

ARBORICULTURAL METHOD STATEMENT

Trinity College
Broad Street
Oxford
Oxfordshire
OX1 3BH

Instructed by Trinity College

Ref: 20165/AMS

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1. INTRODUCTION

- 1.1 Instructions have been received to compile an Arboricultural Method Statement (AMS) to assist with supporting a planning application on land at Trinity College, Oxford (Appendix 1).
- 1.2 During October 2020 select tree survey data from Sylva Consultancy's 2018
 Arboricultural Report was revised and updated. This review 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.
- 1.3 This Arboricultural Method Statement is to provide details on the range of issues that are related to the planning application and is aimed at providing site specific details regarding the implementation.

2. SITE DESCRIPTION

2.1 The area surveyed is land within the south east corner of Trinity College. To the east of the site is Parks Road with the Western Library located to the south. In the south eastern corner of the site are existing buildings known within the College as the Presidents Garage.

TREE LEGISLATION

- 3.1 A desk top study of information posted on Oxford City Councils' website (OCC) website details that the site is located within Central Conservation Area. In addition, the website reveals that no Tree Preservation Orders (TPO's) are present on trees within or adjacent to the site.
- 3.2 Trees in a Conservation Area that are not protected by a TPO are protected by the provisions in section 211 of the Town and Country Planning Act 1990. Anyone who *cuts down, uproots, tops, lops, willfully destroys or willfully damages a tree* in a Conservation Area (if that tree is not already protected by a Tree Preservation Order), or causes or permits such work, without giving a section 211 notice (or otherwise contravenes section 211 of the Town and Country Planning Act 1990 is guilty of an offence, unless an exception applies.

4. PLANNING PERMISSION

4.1 Planning permission is sought for the construction of a new bin facility.

TREE PROTECTION MEASURES

5.1 <u>Pre-commencement site meeting</u>

5.1.1 It is recommended that a pre-commencement of work site meeting with the Project Manager and Project Arboriculturalist is held prior to the instigation of works to review the tree protection measures. In addition, this meeting will provide the opportunity to consider whether additional tree protection measures are necessary.

5.2 <u>Construction Exclusion Zone (CEZ)</u>

- 5.2.1 This is the area based on the root protection area (RPA) of a tree as identified by the Arboriculturalist to be protected during the development. Protection will be using barriers and/or ground protection which is fit for purpose to ensure the successful long-term retention of trees within or adjacent to the development site. The area within the Construction Exclusion Zone is to be regarded as sacrosanct, and the tree protective fencing should not be taken down or relocated at any time without the written approval of the LA.
- 5.2.2 Within the Construction Exclusion Zone (CEZ) the following prohibitions will apply:
 - NO mechanical digging or scraping.
 - NO hand digging (unless agreed in writing by the LA).
 - NO storage of plant, equipment or materials.
 - NO vehicular or plant access.
 - NO fire lighting. NO earthworks.
 - NO washing down of vehicles or machinery.
 - NO handling, discharging or spillage of any chemical substance including cement washings.
 - NO action likely to cause localised waterlogging.
 - NO changing of ground levels (unless agreed in writing by the LPA).
 - NO construction of a hard surface (unless agreed in writing by the LPA).
- 5.2.3 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:
 - Materials that will contaminate the soil such as concrete mixing, diesel spillage and vehicle washings, must not be discharged within 10m of a tree stem/s. This must consider the topography of the site and the slopes to avoid toxic materials running towards a tree/s.
 - Fires must not be lit in a position where their flames can extend to within 5 metres of the foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
 - Notice boards, telephone cables or other services should not be attached to any part of a tree/s.

- 5.3 <u>Tree protective fencing and tree protection plan</u>
- 5.3.1 Tree protective fencing will be installed in accordance with the detail set out on tree protection plan (Appendix 2). Fencing will be erected *prior* to any site works and must remain in situ and be fit for purpose for the duration of the development. The fencing must not be prematurely removed without prior consent of the project Arboriculturalist or the Local Planning Authority (LPA).
- 5.3.2 Scaled copies of the tree protection plan must be made available for site personnel and must be displayed in the temporary contractor's compound area on site for all site personnel to see.
- 5.3.3 The fence protection is to comprise of Heras fencing and will be based on Figure 2 'Default Specification for Protective Barrier' as recommended within the British Standard 5837:2012 (Appendix 3). Where appropriate this will be braced to withstand impacts.
- 5.3.4 To inform site personnel of the purpose of the fencing, information notices shall be fixed to the fencing at 5m intervals. These notices shall be of all-weather design and examples of the notices are at Appendix 4.
- 5.3.5 Where necessary and with the written approval of the LPA, the line of fencing may be temporarily taken down to facilitate an approved action such as the removal of an area of existing hard surface. The Project Arboriculturalist must be on site to oversee any additional and appropriately approved processes.
- 5.4 Ground Protection for Trees
- 5.4.1 Where existing hard standing is present this will act as ground protection where this falls with the RPAs of trees.
- 5.5 <u>Pre-development Tree Works</u>
- 5.5.1 In accordance with British Standard 5837:2012 Section 8.8 recommends a tree works schedule is provided for works required to implement the development. The following tree works are required:

