMOTYPE3). 21. RootStart (RSPMF2.5LA). 22. Drainage layer underground guying to BS 4043. Install to manufacturer's instructions
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iii) Trees and shrub Planting areas within 5m of the highway should incorporate Root Director (RD1000-RSA).

Tree Planting into Soft Surface Areas

i) Excavation / Site Clearance / Ground Preparation

- Ensure all survey works, CAT scans and stats locations have been accurately established.
- Remove all existing surface vegetation and roots where indicated and re-cultivate soil, remove all detritus from the site. Store any grass turf that may be replaced, but do not allow roots and soil to dry out. Add 150mm depth of organic compost and work into the soil before planting. Place out all trees, shrubs and plants at specified centres before planting.
- Create plant hole; plant specified shrubs; ensure roots are kept well-watered and moist.
- After planting ensure soil surface receives 75mm depth of bark chip mulch.

ii) Tree Pits

Sizes	1200 mm x 1200 mm x 750 mm deep
Sloping ground	Maintain horizontal bases and vertical sides with no less than minimum depth throughout
Pit bottoms:	With slightly raised centre. Break up to a depth of 200 mm
Treatment	[Soil ameliorant worked into pit bottoms-organic non-peat compost]
Pit sides	Scarify
Backfilling material	use a recommended sandy loam soil topsoil mix to BS3882 mix with excavated topsoil and non-peat organic compost
Accessories	<ul style="list-style-type: none"> • Tree pit drainage layer as drawing • Perforated plastics irrigation/ ventilation pipe • Root barrier • Root guides • Root cells • Drainage layer

iii) Trees and shrub Planting areas within 5m of the highway should incorporate Root Director (RD1000-RSA).

APPENDIX 30/5: GRASS SEEDING, WILDFLOWER SEEDING AND TURFING

GRASS SEED FOR ALL GRASSED AREAS (NON-WILDFLOWER)

(i) The areas to be grassed shall be prepared as described in Appendix 6/8 and receive the following treatment: Topsoil, Fertiliser, and Seeding.

- Supplier: Submit proposals.
- Mixture reference: Submit proposals.
- Application rate: 34-50 g/m².

(ii) **QUALITY OF SEED FOR ALL GRASSED AREAS**

- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
- Standard: EC purity and germination regulations.
- Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- Samples of mixtures: Submit when requested. – See example table below

The grass seed mixture shall be as Table 30.5.1 for central reserves, verges and side slopes and mix Type A specified below for other areas.

Mix A Low Maintenance

10% Agrostis stolonifera - Carmen, Penncross, Penneagle, Emerald, Prominent

40% Festuca rubra litt - Logro

50% Lolium perenne- Lorina

Table 30.5.1: Grass Seed Mixture per 50kg	kg	%
Crested Dogs Tail	10.0	20
Cocks Foot	15.0	30
Tall Fescue	5	10
Smaller cats Tail	2.5	5
Smooth Stalked Meadow Grass	7.5	15
Rough Stalked Meadow Grass	10	20

Note: Seed varieties to be from the UK National List where marked “not for fodder production”

(iii) **SOWING**

- General: Establish good seed contact with the root zone.
 - Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
 - Distribution: 2 equal sowings at right angles to each other.
 - Fertiliser and seed may, unless otherwise stated, be applied by hydraulic mulch.
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- A general-purpose granular fertiliser shall be incorporated into the upper 50mm of soil during final cultivation at a rate of 75 g/m².

(iv) **GRASS SOWING SEASON**

Grass seed generally: April to June or August to October.

PROTECTING/CUTTING

(i) **FIRST CUT OF GRASSED AREAS**

- Timing: When grass is reasonably dry.
- Height of initial growth: 75 mm.
- Preparation:
- Debris and litter: Remove.
- Stones and earth clods larger than 25 mm in any dimension: Remove.
- Height of first cut: 40 mm.
- Mower type: Rotary.
- Arisings: Remove from site.

(ii) **CLEANLINESS**

- Soil and arisings: Remove from hard surfaces.
- General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.

MAINTENANCE

FAILURES OF SEEDING/TURFING

- Duration: Carry out the following operations from completion of seeding/ turfing until the end of the rectification period.
- Defective materials or workmanship: Areas that have failed to thrive.
- Exclusions: Theft or malicious damage.
- Method of making good: Recultivation and reseeded/ returfing.
- Timing of making good: The next suitable planting season.

