

LANDSCAPE SPECIFICATION



Proposed Development
at
Cairns Road, Sligo

for
Novot Holdings Limited

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SECTION 1.0 LANDSCAPE WORKS – GENERAL ITEMS

1.1 Description of works

The work consists of general works, site preparation, grass seeding, wildflower seeding, bulb/corm planting, shrub groundcover planting, and tree planting. Exact dates for completion of works will be finalised after the award of contract. The landscaping Contractor shall satisfy the landscape architect that all works have been carried out to B.S. 4428 General Landscape Operations, B.S. 3936 Nursery Stock and to B.S. 3882, Topsoil and the items stated below. It is always essential that the site tidy and that the planting appears healthy.

The landscape contractor should always be prepared to ensure that such conditions are met and should include for this in his rates. An agreed schedule of phased completion and expected handover dates will be finalised after the contract is awarded. The construction of hard works shall be undertaken with the main construction program. Care is to be taken to avoid unnecessary machinery traffic on completed areas. Top soiling shall be carried out in areas where the underground service work and hard works elements are completed to avoid disturbance to top soiled areas. Any unnecessary works and disturbance to be reinstated by the contractor at no expenses rot the client.

Planting bare root and rootballed stock to take place in the following planting season from completion of topsoil works, namely between November and March. Container grown stock and grass seeding shall be carried out in the appropriate weather conditions following completion of topsoil works.

1.2 Standards of Workmanship and Materials

The Landscape Contractor shall satisfy the Landscape Architect that all works have been carried out to comply with BS 4428 (General Landscape Operations), BS 3936 (Nursery Stock), and BS 3882 (Topsoil).

It is essential that the site is tidy at all times, and that the planting appears healthy. The Landscape Contractor should be prepared, at all times, to ensure that such conditions are met and should include for this in his/her rates.

Any materials not meeting the specifications or qualifying for the approval of the Landscape Architect, for whatever cause, shall be rejected.

The Landscape Contractor shall familiarise himself/herself with the layout of services and the positions of all structures on the site and shall be liable for any damage to the above.

No existing plants shall be removed or damaged, other than those specified by the Landscape Architect.

1.3 Notice of Intentions and Recording Actions

The landscape contractor shall give 48 hours' notice of his intentions to commence setting out, planting and maintenance visits. The landscape contractor shall return a weekly record of all site actions.

1.4 Leaving the Site Tidy

The site shall be left in a neat and orderly condition at the end of each day's work.

1.5 Season

Landscape work shall take place in the appropriate season and only when conditions are suitable i.e. it is dull, moist and mild, without undue risk of frost or drying winds. There shall be no cultivation or planting when the soil is frozen or waterlogged. If exceptional weather conditions occur after planting eg heavy frost, measures shall be undertaken as approved by landscape architect.

1.6 Replacement

The sub-contractor shall make good at his own expense any losses of trees and plants which die or appear unhealthy at any time up to practical completion in the 18 months after planting.

The sub contractor shall make good at his own expense any losses of trees and plants which die or appear unhealthy at any time prior to hand over. Plant failures will not be charged to the Landscape Contractor if the failure is due to; damage by hares, rabbits, deer, livestock where not protected by guards or fencing, damage/losses due to theft, vandalism or disturbance by other contractors.

Persistence of weed in planted areas will be regarded as a contributory cause of failure due to drought. Prolonged dry weather will not exonerate the Landscape Contractor if the scheduled maintenance operations have not been carried out as programmed

1.7 Damage

All trees and plants are to be adequately and carefully packed and protected to survive transport, whatever means, to the site, during loading, transit or unloading. If in spite of these precautions' roots, branches, or shoots suffer slight damage, they are to be carefully pruned.

If major damage has occurred, the plants or tree shall be rejected and replaced at the landscape contractor's expense.

1.8 Defects liability period

The landscape contractor shall be responsible for any plants that fail to take during the first growing season, 18 months, from date of completion

1.9 Protection

The landscape contractor shall provide adequate temporary protection to the whole of the works and shall include temporary coverings, planked barrow runs and all other measures for protecting the work from damage. The landscape contractor shall also protect from damage all existing roadways, kerbs, services and other completed works on site. Any work damaged or soiled by weather, traffic or other causes due to inadequate temporary protection shall be removed and made good at the cost of the landscape contractor. The form of protection is left to the discretion of the landscape contractor.

1.10 Programme of Operation

The Landscape Contractor shall execute his works in conformity with a programme to be agreed with the Landscape Architect and shall include in his estimate for working within an agreed time limit.

No individual areas will be handed over unless there is an agreed sectional completion. The Landscape Contractor shall allow for keeping individual areas adequately maintained until the whole has been completed.

1.11 Site Inspection

Prior to the submission of tenders to the Landscape Architects, the Landscape Contractor is expected to visit the site and familiarise himself/herself with the nature of the existing roads and pathways, the soil conditions, slope gradients, any hazards and other matters affecting the works. No extra charges will be made for any misunderstandings, or incorrect information or any of these points, or on grounds of insufficient description or lack of information will be allowed.

1.12 Setting out the works

Setting out shall be in accordance with the landscape architect, and the supplied drawings.

The Landscape Contractor will be responsible for checking all schedules and drawings by the Landscape Architect. In the event of any discrepancies being found between such schedules and drawings, or if the Landscape Contractor considers that additional detail drawings are required, the Landscape Contractor shall report such discrepancy in writing at least ten days before the works are to be executed.

The right is reserved to adjust the exact position of trees and specimen shrubs after they have been set out on site. Any trees which are planted without approval of the setting out may be required to be re-planted at the Landscape Contractor's expense

1.13 Supervision and Contractor's Staff

The Landscape Contractor shall ensure full and adequate supervision of the site during the duration of the works.

The Landscape Contractor shall at all times during the Contract period employ sufficient persons of appropriate abilities, skills, care, and experience as are required for the proper performance of the services in accordance with the contract and shall ensure that a sufficient reserve of persons is available to provide the services during holiday periods, absences due to sickness and special events/emergencies.

The Landscape Contractor will appoint a contract manager to supervise those persons employed to perform the Services in accordance with the contract. The contract manager must be available and present in the contract area at all times that the services are being carried out.

1.14 Finished grading

All area planted by the landscape contractor shall be left in a reasonably even state, with all soil dumps broken up, stones >50mm shall be removed off site.

1.15 Site access

The landscape contractor is to consult with the developer as to the most suitable access point to undertake the works. The contractor to ensure that as little inconvenience as possible is caused to the users of the public road. In this regard arrangements will be agreed with the client as to the times for moving of materials onto or about the site.

1.16 Existing services

The contractor is to make himself aware of the extent of the existing services in so far as they affect his contract area. The contractor to make good at his own expense any damage to services damaged, due

to any cause within his control and he shall pay any costs and charges in connection with same. The landscape contractor is to indemnify the client and the landscape architect against any charge of negligence and cost of repairs caused by the landscape contractor during the course of this contract.

1.17 Plant materials

The landscape contractor is to ensure that plants brought onto the site are grown in Ireland, written proof will be required.

