Tree Protection Report

ICS Urology Project
Royal Berkshire Hospital
Reading

Prepared for

17th July 2024

GBS Health+ Job Number: 7073

Revision A – 16/10/2024

Contents

1.0 Introduction

2.0 Trees in the Site

3.0 Prior to Works Starting

4.0 Protection of Trees, Roots and Ground

5.0 Construction Site Requirements

6.0 Other Notes

7.0 Post Development

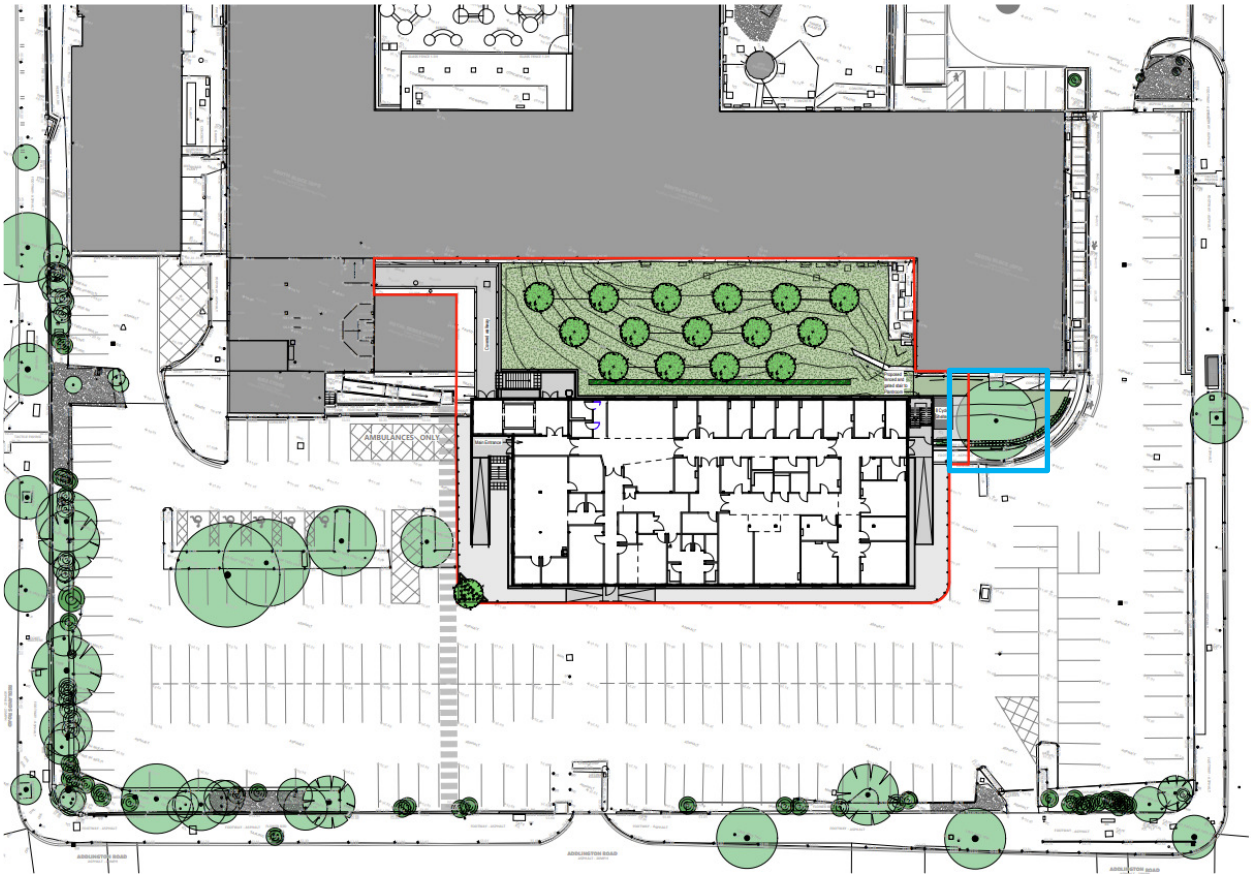
8.0 Conclusion

9.0 Other Notes

1.0 Introduction

This short report is to clarify the Royal Berkshire Hospitals NHS Foundation Trust's tree protection to the Local Authority as part of the ICS Urology Project, adjected to South Block.

