SPECIFICATION FOR SOFT LANDSCAPING & PLANTING

CULTIVATION AND EXTENSION

1. Formation Levels

All areas to receive topsoil will be left at the following formation levels:-

Areas to be turfed or grass seeded will be left at 100mm below adjacent kerbs or paving unless specified otherwise on the drawings. In the case of these areas, the term "finished soil level" means the level obtained after topsoil has been spread, levelled and consolidated to a depth of 100mm prior to sowing grass seed or laying turfs.

Areas to be planted with shrubs, except in raised brick beds, will be left at a depth of 450mm below finished soil level, i.e. to level obtained after topsoil has been spread, levelled and consolidated to a depth of 450mm prior to planting.

All areas which are to be planted with forestry transplants and whips shall generally be left at existing ground levels, except where otherwise specified and all cultivation operations for areas to be planted shall be carried out as hereinafter specified.

Where shrubs are to be planted in raised beds, the ground within the beds shall be left at a depth of 900mm below finished soil level, i.e. the level obtained after drainage materials, peat and topsoil have been spread in three layers to a total consolidated depth of 900mm.

2. Compaction

Areas compacted to such an extent that a hard pan has formed are to be broken up by the use of a heavy tine cultivator or sub-soil plough.

3. Season

All work shall be carried out at an appropriate season and in weather conditions suitable for the operation. In particular, tree and shrub planting shall not be carried out before October nor after March and grass seeding shall be carried out between mid July and mid October.

Suitable weather conditions for planting shall mean open weather (i.e. mild, dull and moist, even in winter) when the ground is moist and workable. Planting operations shall be suspended in periods of drought, when soil is frost-bound or water-logged and in periods of persistent drying cold winds.

4. Work by Machine or Hand

All operations hereinafter described, may be carried out by suitable approved machines or by hand. Any work around the bases of existing trees or shrubs, or in confined spaces, or where it is impracticable to carry out by machine for any reason, shall be executed by hand.

5. Notice of Intentions

The Contractor shall give the Local Planning Authority 48 hours notice of his intention to carry out any of the following operations:-

Setting out, ground modelling, cultivations, excavations for planting, topsoiling, planting, fertilising, grass seeding, turfing, maintenance visits.

6. Cultivations Generally

Before proceeding with the cultivation of any part of the site, any weed growth shall be destroyed and removed by whatever means and all operations are to be performed in accordance with the specification.

7. Cultivation at Formation Level

Cultivate the ground at formation level over all areas to be grass seeded or with shrubs or forestry whips or transplants with a tractor mounted, hydraulically controlled, fixed tine cultivator or rotivator to a constant depth of 300mm in two transverse directions at 1 metre centres.

8. Stone Picking

Pick off by hand and remove from site all extraneous materials, including large stones, broken bricks, concrete, glass, rubbish etc. exceeding 100mm diameter, which are exposed during the cultivation of all areas at formation level.

9. Preparation for Topsoiling

Prior to topsoiling, all areas to be planted, grass seeded or turfed shall be graded and regulated and lightly consolidated ready to receive topsoil.

10. Excavation of Planting Pits and Trenches for Hedge Planting

All trees are to be planted in pits excavated to 900mm x 900mm x 600mm deep, below finished soil levels, or such larger size as may be necessary to adequately accommodate to root spread. Excavated sub-soil is to be removed from site.

All shrubs, forestry whips and transplants are to be planted in pits excavated to 450mm x 450mm x 300mm deep, below finished soil levels.

The bases of all trees and shrub pits are to be broken up to 100mm deep and any extraneous materials such as bricks, large stone, concrete etc. is to be removed from site.

Hedges are to be planted in trenches excavated 600mm wide and 300mm deep. The base of the trench is to be broken up to 100mm depth before being backfilled with good quality topsoil.

11. Topsoil

Topsoil shall conform in all respects to BS 3882 : 1965 and shall be good quality, medium top-spit loam, of good heart, free from chemical or other pollution subsoil, pernicious weeds or other extraneous matter. It shall not contain stones

in excessive quantities and those that are present must not exceed 50mm in any dimension.

