STANDARD CONSTRUCTION SPECIFICATION for RETAIL SERVICE STATIONS

LANDSCAPING

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9.0 PLANTS & MATERIAL PROCUREMENT

9.0.1. SHRUBS, HERBAECEOUS PERENNIALS AND TREES

9.0.1.1 All plants must be robust and well grown and shall conform to BS 3936 Part 1:1992 Nursery Stock (Specifications for trees and shrubs)

9.0.1.2 Immediately upon delivery, check condition of plants to ensure that only healthy and robust species are accepted. For example: Plants that have been containerised for a long period of time may be lacking in nutrients and will often have a layer of moss or liverwort.

9.0.1.3 Any plants, which appear in poor health, stunted growth or show obvious signs of pests, disease, dieback or discoloured foliage must be replaced without exception prior to planting.

9.0.1.4 Water the plants in their containers upon delivery.
Shrubs and herbaceous perennials must be stored in their containers in a shady and frost-free area.
In temperatures exceeding 23 degrees Celsius, the containers must be watered with 3 litres of water per plant every three daylight hours until planting takes place.
Water used should be drinkable.
Containerised trees – 50 litres of water per m2 of root area
Root balled and bare rooted trees – keep moist and covered with plastic sheeting at all times, never allow them to dry out

9.0.1.5 All plants must be planted in the ground within two days of delivery

9.0.1.6 Protect plants from extremes of weather prior to placing in the ground; a few minutes' exposure to a cold wind can be sufficient to kill a plant's roots. Keep containerised shrubs in a cool, shady area.

9.0.1.7 Moving and planting any plants over 1200mm high must be done by two people

9.0.2 TREES

9.0.2.1 Trees must have a balanced framework of top growth in proportion to the root ball size.
All trees must have a straight trunk with evenly spaced branches both up and around the trunk.
A large healthy root ball with lots of fibrous roots together with a smaller canopy is preferable to a tree with a small root ball and over sized canopy. All trees must have at least a 250mm width of root ball for every 25mm diameter of stem at ground line just above basal swell (Root/trunk junction)

9.0.2.2 Bare rooted plants should be planted immediately after delivery. While awaiting planting the roots should be kept moist at all times, stored by heeling in. (all the roots buried in a pit, covered with soil, in a shady and frost-free area.)

9.0.2.3 Short-term storage of root balled trees (up to two days), the plant should have the moist roots wrapped in plastic sheets or under tarpaulin.

9.0.2.4 Short term storage of all trees, whether containerised, bare rooted and root balled, must be in an unheated outbuilding, free from frost, sunlight and heat.

9.0.2.5 Health check all specimens looking for e.g.- broken leading shoots or side branches, damaged or unhealthy root system, damaged or dried out bark, obvious signs of disease.
Ensure root ball is firm, fibrous, evenly moist and the wrapping intact, if not, replace immediately

9.0.3 WHIPS / TRANSPLANTS

9.0.3.1 Ensure whips / transplants are entirely dormant, robust and disease free. Whips must be planted on same day as delivery. All whips must be stored with roots kept moist to the touch wrapped in plastic sheeting or tarpaulin.

9.0.4 MULCH

9.04.01 Mulch, where required, shall be landscape grade mixed bark graded 35-60mm, treated and disease free.

9.04.02 To all planting areas an initial 80mm depth of mulch shall be evenly applied, allowing for settlement to a minimum depth of 60mm adequately retaining moisture and reducing growth of weeds. The initial application of mulch must be checked before leaving site to ensure that the minimum depth has been achieved. Any areas not conforming must be treated with a further application of mulch to achieve the required settlement depth of 60 mm.

9.0.5 COMPOST

9.0.5.1 All compost used to be multi-purpose peat reduced or ideally peat free, suitable for trees and shrubs.

9.0.6 FERTILISER

9.0.6.1 Product selection and usage must comply and meet the requirements and recommendations of the Fertilisers Manufacturers Association, the Fertiliser Regulations 1991 (and subsequent amendment regulations), and the appropriate DEFRA codes of practice relating to the protection of water, air and soil.

9.0.6.2 Use proprietary general-purpose, slow release, NPK balanced, powder or granulated fertilizer suitable for maintaining healthy plants on each individual site.