2.0 Trees in the site



Site Plan – Blue line tree protection around T2 retained tree

The above image highlights the new building and the closest tree that may be affected during the works. Tree T2 (named in the arboricultural report) has been assessed as a category B tree and of moderate quality. The trees on the left of the new proposal are outside the works area and will be unaffected. Trees T3 & T4 are both category B but are small saplings and do not form a constraint and are being removed. There is a small tree by the entrance that will need to be removed due to access. This has been assessed by the Arborculturalist and deemed of minimal value with no constraints on it being removed.

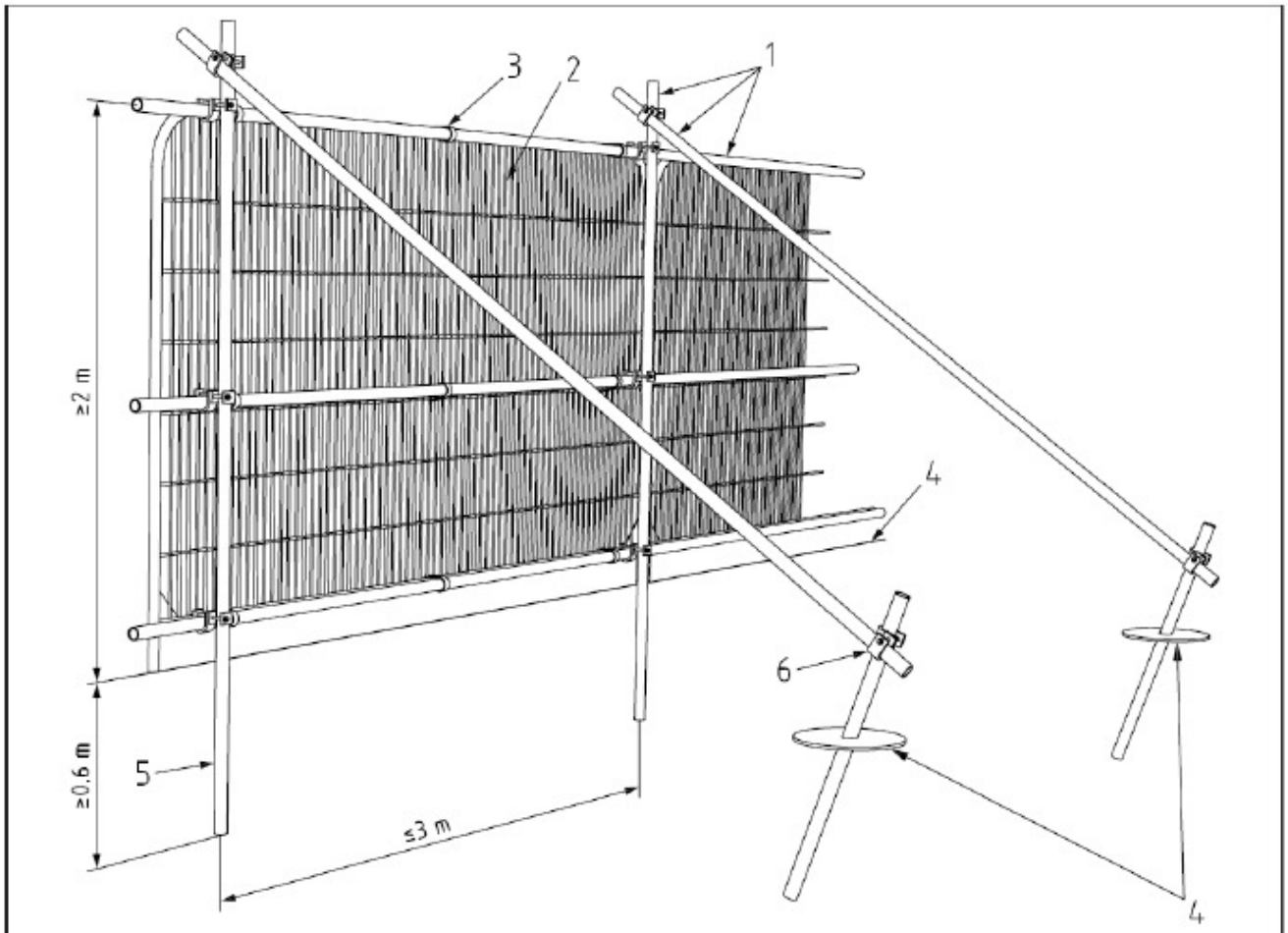
3.0 Prior to Works Starting

It is recommended that a pre-commencement site meeting be held with the Project Manager and the Project Arborculturalist prior to the beginning of the works to review the tree protection measures. This will allow on-site defining of areas (based on the root protection area (RPA) of the trees) to be protected during the development and highlight any further issues or protection methods required.