1.18 Nursery stock

All plant material shall be good quality nursery stock, free from fungal, bacterial or viral Infection, aphids, red spider or other insect's pests and any physical damage. It shall comply with the requirements of B.S. 3936: parts 1-10: 1965 Specification for nursery stock, where Applicable. All plants shall have been nursery grown in accordance with good practice. They shall have the Habit of growth that is normal for the species. The contractor will be deemed to have advised his/her suppliers of the relevant sections of this in all cases be liable to replace materials brought on site that are not in accordance with this specification

1.19 Species

All plants supplied shall be exactly true to name as shown in plant schedules. Unless stipulated, varieties with variegated and/or coloured leaves not to be accepted, and any plant found to be of this type upon leafing out shall be replaced by the contractor at his/her own expense. Bundles of plants shall be marked in conformity with B.S. 3936: Part 1 1965 and B.S. 3936: Part 4: 1966. The landscape contractor shall replace any plants, which, on leafing out, are found not to conform to the labels. Definitions of all terms used in accordance with the following British Standards: - B.S. No. 3936: Part 1: 1965 entitled "Nursery Stock- Trees and Shrubs" B.S. No. 3936: Part 4: 1966 entitled "Nursery Stock- Forest Trees" B.S. No. 3936: 1967 entitled "Specification for Nursery Stock"

SECTION 2.0

LANDSCAPE SPECIFICATIONS: EARTH WORKS

All earth works should comply with BS 4428: 1989.

2.1 Method of work

No works in relation to grading and topsoiling to be carried out in conditions where materials are wet. Provide catchment drains or ditches to collect excess run-off and prevent water entering from adjacent land. Remove scrub as well as top growth by cutting and burning. Flail or swipe mowers can be used. Where turf is excessively thick, plough, disc harrow, and reduce vegetative content by weathering and cultivations.

Strip topsoil from all areas liable to disturbance of any kind, including building works, roads, underground services, all temporary access routes, compounds and storage areas. Strip the full designated working area, and any other areas liable to encroachment and traffic.

Do not run machinery over ground before stripping. Strip the full depth of sod and topsoil. Avoid stripping into the subsoil layers.

Where a hedgerow is to be maintained, do not strip within 4 metres of it. Soil must not be stripped from any part of the area under the canopy of any tree which is to be retained.

2.2 Stockpiles

When soil is in a condition for stacking, remove all topsoil to its full depth and place it in heaps either off site in a convenient position, or on the neutral line of cut and fill. Strict precautions are essential to prevent loss or admixture with subsoil.

Soil heaps should be formed in positions which facilitate eventual respreading, reduce travel to a minimum and will not result in interference with subsequent major levelling and/or grading operations. Stockpiles shall be located on dry, free draining ground, not subject to standing water. If water ponds against the stockpile, temporary drains shall be cut to relieve it. Avoid running machinery over stockpiles.

Stockpile heaps should not exceed 1.5m in height to avoid compaction.

While topsoil is stacked, measures should be taken to ensure that weed control is carried out during the growing season to prevent weeds seeding.

Topsoil stockpiles shall not be covered by subsoil, rock, rubble, site debris, fuel or chemical pollution. Where there is a danger of contamination or topsoil and subsoil stockpiles intermingling the topsoil stockpile shall be fenced off.

Temporary yards, storage areas or hardstanding areas shall not drain towards topsoil stockpiles. Topsoil is the property of the Employer, and shall not be removed from site without consent given from Employer or Landscape Architect.

2.3 Subsoil cultivations

Subsoil should be placed in layers not exceeding 150mm thick; consolidation of fill may be accomplished by the use of special compacting machinery or by running over it with the next load; filling by tipping over an exposed face is not recommended because of the difficulty of consolidation.

After completion of subsoil moving, the formation level should be graded with the box scraper to even, running contours and then, depending on the soil texture and degree of compaction, loosened with a subsoiler or ripper.

2.4 Subsoil levels

Subsoil levels shall be 200mm below the finished ground levels in all areas for grass seeding to allow for 250mm of topsoil to be placed so that 50mm of topsoil stands proud of all kerbs, paths, etc. Subsoil levels shall be 400mm below the finished ground levels in all areas for shrub planting to allow for 450mm of topsoil to be placed so that 50mm of topsoil stands proud of all kerbs, paths, etc.

Subsoil levels shall be 550mm below the finished ground levels in all areas for shrub planting to allow for 600mm of topsoil to be placed so that 50mm of topsoil stands proud of all kerbs, paths, etc. Subsoil levels in all areas for tree planting shall be 900mm below the finished ground levels to allow for 900mm of topsoil to be placed.

2.5 Topsoil

Topsoil shall be native topsoil as removed and stored.

All imported topsoil to be of medium texture, pH matching that of the native topsoil. Stone content 10mm in size not greater than 5% by weight, and no stones greater than 40mm in any dimension, and shall conform to BS 3882:1965. Topsoil shall be a free draining sandy loam. Depth of topsoil to be as specified.

Topsoil shall be free of perennial weed roots, i.e. couch grass, sticks, sub soil or any waste, toxic, putrescent or foreign matter.

After spreading, the soil should be cultivated to crumb size to a condition suitable for blade grading. Large stones and unwanted material 75mm and over should be picked off and carted away. Areas should then be blade graded to true flowing contours. As topsoiling proceeds all consolidated wheel tracks shall be forked over. Final grading of the top 150mm is to be carried out to ensure a true specified level and slope to avoid dishing or other depressions where water may collect. The use of a heavy roller to roll out humps will not be permitted and any area that becomes unduly compacted during the grading operation shall be loosened by forking or harrowing.

2.6 Topsoil levels

All topsoil shall be placed and graded by the Main Contractor to the following levels:

Grass seeding	250mm
Shrub/groundcover planting	450mm
Hedge planting	600mm
Tree planting	1000mm x 1500m x 900m pit

2.7 Maintenance of Topsoil Stockpiles

Stockpiles of 1 year duration or less: keep weed free with agreed methods. Any use of chemicals shall be in accordance with the current Sustainable Use of Pesticides Directive guidelines and Plant Protection Product List which is issued and updated every year by Pesticide Control Division, Department of Agriculture, Food and The Marine.

Stockpiles of up to 2 year's duration: roughly grade top and slopes of topsoil. Sow Italian Ryegrass at 50kg per hectare as a temporary grass cover. Control noxious weeds.

SECTION 3.0 TREE WORKS

3.1 Workmanship

Remove and dispose of off-site any rubbish still occurring in all areas, including weeds, rubble, metal wood and stubs. Any remnants of masonry or stonework are to be reported immediately to the Landscape Architect.

