Sylva Consultancy

expert arboricultural advice

Arboricultural Report

Land to the rear of 10-22 Marshall Road Cowley Oxford Oxfordshire OX4 2NR

March 2020

Ref: 20014

Prepared by Fiona Bradshaw MICFor; Dip.Arb (RFS); F.Arbor.A; Tech Arbor.A

Issued: 18th March 2020

Arboricultural Association Fellow Member FE593

Fiona Bradshaw
MIcFor (Arb); Dip. Arb (RFS); F.Arbor A; Tech Arbor.A
[redacted]

Institute of **Chartered Foresters** Registered Consultant

Sylva Consultancy is a trading name of Sylva Trees Ltd.
Registered in England, Company No. 06787424.
Registered Office: The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH'.

PHONE 01865 872945
EMAIL mail@sylvaconsultancy.co.uk
WEBSITE www.sylvaconsultancy.co.uk

CONTENTS

1.	Introduction	Page 3
2.	Arboricultural Survey	4
3.	Principle arboricultural Implications	5
4.	Summary	7

APPENDICES

1.	Site Location Plan	Page 8
2.	Tree Survey Data	9
3.	Root Protection Area	10
4.	Tree Constraints Plan	11
5.	Arboricultural Impact Plan	12
6.	Example of a Cellular Confinement System Design	13
7.	Qualifications	14

1. INTRODUCTION

1.1 Instructions

1.1.1 Instructions have been received to carry out an Arboricultural Implication Assessment on the likely impact and effect regarding the proposal to construct 9 dwellings with associated access on land at Marshall Road, Oxford (Appendix 1).

1.1.2 This appraisal assesses the impact of the proposal in relation to trees and discusses mitigation measures that may have to be adopted.

1.2. Arboricultural Survey

1.2.1 During January 2020, a tree survey was carried out in accordance with British Standard 5837:2012 'Trees in relation to Design, Demolition and Construction-Recommendations' and good arboricultural practice. This is a basic data collection exercise and a record of the trees condition at the time of surveying. The tree survey data can be viewed at Appendix 2, root protection area data at Appendix 3 with the tree constraints plan listed at Appendix 4.

1.2.2 A desk top study of information posted on Oxford City Council's website (OCC) details that the site is not located within a Conservation Area. In addition, the website reveals that no Tree Preservation Orders (TPO's) are present on trees within or adjacent to the site.

1.3 Site Description

1.3.1 The site is located to the rear of properties 10-22 Marshall Road with access via the north. Additional properties are located adjacent to the (approximate) eastern, southern and western boundaries. The site is approximately rectangular in shape and flat.

1.4 Proposed Development

1.4.1 It is proposed to construct 9 dwellings with associated access with the purpose of this report to assist with the design process.

1.4.2 Please note all tree numbers referred to in this document relate to the tree numbers annotated on the arboricultural implication assessment plan.

2. ARBORICULTURAL SURVEY

2.1 A total of 1 tree and 4 groups have been recorded within this assessment. The tree quality is assessed as follows:

U: Trees that are considered to be of such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboriculture management. However, if category 'U' trees are placed in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer this recommendation.

A: Trees of the highest quality and value and are considered to be of such a condition as to be able to make a substantial contribution (e.g. 40 years +).

B: Trees of moderate to high value and are considered to be of such a condition as to be able to make a significant contribution (e.g. 20 years +).

C: Trees of low quality with an estimated life expectancy of at least 10 years. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. Young trees with a stem diameter of less that 150mm should be considered for relocation or replacement through mitigation (e.g. 10 years).

Category A, B & C trees are further divided into sub-categories. These sub-categories carry equal weight and are selected for either arboricultural values, landscape values or cultural values, including conservation. Within the British Standard 5837:2012 it is recommended to record hedge and shrub masses, however in the context of the standard it is not necessary to assess the quality of these or to provide a category classification.

The numbers of trees falling under each classification within the arboricultural survey are as follows:

U: 0 trees

A: 0 trees

B: 0 trees

C: 1 tree and 4 groups

3. PRINCIPLE ARBORICULTURAL IMPLICATIONS

3.1 Introduction

3.1.1 Consideration is given to the significance of the trees identified in the arboricultural tree survey, the constraints that they are likely to pose to any development that may occur, post development implications (if any) and work requirements to trees for reasons of sound arboricultural management in order to facilitate the development (BS5837:2012 Section 5.4).

3.1.2 This appraisal assesses the impact of the potential to re-develop the site in relation to the trees and discusses mitigation measures that may have to be adopted. The following documents have been provided by the Client:

- Topographical Site Plan
- Proposed Site Plan

3.2 Trees

3.2.1 The majority of the trees and groups that have been surveyed are growing offsite but adjacent to the boundaries of the site. The tree survey has recorded a number of Leyland hedges with these maintained at reduced heights.

3.2.2 The Wildlife & Countryside Act 1981, as amended by the Countryside Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. These have the potential to pose additional constraints on the use and timings of works that may occur to trees located at the site. These issues are beyond my expertise and it is recommended that appropriate advice is sort prior to the implementation of any works considered within this report.