4.0 Protection of trees, roots and ground

Fence protection is required for the retained trees during the works. This will be compromised of Heras fencing and will be based on Figure 2 'Default Specification for Protective Barrier' as recommended within British Standard 5837:2012 and shown below. Fencing will be erected prior to any site development and must remain in situ and be fit for purpose for the duration of the development. The fencing must not be prematurely removed without the prior consent of the project Arborculturalist or the Local Planning Authority (LPA)

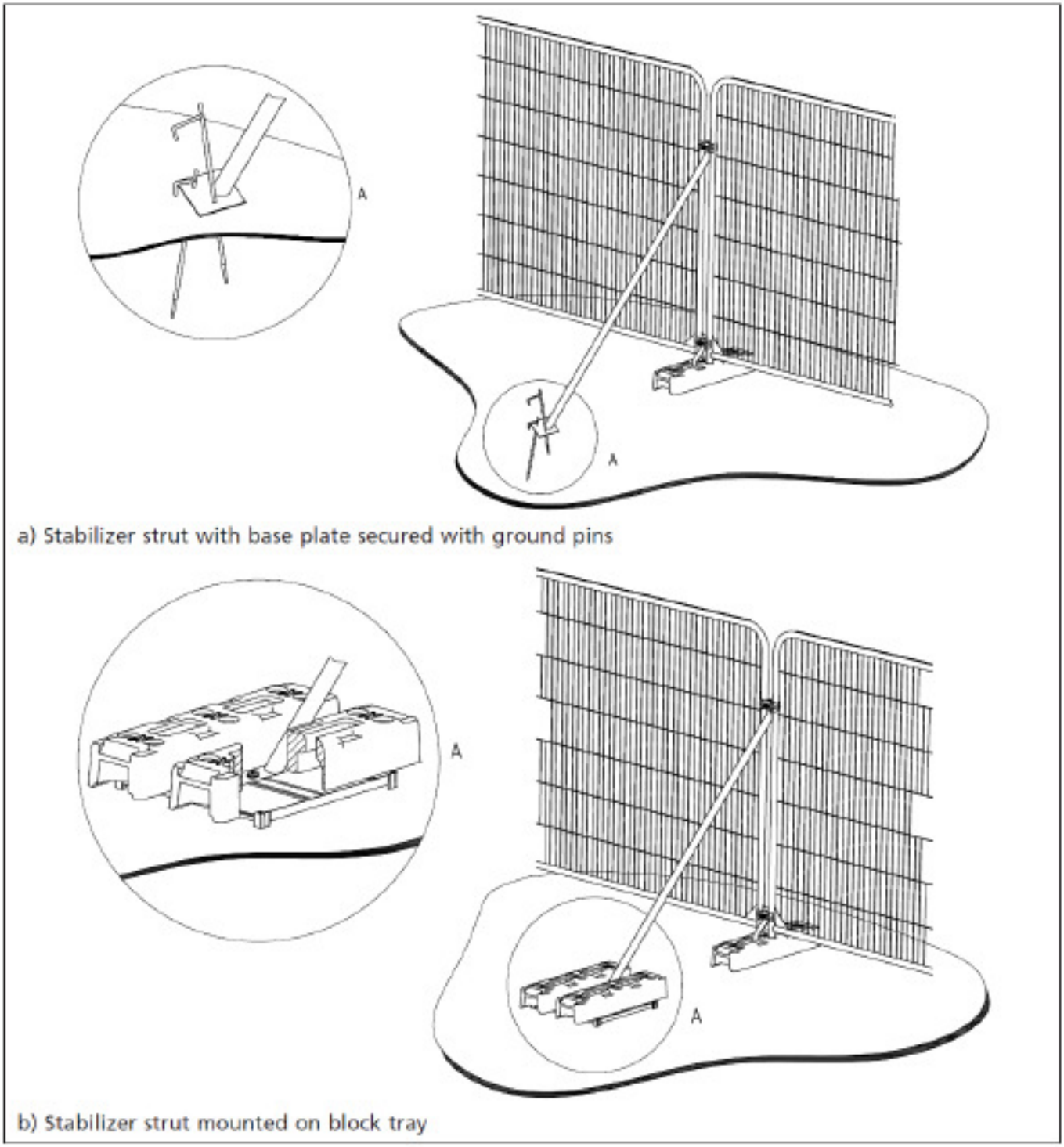
Figure 2: Default Specification of protective barrier BS5837:2012