TREE NO.	SPECIES	PROPOSED WORKS		
T63	Lime	Tip back foliage to allow a 1.5m working space to facilitate the works.		
T64a	Robinia	Remove regardless of development (cat 'U' tree).		
T65	Yew	Tip back foliage to allow a 1.5m working space to facilitate the works.		

- 5.5.3 All consented tree works as part of the planning permission must be carried out in accordance with British Standard 3998:2010 'Recommendations for Tree Works' and in compliance with good practice as promoted by the Arboricultural and Forestry Advisory Group. All pruning works must be carried out by a suitably qualified and experienced Arboriculturalist.
- 5.5.4 Under **NO** circumstances must site personnel undertake any tree pruning operations. All tree works must be carried out prior to any works in connection with the planning permission being implemented.

5.5.5 Tree works must take into consideration the timing of operations so that the avoidance of the bird nesting season (1st March – 31st August) and the main active growing period of trees can be prevented. Penalties contrary to the Wildlife and Countryside Act 1981 is an unlimited fine, up to six months imprisonment or both.

All tree numbers referred to in this document relate to the tree numbers annotated on the Tree Protection Plan (Appendix 2).

6. PHASING OF DEVELOPMENT

- 6.1 The consented development works will be carried out in 2 phases:
 - Pre-commencement of Works 1: Tree Works.
 - Pre-commencement of Works 2: Erection of the tree protection
 - Phase 1: Construction of the Bin Store
 - Phase 2: Upgrading works to the existing pedestrian path
- 6.2 Pre-commencement Works 1 Tree Works
- 6.2.1 All consented tree works to be carried out by a suitably qualified Arboriculturalist.
- 6.3 <u>Pre-commencement Works 2 Tree Protective Fencing</u>
- 6.3.1 Tree protection measures to be installed in accordance with the Tree Protection Plan (Appendix 2). Under no circumstances must the fence protection be altered without prior consent from the LA.
- 6.4 Phase 1: Construction of the Bin Store
- 6.4.1 It is recommended that construction personnel undergo an induction session prior to being allowed to work on site. At this time the Arboricultural Method Statement can be explained to all personnel and where appropriate a copy provided for their reference. In addition, a copy of the Tree Protection Plan will be placed in a readily accessible place and will be pointed out to the construction personnel before the commencement of any works in connection with this phase of the proposal.
- 6.4.2 Large machinery used for the construction phase must be supervised whilst in operation to avoid contact with branches and tree canopies that are within close proximity to the works.
- 6.4.3 The main bin store structure will be supported by individual support posts. Where excavation works for the support posts occur within the root protection areas (rpa's) of retained trees the work will be carried out using hand tools only.
- 6.4.4 Whilst excavating the support post foundations great care must be taken to preserve and work around roots. Care must be taken when working around roots greater than 25mm in diameter, and clusters of smaller roots avoiding damage to bark. In the event roots greater than 25mm in diameter are found under no circumstances will these be cut. Should it not be possible to work around roots greater than 25mm it is proposed to re-locate the post supports. Where roots of less than 25mm require removal, they may be cut back cleanly using secateurs or a sharp pruning saw.