APPENDIX 30/6: PLANTING

EXTERNAL PLANTING

A. GENERAL

i) SITE CLEARANCE GENERALLY

General	Remove rubbish, concrete, metal, glass, decayed vegetation, and contaminated topsoil.
Stones	Remove those with any dimension exceeding 50 mm.
Contamination	Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
Vegetation	Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees
Large roots	Grub up and dispose of without undue disturbance of soil and adjacent areas
Additional requirements	Remove remnants of old fence posts and mesh.

ii) SOIL CONDITIONS

Soil for cultivating and planting	Moist, friable and (excepting marginal planting) not waterlogged
Frozen or snow-covered soil	Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

iii) CLIMATIC CONDITIONS

General	Carry out the work while soil and weather conditions are suitable
Strong winds	Do not plant

iv) TIMES OF YEAR FOR PLANTING

Deciduous trees and shrubs	Late October to late March
Conifers and evergreens	September/ October or April/ May
Herbaceous plants (including marginal)	September/ October or March/ April.
Container grown plants	At any time if ground and weather conditions are favourable.
Watering and weed control	Provide as necessary
Wildflower plugs	Late August to mid-November or March/ April.

v) MECHANICAL TOOLS

Restrictions	Do not use within 100 mm of tree and plant stems
vi) WATERING	
Quantity	Wet full depth of topsoil
Application	Even and without damaging or displacing plants or soil
Frequency	As necessary to ensure establishment and continued thriving of planting.
vii) WATER RESTRICTIONS	
General	If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.
viii) NOTICE	
Give notice before:	<ul style="list-style-type: none"> - Setting out. - Applying herbicide. - Applying fertilizer. - Delivery of plants/ trees. - Planting shrubs. - Planting trees into previously dug pits. - Watering. - Visiting site during maintenance period.
Period of notice	One week.
ix) PREPARATION, PLANTING AND MULCHING MATERIALS	
General	Free from toxins, pathogens, or other extraneous substances harmful to plant, animal, or human life
Certification of source, analysis, suitability for purpose and absence of harmful substances	Submit.
Certified materials:	Submit proposals. Give notice before ordering or using.
x) PLANTS/ TREES	
Condition	Materially undamaged, sturdy, healthy and vigorous.
Appearance	Of good shape and without elongated shoots
Hardiness	Grown in a suitable environment and hardened off.
Health	Free from pests, diseases, discoloration, weeds and physiological disorders
Budded or grafted plants	Bottom worked
Root system and condition	Balanced with branch system
Standard	The National Plant Specification

Species	True to name
Origin/ Provenance	British grown
Definition	Origin and Provenance have the meaning given in the National Plant Specification

xi) PLANTS/ TREES - SPECIFICATION CRITERIA

Name, forms, dimensions, provenance and other criteria	As scheduled and defined in the National Plant Specification
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xii) CONTAINER GROWN PLANTS/ TREES

Growing medium	With adequate nutrients for plants to thrive until permanently planted
Plants	Centred in containers, firmed and well-watered
Root growth	Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting
Hardiness	Grown in the open for at least two months before being supplied.
Containers	With holes adequate for drainage when placed on any substrate commonly used under irrigation systems

xiii) LABELLING AND INFORMATION

General	<p>Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:</p> <ul style="list-style-type: none"> - Full botanical name - Total number - Number of bundles - Part bundles - Supplier's name - Employer's name and project reference - Plant specification, in accordance with scheduled National Plant Specification categories
Additional information	<p>Submit on request:</p> <ul style="list-style-type: none"> - Country of origin - Potting dates - Propagation method and dates - Pruning dates - Type of container

xiv) PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES

Types/ Species	As plant schedule
Predelivery inspection	Give notice
Labelling	Identify inspected plants/ trees as reserved for use on this project

xv) PLANT/ TREE SUBSTITUTION

Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, pruning and other arisings

Remove

B. PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS

xix) HERBICIDE TO CLEAR OVERGROWN BEDS

Locations	All planting areas
Type	Suitable for supressing perennial weeds
Timing	Allow fallow period before cultivation
Duration (minimum)	As manufacturer's recommendation

xx) WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS

Locations	All planting areas
General	Prevent weeds from seeding and perennial weeds from becoming established, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.