All scrub areas shall be grubbed and all existing plants of same shall be removed and disposed of off site to licensed tip including all root systems unless otherwise specified

Extreme care shall be taken when felling, removing and transporting trees and during tree surgery operations, that no damage is done to existing trees to be retained and the ground flora

3.2 Existing Tree Roots

Do not cut roots of existing trees to be retained without the approval of the Landscape Architect

3.3 Works to Trees

Before starting work the contractor shall verify with the Landscape Architect, and clearly or otherwise indicate on site trees to be removed and trees where surgery will take place

All works to comply with Forestry and Arboriculture and Training Council Safety Guides

All tree works shall be in accordance with current arboriculture practice and all operations shall be carried out with due regard to current safety regulations and requirements and using appropriate machinery tools and guards for the same as necessary

All tree works to comply with BS 3998 "Tree Works"

Tree removal shall include the grubbing up of rootball and stump in areas where construction is to take place. In areas where no construction is to take place the Contractor shall grub up all roots of shrubs and smaller trees if directed by the Contract Administrator

The Contractor shall allow for backfilling of all voids created as a result of tree stump removal, with approved compacted fill material.

All branches, roots, debris and all arisings to be chipped and disposed of in the fell area. All large timber (as identified by the Landscape Architect) to be left on site in approved storage location. All large timber to remain on the property of the employer unless the Contractor:

- Is instructed to remove it from site or
- purchases it at a price to be agreed

Take trees down carefully in small sections to avoid damage to adjacent trees/structures that are to be retained, where tree canopies overlap and in confined spaces generally.

Obtain Landscape Architect's approval before removing stumps by winching and do not use other trees as supports or anchors.

No temporary buildings, machinery, storage areas, or materials are to be located within 5m (horizontal distance) of the canopy spread of trees or shrubs unless approved by the Landscape Architect.

3.4 Replacement Costs

The value of all trees to be retained shall be calculated in accordance with the Arboricultural Association Guidelines.

The Contractor shall be liable for vegetation loss or damage to roots, trunk or branches, which in the opinion of the Landscape Architect significantly affects the value or life of existing trees to be retained.

Replacement plants or any tree surgery work that the Landscape Architect may decide to be appropriate shall be carried out by the Contractor, at the Contractor's own expense and to the requirements and satisfaction of the Landscape Architect.

Any accidental damage which occurs during the execution of the works shall be carefully repaired without delay. All such work shall be carried out to conform with BS 3998 'Tree Work' and to the satisfaction of the Landscape Architect.

3.5 Trees in Relation to Construction

All works carried out during construction need to conform to BS 5837:2005 'Trees in relation to construction - Recommendations'. This standard makes reference to the importance of carrying out a tree survey before development occurs. Measures need to be put in place before development begin to as to safeguard against any damage occurring to important trees on site as identified in the tree survey. A construction exclusion zone including ground protection needs to be put in place. Any new planting that takes place needs to be strategically placed so as to avoid any future damage to structures by trees.

Trees in close proximity to any construction/demolition will need to be protected. Design considerations need to be to the forefront for new planting such as proximity to buildings, proximity to other trees etc.

3.6 Tree specification

All trees to be to B.S. 3936, Part 1, including orientation, pruning and root systems.

Trees shall have a sturdy, reasonably straight stem, and a well-defined straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown and root systems shall be well formed. Roots shall be in reasonable balance with the crown and shall be conducive to successful transplantation

3.7 Setting out

Supply and plant trees in location shown on layout drawing. All plants to be set out for approval. Minimum tree sizes are indicated on the accompanying layout drawing.

3.8 Planting

Standard and advanced standard trees planted with tie and two number 70 dia. treated stakes set in pit. Each tree to have 70 grams of slow releasing fertilizer mixed with 20 litres of moss peat and good quality topsoil. Bottom of pit to be broken up and turned over to a depth of 350 to assist drainage. Tree stakes to be pressure treated timber to manufactures instructions.

3.9 Stakes

Round stakes shall be of peeled larch, pine or Douglas fir, preserved with a water-borne Copper chrome arsenic composition in accordance with I.S. 131. Drive stake with a wooden maul or cast-iron headed drive. Tree ties shall be rubber, PVC or proprietary fabric laminate composition and shall be Strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie. Ties shall be min. 38mm wide for standard trees and upward sizes. They shall be fitted with a simple collar spacer to prevent chafing, and with a buckle for adjustment. Nail each tie to the stake with one galvanised nail immediately behind the buckle, leaving the tie free for adjustment

3.10 Tree and shrub planting

3.10.1 Standards

Excavate tree pits to minimum dimensions of 350 mm wider than root ball, minimum tree planting tip to be 800 x 800 x 800 deep. The base of the pit shall be broken up to a depth of 450 below root ball and glazed sides roughened. Incorporate slow releasing fertilizer and moist moss peat to each tree pit prior to planting. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plants into position. Supply and drive the stake 800mm into the ground. Where indicated trees set into precast containers to have prepared backfill with topsoil mixed with patent potting compost and approved loam

3.10.2 Containerized shrubs and herbaceous

Excavate planting hole to a minimum depth of 350 wider than root ball. The base to be broken to a depth of 350 mm and glazed sides roughened. Apply slow releasing fertilizer and moist moss peat as directed. Where indicated shrubs set into precast containers to have prepared backfill with topsoil mixed with patent potting compost and approved loam.

3.10.3 Container grown shrubs / conifers / bare root shrubs

Excavate planting pit to a minimum depth of 350mm wider than root ball. The base to be broken to a depth of 350 mm and glazed sides roughened. Apply prepared mix of bone meal, moss peat and topsoil to planting pit.

3.10.4 Protection of plants

Plants shall be protected from drying out and from damage in transport. All stock awaiting transport shall be protected from the wind and frost and from drying out.

3.10.5 Damage / Inspection

On completion of lifting of plants in the nursery, any broken shoots or severed roots shall be pruned, areas of damaged bark neatly pared back to sound tissue.

3.10.6 Raking off

Upon completion of planting, all pits shall be raked over lightly to even surface and neat appearance. All stones greater than 50mm dia. to be removed off site.

SECTION 4.0 SOFT LANDSCAPING WORKS

4.1 Topsoil

Topsoil shall be native topsoil as removed and stored.

All imported topsoil to be of medium texture, pH matching that of the native topsoil, stone content 10mm in size not greater than 5% by weight, and no stones greater than 40mm in any dimension, and shall conform to BS 3882:1965. Topsoil shall be a free draining sandy loam. Depth of topsoil to be as specified.

Topsoil shall be free of perennial weed roots, i.e. couch grass, sticks, sub soil or any waste, toxic, putrescent or foreign matter.

4.2 Plants Generally

All plants conform fully to the specification in respect of species, size and quality. The Landscape Contractor shall investigate the sources of supply and satisfy himself that he can supply all of the plants specified on the planting schedule in the size, variety and quality before submitting a bid. Substitutions will not be permitted. If proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of nearest equivalent size or variety, with an equitable adjustment of contract price. All plants shall be well grown, sturdy and bushy, according to type, and free from all disease and defects.

The Landscape Architect reserves the right to reject any plant material before or after planting if it does not conform with the specification.

All plants shall be adequately hardened off prior to planting, where frost or cold winds may be a problem. All plants shall be supplied with temporary labels with the full botanical name, on each bundle or batch of plants.

The Landscape Contractor should indicate in their tender source of material; to be used and where it can be inspected prior to award of contract.

All plants that do not conform to the specification will be automatically rejected and must be removed from site and replaced at the Landscape Contractors expense.