3.3 Overview

3.3.1 The appended arboricultural implications plan (Appendix 5) illustrates the proposals in relation to the offsite tree stock. In addition to pre-development concerns, post development concerns such as debris and concerns of the trees proximity and juxtaposition to the proposal have also been considered during the design process.

3.3.2 For the proposed scheme land from the rear of No. 10 Marshall Road will be incorporated into the scheme. An assessment of the impacts of the proposed development on the tree stock reveal that for development no trees will be removed to facilitate the proposal.

3.3.3 The scheme has undergone a careful design process to ensure an efficient use of the site, whilst safeguarding the continued contribution that the offsite trees afford to the immediate landscape. On the bases of the appraisal it is considered that the arboricultural impact of the scheme on the tree stock will not result in an adverse impact on the character and appearance of the site or wider landscape.

3.4 Impact of the proposal on the tree stock

Overview

3.4.1 Whilst trees in categories 'A', 'B' and 'C' are all a material consideration in the development process, the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary where they impose a significant constraint on development. Furthermore, BS 5837:2012 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature "*need not necessarily be a significant constraint on the site's potential*".

3.5 Proposed New Dwellings

3.5.1 The proposal seeks to utilise the existing building footprint, and as such to construct the new dwellings no trees will be removed. In addition to the new dwellings the re-configuration of the existing access will occur. The arboricultural impact assessment plan illustrates that the new access falls outside the root protection areas of the retained trees and as such these can be successfully retained.

3.5.2 Part of the new access will pass over a small section of the root protection areas (RPA's) of Groups G4 & G3. To ensure no adverse impact occurs to these groups it is proposed to construct these sections based on a cellular confinement system design (Appendix 6). Any marrying of levels will occur outside the RPA of trees. As such it is concluded that there will not be any adverse impact to this tree and the tree can be successfully retained.

3.5.3 In addition to the above the proposed bicycle and bin store will fall within the root protection areas of adjacent trees. Where the bicycle store extends beyond the footprint of an existing outbuilding this will be constructed using a no dig cellular confinement system design. A similar design methodology will be adopted for the bin store.

3.6 Proposed Landscaping

3.6.1 Landscaping will occur in order to mitigate the tree loss and to complement the re-development of the site. New landscaping is proposed whereby suitable species for the site will be chosen.

3.7 Construction

3.7.1 Careful consideration has been given regarding the buildability of the proposals. The arboricultural impact assessment plans illustrate that sufficient room exists to locate the site compound and contractor parking outside the RPA's of the retained trees.

3.7.2 Fence protection is required for retained trees and will comprise of Heras fencing and will be based on Figure 2 'Default Specification for Protective Barrier' as recommended within the British Standard 5837:2012. Where appropriate the fencing will be braced to withstand impacts.

3.7.3 A tree works schedule to facilitate the proposal has not yet been finalised. In the event pruning works are necessary it is judged that trees can be pruned to acceptable standards in accordance with British Standard 3998:2010 'Tree Works - Recommendations'.

3.7.4 New service runs have yet to be confirmed, however where possible new services will connect to existing. In the unlikely event new service runs are placed unavoidably within the RPA of trees then all new installations will be carried out in accordance with the guidelines set out in NJUG Publication No.10 and Section 7.7 of the British Standard 5837:2012.

4. SUMMARY

4.1 Conclusions

4.1.1 The British Standard 5837:2012 states that there is the need to avoid misplaced tree retention; for example, to attempt to retain too many unsuitable trees on a site may result in excessive pressure on the trees during the development work and subsequent demands for their removal post development. However where design permits, the retention of lower category trees can be beneficial providing screening and softening to a development and a sense of maturity to a scheme.

4.1.2 Careful planning of site operations are recommended so as to avoid any adverse impact to the retained trees. In order to safeguard the trees through the development it is recommended that a site specific Arboricultural Method Statement is drawn up and implemented.

4.1.3 It is concluded that there is an adequate juxtaposition with the retained tree stock and proposal therefore reducing any post development concerns. As such it is regarded that there will not be any future pressure to significantly prune, or to seek permission to remove trees within the site. With further regard to any concerns of debris and seasonal nuisances it is considered that this can be managed by good design and as part of the overall general maintenance of the site.

4.2 Post development tree management.

4.2.1 Tree owners have a duty of care to maintain and manage their tree stock and it is recommended that regular tree inspections are undertaken by a person competent in arboriculture.

4.2.2 Section 8.8.2 of the British Standard: 2012 recommends post development aftercare of trees following the completion of development works. It is recommended the following is considered with regard to post development inspection of retained trees:

1. Trees that grow on a site prior development may, if adversely affected be in decline over a period of several years before they die. This varies due to age, species, condition prior to development, extent of damage during development, soil conditions and climate. It is recommended that regular inspections are undertaken.
2. Where trees are protected by planning controls, it is recommended that the LPA is informed, and necessary agreements obtained prior to any remedial works.
3. Following completion of a development it is recommended that the arboricultural consultant inspects the trees for signs of intolerance to the change of conditions and the effect of the development. There may be a need for additional tree works to those originally specified.
4. Maintenance of newly planted trees is important during the establishment period, of at least two years and it is recommended an appropriate maintenance schedule is included with the Landscaping Scheme.