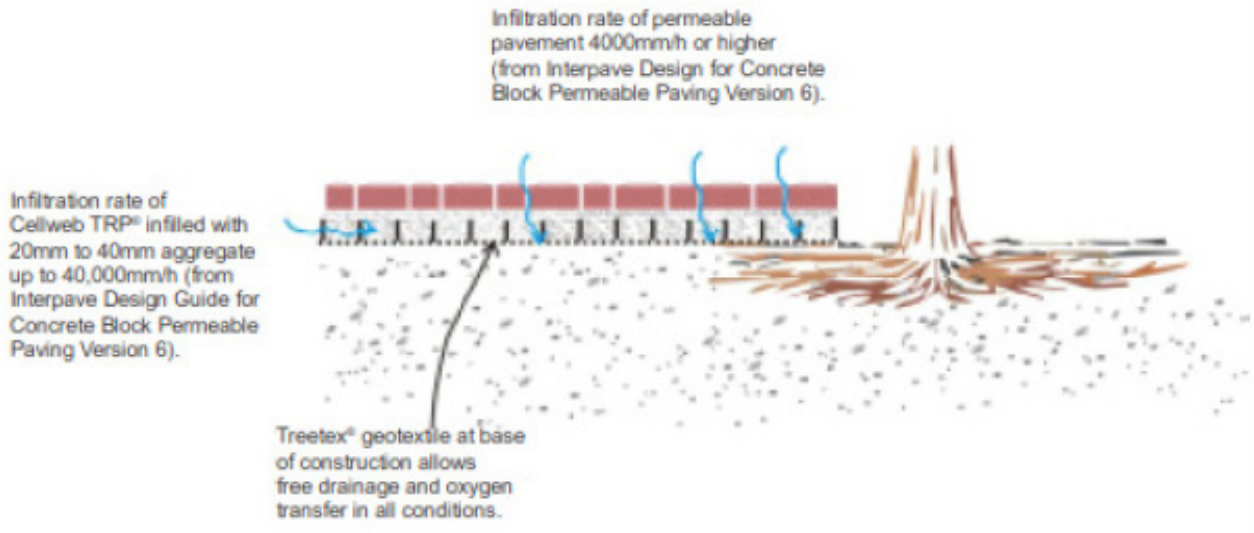
Key

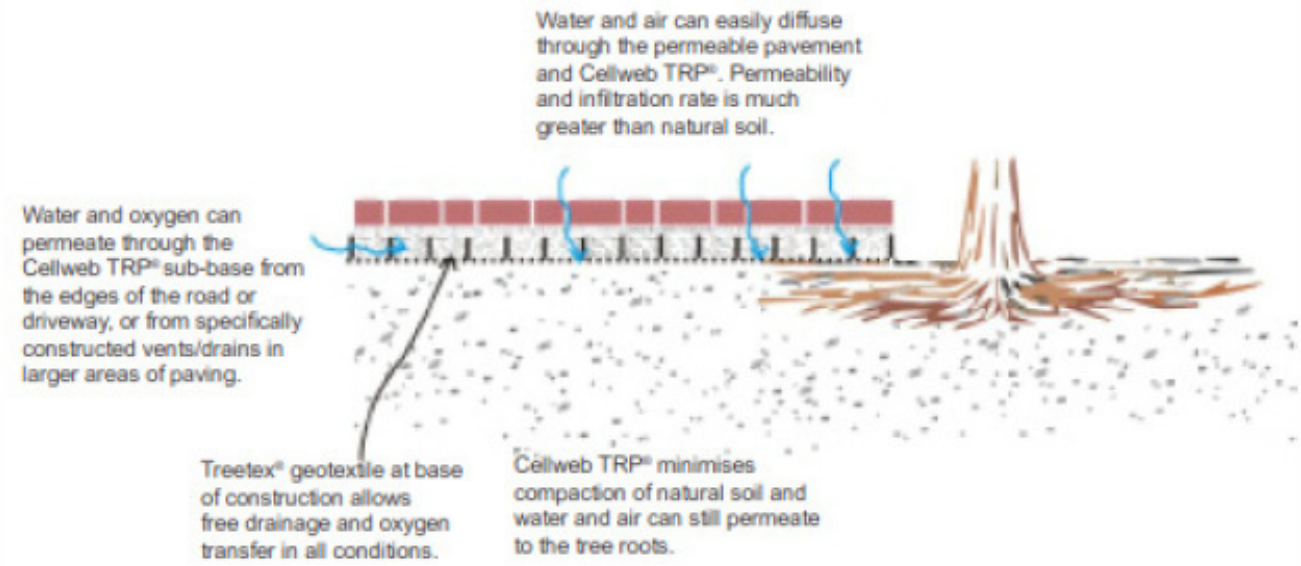
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3: Example of above ground stabilizing system BS5837:2012



Areas of root protection as identified in the Arborculturalist report are to be protected with Cellweb TRP matting. This is a cellular conferment system that creates a load bearing surface that displaces and weight and damage, protecting roots from compaction and desiccation of the soil, while still allowing water and oxygen to permeate through (see below).





Care shall be taken with 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 protected trees. Such contact could result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of machinery in close proximity to the trees should be carried out under the supervision of a banksman to ensure adequate clearance from the tree is maintained at all times.

In addition, ground protection measures are also required to facilitate the work. It has been recommended by the Arborculturalist that the ground protection comprises of Duradek Mats. These are ground protection mats, moulded from a proprietary blend of High Density Polyethylene, designed to link together to form a temporary surface, protecting the ground from damage.

DuraDeck

PRODUCT SPECIFICATIONS
DD2

Traction Surface:
Side 1: Double-traction tread design includes two parallel traction treads positioned at a 90-degree angle to adjacent double traction tread sets.
Side 2: Pedestrian friendly alternating cross shaped traction design.

Module Size: **Length:** 8' / 2.44 m
Width: 4' / 1.22 m
Module Size: 32 sq/ft / 2.973 sq/meters
Thickness: ½" thick mat + 3/8" cleat

Module Weight: 86 lbs. / 39.01 kg.
Per Square Foot: 2.69 lbs. / 43 oz. / 1.22 kg. / 1219 grams