12. Topsoiling

Topsoil, as previously specified, is to be spread, levelled with a blade grader or other means to the following evenly consolidated depths.

100mm over all areas to be turfed and areas to be grass seeded

450 mm over areas to be shrub planted

600mm over areas to be planted in raised beds

600mm in the tree pits previously excavated

All areas are to be of a uniform and even grade at correct finished soil level with all hollows and ridges removed. All topsoiling and grading must only be carried out when the soil is in a reasonably dry condition.

13. Preparation of Raised Beds

After the cultivation of ground at formation level in raised beds but prior to topsoiling, the Contractor shall, firstly, supply and evenly spread pea gravel at 25mm nominal diameter to a consolidated depth of 150mm and, secondly, shall supply and evenly spread good quality coarse peat conforming to BS 4156 : 1967 to a consolidated depth of 150mm.

14. Cultivation of Topsoiled Areas

When topsoil has been spread, levelled and consolidated, all areas to be grassed or planted shall be brought to good condition by light disc or chain harrow or raking.

All stones, bricks, metal, concrete, rubbish etc. exceeding 50mm nominal diameter exposed during cultivation shall be picked by hand and removed from site.

All areas will be rolled with a light, Cambridge roller.

Carry out any necessary additional cultivation which is necessary from time to time to destroy all weed growth and to maintain a fine tilth if, owing to the time of year, weather or other causes, there is a period of waiting between completion of the work as specified and the actual turfing, grass seeding or planting operations.

GRASS SEEDING

15. Fertiliser

Three to five days before seeding, all areas to be grass seeded shall be dressed with an approved pre-germination fertiliser which is to be evenly applied at a rate of 70 gms. per square metre and to the manufacturer's instructions.

All areas are to be chain harrowed or raked in two transverse directions to a depth of 50mm to produce a fine, true and even seed bed.

16. Grass Seed

All seed and seeding operations are to comply with BS 4428 : 1969. Seed is to be obtained from an approved source, conforming in all respects to the Fodder Plant Seeds Regulations 1976 and the Seeds (National List of Varieties) Regulations 1973. Fresh seed must be purchased each season.

All grass seed is to be stored in a dry watertight shed and is to be protected from damp and vermin until required.

Seed is to be thoroughly remixed before sowing to avoid patchiness in the ground.

The grass seed mixture to be used on future public open space areas shall be agreed with the Local Planning Authority beforehand.

17. Sowing

Sowing is to be carried out between mid July and mid October in suitable calm weather conditions. Seed is to be sown at a rate of 45 gms. per square metre in two equal sowings in transverse directions by an efficient broadcast machine or in small areas, where machine distribution is impracticable, by hand.

After sowing the ground is to be lightly harrowed or raked in two transverse directions and consolidated with a Cambridge roller under suitable conditions.

TURFING

18. Fertiliser

Before laying turf, provide and evenly spread an approved pre-turf fertiliser in accordance with the manufacturer's instructions, which shall then be worked into the top 50mm of soil by light harrowing or raking.

19. Turf

Over the area to be grassed, provide and lay good quality meadow turf in accordance with BS 3936 : 1965 and BS 4428 : 1969 fibrous well rotted, mown and free from matted or dead grass and pernicious weeds following treatment by a selective weed-killer not more than three months previously and cut 900mm x 300mm of regular size and not less than 25mm in even thickness throughout.

20. Turfing

Prior to the laying of turf, the soil is to be brought to an even tilth and necessary firmness.

Turfs are to be unloaded in a clear area of that to be turfed. Turfs to be laid in accordance with BS 4428 : 1969, in rows on the prepared bed of soil commencing at the near end of the area and laid progressively by placing planks over the last row of turfs and laying subsequent therefrom; the plank to be

moved forward as each line of turfs is laid and so on to the end of the area. Turfs from the pile as unloaded to be wheeled to turf layers on three rows of planks laid side by side. The turfs to be beaten twice over the whole area with wooden turf beater. Any inequalities in finished levels are to be adjusted after the first beating by raking or packing fine soil under the turfs to obtain an even surface. The finished levels of turf abutting paving or top of kerbs must not be less than 25mm above the surface of the paving kerbs after laying is complete. Turf edges of borders and margins are to be carefully trimmed square and true to line.