APPENDIX 1

Site Location Plan

Site Location Plan

A PPENDIX 2

Tree Survey Data

KEY TO TREE SCHEDULE

Tree No:	Relates to individual trees identified within the Tree Survey Schedule and Tree Constraints Plan
Species:	Common name
Height:	Estimated height expressed in meters
ST:	Stem diameter of the main trunk taken at 1.5m above ground level or in accordance with Annex C BS5837:2012.
Height in M of Canopy:	Information of the first significant branch and direction of growth in order to inform on ground clearance.
Abbreviations:	#: Estimated Ave: Average A.G.L: Above ground level SULE: Safe Useful Life Expectancy
Branch Spread:	Estimated crown radius expressed in meters, taken for each cardinal compass point.
Age Class:	Y Young - Less than one third of natural life expectancy SM Middle aged - One to two thirds of natural life expectancy M Mature - More than two thirds of natural life expectancy OM Over mature NP Newly Planted
Physiological Condition:	G Good F Fair P Poor D Dead

Notes:

Root Protection Area: This is a layout tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority (detailed in paragraph 3.7 British Standard 5837:2012 'Trees in relation to Construction-Recommendations').

Young trees with a stem diameter of less than 150mm: Whilst the presence of young trees of good form and vitality is generally desirable (i.e those which have the potential to develop into quality mature specimens), they need not necessarily be a significant constraint on the site's potential (detailed in paragraph 4.5.10 British Standard 5837:2012 'Trees in relation to Construction-Recommendations').

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			Dark Red
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light Green
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Mid Blue
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

TREE SURVEY BS5837:2012

TREE NO.	SPECIES	Height in (M)	CALCULATED STEM DIA (MM)	BRANCH SPREAD				HEIGHT IN M OF CANOPY	AGE CLASS	PHYS. COND	COMMENTS	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY GRADING
	(Latin)			N	E	S	W				Recommendations		
T1	Leyland Cypress *X Cupressocyparis leylandii*	5	250#	2	2	2.5	2	2e	SM	F	Off site tree adjacent to eastern boundary. Dimensions estimated. Topped at 5m No work	10 to 20	C2
G1	Leyland Cypress *X Cupressocyparis leylandii*	Ave 12	300#	0.5	0	2	4.5	2w	SM	P	Off site row of tree adjacent to eastern boundary. Average dimensions recorded. Have been topped at 5m - no live foliage on eastern side of trees. Low end of category. No work	10 to 20	C2
G2	Variegated Leyland Cypress *X Cupressocyparis leylandii 'Harlequin'*	Ave 14	450#	4	4	4	4	2n	M	F	Off site row of trees tree adjacent to southern boundary. Average dimensions recorded. Canopy overhangs the site. Previously reduced at 7m agl. Useful screening to the site. No work	10 to 20	C2
G3	Cherry *Prunus sp*	Ave 9	140#	3	2	2	2	N/A	SM	P	Off site trees adjacent to the southern boundary. Average dimensions recorded. Canopies overhang the site. Etiolated in form. No work	10 to 20	C2
G4	Leyland Cypress *X Cupressocyparis leylandii*	Ave 8	500#	4	4.5	4	3	2e	SM	F	Off site tree adjacent to eastern boundary. Topped at 5m agl. Lower branches have been pruned back to boundary. Upper canopies overhang boundary line. Average dimensions recorded. Low end of category due to pruning works. No work	10 to 20	C2

APPENDIX 3

Root Protection Area

ROOT PROTECTION AREA

TREE NO.	SPECIES	NO. OF STEMS	SINGLE STEM DIA (mm)	2-5 STEMS					> 5 STEMS	ROOT PROTECTION AREA - RPA (RADIUS IN M)	RPA (M^2)	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY
				STEM 1 (mm)	STEM 2 (mm)	STEM 3 (mm)	STEM 4 (mm)	STEM 5 (mm)	MEAN STEM DIA (mm)				
T1	Leyland Cypress	1	250							3.00	28	10 to 20	C2
G1	Leyland Cypress	1	300							3.60	41	10 to 20	C2
G2	Leyland Cypress	1	450							5.40	92	10 to 20	C2
G3	Cherry	1	140							1.68	9	10 to 20	C2
G4	Leyland Cypress	1	500							6.00	113	10 to 20	C2

APPENDIX 4

Tree Constraints Plan

NO.8

NO.10

PRIVATE GARDEN

PRIVATE GARDENS

PRIVATE GARDENS

PRIVATE GARDENS

PRIVATE GARDENS

WAREHOUSE

OUTHOUSE

Asphalt

Asphalt

Silted

Grass

Grass/Conc

Conc

Viburnum

G1

G2

G3

G4

T1

Lilac

Elder

<75mm Cypress

Building continues Obscured by vegetation

Assumed fence line Unable to survey due to vegetation

Assumed building line Unable to survey due to vegetation

Building runs along fence Obscured by vegetation

Building continues beyond fence

Conc continues Obscured

Conc obscured Not extents Indicitive only

Conc extents

Ramp Up

Parapet level

Tollarded

10mh

12mh

7mh MS

8mh MS

MS2

MS4

CBSF 2.1mh

CBF 1.8mh

Cable pit?