Per Square Meter: 28.60 lbs. / 12.97 kg.

Colors: Black, White.
Custom colors available (minimum order required).

Material: Black High-Density Polyethylene (HDPE) post-industrial recycled plastic, naturally UV resistant due to the carbon black used for color. White UV-stabilized mats available.

Test Results:

Values	ASTM	Units	Typical
Melt Index	D 1238	g/10min	4.9
Density	D 792	g/cm^3	.960
Tensile Strength @ Yield 50mm/min	D 638	MPa (psi)	29 (4 200)
Elongation @ Break 50mm/min	D 638	%	1 500
Flexural Modulus	D 790	MPa (psi)	1 280 (185 000)
Hardness, Shore D	D 2240	–	65
Compressive Strength:		D695-02a psi	2,843
Flammability Resistance:	UL-94 HB		Passed

Weight Loading: Varies, depending on sub-surface, up to 80 tons capacity.

Signature Systems Group, LLC
50 East 42nd Street • 14th Floor
New York, NY 10017
Toll Free: 800-569-2751 • 212-953-1116 • Fax: 212-953-1117
Flooring: www.eventdeck.com • *Fencing*: www.signaturefencing.com

5.0 Construction Site Requirements

The following items are required as part of the works on site:

Scaled copies of the external works plan must be made available for any site personnel and must be displayed in the temporary contractor's compound area on site for all personnel to see.

To inform site personnel of the purpose of the protective 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 can be found below as part of this report below.

Construction personnel must 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.

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

Should any damage occur to trees noted, 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 an appropriately qualified Arboriculturalist, to enable remedial measures to be implemented as necessary and without delay.