xxi) CULTIVATION

Compacted topsoil	Break up to full depth
Cultivation	Loosen, aerate and break up soil into particles of 2-8 mm
Depth	350 mm
Timing	Within a few days before planting
Weather and ground conditions	Suitably dry.
Surface	Leave regular and even
Levels	<ul style="list-style-type: none"> - 25 mm above adjoining paving or kerbs - 50 mm above adjoining lawns - Minimum 150 mm below dpc of adjoining buildings
Undesirable material brought to the surface	Remove visible weeds, roots and large stones with any dimension exceeding 30 mm
Soil within root spread of trees and shrubs to be retained	Do not dig or cultivate

xxii) NATURALIZED HEDGES

Planting

In trenches large enough to take full spread of roots. Set out plants evenly

xxiii) FENCING SUPPORT FOR NEW HEDGES

Type

Timber post and general pattern wire mesh

Standard

To BS 1722-2

Height

600 mm

Timing

Before planting hedge

Support

Lightly secure hedge plants to fence wires at appropriate intervals

xxiv) STAKING

General

Stakes Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end

Preservative treatment

Not required

Nails

To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads

Stake size (minimum)

75 mm diameter. Ideally 1.8 metres above ground for semi-mature trees

xxv) AFTER PLANTING

Watering

Immediately after planting, thoroughly and without damaging or displacing plants or soil.

Firming

Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.

Top dressing

Not required

Depth

N/A

xxvi) SEMI-MATURE TREES

Standard

Prepare roots and transplant to BS 4043

Backfilling material

Use a recommended sandy loam soil topsoil mix to BS3882 mix with excavated topsoil and non-peat organic compost

Support

Long single staking or underground guys as specified [Not required]
Ensure trees are protected and kept watered.
Ensure no damage**xxvii) LONG SINGLE STAKING FOR: [HEAVY STANDARD TREES]**

Staking	Position stake close to tree on windward side and drive vertically at least 300 mm into bottom of pit before planting
Backfilling	Consolidate material around stake
Height of stakes	Cut off just below lowest branch of tree. Stake to be ideally 1.8 metres above ground for semi-mature trees
Ties	[Adjustable ties]
Tying	Secure tree firmly but not rigidly to stake with at least two ties. Use three ties, if necessary, to prevent tree touching stake
Position	Top tie within 25 mm of top of stake and lower tie approximately halfway down

xxviii) **CLIMBING PLANTS USED AS GROUND COVER**

Planting

Canes or other supports
Arrangement

Remove Spread stems

Fixing

Pinned to ground to ensure good contact

xxix) **TREE PIT ROOT BARRIER**

Locations

Wherever the installed root-ball will be within 3.0 m of an existing underground service route

Manufacturer

Green Blue Urban or similar approved Contractor's choice

Product reference

Contractor's choice

Depth of top of root barrier below finished soil level

Varied up to sub-base levels, allow no soil above. Refer to manufacturer's instructions 600mm depth or 1000mm depth. Refer to detail drawings: root barrier to sit around underground rootspace structure in some cases to protect walls, roads and services.

Installation

With sides vertical

xxx) **TREE PIT ACCESSORIES**

Locations

All tree pits in hard surfaces

Manufacturer

Green Blue Urban or similar approved supplier

Product reference

Contractor's choice

Type

Contractors' choice

C. Existing Tree Protection during Highways Works

All works adjacent to existing trees must be compliant with BS5837.

The latest edition of British Standard 5837, BS 5837: 2012 ‘Trees in Relation to Design, Demolition and Construction – Recommendations’, came into effect on 30 April 2012 and supersedes the previous edition BS 5837: 2005 ‘Trees in Relation to Construction – Recommendations’.

TABLE 30.6.1 - SCHEDULE OF PLANTING

Planting location to refer to the Landscape drawings number [insert drawing number].

Plant type Tree/ Shrub	Species name	Qty	Plant size girth	Plant size height	In - pits, trenches, bed or grassed areas	Brief description of the location	Density/ Centres	Bare Root or Root Ball

APPENDIX 30/7: GRASS, BULBS AND WILDFLOWER MAINTENANCE

Refer to Appendix 30/9 for maintenance details for grass, bulbs and wildflowers.