All trees, shrubs and other plant material shall comply with the minimum requirement of the relevant British Standards below:

BS3936 Part 1: Specification for trees and shrubs BS
3936 Part 4: Specification for forest trees
BS 3936 Part 5: Specification for Poplars and Willows
BS 3936 Part 6: Specification for herbaceous, perennials and alpines BS
3936 Part 9: Specification for bulbs, corms and tubers
BS 3936 Part 10: Specification for groundcover plants

4.3 Time of Lifting

Bare root plants must only be lifted when the ground is moist and the plant is dormant between November and end of March of current year. Lifting must never take place when there is a severe ground frost. Particular attention must always be paid to the protection of the roots on lifting when there is a strong drying wind or sun.

4.4 Protection

Care must be taken to ensure that bare roots are protected from physical damage and desiccation at all times. All bare roots must be covered within two hours of lifting.

4.5 Bundling

Whip planting must be in bundles of the same species and size, all shoots must face in the same direction so that roots and shoots are not in contact, and must be of equal numbers. Bundles are to be securely tied with supple material which will not, by its nature or tension, cause damage to the plants.

4.6 Labelling

Each individual plant, bundle, bag or lot of one species shall be labelled with a securely attached label, clearly indicating the plant name, grade and quantity.

4.7 Grass Seed

Grass seed shall conform to the requirements of British Standard 4428:1969 and subsequent amendments, and to the European communities (seed and fodder plants) regulations 1976.

The Landscape Contractor shall supply, with each seed mixture, a certificate stating the composition, purity, germination, year of collection and country of origin. The germination capacity of each constituent of the mixture should not be less than 80%, and the purity of the mixture not less than 90%.

Total weed seed content should not be more than 0.5% and the total content of other crop seeds should not be more than 1%. These minimum figures shall be for the current 14 month period of annual tests.

The seed is to be thoroughly re mixed before sowing to avoid patchiness on the ground and is to be sown at a rate of 35-50g per square metre.

Grass seed mixture to be, 25% Perennial Ryegrass, Aberelf, Darius 25% Perennial Ryegrass, Bareine, Lorina 25% Chewings Fescue, Bargreen, Baroxi, Darwin, Raisa 25% Slender Creeping Red Fescue, Barcrown or other approved. Pedestrian routes through the open space areas to have a min 1.5 m wide mown grassed verge maintained at between 35 and 75 mm high.

Where indicated the seed mixture to include a selection of native wildflower seeds mixed through and spread by contractor. On completion of seeding and in season following sward establishment a selection of bulbs to be hand scattered and planted into sward

4.8 Wild Flower Seed

Wild Flora Mix is to be 'Corburn's Light Soil mix' or similar approved as supplied by Corburn's, seed merchants. Grass seed shall conform to the requirements of British Standard 4428:1969 and subsequent amendments, and to the European communities (seed and fodder plants) regulations 1976.

The seed is to be thoroughly re-mixed before sowing to avoid patchiness on the ground. The seed can be bulked up with sand to ease distribution, lightly raked or rolled in with a ringed roller, taking care not to bury the smaller seeds. The seed is to be sown at a rate of 5gms per square metre.

Wild Flower Grasses:

Crested Dogstail (*Cynosurus cristatus*)
Sheep's Fescue (*Festuca ovina*)
Flora Autumn Hawkbit (*Scorzoneroides autumnalis*)
Bladder Campion (*Silene vulgaris*)
Common Sorrel (*Rumex acetosa*)
Cowslip (*Primula veris*)
Lady's Bedstraw (*Galium verum*)
Meadowsweet (*Filipendula ulmaria*)
Perforate St Johns Wort (*Hypericum perforatum*)
Ribwort Plantain (*Plantago lanceolata*)
Tufted Vetch (*Vicia cracca*)
Wild Red Clover (*Trifolium pratense*)
Betony (*Stachys officinalis*)
Cats Ear (*Hypochoeris radicata*)
Common Vetch (*Vicia sativa* ssp. *segetalis*)
Field Scabious (*Knautia arvensis*)
Meadow Buttercup (*Ranunculus acris*)
Musk Mallow (*Malva moschata*)
Ragged Robin (*Lychnis flos-cuculi*)
Salad Burnet (*Sanguisorba minor*)
Wild Carrot (*Daucus carota*)
White Campion (*Silene latifolia*)
Birdsfoot Trefoil (*Lotus corniculatus*)
Common Knapweed (*Centaurea nigra*)
Common Toadflax (*Linaria vulgaris*)
Greater Hawkbit (*Leontodon hispidus*)
Meadow Cranesbill (*Geranium pratense*)
Ox Eye Daisy (*Leucanthemum vulgare*)
Red Campion (*Silene dioica*)
Self-heal (*Prunella vulgaris*)
Wild Marjoram (*Origanum vulgare*)
Yarrow (*Achillea millefolium*)

4.9 Grass maintenance

4.9.1 Grass margins and margins to pedestrian routes through open space

Where indicated grass margins to pedestrian routes through open space to be maintained at between 35 to 75 mm high. Grassed roadside verges to be maintained between 35 to 55 mm high.

4.9.2 Open space areas

Where indicated open space areas with a mix of meadow grasses, native wildflowers and early flowering bulbs to be sown in spring or autumn.

Year 1, following planting grass cutting to take place in mid-October. Cut height to be 30 to 50mm. Remove cuttings and remove perennial weeds.

Year 2 and 3, cut to height between 35 to 50 mm in mid-November, leave cut vegetation for 3 days before removing. Remove perennial weeds.

Year 4 and subsequent years, cut to height between 35 to 50 mm in mid-November, leave cut vegetation for 3 days before removing. Remove perennial weeds. Perennial weeds such as dock or nettles to be removed.

4.10 Bulb planting

Landscape contractor to supply and plant in designated areas indicated on the planting drawing at rate of 20 bulbs per m². Bulbs planted in scatter pattern in mixed groups.

Bulbs:

Anemone nemrosa

Crocus tommasinians

Narcissus February Silver

Narcissus February gold

Narcissus Mt Hood

If planting whilst laying turf, for a naturalised effect, bulbs should be scattered from waist height onto prepared soil (a light tilth) and then covered over with the turf. The turf provides adequate cover on additional soil or dibbing is required. Bulb sizes are deliberately small, but care should be taken not to put too much heavy weight on to the turf, so as not to damage the bulbs underneath. Planting into established wildflower areas, use a handheld bulb planter to a depth of 6-8 cms and plant where they have fallen after scattering them from waist height.

A motorised turf cutter can also be used for a larger area, forking over the bared soil to create a light tilth, scattering the bulbs and taking care to lay down the cut turf back into place once the bulbs have been scattered. Bulbs should be planted between September and December, ideally when the ground temperature is between 4-8°C. 6.2 Densities For a naturalised effect we recommend planting 20 bulbs per m². Denser looks can be achieved by doubling the rate.

4.11 Container Grown Shrubs, Groundcovers, Climbers and Herbaceous Plants

Shrubs shall be bushy, well established nursery stock with a good fibrous root system. They shall be container grown, true to size, name and description as scheduled. Shrubs shall conform to the appropriate British Standards. Plants shall not be pot bound, nor with roots deformed or restricted. Bare root material will only be accepted where specified.

