

## **Standard specification for replacement tree planting in areas of soft landscape**

### **1.0 TOPSOIL**

#### **1.1 IMPORTED TOPSOIL FOR TREE PITS**

Imported topsoil to be to BS 3882; general purpose grade.

Texture slightly stoney.

Soil pH 7.0.

Maximum stone size of 50mm in any dimension.

Topsoil to be free from, an excessive amount of weed seeds, roots of perennial weeds, subsoil and extraneous matter.

#### **1.2 HANDLING TOPSOIL**

Select and use plant to minimise disturbance, trafficking and compaction. Do not contaminate with subsoil, stone, hardcore, rubbish or material from demolition work. Handle topsoil in the driest conditions possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit as defined by BS 3882, Annex N2.

### **2.0 PLANTS AND TREES GENERALLY**

2.1 All trees and shrubs shall conform to the specification for nursery stock as set out in the National Plant Specification where it applies to trees, shrubs and plant handling and establishment: <http://www.gohelios.co.uk/nps/nps.aspx> and British Standard 3936 Parts 1 (1992) and 4 (1984). Advanced Nursery stock trees shall conform to BS 5236. Handling, planting and establishment of trees shall be in accordance with BS 8545:2014 Trees: from nursery to independence in the landscape: Recommendations.

2.2 Stock shall be materially undamaged, sturdy, healthy and vigorous, of good shape and without elongated shoots, and free from pests and diseases, discolouration, weeds and physiological disorders. Plants shall have been grown in a suitable environment and hardened off. The root system shall be to the requirements of the National Plant Specification and balanced with branch system.

2.3 Native species specified shall be of local provenance and preferably from seed collected from semi-natural parent trees within the appropriate region of provenance zone as set out in the Forestry Commission Practice Note "using local stock for planting native trees and shrubs".



- 2.4 Where a necessary change from the approved species is required due to lack of availability of stock, then this amendment will need to be agreed with the Local Planning Authority.

### **3.0 PREPARATION**

#### **3.1 SITE CLEARANCE:**

Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil. Remove stones with largest dimension exceeding 75mm. Substances injurious to plant growth including subsoil, rubble, fuel and lubricants to be removed. Retain and protect trees indicated on drawings in accordance with BS5837:2012 Trees in relation to design, demolition and construction – Recommendations (or latest iteration).

#### **3.2 PLANTING CONDITIONS:**

Deciduous trees and shrubs shall be planted only during the season November - March, and only when the soil is in a friable condition. Conifers and evergreens may be planted September/October or April/May.

Carry out preparation and planting while soil and weather conditions are suitable. Do not carry out work when the soil is so wet that to work it would result in a loss of structure or during periods of heavy frost or strong winds.

#### **3.3 WATERING:**

Water as necessary to ensure establishment and continued thriving of planting. Water to full depth of topsoil. Apply evenly and without damaging or displacing plants or soil.

#### **3.4 COMPOST:**

Tree planting compost shall be entirely free of peat. Proprietary products based on composted straw, manure or coir are acceptable, but products based on wood chips or bark should not be used. Recycled compost material must comply with BS PAS100.

Incorporate evenly into backfill of tree pits at the rates specified or the manufacturers recommended rates.

#### **3.5 ROOT DIP FOR ALL BARE ROOT PLANT MATERIAL:**

Product: Root Dip as manufactured by Agricultural Polymers International Ltd, or similar product. Apply in accordance with the manufacturers recommendations as soon as possible after lifting.

#### **3.6 TREE SHELTERS / TREE PROTECTION:**

Where there is a risk of rabbit, hare or deer damage trees should be provided with individual plastic rabbit guard.



### 3.7 ROOT DEFLECTORS

Install a proprietary root deflector to reduce the risk of distortion to surfaces or other damage that may be caused by root growth where trees are located close to paved areas or underground services. Install in accordance with the manufacturer's recommendations.

## 4.0 PLANTING

### 4.1 PLANTING PITS GENERALLY:

The preparation of planting pits is to be carried out only during periods of suitable weather. All trees and shrubs are to be planted in pits of the following minimum sizes:

	<b>Diameter (mm)</b>	<b>Depth (mm)</b>
Whips	500 x 500	500
Feathered	600 x 600	600
Standard (8-10cm girth)	600 x 600	600
Selected Standard (10-12cm girth)	750 x 750	700
Heavy Standard (12-14cm girth)	1000 x 1000	1000

Tree pit sizes should be increased where necessary to ensure pits are at least 300mm wider and 75mm deeper than the tree root system when fully spread.

Fork over the bottom of tree pits to a depth of 225mm and leave slightly domed to assist drainage. Roughen any smooth sides to pits. Topsoil excavated from planting pits is to be mixed with compost and used for backfilling. Any subsoil excavated is to be removed from site to an approved tip.

#### (a) Whip tree pits:

Excavate pit 0.5m x 0.5m x 0.5m below the lowest adjacent existing levels. Topsoil excavated from the pit should be mixed with 20L of planting compost and the pit backfilled, lightly firming by treading. Finished surface level of the pit should be domed to a minimum of 50 mm. and a maximum of 70 mm. above the adjacent surface level.