No turf is to be laid in exceptionally dry or frosty weather.

TREE & SHRUB PLANTING

21. Supply of Plant Material

All trees, shrubs and hedge plants supplied shall comply with the standards of BS 3936 – Specification for Nursery Stock. All pre-planting site preparation, planting and post-planting maintenance shall be carried out in accordance with the requirements of BS 4428 (1989) Code of Practice for General Landscape Operations.

All new tree plantings shall be positioned in accordance with the requirements of Table 2 of BS 5837 – A Guide for Trees in Relation to Construction.

All plants shall be exactly true to name and variety and must be supplied in the quantities and sizes shown in the schedule. No substitution shall be made in place of the varieties listed without written permission of the Local Planning Authority.

Trees for forestry planting shall have root systems that contain a reasonable proportion of fine fibrous roots which shall be adequate for the age and size of the plants.

All plants shall be free from disease and insect pests and shall have well balanced root and shoot systems with a vigorous leading shoot appropriately furnished with laterals according to species and age.

22. Delivery of Plant Material

Plant material is to be lifted ex-nursery immediately prior to delivery to site and shall, during transit, be adequately protected so that no drying out of roots can occur. If planting cannot take place immediately following delivery, the plant material must be heeled-in in a trench deep enough to cover all roots or otherwise protected under wind and frost-proof covers.

All trees and plants are to be adequately and carefully packed and protected to survive transport, by whatever means, to the site without damaging in 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 plant or tree shall be rejected and replaced.

23. Planting Periods

Planting shall be carried out when the ground is frost free and not water-logged. Deciduous species are to be planted between late October and early April and evergreen species during October/November or from mid March to mid April.

24. Watering

At the time of planting and during periods of drought, all trees and shrubs shall be thoroughly watered.

25. Planting Depth

All trees and shrubs shall be planted at the same depth at which they have been previously growing.

26. Tree Types

(i) Whips:	Overall height 900-1200mm with single straight stem.
(ii) Forestry Transplants:	Overall height 450-700mm three years old, transplanted during their second year (2 + 1).
(iii) Feathered:	Overall height 1.20-2.10m with a defined, straight and upright leading shoot and a stem well furnished with lateral branches.
iv) Standard:	With a sturdy, reasonably straight stem 1.8-2.1m in height from ground level to the lowest branch and with a minimum diameter of 19mm at between 600mm and 900mm above ground. To have normally a well balanced branch spread giving an overall height of approximately 2.70-3.00m.
v) Selected Standard:	With a sturdy, reasonably straight stem 1.80-2.10m in height from ground level to the lowest branch and with a minimum diameter of 25mm at 600-900mm above ground. To have normally a well balanced branch spread giving an overall height of approx. 3-3.6m.
vi) Heavy Standard:	With a sturdy, reasonably straight stem 1.8-2.1m in height from ground level to the lowest branch and with a minimum diameter of 50mm at 600-900mm above ground level. To have normally a well balanced branch spread giving an overall height of approx. 3.60-4.2m.

27. Tree Planting – Feathered, Standard and Taller Nursery Stock

All trees are to be planted in the positions shown on the approved drawings in pits previously excavated. 200gms of bone meal and 0.03 cum (1 cu. ft) of peat is to be mixed into the backfill soil before planting.

One or more tree stakes, hereinafter specified, shall be driven into the centre of each pit to stand at least 1.65m above finished ground level. The base of each pit is to be covered with a sufficient depth of topsoil to allow the tree to be planted at its original soil depth. The tree should be set upright in the centre of the pit and its roots spread out evenly. Soil which has been finely worked shall be placed around the roots and the tree gently shaken. Backfill soil shall be firmed layer by layer as planting proceeds, care being taken that no depression is formed and avoiding excessive mounting.

The tree is to be secured to each stake by two approved tree ties and pads as specified.

28. Tree Stakes and Ties

Trees shall be well secured to adequate stout, straight, roundwood stakes of Hazel, Chestnut or Larch, free from bark and treated with wood preservative. Each stake should be pointed and be well barred over 600mm of its bottom length.