Herbaceous plants shall be supplied as well rooted clumps, showing several healthy buds, and grown in pots. Pots shall be appropriate to the size of the plant supplied, minimum size 0.5 litres (80mm square or 90mm diameter).

4.12 Whips and Transplants

All plant material must comply in all respects with the current edition of BS 3936 Parts 1, 4 and 5.

Transplants shall not be less than 3 years old and have been transplanted at least once. Trees shall be sturdy, with a balanced root and shoot development and sizes shall conform to schedule.

Willows shall have been stumped and transplanted at the end of the first year in the nursery.

4.13 Trees

Trees shall conform to the appropriate British Standards.

All trees should be full and well shaped, bark unmarked and have healthy root systems. The Landscape Architect must inspect and approve all trees prior to lifting or planting. Trees must all be of identical size and shape and should originate from the same stock nursery and stand.

Rootballed trees shall be rootballed immediately when lifted at the nursery. The rootball shall be suitable for the size of crown and the rootball shall be flat bottomed.

The rootball shall be formed through regular transplanting every 2-3 years minimum. The rootball shall be wrapped in Hessian and steel wire netting or other suitable and approved

decomposable material.

Standard pleached trees shall have a clear stem 1.7m to 1.85m in height from ground level to the lowest branch, a minimum girth of 8cm at 1m from ground level and a total height of 2.75m to 3m. They shall have a well defined, straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown shall be well shaped, balanced, of a form and habit natural for the species.

All advanced nursery trees shall comply with BS 5236: 1975. They shall have a well defined, straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown shall be well shaped, balanced, of a form and habit natural for the species. Trees shall have a sturdy, reasonable straight stem not less than 1.8m from ground level to the lowest branch. All advanced nursery stock trees shall be supplied with roots balled. All coniferous trees shall be supplied rootballed or container grown, with a good fibrous root system. Trees shall conform to specified height with well developed, uniform branching systems.

4.14 Tree Planting

Planting pits for trees in undisturbed ground will be backfilled with excavated material. Tree pits in mounds or other made up ground shall be backfilled with topsoil.

All tree pits for all trees other than semimature trees shall be excavated 200mm wider in all directions than the natural root spread, or rootball, and the base forked to improve drainage. Stakes shall be positioned before backfilling.

Topsoil backfill shall be mixed with peat substitute in the ratio of 4:1. 60g Enmag or similar approved slow release fertiliser shall be incorporated. The backfill shall be settled and well firmed around the roots avoiding air pockets.

All semimature tree pits shall be excavated 500mm wider than the natural root rootball, and 150mm deeper to allow for 250mm of backfill mix, tamped firm to 150mm. In all semimature tree pits an additional depth of 150mm should be dug to allow for a 150mm gravel layer at the bottom of the pit to aid in drainage.

Sides of tree pit shall be ripped and loosened to ensure a good bond with the backfill and to avoid root girdling.

All semimature tree pits shall be backfilled with mix consisting of: 10 parts native topsoil and 5 parts sharp sand. 60g Enmag or similar approved slow release fertiliser shall be incorporated.

4.15 Plants Generally

All plants shall conform fully to the specification in respect of species, size and quality. The Landscape Contractor shall investigate the sources of supply and satisfy himself that he can supply all of the plants specified on the planting schedule in the size, variety and quality before submitting a bid. Substitutions will not be permitted. If proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of nearest equivalent size or variety, with an equitable adjustment of contract price.

All plants shall be well grown, sturdy and bushy, according to type, and free from all disease and defects.

The Landscape Architect reserves the right to reject any plant material before or after planting if it does not conform with the specification. All plants shall be adequately hardened off prior to planting, where frost or cold winds may be a problem. All plants shall be supplied with temporary labels with the full botanical name, on each bundle or batch of plants.

The Landscape Contractor should indicate in their tender source of material to be used and where it can be inspected prior to award of contract.

All plants that do not conform to the specification will be automatically rejected and must be removed from site and replaced at the Landscape contractor's expense.

All plant stock, plant handling and planting to be undertaken in accordance with the following British Standard Specifications and Code of Practice:

- BS 3936:1992 Part 1 Nursery Stock :Specification for trees and shrubs;
- BS 3936:1981 Part 10 Nursery Stock : Specification for ground cover plants;
- BS 4428:1989 : Code of Practice for General Landscaping Operations (excluding hard surfaces);
- BS 8545:2014 Trees from Nursery to Independence in the Landscape;
- The Code of Practice for Plant Handling 2002 (Horticultural Trades Association).

4.16 Shrubs/ Groundcover Sizes

All shrubs and groundcovers shall be supplied as sizes indicated in the Bill of Quantities and Contract drawings.

4.17 Whip Sizes

Unless otherwise specified, all trees shall be as follows:-

Whips, 600-1200mm high, 150 x 150 150mm minimum root dimensions. All whips are to have a sound central leader and well formed branches.

4.18 Tree Sizes

Unless otherwise specified:

Type	Girth	Height
Whip Planting		600-1200mm
Half Standard Tree	4-6cm	1.8-2.1 m
Light Standard Tree	6-8cm	2.25-2.5m
Standard Tree	8-10cm	2.75-3m
Selected Standard Tree	10-12cm	3-3.5m
Heavy Standard Tree	12-14cm	3.5-4m
Extra Heavy Standard Tree	14-16cm	4-4.5m
Advanced Extra Heavy Standard Tree	16-18cm	5m
Semimature Tree	20-22cm +	6.5-7m +

4.19 Tree Anchors, Stakes, Guys, etc.

All trees other than semi mature trees shall be supplied and fitted with one tree stake per tree.

Tree stakes shall be peeled poles of oak, sweet chestnut, pine or Douglas fir, or tanalised larch. All stakes shall be preserved with water borne copper chrome arsenic to IS 131, to a net dry salt retention of 5.3kg per cubic metre of timber. Stakes shall be supplied as sizes specified.

They shall be at least 1.8 metres long unless otherwise specified, with a minimum diameter of 75mm at both butts.

Stakes shall be driven prior to planting with a drive all, wooden maul or cast iron mell.

Trees shall be tied to each stake with a purpose made tie and spacer, the tie to be overlapped and thrice nailed to the stake. Tree ties shall be rubber or PVC or proprietary fabric laminate composition, and shall be durable enough to hold the tree secure in all weather conditions for a period of three years. They shall be flexible enough to allow for proper tightening of the tie. Tree ties shall be 25mm-40mm wide depending on tree size. They shall be fitted with a simple collar spacer to prevent charring, and with a buckle for adjustment.

4.20 Mulch

Mulch shall be graded bark chippings from coniferous trees, particles 25-75mm, free of fine material, dust or wood.

Mulch will be rejected if in the Landscape Architect's opinion it is likely to be wind blown.

SECTION 5.0 WORKMANSHIP

5.1 Site Clearance

Remove and dispose of off site any rubbish still occurring in topsoiled areas, including weeds, old masonry and rubble, metal, wood, and stones, excavating as necessary to permit the specified depth of final cultivations.