- 6.4.5 On completion of the excavation works for the supports of the boundary treatment a non porous membrane will be installed prior to any concrete pouring. Provision should be made for future diameter growth by surrounding retained roots with uncompacted sharp sand or other flexible fill materials.
- 6.4.6 Back filling should be carried out using the excavated soil, which should be worked in around any retained roots and lightly 'tamped' not compacted and respecting the original soil profile. The backfill should be left proud of surrounding levels to allow for settlement.
- 6.4.7 Materials will be delivered on an as and when basis. However, if temporary storage of materials is required this shall be in area highlighted on the Tree Protection Plan.
- 6.5 Phase 2: Upgrading works to the existing pedestrian path
- 6.5.1 It is recommended that construction personnel undergo an induction session prior to being allowed to work on site. At this time the Arboricultural Method Statement can be explained to all personnel and where appropriate a copy provided for their reference. In addition, a copy of the Tree Protection Plan will be placed in a readily accessible place and will be pointed out to the construction personnel before the commencement of any works in connection with this phase of the proposal.
- 6.5.2 Where the upgrading works falls within the rpa's of retain trees this will be constructed using a no dig design principle. The use of a 'No dig' form of construction using Geoweb or a similar product will be employed to create a structurally sound layer within close proximity to trees that dissipates load efficiently and permits the use of free drainage aggregates (Appendix 5). The new surface must be established above the existing ground level and levels must not be raised by more than 200mm within the rap. Any marrying of levels will occur outside the RPA's of retained trees.

7. UTILITY SERVICE CONNECTIONS

7.1 No new services are required.

8. VEHICULAR MOVEMENTS

8.1 No vehicle movements will occur within the RPAs of the retained trees.

9. TEMPORARY OFFICES/STORAGE COMPOUNDS

9.1 The locations of these to be finalised with the project manager prior to the commencement of works. These facilities will then remain in the agreed locations throughout the construction. If alternative locations are required, these must be agreed in writing by the LPA. This will also include the delivery, storage, and movement of all these essential facilities as well as aspects such as temporary contactor parking and sitting of concrete mixing.

10. AVOIDING DAMAGETO STEMS & BRANCHES

10.1 Care shall be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights, can operate without coming into contact with the retained trees. Such contact could result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be carried out under the supervision of a banksman to ensure adequate clearance from tree is maintained at all times.

11. REPORTING OF DAMAGE TO TREES/FENCE POTECTION

- 11.1 Should any damage occur to trees noted for retention either by the above works or as the result of any other action, the damage must be reported to the site supervisor immediately. The site agent shall report up the chain of responsibility to the Arboricultural Consultant, or in their absence an appointment with an appropriately qualified Arboriculturalist, to enable remedial measures to be implemented as necessary and without delay.
- 11.2 Should protective fencing become damaged so as to impair its function in protecting trees, all works shall cease in the vicinity of the damage until the fence has been returned to standard. It shall also be recorded on the daily monitoring sheets as likewise all other issues regarding tree related issues on the site.

12. REPORTING OF DAMAGE TO TREES/FENCE POTECTION

- 12.1 Ongoing Arboricultural site monitoring for the duration of the development is recommended. Site monitoring should be undertaken by a qualified and experienced Arboriculturalist at pre-determined and agreed time intervals. It should take the form of regular inspections (i.e.monthly and/or during key operations), ongoing liaison with all personnel involved in the site development and with the LPA. Any defects requiring rectifying must be notified to the Site Agent and the Client and copied to the LPA.
- 12.2 It is recommended that the Project Arboriculturalist be present on site during the main periods of construction. Records are to be made available to the LA if required to show evidence of site monitoring (Appendix 6):
 - Pre-commencement site meeting.
 - Inspection of fence protection
- 12.3 In addition it is proposed that a site logbook is kept recording all stages of the development from the installation of the fence protection, to daily checks of the fencing through to the completion of the project. This should be made available to the LA if required to show evidence of site monitoring.
- 12.4 The LA's Arboricultural Officer will have free access to the site and report on any problem areas directly to the developer's Project Arboriculturalist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure implementation.

13. REMOVAL OF TREE PROTECTION

13.1 When the substantial completion of the development phase has occurred, all drainage and service runs are in place, and all site machinery has been removed, and any landscaping for the principal areas of the site have been undertaken, the fence protection may be removed.

14. POST DEVELOPMENT TREE MANAGEMENT

14.1 Section 8.8.3 of the British Standard 5837:2012 recommends a programme of inspection is drawn up in conjunction with an Arboriculturalist to advise on any necessary work to retained trees on the completion of the development. This may include recommendations for frequency of inspections and should take the form of a management plan which can be forwarded to interested parties regarding the site's future management.

BS5837:2012 Section 8.8.3 NOTE 1:

Trees growing on a site before development takes place can, if adversely affected, be in decline over a period of several years before they die.

BS5837:2012 Section 8.8.3NOTE 2:

Where the trees in question are subject to legal, planning or other regulatory controls, the appropriate authority needs to be informed and any necessary agreements obtained prior to work being undertaken.