UTL(2)

5m 10m

Sylva Consultancy

Tel: 01865 872 945 Mobile: 07976 596 517

e-mail: mail@sylvaconsultancy.co.uk

The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH

Arboricultural Association Fellow Member FE593

Site: Marshall Road	1:200 @ A2
Drawing Title: Tree Constraints Plan	Feb 2020

Key:

- Category A
- Category B
- Category C
- Category U

Category — 13 — Tree Number; Crown Spread; Root Protection Area

NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

APPENDIX 5

Arboricultural Impact Plan

No.8
garage removed
No.10
12
14
16
18
20
22
24
26
28
30
32
34
48
50
52
4100
original boundary dotted red
Viburnum
boundary altered
parking for 10 Marshall Rd
new tree
25.0M
23.5M
footprint of existing warehouse shown dotted
visitor
visitor
turning area delivery vehicles
turning area for refuse vehicles
5No. FLATS
6000
3100
21.5M
BLOCK ONE
BLOCK TWO
4No.HOUSES
12.0M
34.5M
BOUNDARY
1
2
3
4
5
6
7
8
9
G1
G2
G3
G4
T5
Covered storage for 24 bicycles
Covered refuse bin storage
trees outside site boundary
trees outside site boundary
trees outside site boundary
<75mm Cypress
Lilac
Elder
N
W
E
S
5m
10m

Sylva Consultancy

Arboricultural Association Fellow Member FE593

Tel: 01865 872 945 Mobile: 07976 596 517
e-mail: mail@sylvaconsultancy.co.uk
The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH

Site: Marshall Road	1:200 @ A2
Drawing Title: Arboricultural Impact Assessment	March 2020

Key:

- Category A
- Category B
- Category C
- Category U

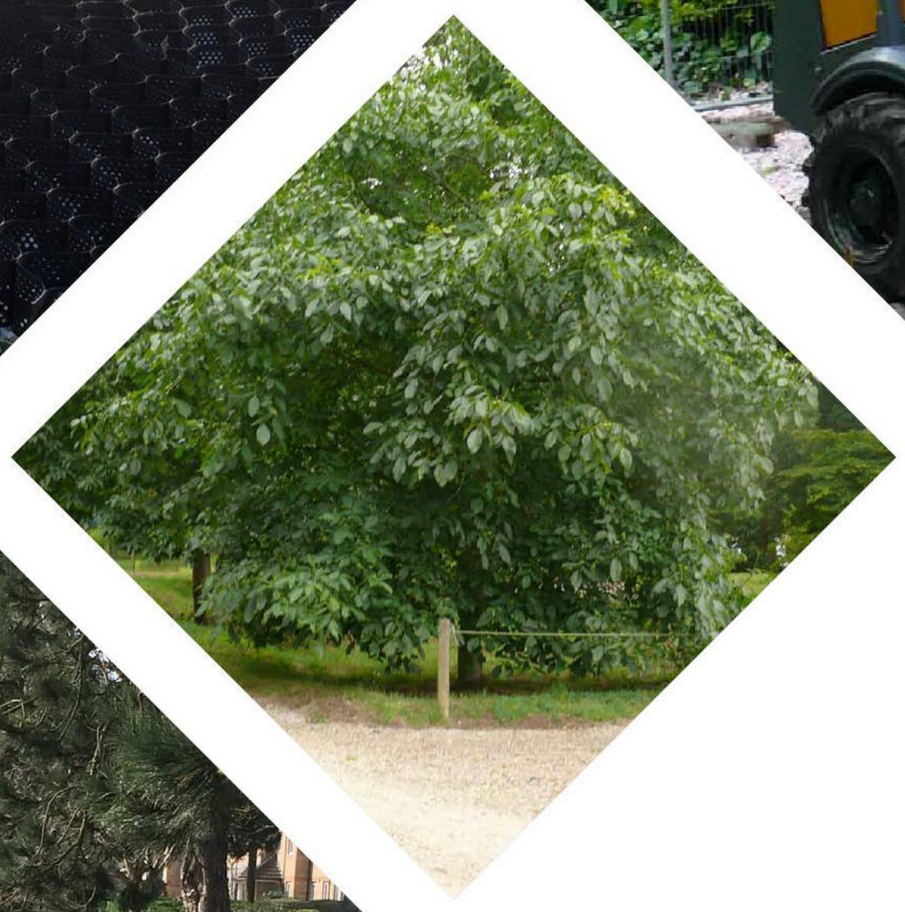
Category — Crown Spread
13 — Tree Number
Root Protection Area

NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

APPENDIX 6

Example of a Cellular Confinement System Design

www.geosyn.co.uk



Geosynthetics

Cellweb® TRP

Technical Support Package

"Creating Innovative Solutions with Outstanding Products"

What is Cellweb® TRP

What is Cellweb® TRP?

Cellweb® TRP is a cellular confinement system specifically designed for tree root protection. The system creates a stable, load bearing surface for traffic or footfall whilst eliminating damage to roots through compaction and desiccation of the soil.