Should the protective fencing become damaged so as to impair its function in protecting the 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.

All consented tree works as part of the planning permission, must be carried out in accordance with British Standard 3998:2010 'Recommendation for tree works' and in compliance with good practice as promoted by the Arboricultural and Forestry Advisory Group.

Under no circumstances must site personnel undertake any tree pruning operations. Any tree works must be carried out prior to any works in connection with the planning permission being implemented.

6.0 Other Notes

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. Any defects requiring rectifying must be notified to the Site Agent and the Client and copied to the LPA.

It is recommended that the Project Arboriculturalist be present on site during the main periods of construction. 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.

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.

7.0 Post Development

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 the 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 8.8.3 NOTE 2:

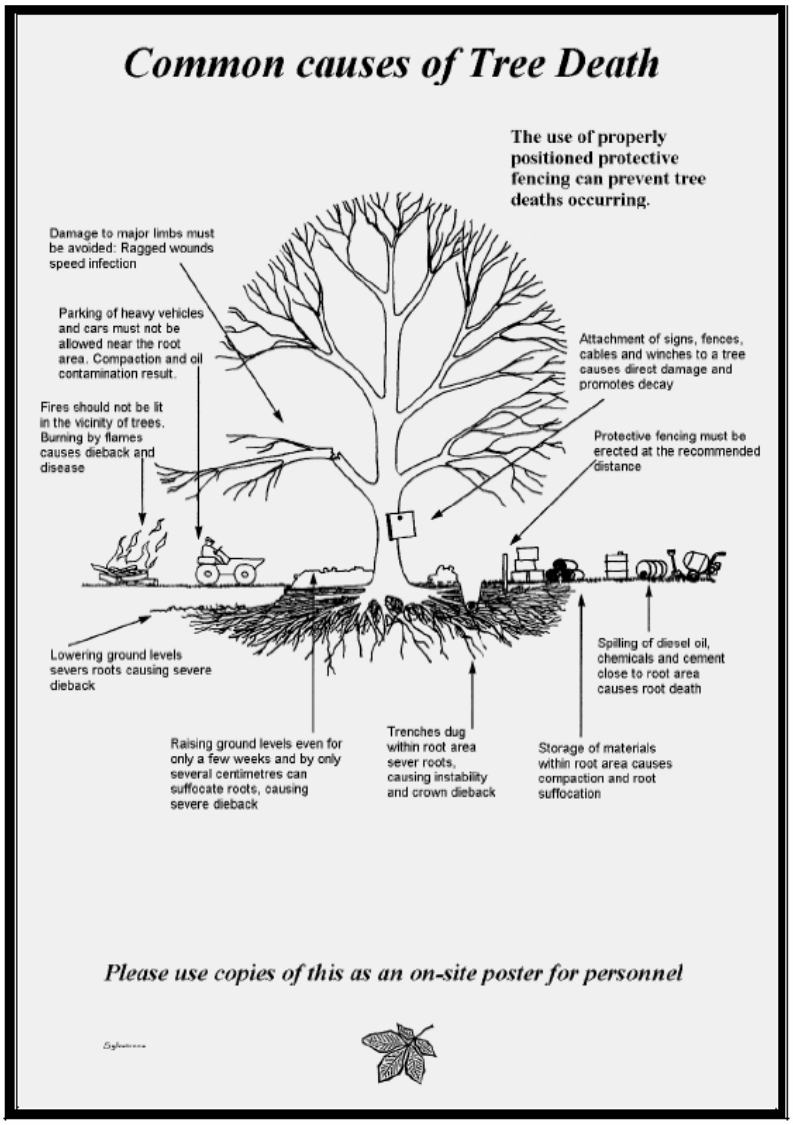
Where the trees in question are subject to legal, planning or other regulatory controls, the appropriate authority needs to be informed and any necessary agreements obtained prior to work being undertaken.

8.0 Conclusion

The tree protection measures have been considered in accordance with British Standard 5837:2012 'Trees in relation to Demolition, Design & Construction – Recommendations'.

Implementing the recommendations in this guide and the Arboricultural report should lead to successful tree retention and furthermore, the submitting of this report will allow condition 5 of the planning approval to be discharged.

9.0 Further 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