

APPENDIX 2: GENERAL GUIDELINES AND “INFRAWEB” BROCHURE

- 3.1 All work must be to BS 3998:2010 - '*Recommendations for tree work*'.
- 3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and will be covered by adequate public liability insurance.
- 3.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.
- 3.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of a Landmark Trees consultant.
- 3.5 It is advisable to have trees inspected by a consultant regularly. On this site it is recommended that these inspections are made every year.



Technical Information

InfraWeb TRP

Tree Root Protection System

For further information on any of our products, or for design guidance, please contact our office on 01925 630 976 or email info@infragreen-solutions.com

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Damage to existing trees on development sites

There are a number of ways trees are damaged during construction:

- Unspecified or poorly implemented treeworks
- Poorly installed Tree Protection fencing / ground protection
- Unauthorised or poorly undertaken excavations for service trenches in close proximity to retained trees
- Storage of materials within retain tree RPAs
- Contamination of tree rooting zones directly or indirectly by: concrete run off / washings, mortar silos, diesel, tarmacadam, chemicals etc
- Compaction of tree rooting zones by temporary construction site access for delivery vehicles, materials storage etc
- Compaction damage by waterlogging of tree rooting zones
- Damage by burning fires on site too close to retained trees

Soil compaction causes the reduction in available air spaces within the structure of the soil, a vital component tree roots require to respire, grow and re-generate. By compacting the soil around tree roots the trees ability to absorb available ground water is reduced as associated symbiotically growing fungal Micorrizae attached to and around those roots decline. This in turn affects the trees ability to absorb not only water but also nutrients which detrimentally affects the vigour and growth of the tree causing 'stress'. This manifests itself in smaller, yellowing leaves, a reduction in crown vigour and shoot / twig extension, higher crown deadwood in particular of the upper crown which can lead to branch failure or even tree decline if not alleviated.

Infra Green are focussed on maintaining and improving green infrastructure in the built environment. We have a number of tree root protection systems for the protection of both existing and newly planted trees. InfraWeb TRP has been developed to provide a cost effective solution to the problems associated with providing load support for new hard surfacings above existing tree roots on development sites.

BS5837 (2012) Trees on Construction Sites

This document provides guidance for the management of existing trees on construction sites identified for retention as part of the survey and reporting process by a qualified Arboricultural consultant.

Where tree retention or planting is proposed in conjunction with nearby construction, the objective should be to achieve a harmonious relationship between trees and structures that can be sustained in the long term. The good practice recommended in the British Standard is intended to assist in achieving this objective. BS 5837:2012 is applicable whether or not planning permission is required.

BS 5837:2012 follows a logical sequence of events that has tree care at the heart of the process. The full sequence of events might not be applicable in all instances; for example, a planning application for a conservatory might not require the level of detail that needs to accompany a planning application for the development of a site with one or more dwellings.

The 2012 revision of the standard introduces the following principal changes:

- Takes account of current practice regarding planning for the management, protection and planting of trees in the vicinity of structures, and for the protection of structures near trees
- Updates the guidance in relation to building regulations
- Recognizes the contribution that trees make to climate change adaptation



Failing root system without InfraWeb

When dealing with incursions into the RPA of existing trees BS5837:2012 the new guidance offers a number of solutions including 'sub base options for new hard surfacing include the use of 3 dimensional cellular confinement systems'.

InfraWeb TRP is a 3 dimensional cellular confinement system used to construct vehicular access roads, parking areas etc around the RPA of existing trees. The system is manufactured in accordance with the original U.S. Army Engineers Corps specification and conforms to the requirements of BS5837 and APN12.

The system is available in five depths: 50mm, 75mm, 100mm, 150mm and 200mm.

InfraWeb TRP Product Specifications

PROPERTY	TEST METHOD	UNIT	VALUE				
Wall thickness (textured)	ASTM D5199	mm	min 1.25±0.15 min 1.25±0.15				
Unit Height		mm	50	75	100	150	200
Cell Walls			Textured and perforated (11% ± 2%)				
Distance between welds		mm	292				
Expanded Unit Width		m	2.42				
Expanded Unit Length *		m	8.0				
Coverage *		m ²	19.3				

* Other length and coverage available upon request. (Length, width and coverage dimensions are for square cells)

Key

- 1: Permatex geotextile
- 2: InfraWeb Tree Root Protection System infilled with 4/20 or 20/40 Clean angular Stone to BS EN 13242/EN 12620*
- 3: Permatex separation geotextile
- 4: Treated Timber Edging (Or other Edging Detail Acceptable)
- 5: Block Paving with sand bed to Engineers Specification
- 6: Soil graded to edging (if required)

Benefits

- No dig solution
- Reduces compaction of subsoil around tree roots
- Reduces subbase thickness
- Allows clean angular stone to be used within the cells
- Dissipates vertical loads
- Allows air and moisture transfer
- Can support any type of vehicle loading

InfraWeb TRP Typical Section Detail