The Cellweb® TRP system comprises of three specific elements; Cellweb®, Treetex™ pollution control geotextile and an infill of clean angular stone. The system has been designed combining the best possible products to create an unparalleled solution for tree root protection applications.

Cellweb® TRP is a no dig solution that ensures that the load placed upon it is laterally dissipated rather than transferring to the soil and roots below. The use of Treetex™ pollution control geotextile allows for drainage and separation whilst preventing contaminants from reaching the roots.

The walls of the cells are perforated and when combined with an infill of clean angular stone this enables free movement of water and oxygen ensuring that supplies to the tree roots are maintained.

What makes Cellweb® TRP different?

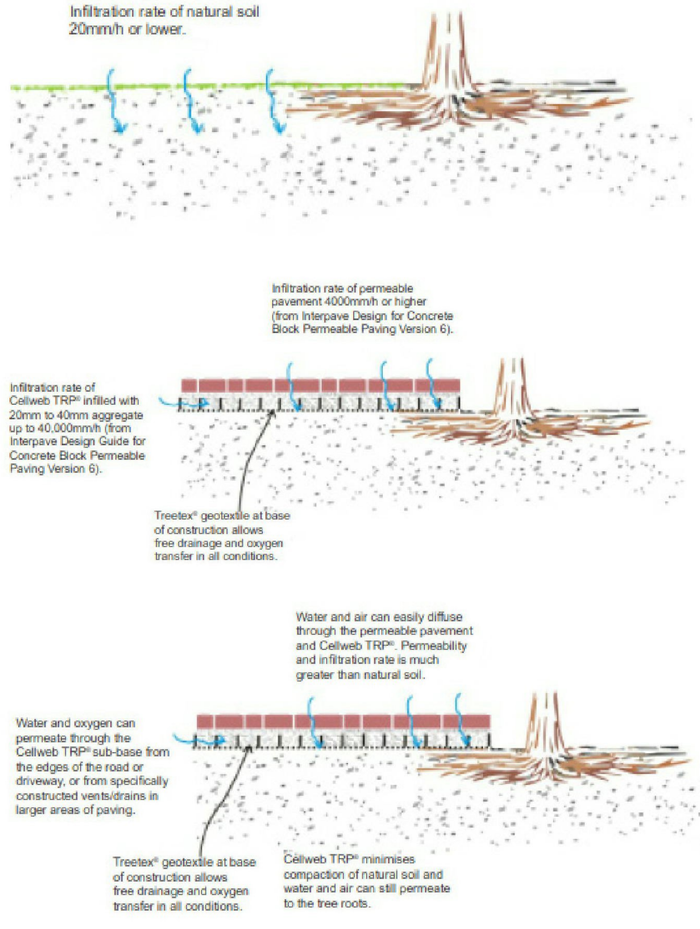
From the drawing board to installation, we are here to help.

We have been supplying the Cellweb® TRP system since 1998 and our technical team have vast experience with tree root protection and the associated legislation.

Delivering complete peace of mind to customers is our number one priority. As part of this customer care package we offer free on site consultations, technical recommendations and on site installation guidance on all projects.

Our in house Engineering Team provide site specific recommendations to ensure the solution used is cost effective and environmentally sound.

For more information on Cellweb® TRP or Geosynthetics Limited please contact our sales office on 01455 617139 or visit www.geosyn.co.uk.



Benefits Of Our Guarantee

Tried and tested
Cellweb® TRP is the only guaranteed system available today which has also the been independently tested and proven to prevent over compaction of the sub-soils and roots. Customers have been using the system since its inception without failure.

Full tree root protection services
Combining Cellweb® TRP with our in-house arboriculturalists and design engineers gives our customer the assurance that all their specific requirements will be met.

Peace of mind
The guarantee covers the replacement of not only the Cellweb® TRP system but also the tree(s), giving the customer complete peace of mind.

Helping to build the right solution
Our in-house engineers will provide free site specific technical recommendations to value engineer the project.

NBS Specification Clause

Obtaining a Guarantee

Provide a copy of the Arb Report
If an arb report hasn't already been produced, we would advise approaching an Arboricultural Association registered consultant to have a full survey completed.

Complementary Technical Recommendation (TR)
We offer all our customers full use of our engineering services free of charge. For all guaranteed projects, we provide a full technical recommendation and calculations which ensure the optimum solution is provided.

Scope Agreement
Once we have received the arb report and technical recommendation, we will work with our customer to specify which trees can be covered under the guarantee using a scoping agreement.

Installation
All we ask is that our customers follow our installation guide alongside the technical recommendation provided. Once completed we will ask for a customer signature agreeing to the terms and conditions of the guarantee.

Certification
Upon your agreement with the terms and conditions, we will send out a guarantee certificate alongside a copy of all of the details of the project.

NBS Specification Clause

I. The Tree Root Protection System shall be Cellweb® TRP by Geosynthetics Ltd 01455 617139

II. The Tree Root Protection System shall include Cellweb® TRP 3 dimensional cellular confinement panels measuring 8.1m in length x 2.56m wide. The system also includes a Treetex™ Pollution Control Geotextile.