9.0.6.3 Follow manufacturers recommended application rates and instructions. Do not apply to plants leaves and stems.

9.0.7 STAKES

9.0.7.1 All stakes used for plant and tree stabilisation shall be formed from chestnut wood and shall be straight and true. All stakes shall have a minimum width in any direction of 30mm. Stake lengths shall allow for a minimum of 600mm depth to be inserted into the ground with an above ground length to suit the plant or tree species as specified elsewhere in this specification.

9.0.8 IMPORTED TOPSOIL

9.0.8.1 All imported topsoil used to enhance or add to existing site topsoil shall be to BS 3882:2015 - Specification for Topsoil. Imported topsoil must be of medium / fine texture, with a ph level of between 6.5 to 7.5, be substantially free of stones and be free of disease, weed seeds, roots of perennial weeds, sticks, subsoil and foreign matter. All imported topsoil must be

certified low in PTE's (potentially toxic elements).

9.0.8.2 Topsoil contaminated with subsoil, rubbish oil based products, or other materials toxic to plant life must not be used.

9.0.9 TURF

9.0.9.1 All turf must be fresh, green, moist, weed free, a low maintenance variety, robust and well grown. All turf must conform to BS 3969:1998: Recommendations for turf for general purposes. Turf must be delivered on day of laying only.

9.0.9.2 Turf, which disintegrates on handling, is dull, yellowish, or dry edged, must not be used. Turf must be laid on the day of delivery. Store rolled up under tarpaulin in a shady and frost free area. Keep turf moist, roots and existing soil to be damp to the touch.

9.0.10 GRASS SEED

9.0.10.1 Grass seed must be good quality and conform to BS 3969: 1998 Recommendations for turf for general purposes (Grass seed mixtures). The mix must be general purpose/universal landscape - drought tolerant and low maintenance species.

9.0.11 CHEMICAL HERBICIDES AND PESTICIDES

9.0.11.1 All chemical herbicides and pesticides must be used in strict accordance with local authority regulations and manufacturer's instructions and recommendations. All chemicals must be supplied with their relevant COSHH data sheets and requirements be complied with.

9.0.11.2 All chemicals must be approved by the Pesticides Safety Directorate and the Department for Environment, Food and Rural Affairs (DEFRA).

9.0.11.3 <u>Any products or preparations containing Sodium Chlorate or any other types of oxidising agents must never be used. These products or preparations, being a strong oxidizing agent, are potentially explosive when mixed with organic materials.</u>

9.1 <u>PLANTING TO NEW INSTALLATIONS</u>

9.1.1 GENERAL REQUIREMENTS

9.1.1.1 If underground services or overhead cables are encountered during works, stop immediately and report to the Project Manager for instruction.

9.1.1.2 Tree and shrub planting must take place during the appropriate times to suit the trees or shrubs being planted

9.1.1.3 Container grown shrubs can be planted at any time of year, except when the ground is frozen or waterlogged. If the choice of planting time is optional then Autumn is preferred whilst the ground is still warm.

9.1.1.4 Trees over 1200mm high and under 2500mm high, must have a wooden support stake. There must be a gap of 50mm between the tree stem and the stake. All stakes must be secured with a single adjustable rubber buckle tie with pads. Tack the tie to the stake to prevent slipping.

9.1.1.5 When staking standard trees over 2500mm and under 5000mm high, must have a two

wooden support stakes and cross bar.
There must be a gap of 50mm between the tree stem and the stake. All stakes must be secured with a single adjustable rubber buckle tie with pads. Tack the tie to the stake to prevent slipping. For larger trees refer to appropriate specific site landscaping information documents or drawings.

9.1.1.6 All persons using chemical herbicides are to be trained and certified under the requirement of the Food and Environment Protection Act 1985 and hold a National Proficiency Tests Council Certificate of Competence.

9.1.1.7 Chemical herbicides manufacturer's instructions and recommendations must be strictly followed regarding the use of protective clothing and the safe and effective use of herbicides. Precautions must be taken to avoid spray drift, and any damage to non-target plants when applying herbicides. Chemical herbicide spraying must be performed during still dry conditions, without rain for 6 hours.

9.1.1.8 The approval of the Environment Agency must be obtained prior to any chemical treatments being used or applied if the site is near a water course or source or above an aquifer.