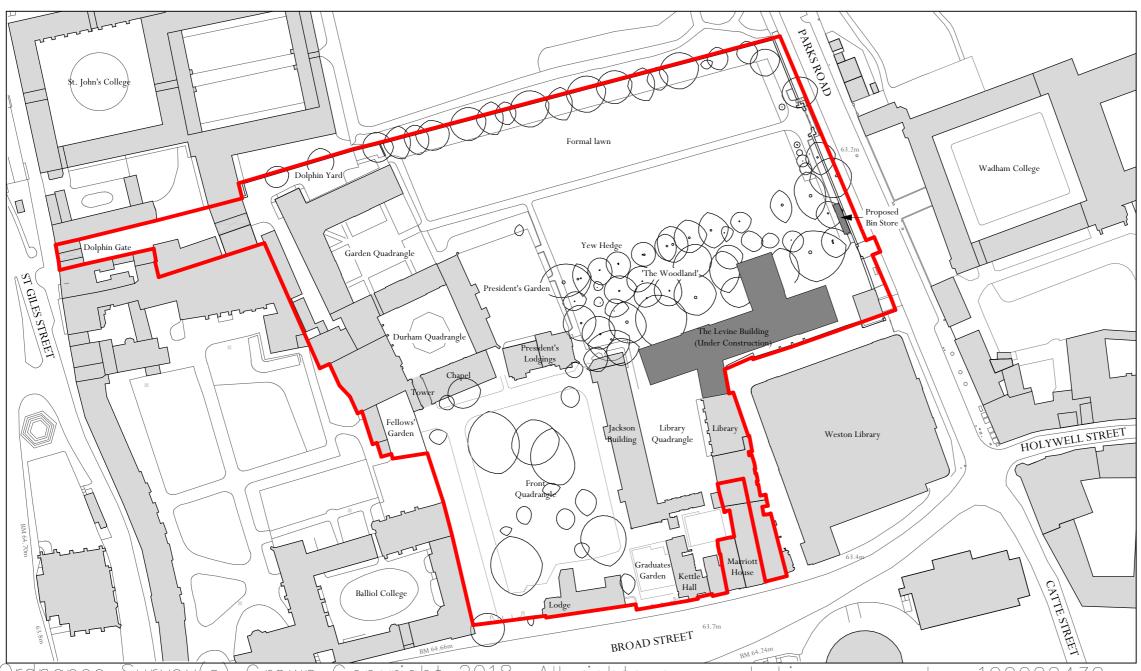
15. CONCLUSIONS

- The tree protection measures have been considered in accordance with British Standard 5837:2012 'Trees in relation to Demolition, Design & Construction Recommendations'.
- 15.2 Successful tree retention is achievable with the application of the tree protection measures set out in this document.
- 15.3 Sylva Consultancy has prepared this arboricultural method statement based on the information provided.

16. BIBLIOGRAPHY

- British Standard 5837:2012 'Trees in relation to Construction Recommendations'.
- British Standard 3998:2010 'Recommendations for Tree Works.
- Barrell, J. D. (1993) Pre-planning Tree Surveys: SULE is the Natural Progression.
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- Barrell, J. D. (1995) Pre-development Tree Assessments. In: Trees on Building Sites:
 Proceedings of an International Conference on Trees and Building Sites (G. W. Watson & D. Neely, eds). International Society of Arboriculture, Illinois.
- Biddle, P. G. (1998) Tree Roots and Foundations. Arboriculture Research and Information Note 142/98/EXT. Arboricultural Advisory and Information Service.
- Dobson, M. (1995) Tree Root Systems. Arboriculture Research and Information Note 130/95/ARB. Arboricultural Advisory and Information Service.

SITE LOCATION PLAN



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0 10 20 30 40 50 60 70 80 90 100 110 120 130

Scale 1:1250

Adjacent Properties and Boundaries are shown for illustrative purposes only and have not been surveyed unless otherwise stated.

All areas shown are approximate and should be verified before forming the basis of a decision.

Do not scale other than for Planning Application purposes.

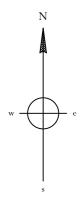
All dimensions must be checked by the contractor before commencing work on site.

No deviation from this drawing will be permitted without the prior written consent of the Architect.

The copyright of this drawing remains with the Architect and may not be reproduced in any form without prior written consent.

Ground Floor Slabs, Foundations, Sub-Structures, etc. All work below ground level is shown provisionally. Inspection of ground condition is essential prior to work commencing.

Reassessment is essential when the ground conditions are apparent, and redesign may be necessary in the light of soil conditions found. The responsibility for establishing the soil and sub-soil conditions rests with the contractor.