III. The Cellweb® TRP shall incorporate perforated cell walls to provide lateral flow and frictional interaction between infill material and adjacent cells. Perforations shall be 11% of the cell wall surface area for Cell height of 100mm and 200mm and 16% for Cell height of 75mm and 150mm.

IV. The Cellweb® TRP shall incorporate a green identification strip along the length of the panel.

V. The seam peel strength of the cells shall be as shown in the following table:

Cell Height (mm)	75	100	150	200
Seam Peel Strength (N)	1065	1420	2130	2840

U.S.Army Corps of Engineers. Technical report GL86-19, Appendix A

VI. The expanded cell size (width x length) shall be 259mm x 224mm.

VII. The infill material shall be a clean angular stone typically 40mm to 20mm or 20mm to 4mm.

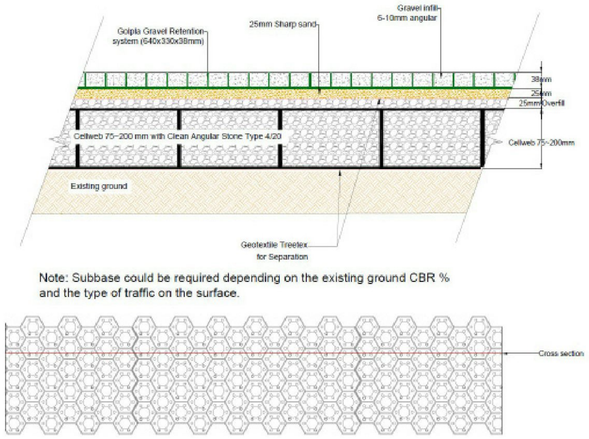
VIII. The system shall be installed strictly in accordance with the manufacturers installation instructions.

IX. Fact Sheets 1,2,3,4,and 5 provide factual evidence of the Cellweb® TRP and Treetex™ systems performance in the application of Tree Root Protection.

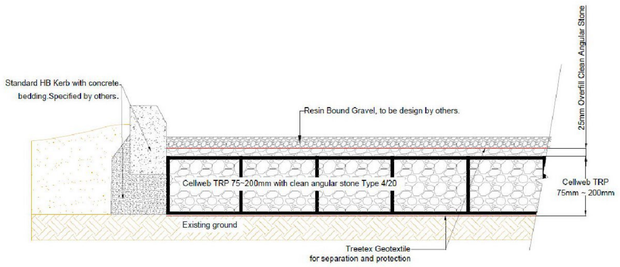
X. The system shall encorporate a 10 year guarantee which covers the replacement of any dead tree(s) up to a value of £10,000 per tree, as well as a replacement of the system which has failed up to the value of £50,000.