9.1.2 EXISTING TOPSOIL PREPARATION

9.1.2.1 Prior to any planting a settlement test must be carried out to establish components of existing soil. Replenish components to achieve the required quotas of one-third humus, one-third sand and grit, one-third clay and silt by adding sharp sand and grit to heavy clay soil, or compost to sandy soil as required to achieve the required component quotas and achieve a pH level of between 6.5 to 7.5.

9.1.2.2 Break up any compacted topsoil by fork or machinery to loosen the top 200mm depth adding compost and/or sand/grit as required. Remove undesirable material brought to the surface including stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass and foreign matter. If existing soil has been compacted then improve to a depth of 400mm.

9.1.2.3 Topsoil must be reasonably dry and workable to allow grading to smooth, flowing contours, with falls for adequate drainage, removing all minor hollows and ridges. Topsoil levels may be adjusted by blade grading ensuring that there is nowhere less than 250 mm of topsoil. If the required levels cannot be achieved by movement of the existing soil, obtain instructions from The Projects Services Project Manager.

9.1.2.4 After due allowance for natural settlement and unless otherwise stated final levels of topsoil must be:-
30 mm above adjoining paving or kerbs.
Not less than 150 mm below dpc of adjoining buildings.
30 mm higher for shrub areas than for adjoining grass areas.
All topsoil must achieve levels and contours to suit the site specific landscaping scheme.

9.1.3 IMPORTED TOPSOIL PREPARATION

9.1.3.1 Any imported topsoil found on site to be contaminated and not in compliance with this specification shall be disposed of to an appropriate licensed site in strict accordance with current legislation and law.

9.1.3.2 Prepare existing sub grade levels to allow the specified finished levels of the topsoil to be laid. Excavate locally as necessary for areas of thicker topsoil. Small planting beds located in general landscape areas may be excavated separately at a later date.

9.1.3.3 Topsoil must be reasonably dry and workable to allow grading to smooth, flowing contours, with falls for adequate drainage, removing all minor hollows and ridges. Topsoil levels may be adjusted by blade grading ensuring that there is nowhere less than 250 mm of topsoil. If the required levels cannot be achieved by movement of the existing soil, obtain instructions from The Projects Services Project Manager.

9.1.3.4 After due allowance for natural settlement and unless otherwise stated final levels of topsoil must be:-
30 mm above adjoining paving or kerbs.
Not less than 150 mm below dpc of adjoining buildings.
30 mm higher for shrub areas than for adjoining grass areas.
All topsoil must achieve levels and contours to match levels and contours of adjoining existing soil areas.

9.1.4 GROUND PREPARATION FOR BOTH TURF LAYING AND SEED SOWING

9.1.4.1 Do not lay turf or sow seed in temperatures exceeding 23 degrees or below 5 degrees Celsius. If an optimum planting time is available then Autumn is preferable, followed by Spring avoiding any prolonged dry periods.

9.1.4.2 Blended topsoil to a minimum depth of 100mm should be turned over and free from surface stones, debris and perennial weeds.

9.1.4.3 Where soil has become compacted dig over or rotavate to a depth of 100mm.

9.1.4.4 Firm down the soil and rake to a fine tilth. Level site and water the ground so the soil is damp to a depth of 75mm

9.1.5 CONTAINERISED SHRUBS AND HERBACEOUS PERENNIALS

9.1.5.1 Dig a hole twice as deep and wide as the container, if the ground is heavy clay then loosen the sides and bottom of the pit

9.1.5.2 Ease the plant from the container and prior to planting, tease out and spread any roots, which have been circling the container, to encourage sideways growth of new roots.

9.1.5.3 Place the plant in the pit, so the plant is at the same level in the ground, as it was in the container. Check level with a cane. Ensure best aspect of plant is facing the most appropriate direction.

9.1.5.4 Fill in the gaps around the sides of the plant firming in layering to the top. Gently firm in to make sure it is secure. Water with at least one full 8-litre watering can.

9.1.5.5 Dead head any spent flowers.

9.1.5.6 Prune back to a healthy bud any branches, which are damaged or dead. Open up centres of plants and remove any tangled or crossing branches to allow air to freely circulate and maintain plant health.

9.1.5.7 Mulch around to 1000mm radius from main stem, mulch must be kept a minimum of 80mm distance away from plant stems to reduce the risk of decay and pest infestation.

9.1.6 CONTAINERISED TREES

9.1.6.1 Dig a pit 1.5 times the height of the container and 3 times as wide. If the soil is heavy clay or compacted, loosen the bottom and sides of the pit. Soak the plant well.