Feathered trees to have a stake 2m long x 37mm top diameter.

Standard and taller trees to have a stake 2.40m long and 75mm top diameter. Extra large standard trees to be supported between two stakes, each 3.2m long x 75mm top diameter up to an overall tree height of 4.50m. Trees over this height should be additionally supported by means of three light steel wires, adequately pegged into the ground and fastened to a point at two-thirds of the height of the tree.

Each tree to be tied to the stake by two rubber or plastic ties and pads, the top tie being 50mm below the top of the stake.

29. Planting of Shrubs, Forestry Whips and Transplants

All plants shall be planted in the positions shown on the approved drawings in pits previously specified. Plants within each group shall be evenly distributed in an informal manner over the area indicated, avoiding straight lines and regular geometric patterns. All plants are to be planted at their original soil depth.

All whips, forestry transplants and shrubs are to be planted at 2.0m centres unless otherwise specified in pits excavated to 450mm x 450mm x 300mm deep. Excavated materials is to be spread and levelled on site. The base of each pit is to be broken up to 100mm depth and planting done in good quality topsoil conforming in all respects to this specification. Plants are to be planted at their original soil depth, roots spread evenly over the pit and topsoil backfill firmed layer by layer as planting proceeds.

Each forestry transplant and whip is to be protected by an approved plastic rabbit guard 1.2m long supported to a stake 0.5m long x 25mm square pointed at one end and driven into the ground 150mm deep. The guard is to be secured to the stake with two staples. Guards may be halved in length for trees under 450mm tall.

Specimen shrubs shall be secured to a light stake or cane 0.5m long x 25mm x 25mm with a single tie.

30. Mulch to Shrubs

On completion of shrub planting, provide and evenly spread a mulch of finely pulverised forest bark to an even depth of 50mm over the whole area of each shrub bed.

31. Hedge Planting

Hedging plants supplied at the specified sizes are to be planted at 450mm staggered centres in two rows 300mm apart unless otherwise specified.

32. Fertiliser to Whips and Transplants

After planting, superphosphate shall be applied to all trees and shrubs at a rate of 60gms per plant. The fertiliser shall be placed a few millimetres away from each plant, taking care to avoid the foliage.

MAINTENANCE OF AREAS TO BE TAKEN OVER BY THE LOCAL AUTHORITY

33. Generally

The Contractor shall allow for keeping individual areas maintained until the whole site has been completed by the Council.

34. Grass Seeded and Turfed Areas

When the grass has grown 50mm high on areas which have been seeded, prior to grass cutting, pick off by hand all stones or other material with a nominal diameter greater than 50mm. The area shall be rolled in two directions with a light roller.

When grass over the whole area has grown 75mm high, it shall be cut with a hand or machine box mower to half the original height and all grass cuttings removed from site.

Allow for any shrinkage in seeded or turfed areas, below finished levels to be made good by top dressing with fine sifted topsoil.

If necessary, supply and make an application of an appropriately selective herbicide over grassed areas in accordance with the manufacturer's instructions to destroy all pernicious and undesirable weeds in the sward.

The height of the sward shall be maintained at 50mm until handover is completed.

35. Planted Areas

Maintain until handover a 900mm square area around the base of each standard tree and the total area of all shrub beds, free of weeds and well cultivated. An area of 0.5 sq. m at the base of each whip and forestry transplant is to be kept clear of vegetation by the application of an approved herbicide such as 'Roundup'. All weed growth, rubbish, litter and excavated materials etc. are to be collected from these areas and removed from the site.

Plants are to be firmed up, re-staked or re-tied as necessary and water shoots or broken twigs are to be removed with a sharp knife.

36. Watering

Following planting, allow for all trees and shrubs to be thoroughly watered in dry periods and, as necessary, ensure their growth and establishment.

37. Liability for Replacement

Trees and shrubs which die within five years of planting, or greater time period specified by planning permission due to the effects of weather, including late frost or lack of water, or any other cause within the control of the Contractor or Developer, shall be replaced at the Developer's own expense during the following planting season.

Bower Edleston Architects
Sweetbriar Hall
Hospital Street
NANTWICH
Cheshire
CW5 5RW