Surfacing Options

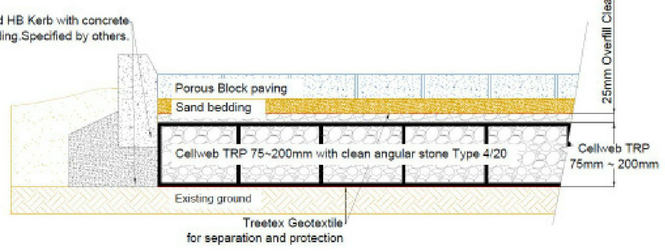
Golpla® Grass & Gravel Pavers



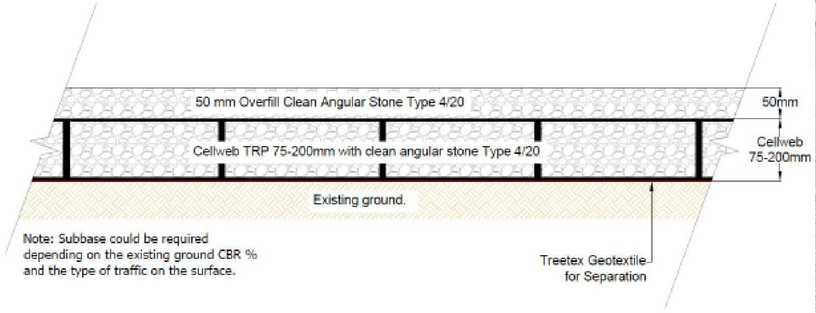
Resin Bound Gravel



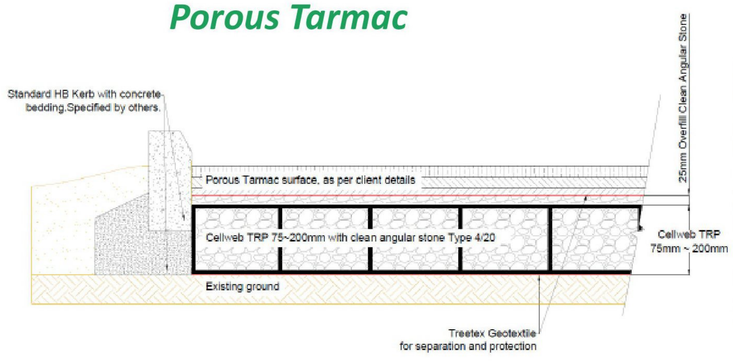
Block Paving



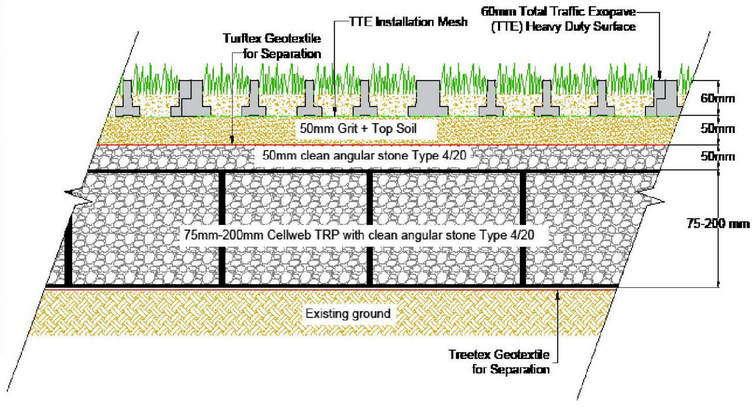
Gravel



Porous Tarmac

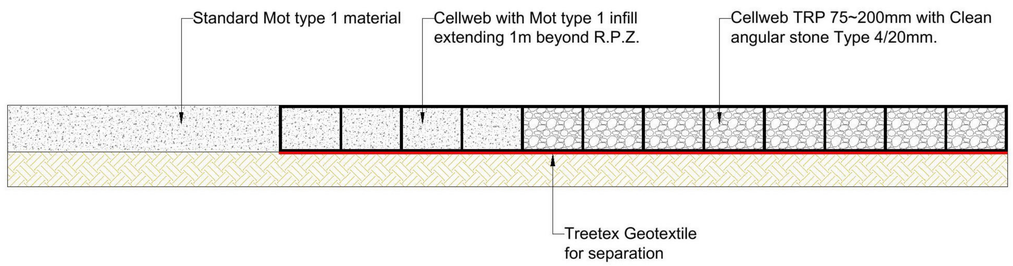


TTE® Heavy Duty Pavers

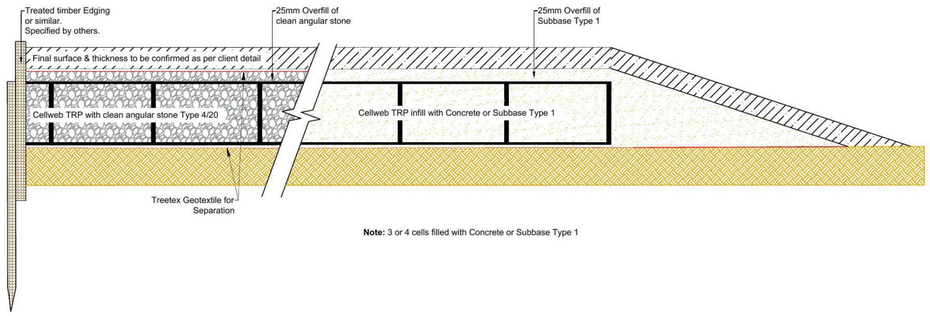


Edging and Transition Details

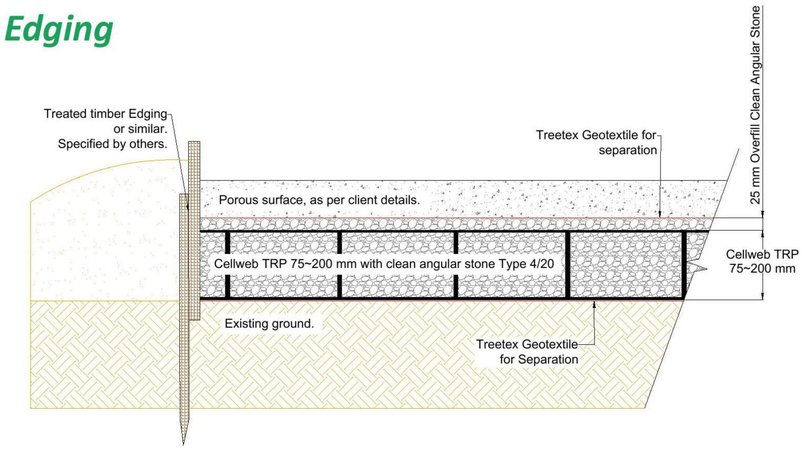
Transition Detail (Flat)



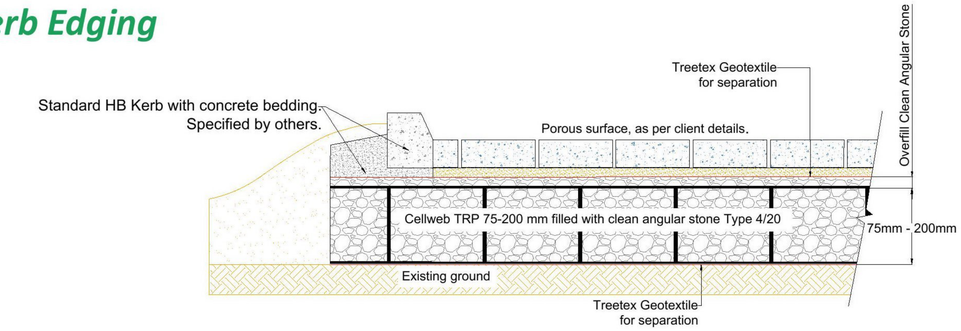
Transition Detail (Ramp)