9.1.6.2 A stake is to be hammered into the hole off centre at a 45 degree angle, leaning into the prevailing wind, prior to planting. A stake length must be used to achieve an above ground length equal to one third of the height of the tree plus a length to allow a driven depth of 600mm below ground level.

9.1.6.3 Gently remove the plant from the container taking care not to damage the root system or bark, position the tree in the pit so the ground level on the stem is the same as the level in the container. Check by laying a cane across the pit. Back fill the gaps gently and firm down the soil by gentle treading. If necessary put a spiral rabbit guard and cane around the stem.

9.1.6.5 Prune back any damaged branches to just above a healthy bud

9.1.6.6 Gently water the area thoroughly – 50 litres of water per one m2 of root area.

9.1.6.7 Mulch area around tree to 1000mm radius from trunk, keep area clear of mulch to 100mm away from trunk to reduce decay and pest problems.

9.1.6.8 Remove tags, bindings etc to prevent girdling of the plant

9.1.7 BARE ROOTED TREES AND ROOT- BALLED TREES

9.1.7.1 Planting must take place after the leaves have fallen and before the buds break, normally October/November to March/April. Planting must not take place if the ground is waterlogged or frozen.

9.1.7.2 Dig a pit 300mm wider than the root ball/root system, break up any compacted soil to the sides and bottom of the pit to aerate soil

9.1.7.3 <u>Keep roots moist and protected with plastic sheets at all times.</u>

9.1.7.4 Use a fork for lifting the plant, spades must not be used as this may damage the roots.

9.1.7.5 Remove any wrapping around the plant.

9.1.7.6 Prior to planting, water thoroughly so roots are visibly wet

9.1.7.7 A stake is to be hammered vertically into the hole off centre prior to planting. A stake length must be used to achieve an above ground length equal to one third of the height of the tree plus a length to allow a driven depth of 600mm below ground level.

9.1.7.8 Place tree in the pit, on a mound of soil supporting the roots, so the stem is at the same level in the ground as it was prior to delivery, check with a cane

9.1.7.9 Space out bare roots into the pit - do not bend them. Enlarge the pit if necessary in accordance with BS 4043 - from nursery to independence in the landscape. Recommendations. Start refilling the hole with soil and water to settle the soil

9.1.7.10 Fill any spaces in the pit with topsoil, gently shaking the tree so the soil filters into the gaps and around the roots, firm in gently with the foot

9.1.7.11 Remove tags, bindings etc to prevent girdling of plant.

9.1.7.12 If necessary put a spiral rabbit guard and cane around the stem

9.1.7.13 Water in gently so moisture penetrates the ground – 50 litres per m2 of root area

9.1.7.14 Mulch area around tree to 1000mm radius from trunk, keep area clear of mulch to 100mm away from trunk to reduce decay and pest problems.

9.1.7.15 Remove tags, bindings etc to prevent girdling of the plant

9.1.8 WHIPS / TRANSPLANTS AND NATIVE HEDGEROWS

9.1.8.1 Bare rooted plants should be transplanted between mid-Autumn to mid- Spring, avoiding waterlogged or frozen periods.

9.1.8.2 Clear away any grass and weeds to 45cm radius from planting area.

9.1.8.3 Prune whips to two thirds of original height if they have not already been pruned by the nursery.

9.1.8.4 Insert the spade vertically into the soil. Create a 45-degree slit by pushing the spade backwards, place whip in the space whilst carefully inserting the roots, ensuring they are vertical.

9.1.8.5 Gently pull the plant up until the root collar is at ground level.

9.1.8.6 Firm the soil around the roots ensuring that the plant is vertical. Water in only if ground is dry.

9.1.8.7 Where necessary fit a spiral rabbit guard and cane.

9.1.8.8 Lay Mulch, to 80mm depth, around tree starting 100mm away from stem and extending to 1000mm radius from stem. A 100mm wide clear area away from the stem must be maintained to reduce decay and pest problems.

9.1.8.9 Remove tags, bindings etc to prevent girdling of plant.

9.1.9 TURF LAYING

9.1.9.1 While turfs are awaiting laying, measures must be taken to ensure that root systems do not dry out, including but not limited to, stacking in a cool location, sprinkling with water and if necessary covering with polythene.