All scrub areas shall be grubbed and all existing plants of same shall be removed and disposed of including all root systems unless otherwise specified.

Before topsoiling, remove all stones over 75mm in diameter. Dig out any areas polluted by oil or chemicals and make up with clean soil. Break up the formation under any areas liable to ponding of rainwater, so that they drain.

Topsoil shall be moved and spread only in dry weather. No work to topsoil shall be carried out when it is waterlogged, or if its moisture content is conducive to structural deterioration. Minimise compaction of topsoil and subsoil when spreading, running machinery over the surface as little as possible.

5.2 Cultivation Generally

The aim of cultivation is to produce a well drained and textured soil suitable for plant growth. All areas to be planted or seeded shall be cultivated to a minimum depth of 450mm or deeper if specified. Areas where obvious compaction has occurred shall be ripped. Stones above 75mm longest dimension shall be removed from the top 100mm layer of shrub planting areas.

5.3 Final Preparation - Seeding Areas

One week before seeding, Fisons PSS or similar approved pre-seeding fertilizer shall be spread at a rate of 70g per square metre and incorporated in the surface layer. The soil shall be firmed and raked to a fine tilth suitable for seeding.

5.4 Final Preparation - Wild flower Seeding Areas

The soil shall be firmed and raked to a fine tilth suitable for seeding. No fertilizers shall be used on areas for wildflower seeding.

5.4 Final Preparation - Shrub planting areas

Coarse clean moist compost or approved peat substitute shall be forked in at a rate of 5kg per square metre and incorporated to a depth of 200mm.

Controlled release fertilizer N:P:K 15:9:11 plus trace elements - Osmocote plus or similar approved shall be applied at specified rates and raked into the top 50mm. The surface shall be raked to a tilth suitable for planting.

5.5 Final Preparation - Whip planting areas

Coarse clean moist compost or approved peat substitute shall be forked in at a rate of 5kg per square metre and incorporated to a depth of 200mm. An approved fertilizer shall be spread

at a rate of 70g per square metre and raked into the top SOMm layer. The surface shall be raked to a fine tilth for planting.

5.6 Planting

Forestry transplants and feathered trees other than evergreens will be planted between November and March inclusive. Evergreens will be planted in October or in April/May. Planting shall normally be carried out during the period 1st October to 31st March in suitable weather.

Containerised plants may be planted throughout the year provided the weather is suitable, the soil is sufficiently moist and each plant is watered following planting.

Planting out with the specified planting period will only be permitted in exceptional circumstances at the discretion of the Landscape Architect; such exceptional circumstances shall include unsuitable weather and no penalty shall be incurred under provided that any delay is formally accepted by the Landscape Architect as attributed to this cause. In the event that works are delayed by inclement weather, the Landscape Contractor shall complete the works at the earliest opportunity afforded by suitable weather.

5.7 Planting Generally

All planting operations shall be carried out in accordance with BS 4428 and good horticultural practice.

The Landscape Contractor shall provide the Landscape Architect with the species and quantities reserved from each named nursery, and the Landscape Architect shall have the right to inspect such nursery stock as deemed necessary, prior to its purchase by the contractor.

All plant labels are to be kept on their respective plants by the Landscape Contractor until the final inspection has been carried out. Only on approval from the Landscape Architect may such labels be removed by the Landscape Contractor.

Bare root stock shall be delivered to the site on the day of planting.

If under exceptional circumstances planting cannot take place within 12 hours of delivery, stock shall be healed in or their roots shall be adequately covered with moist hessian or good quality topsoil for a maximum period of 10 days. The roots are to be kept moist throughout this time by adequate watering. Water logging shall be prevented. Any plants which fail due to inadequate protection prior to planting shall be rejected and replaced at the Landscape Contractor's own expense.

Any plants stored temporarily on site shall be protected from adverse weather conditions. Plants with damaged root systems shall not be accepted. After planting, any minor damage shall be rectified by pruning. Plants which, in the opinion of the Landscape Architect, have been seriously damaged during planting shall be rectified by pruning. Plants which, in the opinion of the Landscape Architect, have been seriously damaged during planting shall be rejected and replaced at the Landscape Contractor's expense. All planting shall be firmed up if loosened by frost or wind

Prior to planting all bare rooted plants shall be completely immersed in a container of Alignure Root Dip (1:99) solution and container grown plants shall be sprayed with the solution according to manufacturers instructions.

5.8 Seeding & Establishment

Grass seeding rate shall be: 25-35gm per square metre.

Wildflower seeding rate shall be: Sgm per square metre.

Seeding shall only be carried out at the correct season and in suitably calm but moist weather conditions.

Seeds shall be cross sown in two directions at right angles to each other (half the seed to be used in each direction) to prevent striping.

After sowing, all areas shall be lightly raked with a chain harrow or by hand.

About 48 hours before first cut, large stones (more than 40mm in any dimension) should be removed and all areas rolled with a light roller to firm grass and press in all remaining stones.

When the grass is established and from 40 mm to 75 mm high, according to the seed mixture, it should be topped with a rota-scythe so as to leave from 25mm to 50mm of growth, to cut weeds, to control the growth of coarser grass and to encourage tillering. Grass areas shall only be accepted as reaching practical completion when germination has proved satisfactory and weeds have been removed.

No payment for re-seeding shall be made to the landscaping Sub-Contractor if the seed fails due to any cause whatsoever. He shall be required to make good the soiling and repeat the seeding until a good sward is obtained.

5.9 Bulbs/Corms

Bulbs/Corms shall be planted in a random pattern and allowed to naturalise. Avoid planting in straight lines. To plant, take out core in grass/shrub area, placing bulb/corm at base of hole ensuring no space is left under bulb. Hole must be wide enough to allow for base of bulb/corm to be placed directly on the soil. Repair the core and firm flush.

5.10 Shrubs

All shrubs shall be pit planted in precise locations as shown in plans. Pits shall be excavated 150mm wider in all directions than the natural root spread of the plant, and the bottom of the pit must be well forked to improve drainage. Backfilling of all pits shall be with soil and compost or an approved peat substitute in the ratio of 4:1.

All plastic and non-degradable wrappings and containers shall be removed before planting. Make 4 vertical cuts with a sharp knife on the quadrants through the edge of container grown rootballs to sever girdling roots.

5.11 Whip planting

All whips shall be notch planted in staggered pattern. Whip trees shall be planted randomly with no more than 5 plants of the same species planted in groups. Blocks of similar species are not to be planted. Pits shall be excavated 150mm wider in all directions than the natural root spread of the plant.

5.12 Tree Planting

Planting tips for trees in undisturbed ground will be backfilled with excavated material. Tree pits in mounds or other made up ground shall be backfilled with topsoil.

All tree pits other than semi mature trees shall be excavated 200mm wider in all directions than the natural root spread, or rootball, and the base forked to improve drainage. Stakes shall be positioned before backfilling. Topsoil backfill shall be mixed with peat substitute in the ratio of 4:1.60g Enmag or similar approved slow release fertiliser shall be incorporated. The backfill shall be settled and well firmed around the roots avoiding air pockets.