APPENDIX 30/8: WATERING – WATERING

Clause 3008 Watering

- i) The Contractor shall water all planting undertaken under the Contract, in accordance with this Clause, at the frequency necessary to ensure establishment and survival.
- ii) When instructed by the Project Manager additional watering shall be carried out.
- iii) See Appendix 30/9 and watering requirements as listed in Appendix 30/6.

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| <ol style="list-style-type: none">a) Watering<ul style="list-style-type: none">• Quantity: Wet full depth of topsoil.• Application: Even and without damaging or displacing plants or soil.• Frequency: As necessary to ensure establishment and continued thriving of planting.b) Water restrictions<ul style="list-style-type: none">• General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering. |
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APPENDIX 30/9: ESTABLISHMENT MAINTENANCE FOR PLANTING

Clause 3009 Establishment Maintenance for Planting

- Plants and planting areas maintenance shall be carried out at the location to refer to the Landscape drawings number **[insert drawing number]** and frequency instructed by the Kirklees Council Landscape Engineer or the Project Manager.

Table 30.9.1 Maintenance Schedule for Planting

Planting	YEAR 1 Rectification period x12 maintenance visits	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Grass cutting on verges / path edges/cycle way edge 1 metre back from path edge. a) removal of stones, litter, undesirable and deleterious material. b) cutting around obstacles and between plants. c) strimming d) sweeping e) cutting edges f) re-forming edges g) disposal of material	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year
Grass cutting on verges/path edges/cycle way edge. a) removal of stones, litter, undesirable and deleterious material b) cutting around obstacles and between plants c) strimming d) sweeping e) cutting edges f) re-forming edges g) disposal of material	6x visits per year				

<p>Grass cutting to wildflower meadow/woodland edges.</p> <p>a) removal of stones, litter, undesirable and deleterious material</p> <p>b) hoeing and raking</p> <p>c) cutting</p> <p>d) measures to avoid uprooting desirable vegetation.</p> <p>e) disposal of material</p>	<p>2 x per year annual spring summer cut-after flowering</p>	<p>2 x per year annual spring summer cut-after flowering</p>	<p>2 x per year annual spring summer cut-after flowering</p>	<p>2x per year annual spring summer cut-after flowering</p>	<p>2 x per year annual spring summer cut-after flowering</p>
<p>Weeding by hand or spray etc.</p> <p>a) Selective weed control.</p> <p>b) Weed control by spot application.</p> <p>c) Hand weeding. Cutting weeds. To planted areas, grassed areas, to wildflower areas, to shrubs.</p>	<p>6 x visits per year during growing season</p>	<p>6 x visits per year during growing season</p>	<p>6 x visits per year during growing season</p>	<p>6 x visits per year during growing season</p>	<p>6 x visits per year during growing season</p>
<p>Maintain hedge line: hedge cutting/pruning remove clippings, litter debris and foreign objects.</p>	<p>2 x visits per year</p>	<p>2 x visits per year</p>	<p>2 x visits per year</p>	<p>2 x visits per year</p>	<p>2 x visits per year</p>
<p>Maintain shrubs and beds; hand weed; prune annually; maintain edges; sweep soil or mulch spills back onto bed.</p>	<p>6x visits per year</p>	<p>6x visits per year</p>	<p>6x visits per year. Year 3 - pruning shrubs: thinning, scrub control, remove clippings and debris 1x per year</p>	<p>6x visits per year. Year 3 - pruning shrubs: thinning, scrub control, remove clippings and debris 1x per year</p>	<p>6x visits per year. Year 3 - pruning shrubs: thinning, scrub control, remove clippings and debris 1x per year</p>
<p>Check all mulch matts, re-peg or replace as necessary.</p>	<p>6x visits per year</p>	<p>6x visits per year</p>	<p>6x visits per year</p>	<p>6x visits per year</p>	<p>6x visits per year</p>
<p>Check all trees for health and condition; check all tubes, ties and stakes and re-firm ground; repair damage, including hedgerow.</p>	<p>6 x visits per year</p>	<p>6 x visits per year</p>	<p>6 x visits per year Formative pruning to retain shape of trees</p>		
<p>Check all trees condition and health; check tubes, ties and stakes and re-firm ground; repair damage. Including hedgerow; Tree maintenance to include:</p>	<p>-</p>	<p>-</p>	<p>-</p>	<p>6 x visits per year</p>	<p>6 x visits per year</p>