9.1.9.2 Start laying turfs closely butt-jointed. The next rows should be staggered in stretcher bond, brickwork fashion.

9.1.9.3 During placing of turfs, planks or scaffold boards must be placed on newly laid turf to allow laying of subsequent rows.

9.1.9.4 Lightly firm down with the back of a rake, or similar, to ensure good contact between the roots and the soil.

9.1.9.5 Fill all gaps to joints with sandy soil. Soak the turfed area thoroughly ensuring that the water

has soaked through the turfs to the soil underneath. Water should be drinkable. Do not lay turf on existing grass. Avoid walking on turf for 2 days after initial laying. Avoid motorised traffic on the area for 2 weeks after initial laying.

9.1.10 GRASS SEEDING

9.1.10.1 Apply granular general-purpose fertilizer to the ground surface 2 days prior to seeding. Lightly rake the soil surface ready to receive the seeds

9.1.10.2 If sowing by hand or machine, calculate the amount of seed required for the area, according to the manufacturers' instructions

9.1.10.3 If applying by hand mark out areas of one metre square, using cane and string. After working out the application rate for this area sow half of the amount working up and down in strips. The second half to be applied at right angles to the first application again in strips.

9.1.10.4 If applying by machine work up and down the whole area in strips, ensuring that the strips join but not overlap. Turn off the application holes when making the turn.

9.1.10.5 Using a swift light action rake the seeds gently into the soil surface to 5mm.

9.1.10.6 After sowing, do not allow top 25mm of soil to become dry until germination has occurred. This can vary between 7-21 days. Watering must be carried out so as not to disturb the seeds.

9.2 NEW INSTALLATION AFTERCARE
FIRST 6 MONTHS

9.2.1 GENERAL REQUIREMENTS

9.2.1.1 All work to conform to BS 4428:1989 Code of Practice for General Landscape Operations (excluding hard surfaces).

9.2.2 GRASS SEEDED AREAS

9.2.2.1 Following germination water every other day with a gentle sprinkler applying to 15mm of water per week, until grass plants are 50mm high

9.2.2.2 Do not cut the grass plants until they are 50mm high and if they are damp. The first three cuts to be to 35mm high.

9.2.3 TURF LAID AREAS

9.2.3.1 In dry weather, water the newly laid or sown turf every other day for one week or until the roots have established. In temperatures over 23 deg Celsius, watering must be carried out every day.

9.2.4 SHRUBS, HERBACEOUS PERENNIALS AND TREES

9.2.4.1 Water trees 13 times during April to September (every two weeks) in year one with 50 litres water per tree. In year two water trees 7 times during April to end September with 50 litres of water per tree.
In dry spells water shrubs and perennials every three days for nine days after planting. Each plant to receive with 3 litres of water

9.3 ESTABLISHED LANDSCAPING MAINTENANCE FROM 6 MONTHS AFTER INITIAL INSTALLATION

9.3.1 GENERAL REQUIREMENTS

9.3.1.1 All work to conform to BS 4428:1989 Code of Practice for General Landscape Operations (excluding hard surfaces).
Aftercare maintenance shall include, but not be limited to, mowing, edging, pruning, litter removal, renovating, fertilisation, weed / pest control and tree surgery. It is expected that all plant material found in landscaped areas will be maintained in a vigorous, healthy and stress-free condition at all times.

9.3.1.2 At, and during, every landscaping maintenance visit a thorough inspection must be carried out for the appearance or reappearance of Japanese Knotweed. When this plant is identified then the eradication treatment detailed in the 'Dealing with Japanese Knotweed' section of this specification must be carried out. The specific choice of treatment must be agreed with The Projects Services prior to commencement.

9.3.1.3 Remove weed growth from planted areas by hand weeding, hoeing or chemical means if required.

9.3.1.4 All persons using chemical herbicides are to be trained and certified under the requirement of the Food and Environment Protection Act 1985 and hold a National Proficiency Tests Council Certificate of Competence.

9.3.1.5 Chemical herbicides manufacturer's instructions and recommendations must be strictly followed regarding the use of protective clothing and the safe and effective use of herbicides. Precautions must be taken to avoid spray drift, and any damage to non-target plants when applying herbicides. Chemical herbicide spraying must be performed during still dry conditions, without rain for 6 hours.

9.3.1.6 The approval of the Environment Agency must be obtained prior to any chemical treatments being used or applied if the site is near a water course or source or above an aquifer.