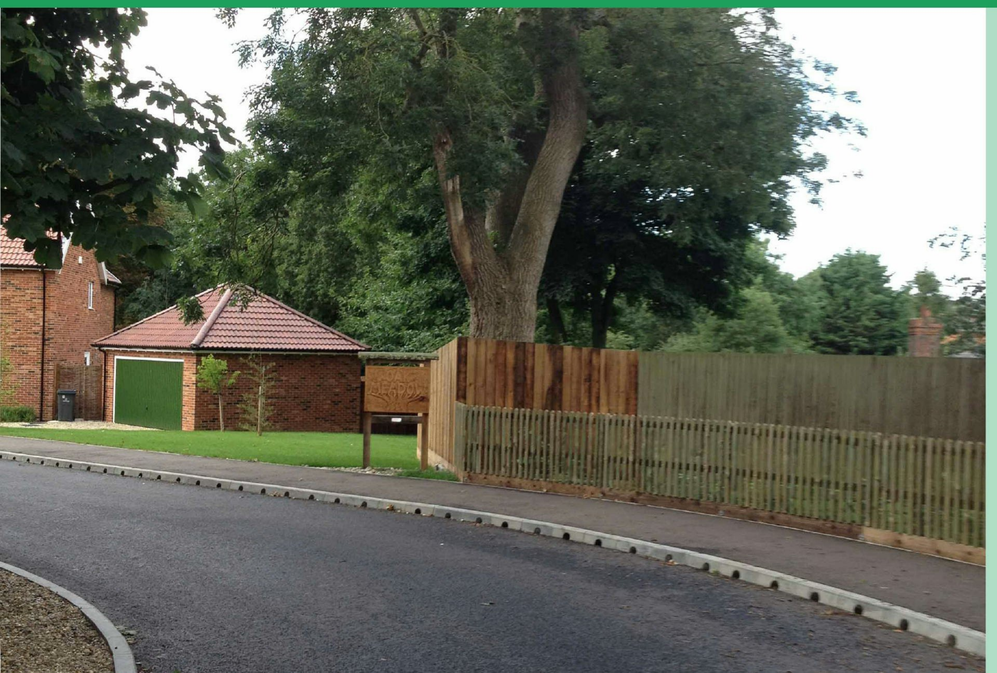
Timber Edging



Kerb Edging



Adopted Roads and Footpaths



Cellweb® Tree Root protection is the UK's market leading tree root protection system and is widely specified for the construction of new hard surfaces within root protection areas in accordance with BS5837.

Difficulties when specifying the system often occur for the construction of public roads, footpaths and carparks where there is a requirement for the local authority to take responsibility for the maintenance of the new structure and formally adopt it.

The following page shows examples of where new hard surfaces constructed using the Cellweb® TRP system have been adopted by local authorities. This document is designed to provide examples to specifiers of the system and local authorities.

This document is designed to be used in conjunction with technical advice and site specific recommendations which are also available free of charge from Geosynthetics Limited.

Geosynthetics

sales@geosyn.co.uk
Tel: 01455 617 139
Fax: 01455 617 140
www.geosyn.co.uk

CERTIFICATE NO. 11161
ISO 14001:2004

CERTIFICATE NO. 11161
ISO 9001:2008

INVESTORS IN PEOPLE | Bronze

This brochure is produced to give an example of the products we supply and how, subject to your own testing, our products may be used. Nothing in this brochure shall be construed so as to make any ascertain or give/constitute any warranty as to specification or the fitness for purpose of any of our products in respect of any specific job. You should satisfy yourself through your own testing as to the suitability of our products for any specific purpose and rely solely on such testing and/or the advice of any professional(s) you commission. While we try to ensure as far as possible that all information given in this brochure is accurate at the time of print, information and examples given in this brochure are by way of illustration only and nothing contained in this or any other promotional literature produced by Geosynthetics Limited shall in any way be binding on us or constitute any offer or contract with you or shall be relied upon by you as a statement or representation of fact.

APPENDIX 7

Qualifications

Fiona Bradshaw

MicFor; RFS Dip Arb;F. Arbor.A; Tech Cert (Arbor.A)

I have over 21 years' experience of arboriculture and I am the principal consultant at Sylva Consultancy. I hold the Royal Forestry Society's Professional Diploma in Arboriculture and the Arboricultural Associations Technicians Certificate. I am a Fellow member of the Arboricultural Association and a professional member of the Institute of Chartered Foresters, of which I am also a registered Consultant.

I have the benefit of both a local authority and private practice background and I am frequently instructed to provide advice and assistance relating to trees and the planning process. I am also experienced at compiling expert reports, providing evidence and also appearing as an expert witness at Public Inquires.

I am committed to my continued professional development which is reflected in my regular attendance of seminars and workshops.