#### (b) Feathered tree pits:

Excavate pit 0.6m. x 0.6m. x 0.6m below lowest adjacent site levels. Break up the soil forming the base of the pit to a depth of 150 mm. Refill pit with topsoil mixed with 20L tree planting compost, to be provided by the Contractor, and lightly firm by treading. Finished surface level of the pit should be domed to a minimum of 70 mm. and a maximum of 100 mm. above the adjacent surface level.

#### (c) Standard and selected standard tree pits:

Excavate pit 0.6m. x 0.6m. x 0.6m deep below lowest adjacent site levels or 0.75 x 0.75 x 0.7m respectively. Break up the soil forming the



base of the pit to a depth of 150 mm. Refill pit with topsoil mixed with 80 litres of tree planting compost to be provided by the Contractor, and lightly firm by treading. Sufficient topsoil/compost mixture shall be returned to the pit to raise the surface level to a minimum of 75 mm. and a maximum of 150 mm. above adjacent surface levels.

(d) Heavy Standard tree pits

Over the area of each planting pit, remove all turf to one side for re-use. Excavate pit 1 m. x 1 m. x 1 m. deep below lowest adjacent site levels. Break up the soil forming the base of the pit to a depth of 150 mm. Refill pit with topsoil mixed with 100 litres of tree planting compost, and lightly firm by treading. Sufficient topsoil/compost mixture shall be returned to the pit to raise the surface level to a minimum of 75 mm. and a maximum of 150 mm. above adjacent surface levels.

Excavate topsoil to a sufficient depth and width to accommodate the container or allow roots to be spread without cutting or bending. Spread friable mixed topsoil/compost backfill over the roots in successive layers, working plant up and down between each layer to ensure a distribution of soil between all roots and an intimate contact between roots and soil particles. Firm the soil by treading with the heel and bring the surface level to that of adjacent areas and also to the mark on the plant stem which indicates the nursery planted level.

## 4.2 TREE SUPPORT

Feathered, Standard and Selected standard trees shall be supported with one tree stake. The overall length of the stake shall be sufficient to ensure that it is firm when driven into the soil and that the top of the stake extends above ground level to approximately one third of the tree's height, on the windward side of the tree. Stakes are to be hammered into the ground before the tree is positioned in the pit. Stakes shall be whole sections of softwood timber 50 mm. to 75 mm. top diameter, peeled and pressure treated in accordance with BS 4072. Ties shall be of a type with a spacer. One tree tie shall be positioned approximately 50 mm. from the top of the stake to hold the tree, ensuring that tree and stake do not touch in any place.

Heavy standard trees shall be provided with two tree stakes. The overall length of the stakes shall be sufficient to ensure that they are firm when driven into the soil and that the top of the stake extends above ground level to approximately one third of the tree's height. Stakes are to be hammered into the ground before the tree is positioned in the pit. Each stake shall be whole sections of softwood timber of 75 mm top diameter, peeled and pressure treated in accordance with BS 4072. A 100mm x 30mm section cross spar shall be fixed to the posts with galvanised nails. The tree tie should utilise a rubber collar to ensure that tree and stake do not touch in any place.

## 5.0 **AFTERCARE**

A 5 year aftercare period is required, during which time plants shall be maintained regularly to ensure establishment. Plant condition shall be assessed annually and any plants that die or are badly misshapen by dieback, disease or damage shall be replaced at the end of each growing season (during the planting season) in the year the fault was identified. Replacement stock shall be of the same size and species as that originally specified.

Monthly maintenance visits through the growing season should include:

### 5.1 (a) **WEEDING**

Maintain an area of clean ground 1 metre diameter around each tree.

### (b) **STAKES, TREES AND TIES**

Maintain all stakes, trees and shrubs in firm positions within the ground and with all ties securely fixed and adjusted to allow for the increase in stem girth.

### (d) **PRUNING**

Remove all dead wood and diseased tissue from all planted material at the end of each growing season, and all stem growths from standard trees immediately before the completion of the maintenance period. Prune tree crowns if necessary to encourage development of good shape.

## **Guidance Notes**

Existing trees of good quality can enhance any new development by providing an immediate appearance of maturity and by contributing to Green Infrastructure. Development proposals should seek to retain existing trees where possible, therefore when considering site layout proposals should make space for retaining existing trees and / or accommodating new planting.

To ensure that trees on a development site are fully considered at an early stage in the design process a tree survey should be carried out in accordance with British Standard 5837:2012 "Trees in relation to design, demolition and construction – Recommendations". This will help to identify trees that merit retention due to their good condition, high visual amenity, and potential longevity, and these should be considered as constraints to the design.

On occasions there will be justification to remove trees for development. In this situation mitigation planting is expected. Replacement planting of three trees for each one lost is required, unless the applicant wishes to carry out planting with larger tree stock and has limited space, in which case two trees would be expected.



It may be appropriate to locate tree planting where this will also contribute to visual mitigation of the development as it matures.

Selection of species suitable for replacement should be based on the species of the tree removed. By preference, where space permits, the same species should be used or a species / variety that will ultimately achieve a similar stature. On more constrained sites a species attaining a smaller stature is likely to be more appropriate. Where planting is on or close to a boundary with open countryside a native species appropriate to the location should be selected.

Planting into paved areas will require additional root management products, tree pit irrigation and soil structure systems.