9.3.1.7 Apply, twice yearly, a chemical herbicide to kill off all weed growth from hard surfaces. Remove resulting debris from site once dead from site.

9.3.1.8 Under the Duty of Care requirements of the Environmental Protection Act 1990 (EPA90), particularly Section 34 of that Act which imposes a duty of care on persons concerned with the disposal of controlled waste, persistent chemicals must be included within the description of the waste if the material is being disposed of within the period of activity of that particular chemical.

9.3.1.9 Keep areas clear areas of debris.

9.3.1.10 Edge all beds using a suitable edging tool where they adjoin grassed areas.

9.3.1.11 Prune to open up centres of plants, take out any crossing branches to aerate the centre of the plant.

9.3.1.12 All Autumn and Winter flowering plants – must receive general pruning and shaping during March /April prior to new growth

9.3.1.13 All Spring and Summer flowering plants must be pruned after the flowering period has finished i.e. March to July.

9.3.1.14 Plants should be left to assume their natural shape, unless the growth is causing a problem.

9.3.1.15 An inspection is to be made at the end of the growing season with a view to providing a zero-obligation replanting quotation (Free of Charge), the purpose of which is to fill gaps where plants have failed to become established, died or been stolen/damaged.

9.3.1.16 Top up beds with mulch as necessary to maintain depth.

9.3.1.17 Top up soil with proprietary combined general fertilizer during the Spring and Autumn period.

9.3.1.18 Prior to pruning trees on the site owner's property, any TPO or conservation issues should be checked and permission obtained as necessary.

9.3.1.19 To attend site twice yearly to cut back and prune trees and boundary hedges to maintain in good order and prevent obstruction of site lighting, CCTV and neighbouring properties.

9.3.1.20 The Contractor shall keep all trees, regardless of height, trimmed so as not to conflict with vehicular and/or pedestrian traffic visibility. Trees overhanging streets shall be kept raised to 5 metres above the street. Trees overhanging pedestrian walkways shall be kept raised to 2.45 metres above the walkway. Trees shall not be allowed to overhang into fenced gravel areas.

9.3.1.21 Plant material encroaching onto or from the site owner's property shall be trimmed back to the property line at The Projects Services discretion depending on circumstance, i.e. plants growing over fences and pavements from private property adjacent to contracted areas shall be trimmed back to the property line. This work shall be performed if needed during scheduled maintenance.

9.3.1.22 Prior to pruning neighbouring shrubs and trees not on the site owner's property, any TPO or conservation issues should be checked and permission obtained if necessary.

9.3.1.23 Prior to pruning shrubs and trees not on the site owner's property reasonable notice, where possible and practicable, must be given to the affected neighbour informing of the intention to prune shrubs and trees parts overhanging the site owner's property back to the line of the site owner's boundary including the removal and disposal of all resulting debris.

9.3.1.24 Extreme care shall be taken to ensure that traffic visibility is not obstructed for vehicles making turns and entering or exiting the site. The Contractor shall alleviate all obstructions with two (2) working days of written notification.

9.3.1.25 All litter and debris generated during the performance of this aftercare maintenance shall be removed from the project the same day it is generated and disposed of off-site in the proper manner at the Contractor's expense.

9.3.2 LPG COMPOUNDS

9.3.2.1 All weeds, long grass, deciduous shrubs and trees, and any plant material and debris must be removed from within the LPG compound and, when applicable, within an area around the LPG facility as follows:

Sites with one LPG tank of capacity not exceeding 1.1 tonnes	An area 3.0 metres wide measured from the tank
Sites with one or more LPG tank(s) of total capacity not exceeding 4.0 tonnes	An area 6.0 metres wide measured from the tank(s)

9.3.2.2 Where evergreen shrubs or trees are being used along one side of the LPG compound, this landscaping must be maintained to ensure that; ventilation around the LPG installation is not interfered with, and foliage is cut back to provide separation distances as follows:

Sites with one or more LPG tank(s) of total capacity not exceeding 2.2 tonnes	An area 1.0 metres wide measured from the tank(s)
Sites with one or more LPG tank(s) of total capacity exceeding 2.2 tonnes	An area 6.0 metres wide measured from the tank(s)

9.3.2.3 Any products or preparations containing Sodium Chlorate or any other types of oxidising agents must never be used. These products or preparations, being a strong oxidizing agent, are potentially explosive when mixed with organic materials.