27.11.20 Planning submission PHon
Date Description Initials

PROJECT Trinity College

Proposed Bin Store

TITLE: Proposed Bin Store - Site Location Plan

SCALE: 1:1250 @A3

DATE: December 2018

DRAWING No:5446/72

DRAWN BY: AM

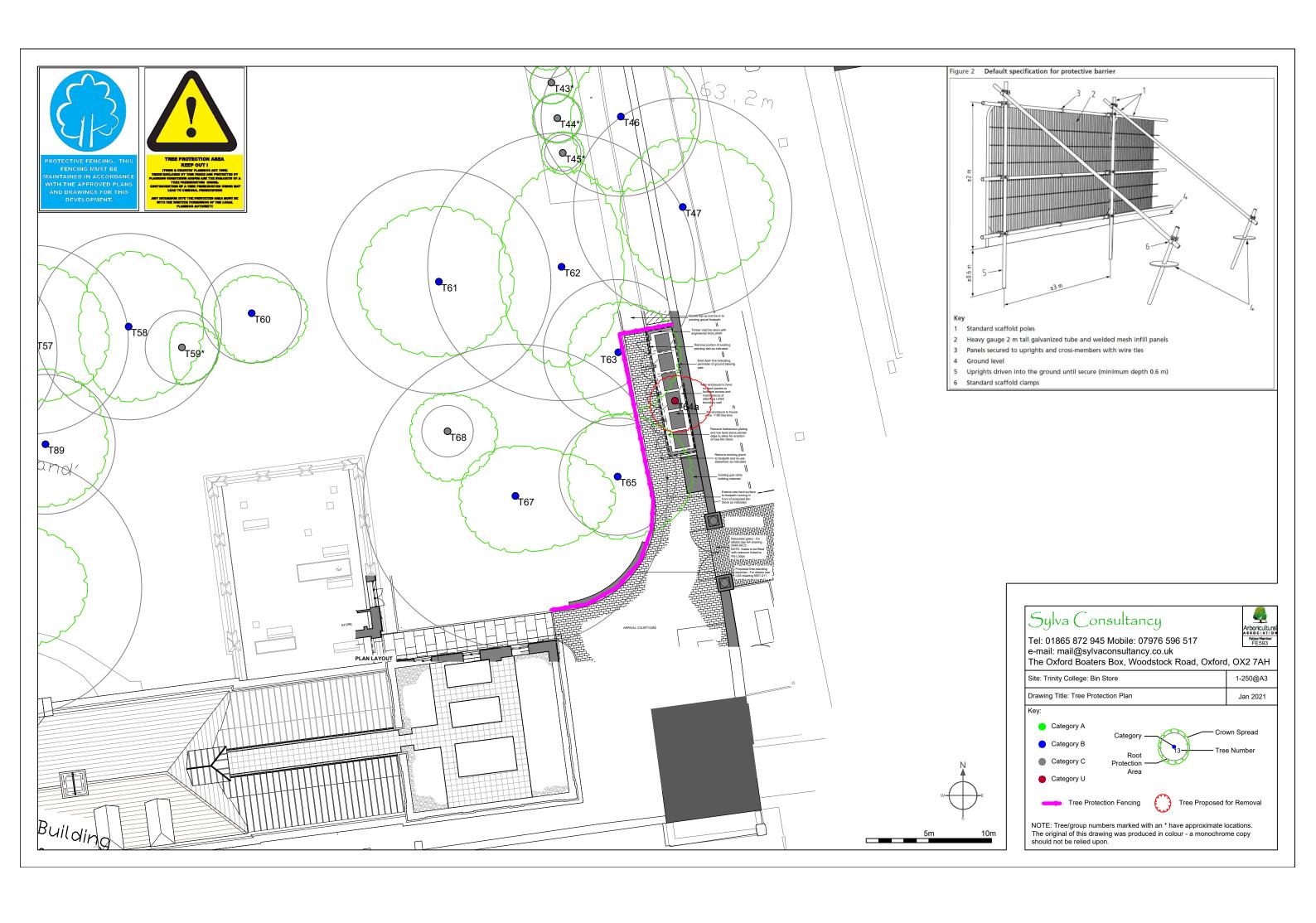


OLD HYDE HOUSE, 75 HYDE STREET WINCHESTER, HAMPSHIRE, SO23 7DW TELEPHONE: 01962 843843 FACSIMILE: 01962 843303

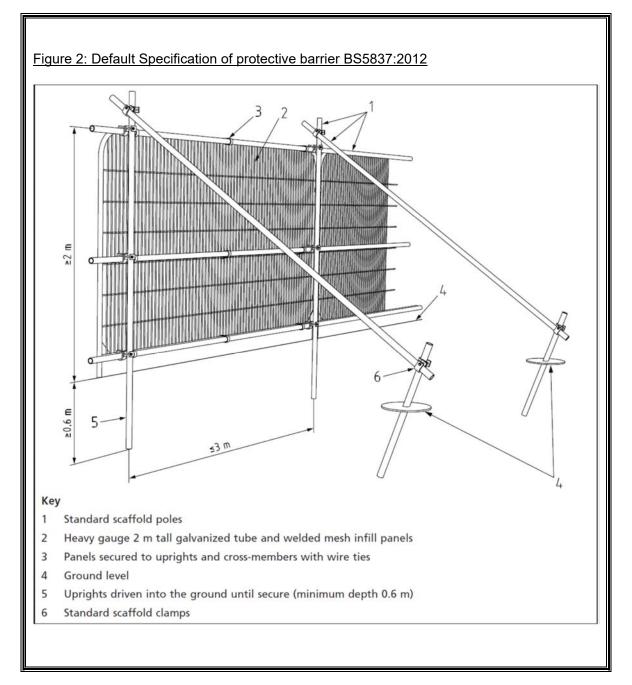