(a) pruning; (b) dealing with damage to limbs and boles; (c) repairing bark wounds; (d) probing cavities; (e) removal of debris and loose decayed wood from cavities; (g) removal of foreign objects; (h) severance of climbing plants; (i) crown lifting, thinning, reduction and reshaping; (j) disposal of material (l) inspections and reports.					
Remove litter, detritus from the planting site, remove off-site.	6 x visits per year				
Top up all mulch levels.	1 x every year to the base of the hedge line 75mm thickness (annual)	1 x every year to the base of the hedge line 75mm thickness (annual)	1 x every year to the base of the hedge line 75mm thickness (annual)	1 x every year to the base of the hedge line 75mm thickness (annual)	1 x every year to the base of the hedge line 75mm thickness (annual)
Check and repair rabbit fence as required.	6x visits	6x visits	6x visits	6x visits	6x visits Removal of all rabbit fence by the end of the maintenance period
Replacement of plant losses (provisional sum)	1 x per year in next available planting season	1 x per year in next available planting season	1 x per year in next available planting season	1 x per year in next available planting season	1 x per year in next available planting season
Defects / maintenance visit with Project Manager / client and associated written report / list.	1 x per year				

APPENDIX 30/13: TREE PITS

- i) Tree pits shall be installed by the Contractor in accordance with Kirklees Council Standard Detail HD/SD/30/01.
- ii) In streets and other paved areas, a root director (by Greenleaf, GBU or similar accepted) shall be installed.
- iii) Tree pits shall be excavated with a slightly raised center. Break up bottom of pit to 150 deep.
- iv) Where specified, fertiliser shall be Fisons Fidcote 360 16.10.10 at 5kg/tree pit. Broadleaf P4 Agricultural Polymer shall be applied at 1kg/cu.m. of the backfill material.
- v) Tree pits shall be filled with topsoil or Urban Tree Soil Sand (Heicom or similar accepted material) as shown on the drawings. The exact shape of the tree soil area is not important, and it may be adjusted to fit site constraints. The shape of the tree pit should not be circular.
- vi) Root Director to be used as specified.
- vii) Where specified, ground guying shall be provided using Platipus Anchors Model RF2 88DB1 (or similar approved) for 25-30cm girth trees and RF3 138-DB1 for 60cm trees.

APPENDIX 30/14: RETENTION AND PROTECTION OF TREES AND HEDGEROWS ON THE EXISTING HIGHWAY

- i) Existing trees and hedgerows to be retained as part of the scheme as shown on the general arrangement drawings and care shall be taken to avoid damage to them.
- ii) During the construction Contractors are expected to work in harmony with trees and other protected vegetation.
- iii) Tree protection measures should conform to Section 9 of the BS5837 Trees in relation to Construction (2005). 'The Construction Exclusion Zone: Barriers and Ground Protection in Particular care shall be taken such that trees and hedgerows to be retained and preserved shall not be damaged during the removal and disposal of adjacent trees and hedgerows.
- iv) Due to the need to avoid excavation in order to avoid damage to the roots or rooting environment of retained trees, Root protection areas (RPA) have been identified. In order to avoid root severance, within the RPA sub-bases should be formed using a cellular confinement system at ground level that shall comply with Geocellular system described in Appendix 6/5.
- v) Where Tree Roots or Archaeological Protection requirement apply Smooth wheeled non-vibrating rollers (Mass per metre width of roller not exceeding 2700kg) will be required. The minimum number of passes and thickness of uncompacted layers will need to be agreed with the Project Manager.
- vi) No material or excavated waste shall be stored or deposited over the root system of the trees and hedgerows to be preserved.
- vii) To reduce the risk of contamination due to spillage, no liquid storage shall be set up within 15 metres of any tree or hedgerow to be preserved.
- viii) No branches shall be trimmed, nor any roots pruned or severed without the prior approval of the Project Manager.
- ix) Trees and hedgerows to be preserved shall not be used as anchorage points and no fires shall be lit within 6 metres of the furthest extent of the tree canopy.