



# SPECIFICATION & LANDSCAPE MANAGEMENT DOCUMENT

**Further Information Response: Planning File SD22A/0045**

**St. Finian's Way,**

**Newcastle,**

**Co. Dublin**





## **1.0 Description of Work**

The work consists of general works, site preparation, and tree, shrub and hedgerow planting. The landscape design is to be implemented on a phased basis, to coincide with the phasing of the building works. All landscaping is to be completed prior to occupation of the buildings.

### **1.1 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 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

### **1.2 Season**

Landscape work shall take place in the appropriate season and only when the 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, e.g. heavy frosts, measures shall be taken as approved by the Landscape Architect.





### **1.3 Replacement**

The landscape 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 twelve months after planting. The landscape 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.

### **1.4 Defects Liability Period**

The Landscape Contractor shall be responsible for any plants that fail to take during the first full growing season (12 months) from date of completion.

### **1.5 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.



### **1.6 Site Inspection**

Prior to the submission of tenders to the Landscape Architects, the Landscape Contractor is expected to visit the site and familiarise himself 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.

### **1.7 Setting Out**

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.

### **1.8 Insurance, Indemnities, etc.**

The Landscape Contractor shall indemnify, and keep indemnified the Employer against all actions, suits, claims, demands, costs and expenses whatsoever, by reason of, or arising out of the execution of the Contract Works, or any of the matters connected therewith, whether such claim or proceedings be brought or costs or expenses incurred under or virtue of Workmen's Compensation Act, Employer's Liability Act, or any other statute or at Common Law, or otherwise howsoever.

### **1.9 Health and Safety**



The Landscape Contractor shall in performing the Services adopt safe methods of work in order to protect the health and safety of his own employees, the employees of the Employer and of all other persons, including members of the public and shall comply with the requirements of the Health and Safety at Work Act 1974, The Management of Health and Safety Regulations 1992, Control Of Substances Hazardous to Health (COSHH) Regulations 1988 and 1994, and of the Road Traffic Act 1988 and of any other Acts, Regulations, Orders or any European Directive pertaining to the health and safety of employed persons. The Landscape Contractor shall at the time of submitting his Tender provide to the Employer a written copy of his health and safety working procedures relating to the performance of the Contract.

#### **1.10 Default in provision of the service**

Without prejudice to any other powers of the Employer, if the Landscape Contractor, for whatever reason fails to provide or perform the Services in whole or in part completely in accordance with the terms of the Contract then without prejudice to any remedy contained herein the Employer may by his own or other workmen provide and perform such Services or part thereof in which the Landscape Contractor has made default. The costs and charges incurred by the Employer in so doing shall be paid by the Landscape Contractor to the Employer on demand or may be deducted by the Employer from any moneys due or which may become due to the Landscape Contractor. In the event of non-completion of specified works, non-compliance with specification, faulty workmanship or use of defective materials, the Landscape Contractor will be deemed to be in breach of contract and payment may be withheld in full or in part pending completion or execution of remedial work.





## **EARTHWORKS**

### **2.0 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. 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 top soiling 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.

### **2.1 Topsoil levels**

All topsoil shall be placed and graded by the Main Contractor to the following levels: shrub and hedgerow planting 450mm tree planting 1200mm x 1200mm x 750mm pit

### **2.2 Maintenance of topsoil stockpiles**

Stockpiles of 1 year duration or less: treat the growing weeds with 'Roundup' applied at 5 litres per hectare, diluted and applied in accordance with the manufacturers instructions, when they are growing strongly (May - June). Noxious weeds (dock, thistle, ragwort) shall be treated before they flower.



### **2.3 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 6 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. All trees, shrubs and other plant material shall comply with the minimum requirement of the relevant British Standards below:

BS 3936 Part 1: Specification for trees and shrubs

### **2.4 Time of Lifting**

Bare root plants must only be lifted when the ground is moist and the plant is dormant between November and end March of the 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.

### **2.5 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.

### **2.6 Trees**

Trees shall conform to the appropriate British Standards. All trees should be full and well shaped, bark unmarked and have healthy root systems.



## 2.7 Tree Sizes

Unless otherwise specified, all trees shall be as follows :- Extra Heavy Standard 14-16cm girth 4.5-5.0m

All trees shall be supplied and fitted with two knee high tree stakes 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 75 mm at both butts. 7 Stakes shall be driven prior to planting with a drive all, wooden maul or cast iron mell, not with a sledge hammer.

Trees shall be fitted to crossbar with rubber tie 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. Flexible pipe is to be installed into the tree pit at the time of planting to facilitate watering of trees during dry spells. Trees are to be watered to field capacity as and when required to ensure continued thriving of trees.