 $www.adamarchitecture.com \ contact@adamarchitecture.com\\$

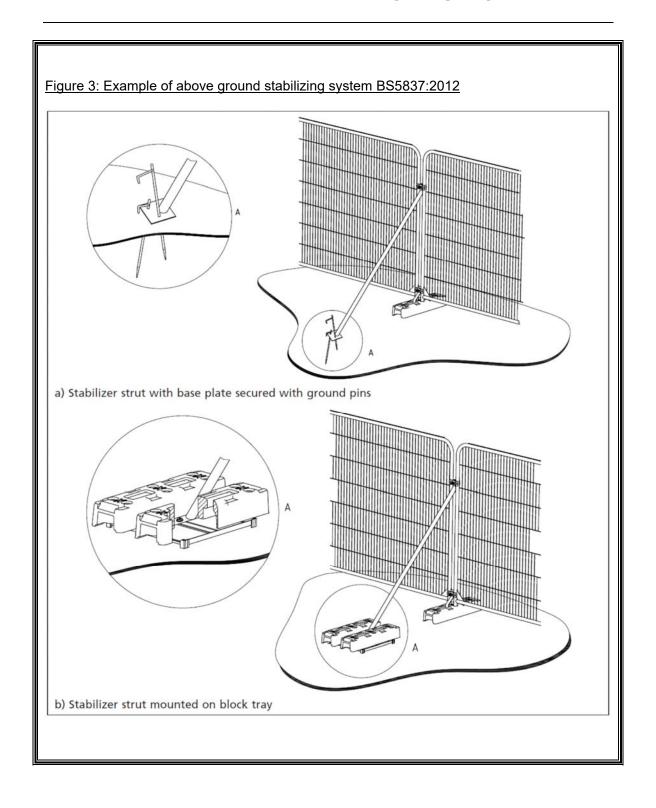
LONDON OFFICE: 6 QUEEN SQUARE, WC1N 3AT TELEPHONE: 020 7841 0140 FACSIMILE: 01962 843303 ADAM ARCHITECTURE IS A TRADING NAME OF ADAM ARCHITECTURE LIMITED

TREE PROTECTION PLAN

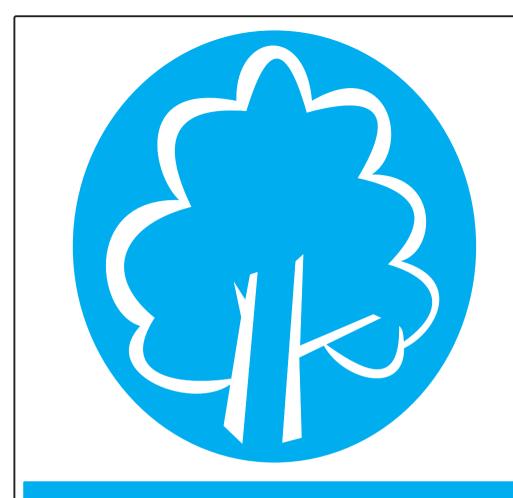


TREE PROTECTION DETAIL





ARBORICULUTRAL INFORMATION



PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.