All semi mature tree pits shall be excavated 500mm wider than the natural root rootball, and 150mm deeper to allow for 250mm of backfill mix, tamped firm to 1SOmm. In all semi mature tree pits an additional depth of 1SOmm should be dug to allow for a 1SOmm gravel layer at the bottom of the pit to aid in drainage. Sides of the tree pit shall be ripped and loosened to ensure a good bond with the backfill and to avoid root girdling.

All semi mature tree pits shall be backfilled with mix consisting of: 10 parts native topsoil and 5 parts sharp sand. 60g Enmag or similar approved slow release fertiliser shall be incorporated. Backfilling shall be firmly tamped every 150-200mm and when pit is half full the backfill shall be flooded for further settlement. After excess water has drained further soil shall be added, tamped, and a final watering shall be given just before the final 75mm of backfill added. The backfill shall be settled and well firmed around the roots avoiding air pockets. All trees shall be well watered after planting.

All semi mature trees shall be transported to the site of planting one tree at a time, and only when the pit has been dug and the backfill mixed on site. All semi mature trees shall be supported on transit by the rootball only. Manhandling of the rootball will not be permitted. The stem shall not be supported. The crown may be supported by hand only if the Landscape Contractor deems it necessary. No tyred machinery except approved balloon-tyred machinery shall be used in the excavations of the tree pits. While excavating, tracked or balloon wheeled machinery shall operate on protective mats or wooden sheets to prevent compaction.

All semi mature trees shall be secured with a Platipus rootball fixing kit as per manufacturer's instructions. All timber frames to be used with the Platipus rootball fixing system shall be fixed with nail plates at each junction so that the individual members of the finished frame shall be flush with each other and of one level. Where possible the timber frames shall be constructed so that an optimum condition is achieved between preventing the timber frame from appearing above ground levels, and also ensuring that an uncompromised frame for anchorage exists (i.e. the frame shall be made as large as possible so that it can sit on the lowest part of the top rootball).

All ratchet tensioning systems shall be nailed to the timber frame so that the ratchet shall remain upright and in the position intended when installed. All timber frames of the rootballfixing system shall be installed to ensure that when the tree pit is backfilled the frame shall be covered by a minimum of 50mm of mulch. All rootballs of semi mature trees are to be surrounded with a 4 inch perforated land drain pipe to aid in future waterings.

5.13 Mulch

On completion of planting, the total area of the disturbed soil is to be mulched to a depth of 150mm. The soil and the mulch shall be thoroughly wetted prior to application, and also prior to application a complete clearly through and weeding of the area shall be carried out, leaving the soil weed free, smooth and conforming to acceptable finished levels.

Mulch to be spent hops/brewers waste, set aside for 2 days before using or approved and treated bark.

5.14 Watering

All bare rooted light standards and selected standards shall be soaked in water overnight, on site. Fertilisers shall conform to B.S. 5581: 1981. In the case of granular fertiliser being added to plantings, it must be mixed through and incorporated into the base of the planting hole and covered over in order to avoid roots of plants coming in direct contact

During dry periods at any other times deemed necessary prior to practical completion, the Landscape Contractor shall water all plant areas.

The Landscape Contractor is to ensure that he is aware of any restrictions on the use of water and hose pipes which may be applied by the water authority and is to comply with any such restrictions. Any water carried out shall take care to avoid soil wash off the shrub area and disturbance of the peat mulch. Any damage caused by soil wash shall be immediately rectified by the Landscape Contractor at his own expense, to the approval of the Landscape Architect. Watering shall be carried out to add moisture to the full planting depth. No minor surface watering shall be carried out. The Landscape Contractor shall allow for watering of all plants to field capacity as and when necessary, until practical completion is achieved.

5.15 Weeding

All planting areas are to be kept free of weeds and rubbish prior to practical completion. All planting areas are to be hoed, forked or hand weeded. The use of chemicals shall only be upon approval from Landscape Architects.

Roundup - by Monsanto chemicals Ltd. 4-5litre/Ha. Do not apply when rain is forecast within six hours. Do not apply when rain is likely to cause spray drift. Allow for leaf symptoms to develop before carrying out any cultivation. Apply to manufacturers recommendations. Apply 'Roundup' to kill existing grass pre-seeding, and weeds germinating in topsoil.

If germinating weed grasses are less than 100mm high and broad leaved weeds have not produced full sized leaves, do not apply 'Roundup'. Apply 'Basta' @ recommended rates, 4 to 7 days before cultivating.

Basta - by May + Baker Ltd., 11litre/Ha. Shall be used in accordance with manufacturers instructions. Apply 'Actrilawn' when grasses have reached the 2 leaf stage or beyond, and when seedlings have emerged and reached cotyledon or 2 leaf stage (approx. 4 weeks after sowing). Do not mow grass within 7 days of treatment.

Casoron G - Granular weedkiller to be applied 5.6-22.5 kg/1000sq.m. Shall be used in accordance with manufacturers instructions.

SECTION 6.0 TIMESCALE AND PROGRAMME OF LANDSCAPING WORKS.

6.1 Timing of Works

Landscaping works to be undertaken in first planting season following completion of site and the development works. Phased completion of landscaping works to be undertaken to match completion of each phase of the development. Topsoil spreading and preparation of soft landscaped areas of gardens and open space area including subsoil cultivation shall be agreed and carried out in suitable weather conditions. Avoiding waterlogged and frost weather periods

Planting of trees and shrubs to be undertaken in dormant period of growth, generally between October and March subject to approval, grassing and surface cultivation between April and September.

SECTION 7: LANDSCAPE MAINTENANCE

7.1 Scope of Work

Landscape contractor to allow for maintaining the works for a period of 18 months after practical completion,

This work to include:

- Grass cutting to maintain sward between 35 to 50 mm as noted above. Cutting of areas with native wildflower seed and bulbs to be agreed.

- Fertilizing of grassed areas to commence in late spring/early summer following development of sward. Application and type of fertilizer to be agreed on site with landscape contractor, prior to application.

- Replacing all plants, which die or fail to thrive, under circumstances within the contractor control, within the 18 months

- Weeding docks and nettles to be removed by mechanical means from all areas, allow for supplying and spreading an approved herbicide weed suppressing to grassed verges, to manufactures instructions.

- Watering all planted areas, including shrubs and trees, allow for standpipe connection and hoses as required.

- Resetting and retying all ties to trees.

During this period thee contractor shall keep all roads and pavements clear of weeds, grass mowings, mulch and rubbish from site at the conclusion of each days work.

7.2 Long Term Maintenance.

Long-term maintenance to be undertaken by approved landscape contractor.

7.3 Maintenance of Tree Planting

7.3.1 Maintenance period

The Landscape Contractor shall be responsible for the aftercare and maintenance of the completed works for 18-months from the date of practical completion.

7.3.2 Weed control

Weeding may only be done by hand, except in exceptional circumstances where persistent perennial weeds may be treated chemically. The use of chemicals shall only be upon approval from the Landscape Architect.