## 2.8 Approved chemicals

All chemicals used shall be non-toxic to human beings, birds and animals under normal use, and chemicals which are not agriculturally approved shall not be used. The use of the following herbicides is acceptable:

Roundup

Basta

Actrilawn 10

Casoron G

Kerb Flo





The use of the following fertilizers is acceptable:

Fisons PS5 : grass areas

Osmocote Plus- fertiliser N:P:K 15:9:11 plus trace elements: Shrub areas

Enmag - 4:19:10 + 7.5% : Tree planting

## 2.9 Planting Generally

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

### Shrubs, Whips and Transplants

All plant material must comply in all respects with the current edition of BS 3936 Parts 1, 4, and 5. Trees shall be sturdy, with a balanced root and shoot development, sizes shall conform to schedule. **Cultivation**

### Generally

The aim of cultivation is to produce a well-drained and textured soil suitable for plant growth. All areas to be planted 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. Any plants stored temporarily on site shall be protected from adverse weather conditions. Plants with damaged root systems shall not be accepted. Controlled release fertiliser 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 layer. The surface shall be raked to a tilth suitable for planting.

### Mulch

On completion of planting, the total area of the disturbed soil is to be mulched to a depth of 50mm. The soil and the mulch shall be thoroughly wetted prior to application, and also prior to application a complete clearing through and weeding of the area shall be carried out, leaving the soil weed free, smooth and conforming to acceptable finished levels.



### **2.10 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 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.

### **2.11 Watering**

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

The Landscape Contractor must give notice to the local water Authority that a supply of water will be required for the execution of the works. 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 damage caused by soil-wash shall be immediately rectified by the Landscape Contractor at his own expense, to the approval of the Landscape Architect.

### **2.12 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 be 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 wind is likely to cause spray drift (over 24kph / 15mph). Allow for leaf symptoms to develop before carrying out any cultivations. 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 Hoechst Ltd. 3 - 7.5litre/Ha. Do not apply when rain is forecast within six hours. Apply to manufacturers recommendations.

'Actrilawn 10' - by May + Baker Ltd., 11litre/Ha. Shall be used in accordance with manufacturer's instructions. Apply 'Actrilawn' when grasses have reached the two leaf stage or beyond, and when seedlings have emerged and have reached cotyledon or two 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 manufacturer's instructions.

Kerb Flo - weedkiller to be applied 3.75 - 4.25litre/Ha. Shall be used in accordance with manufacturer's instructions.

## **MAINTENANCE OF TREE PLANTING**

### **1.0 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.

### **3.1 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. In the winter a first application of the residual weedkiller 'Kerb Flo' shall be applied in the according to the manufacturer's instructions, for tree areas, immediately after the area has been planted and before any weed germination has taken place.





Annual or perennial weeds which grow shall be spot treated by the contact weedkiller 'Basta', according to the manufacturer's instructions, care been taken to ensure no spray touches any part of the leaves.

An application of 'Roundup' may be applied from August on, strictly according to the manufacturer's instructions for tree areas. It is to be noted that the surface of the ground shall not be physically disturbed. 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.

### **3.2 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).

### **3.3 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.

### **3.4 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.

### **3.5 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.



## **MAINTENANCE OF HEDGEROW AND SHRUB AREAS**

### **2.0 Maintenance period**

The Landscape Contractor shall be responsible for the aftercare and maintenance of the completed works for 12 months from the date of practical completion.

### **4.1 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. In the winter a first application of the residual weedkiller 'Kerb Flo' shall be applied in the according to the manufacturer's instructions, for shrub areas, immediately after the area has been planted and before any weed germination has taken place. Annual or perennial weeds which grow shall be spot treated by the contact weedkiller 'Basta', according to the manufacturer's instructions, care been taken to ensure no spray touches any part of the shrubs.

An application of 'Roundup' may be applied from August on, strictly according to the manufacturer's instructions for shrub areas. It is to be noted that the surface of the ground shall not be physically disturbed. If foliar acting weedkillers are applied, all plants shall be protected during their application with 'Arboguard', 'Politec' or similar approved. No residual herbicide shall be used in the first season of planting. 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 are to be maintained along hedges. Weeds shall not cover 10% of circle at any time during maintenance period.

### **4.2 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.



#### **4.3 Fertilizer**

Apply top-dressings of organic matter such as cow, horse or sheep manure or proprietary materials to trees and hedgerows 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.

#### **4.4 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. All hedges shall be clipped to maintain uniform and tidy appearance. Hedgerows are to be trimmed annually in November and maintained to a maximum height of 2.5m.

#### **4.5 Wind firmness**

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