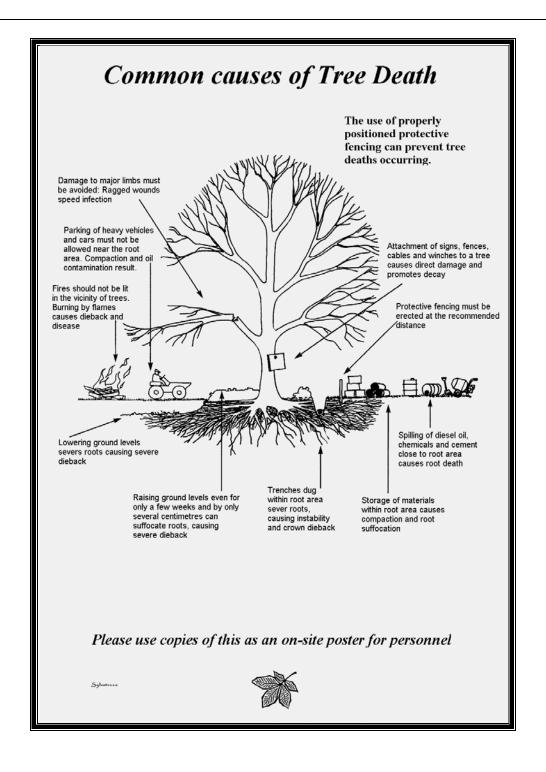
TREE PROTECTION AREA KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.

CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

ARBORICULTURAL INFORMATION



Construction and Trees



Why Is Fencing Erected Around Trees?

- 1. The major cause of damage to trees on construction sites is due to **soil compaction**.
- 2. Roots use the spaces between soil particles to obtain Oxygen, Water and Nutrients.
- 3. Heavy plant and machinery compresses (compacts) the soil, squashing out the air spaces and preventing root function.
- 4. A compacted soil structure will stay compacted.
- 5. Consequently the tree suffers and will show signs of branch die-back.
- 6. Symptoms such as die-back may take several years to appear.
- 7. Soil compaction over roots can be prevented by maintaining a fenced exclusion zone over the tree roots.
- 8. The exclusion zone distance is calculated using British Standard 5837.
- 9. Protective Fencing is installed at the calculated distance.
- 10. Protective Fencing is a condition of planning approval, if it is removed or repositioned the construction firm is in breach of a condition and may be subjected to legal action.

Sylvatrees

CELLWEB INSTALLATION GUIDE



Geosynthetics Cellweb® TRP

Technical Support Package

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?

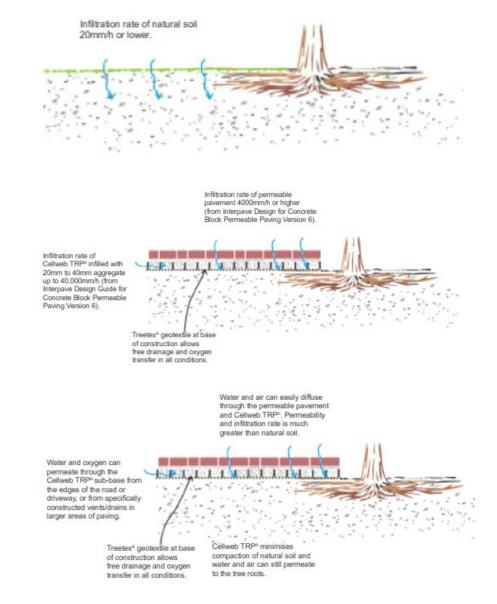
From the drawing board to installation, we are here to help.

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.

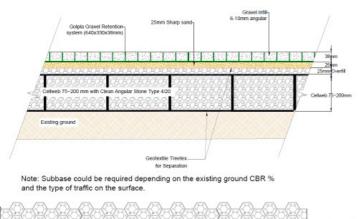
Our in house Engineering Team provide site specific recommendations to ensure the solution used is cost effective and environmentally sound.