9.3.3 HERBACEOUS PERENNIALS

9.3.3.1 During the February/March period - Take off any dead leaves and branches from evergreen plants. Cut down deciduous ornamental grasses to 100mm. high.

9.3.3.2 Dead head spent flowers as required.

9.3.4 SHRUBS

9.3.4.1 March/April – Remove any dead or diseased branches from both evergreen and deciduous plants.

9.3.5 TREES

9.3.5.1 Spring - Check the tree for survival, prune or remove broken branches or shoots, which may compete with the leader.

9.3.5.2 Check and adjust stakes, ties and supports quarterly. Replace as required.

9.3.5.3 Stakes can be removed at the beginning of the second growing season after checking the stability of the plant.

9.3.5.4 To establish whether the stake can be removed – release the tie and if the crown remains upright after the tree is gently shaken by hand, and the roots seem secure, the stake may be removed. The tree should be checked again after severe winds and re-staked if necessary. If the stem and stake is mobile, re-secure the tree with a single tie so the stem remains erect and follow the same procedure the following growing season until tree has established a secure root system

9.3.5.5 Do not shake or wriggle the stake out, as this will cause damage to the root ball. Lever the

stake out. Fill the hole with soil.

9.3.5.6 Keep the ground surrounding the tree free from weeds and grasses up to 1000mm distance from the tree, for at least three years after initial planting. Pull up grass and weeds by hand. Top up with mulch as necessary.

9.3.5.7 Never raise the soil level around the tree above the nursery soil level.

9.3.5.8 Trees in windy or exposed positions may need firming in again at times.

9.3.6 NATIVE HEDGEROWS

9.3.6.1 Trim and tidy every two years ensuring natural shape is maintained

9.3.6.1 Filling in of gaps through plant loss should occur during the following Autumn or Winter period after planting.

9.3.7 TURF & SEEDED AREAS

9.3.7.1 Cut the grassed area on 18 No. visits between March and November, at not more than fortnightly intervals, using appropriate mechanical equipment. Ensure the mowing blades are sharp so young plants are not torn from the ground.

9.3.7.2 Grass clippings shall be collected during each mowing and properly disposed of off-site at the Contractor's expense. Visible clippings remaining on the turf after the mowing cycle shall be vacuumed or otherwise removed from the turf.

9.3.7.3 Trim all edges using hand shears or a strimmer.

9.3.7.4 Trim around shrubs and trees with hand shears

9.3.7.5 During Spring and Autumn periods, use a combined selective weed killer and fertilizer applied to the ground surface. Re-seed small areas as necessary.

9.4 <u>DEALING WITH JAPANESE KNOTWEED</u>

9.4.1 GENERAL REQUIREMENTS

9.4.1.1 Japanese Knotweed (Fallopia japonica) is an extremely long-living perennial which spreads solely by vegetative means. Rhizome fragments as small as 0.7g carried on footwear or by vehicles or spread by general landscaping maintenance onto uncontaminated areas will cause the plant to spread. It is not harmful to health in any way. In the winter it is not visible above ground although the dead stems, which resemble a reddish brown bamboo, are often obvious.

9.4.1.2 The relevant Parts, Sections and Schedules of the Wildlife and Countryside Act, 1981, relating to Japanese Knotweed, must be taken into consideration and appropriate actions carried out to ensure compliance with the requirements contained in the Act.
<u>Causing Japanese Knotweed to spread is an offence under the Wildlife and Countryside Act, 1981.</u>

9.4.1.3 When Japanese Knotweed is to be disposed of, by removal from the site owner's property, then the requirements of the Environmental Protection Act 1990 (EPA90) must be adhered to, particularly Section 34 of that Act which imposes a duty of care on persons concerned

with the disposal of controlled waste.
Not disposing of Japanese Knotwood properly is an offence under the Environmental Protection Act.

9.4.1.4 All activities carried out which involve Japanese Knotweed must be in strict accordance with the Environment Agency "Code of Practice for the Management, Destruction and Disposal of Japanese Knotweed"

9.4.1.5 All endeavours and precautions must be taken to avoid the spread of soil contaminated with Japanese Knotweed rhizome. To reduce the risk of contaminating unaffected areas all vehicle movement, especially excavators with caterpillar tracks, must be avoided. Any soil that is obtained from ground within 7 metres radius of a Japanese Knotweed plant could contain sufficient rhizome to allow new plant growth.