Noxious weeds (dock, thistle, ragwort) shall not be allowed to establish. All soil surfaces shall be generally free of weeds at all times and shall be entirely free of weeds after each maintenance visit. No grass shall be allowed to encroach into soil areas. Weed free circles around trees shall be 1000mm diameter in grassed areas. Weeds shall not cover 10% of circle at any time during maintenance period.

7.3.3 Watering

Careful attention to water is essential during dry spells and may be critical in the case trees. Trees shall be watered as necessary and to their full planting depths. Water trees as required after any period of 4 weeks without significant rainfall (less than 5mm).

7.3.4 Fertilizer

Apply top-dressings of organic matter such as cow, horse or sheep manure or proprietary materials to trees and shrubs once in spring, twice during the summer and once again in winter. This treatment is to be carried out for the duration of the maintenance contract.

Alternatively, if so wished, inorganic fertilizer can be applied as 'Osmocote' 18:11:10, @ 50g / square metre in spring and late summer.

7.3.5 Pruning / trimming

Any pruning should involve removal of dead, diseased or badly crossing branches or shoots. Dead heading reduces competition for nutrients between the developing seeds and the rest of the plants so that further growth and flowering is often stimulated.

7.3.6 Wind firmness, stakes and tree ties

All plants shall be regularly inspected for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and all tree ties inspected and made good as required..

7.4 Maintenance of Shrub Planting

7.4.1 Maintenance period

The Landscape Contractor shall be responsible for the aftercare and maintenance of the completed works for 18 months from the date of practical completion.

7.4.2 Weed control

Weeding may only be done by hand, except in exceptional circumstances where persistent perennial weeds may be treated chemically. The use of chemicals shall only be upon approval from the Landscape Architect.

Noxious weeds (dock, thistle, ragwort) shall not be allowed to establish. All soil surfaces shall be generally free of weeds at all times and shall be entirely free of weeds after each maintenance visit. No grass shall be allowed to encroach into soil areas.

Weed free bands along hedges shall be 750mm wide. Weeds shall not cover 10% of circle at any time during maintenance period.

7.4.3 Watering

Careful attention to water is essential during dry spells and may be critical in the case large shrubs. Shrubs shall be watered as necessary and to their full planting depths.

7.4.5 Fertilizer

Apply top-dressings of organic matter such as cow, horse or sheep manure or proprietary materials to trees and shrubs once in spring, twice during the summer and once again in winter. This treatment is to be carried out for the duration of the maintenance contract.

Alternatively, if so wished, inorganic fertilizer can be applied as 'Osmocote' 18:11:10, @ 50g / square metre in spring and late summer.

7.4.5 Hypericum Rust

All Hypericum spp. plants shall be treated with 'Bayleton 5' for rust, according to manufacturers' instructions.

7.4.6 Pruning / trimming

Any pruning should involve removal of dead, diseased or badly crossing branches or shoots. Dead heading reduces competition for nutrients between the developing seeds and the rest of the plants so that further growth and flowering is often stimulated.

Deciduous shrubs are best pruned in winter when new and old growth can be easily distinguished. Allow shrubs which flower on the current season's growth to be pruned back to older wood soon after flowering. Any pruning should involve removal of dead, diseased or badly crossing branches or shoots.

Dead heading reduces competition for nutrients between the developing seeds and the rest of the plants so that further growth and flowering is often stimulated. All hedges shall be clipped to maintain uniform and tidy appearance.

7.4.7 Wind firmness

All plants shall be regularly inspected for wind firmness and firmed as necessary at the same time.

7.5 Maintenance of Grass Seeded Areas

7.5.1 Maintenance period

The Landscape Contractor shall be responsible for the aftercare and maintenance of the completed works for 18 months from the date of practical completion.

7.5.2 First roll and cut

When grass has grown to 38mm it shall be lightly rolled and two days later mowed with an approved mower having no roller and sufficiently sharp to avoid root pulling. Mowing shall be carried out under dry weather conditions.

7.5.3 Further Cuttings

Thereafter grass shall be cut regularly (a total of 32 times during each growing season) to a length consistent with the season and quality of growth, and rolled as necessary.

Cuttings shall not normally be removed unless otherwise directed.

Cuttings shall be spread evenly on grassed areas. All grass cuttings shall be swept and removed from hard standing areas. Note: Grass shall be established with a height of cut at about 20mm.

7.5.4 Pollinator Friendly Mowing Regime

Grass shall not be mown until the 15th of April. Thereafter grass shall be cut on a six weekly rotation (5 cut and lifts per year). Second cut at the end of May, third cut in mid-late July to maximise growth of Clovers and other wildflowers, fourth cut at the end of August and the fifth cut after mid-October. Remove cutting arisings to off site compost facility.

Mowing shall be carried out under dry weather conditions. Prior to mowing all litter shall be removed from grass areas. Grass cutting in areas of bulbs/corms shall not be undertaken until June or until such time as dieback has occurred.

7.5.5 Fertilizing

The sward shall be given one application of an approved top dressing 10:10:20 applied in two equal passes in transverse directions at a combined rate of 17 g/ square metre, also avoid any banding.

7.5.5 Weed control

Weeding may only be done by hand, except in exceptional circumstances where persistent perennial weeds may be treated chemically. The use of chemicals shall only be upon approval from the Landscape Architect.

7.5.6 Settlement

Any settlements or local depressions shall be made up by the Landscape Contractor at his own expense. The whole new grass areas shall be handed over as complete well established sward at the end of the maintenance period and all necessary work (whether specifically mentioned or not) shall be carried out to secure this end.

7.5.7 Trimming

The edges of seeded areas adjoining beds and margins where board edgings or mowing margins have not been constructed are to be carefully trimmed square and true to line.

7.5.8 Acceptance

Unless otherwise stated in the programme of completion, individual areas will not be accepted until the whole of the works have been completed. The Landscape Contractor shall include for keeping such areas correctly maintained and protected until handed over.

7.6 General

7.6.1 Debris removal

All paper and trash in the planted areas shall be removed on a monthly basis. All paper and trash shall be disposed of by the contractor outside of the Client's facilities.

Remove excessive amounts of leaf and litter (dead twigs, branches, leaves, bark, etc.) as it accumulates in maintained areas. Leaves and other organic material useful as a mulch may be left in place upon approval of the Client. Additional visits will be facilitated as requested by Client.

Stone or debris over 50mm diameter shall be removed or buried after each maintenance visit.

7.6.2 Monthly Maintenance - Maintenance Certificate

Throughout the 18 month maintenance period following completion of planting, the Contractor shall maintain the site in a weed free, tidy and tended condition. He shall include in the Schedule of Rates a realistic amount to cover the cost of such maintenance for the full maintenance period.

7.7 Plant Deaths

All tree and shrub losses due to natural causes after planting shall be replaced by the contractor within the following season with plants equal in size and shape to those first planted.

7.8 Pests and Diseases

All plants shall be inspected by experienced personnel at least twice a year for the presence of pests and diseases. If either or both are present, the contractor shall report the conditions and implement the appropriate control measure immediately.

All chemicals to be used for the control of pests and diseases shall be approved, and applied in accordance with the manufacturers written instructions.

If any plants are so heavily infested that even after control measures have been taken death is likely, they shall be removed from site and replaced with new healthy stock.