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



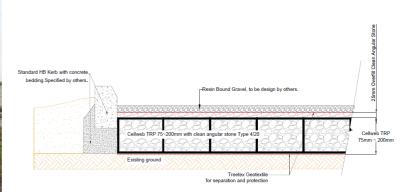
Surfacing Options

Golpla® Grass & Gravel Pavers

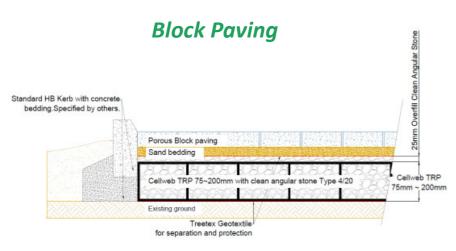


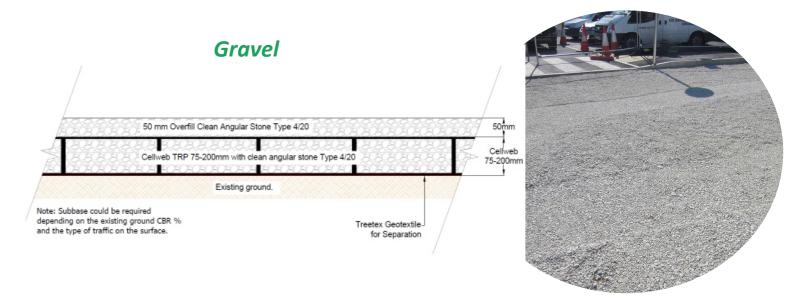


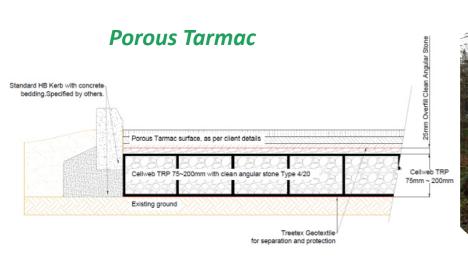
Resin Bound Gravel







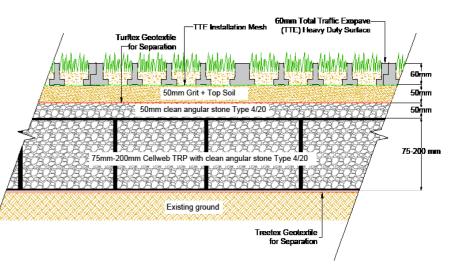






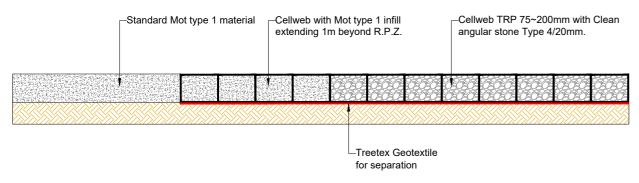


TTE® Heavy Duty Pavers

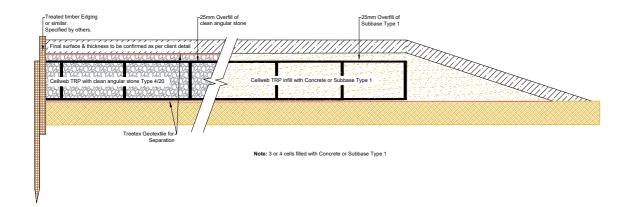


Edging and Transition Details

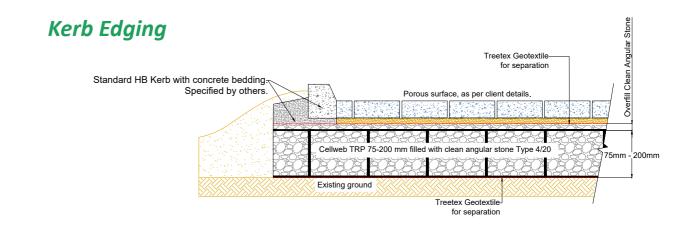
Transition Detail (Flat)



Transition Detail (Ramp)



Treated timber Edging or similar. Specified by others. Porous surface, as per client details. Porous surface, as per client details. Cellweb TRP 75-200 mm with clean angular stone Type 4/20 Existing ground. Treetex Geotextile for separation Treetex Geotextile for Separation Treetex Geotextile for Separation



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.

SITE MONITORING & SUPERVISION PROFORMA

SITE SUPERVISION PROFORMA

ARBORICULTURAL SUPERVISION RECORDING

Client:		Planning Ref:					
Local Authority:		Date:					
Site Address							
Proposal:							
Visit Checklist	Y/N		Y/N				
Tree Protection Fencing in place		Tree protection as approved					
Ground Protection in place		Ground Protection as approved					
Tree or Ground protection breached		Trees damaged					
Site Agent briefed by AC		Photographs taken					
AC briefed by Site Agent		<u> </u>					
LPA informed							
Remedial action required							
Comments							
Recommendations							
Outcome							
1							
2							
3							
4							
5							
Signed		Print name					
Date							

QUALIFICATIONS

QUALIFICATIONS

Fiona Bradshaw

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

I have over 22 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.