9.4.1.6 Ensure that machinery, tools and work clothes are free of fragments of Knotweed before leaving the site. Tracked vehicles, off-road tyres, tools and work boots can collect fragments of Japanese Knotweed and will potentially cause spread to another site. All items including, but not limited to, plant machinery and road vehicles coming into contact with Japanese Knotweed must be thoroughly cleaned before leaving a Knotweed contaminated site.

9.4.2 REMOVAL BY BURIAL ON SITE

9.4.2.1 Do not cut down Japanese Knotweed by flailing, as this will cause it to spread. Cut with mowers, sharp hooks, slashers etc or hand pulling only. Do not dig up Japanese Knotweed as part of normal weeding activities.

9.4.2.2 Do not chip any material comprising of, or containing, Japanese Knotweed, as this will not kill Japanese Knotweed and chipped material transferred, or spread onto uncontaminated soil, will cause Japanese Knotweed to regrow.

9.4.2.3 The whole plant and its root system will be excavated by an excavator standing on uncontaminated ground.

9.4.2.4 Excavation to remove:
Vegetation.
Top soil and subsoil to a depth of 2 metres and 7 metres diameter around the plant to ensure that all parts of the root system have been removed.
Materials must be excavated together and moved to the burial pit in a covered wagon.
Storage of contaminated soil will be avoided wherever possible.

9.4.2.5 Once excavation has been carried out:
This excavated material will then be buried at a minimum of 5 metres deep.
All Japanese Knotweed material must be covered with a geotextile layer or a heavy gauge polythene sheet prior to infilling.
No tracking over contaminated soils will be allowed.

9.4.2.6 All machinery will be cleaned off into the burial pit or on to a designated clean-off area lined with geotextile. In the latter instance this material will be disposed of carefully into the burial pit to ensure no cross contamination.
All hand tools and footwear will be cleaned off in a similar manner.

9.4.2.7 A location record of all on-site burial pits must be provided to The Projects Services Project Manager to enable this information to be clearly marked on a plan in order that follow up checks can be made.

9.4.3 REMOVAL BY TAKING OFF SITE

9.4.3.1 Do not cut down Japanese Knotweed by flailing, as this will cause it to spread. Cut with mowers, sharp hooks, slashers etc or hand pulling only. Do not dig up Japanese Knotweed as part of normal weeding activities.

9.4.3.2 Do not chip any material comprising of, or containing, Japanese Knotweed, as this will not kill Japanese Knotweed and chipped material transferred, or spread onto uncontaminated soil, will cause Japanese Knotweed to regrow.

9.4.3.3 The whole plant and its root system will be excavated by an excavator standing on uncontaminated ground.

9.4.3.4 Excavation to remove:
Vegetation.
Top soil and subsoil to a depth of 2 metres and 7 metres diameter around the plant to ensure that all parts of the root system have been removed.
Materials must be excavated together and immediately transferred to the disposal vehicle to take off-site.
All vehicle and skip loads must be fully covered before leaving site.
Storage of contaminated soil will be avoided wherever possible.

9.4.3.5 All Japanese Knotweed material taken off-site must be disposed as 'controlled waste', under the Environmental Protection Act 1990, at licensed landfill sites.

9.4.4 REMOVAL BY CHEMICAL HERBICIDE TREATMENT ON SITE

9.4.4.1 Chemical herbicide treatment will consist of a cyclic programmed application of ‘Glyphosate’ weed killer, applied to the plant foliage, over a minimum period of three years, until all Japanese Knotweed growth is extinguished.

Before spraying with Glyphosate allow the Japanese Knotweed to grow to about 900mm, which will usually be reached in May, and spray then. Following re-growth a second application must be applied in mid-summer of the same year.

9.4.4.2 A check must be carried out during September of the same year and if it has grown once more, spray again before growth begins to die down in the autumn. Check again the following spring of the next year. This cycle must been carried out for a minimum of three years.

9.4.4.3 Avoid spray coming into contact with garden plants.

9.4.4.4 Glyphosate-treated knotweed will often produce small-leaved, bushy re-growth between 500-900mm in height the following growing season. This is very different in appearance to the normal plant and it is essential that this re-growth is treated.

END