



Arboricultural Method Statement, Impact Assessment and Tree Protection Plan in Accordance with BS 5837:2012

103 CHURCH ROAD, EARLEY, READING, RG6 1HG

SouthOaks Arboricultural Consultancy

Tel 07460 879833

**www.surreytreeconsultant.co.uk
elliott@surreytreeconsultant.co.uk**

Contents

Executive Summary	1
Introduction	2
The Site	3
Tree Survey Parameters	4
Tree Survey and Analysis	5
Arboricultural Impact Assessment	9
Tree Protection Plan	12
Arboricultural Method Statement	16

1. Executive Summary

1.1

The proposal is for a single storey side extension at 103 Church Road, Earley, Reading, RG6 1HG.

Arboricultural Survey

1.2

The site was inspected by Elliott Foulkes (Dip Arb L4 ABC, TechArborA) on Tuesday 20th February 2024. 9 Individual / group of trees were surveyed. Trees to the rear of the property have been excluded from the survey as they are well outside of influencing distance of the design and will be inaccessible due to protection fencing outlined in this report. There are no Tree Preservation Orders listed and the property is not within a Conservation Area (CA). The street scene is residential in nature and is characterised by detached and semi-detached residential dwellings.

1.3

1 individual tree was classified within the 'B' category due to its combination of conservational, amenity value and maturity. 8 individual trees were classified within the 'C' category.

Arboricultural Impact Assessment

1.4

If necessary any small trees with a diameter of below 75mm diameter may be felled to accommodate for the proposed development and improve site access. There are no recommendations to remove trees within this report.

1.5

If precautions are followed as per the method statement included within this report there will be minimal impact on the trees rooting system. It is proposed a trench be dug to determine if there are any significant roots within the footprint of the proposed design. If significant roots are found the foundation design will need to be reassessed and an alternative method of construction will need to be implemented. If a significant rooting system is found that is not deemed practical for a strip foundation then a suitable foundation design that can bridge significant roots can be employed.

Tree Protection Plan

1.6

The RPA of the trees will require protection in order to mitigate from compaction and to avoid potential root damage. To guard the trees protection fencing must be installed around the perimeter of the RPA's as indicated in the Tree Protection Plan.

2. Introduction

2.1 Instruction

2.1.1

SouthOaks are instructed to visit and survey the trees in accordance with BS5837:2012. This includes trees that are within influencing distance of the tree Root Protection Area (RPA), and trees to be retained that may be affected by potential loss or damage within influencing distance of 103 Church Road, Earley, Reading, RG6 1HG.

2.2 Background Information

2.2.1

We have been provided with a proposed block plan for this site with precise tree locations.

2.2.2

The principle reason for this investigation is to provide professional arboricultural advice to assist in tree retention with nearby construction works. This report includes an arboricultural Impact Assessment, Tree Protection and Arboricultural Method Statement in accordance with BS5837:2012 in order to produce a BS5837 report. This report is to inform of feasibility studies and design options in regard to tree constraints.

2.2.3

Care has been taken to obtain all information from reliable sources, and all data has been verified where possible. However no guarantee can be given of the accuracy of information provided by others.

2.3 Plans and documents

2.3.1

A survey and map included in this report will include all tree numbers, specifically where it has not been possible to tag trees due to access. This document will notify of any additional trees not included in the topographical survey.

2.3.2

We have no connections with any of the parties involved in this site that could influence the opinions expressed in this report.

2.3.3

Planning permission overrides a Tree Preservation Order and Conservation Area.

3. The Site

3.1. Site Visit

3.1.1

The site was inspected by Elliott Foulkes (Dip Arb L4 ABC, TechArborA) on Tuesday 20th February 2024, weather conditions provided good visibility of the trees. Access was not granted for neighbouring properties.

3.1.2

The information contained in this report covers the trees inspected and reflects the tree condition and site conditions at the time of inspection. Measurements were taken using a diameter tape, digital laser measure and digital clinometer.

3.1.3

The trees were inspected from ground level only, no climbing inspections were undertaken.

3.2. Site Description

3.2.1

9 Individual / group of trees were surveyed. Trees to the rear of the property have been excluded from the survey as they are well outside of influencing distance of the design and will be inaccessible due to protection fencing outlined in this report. There are no Tree Preservation Orders listed and the property is not within a Conservation Area (CA). The street scene is residential in nature and is characterised by detached and semi-detached residential dwellings.

3.3. The soil

3.3.1

Although believed to be loamy soil with naturally high groundwater (www.landis.org.uk), we are unable to provide exact details of soil structure. If the soil is shrinkable the trees and other vegetation have the potential to cause indirect damage to structures. If there is a requirement to assess subsidence damage further research from a soil engineer would be advised.

4. Tree Survey Parameters

4.1 Parameters

4.1.1

Trees growing as groups have been identified and assessed as such where we have determined it appropriate.

4.1.2

Trees have been categorized using the criteria shown in table 1 in accordance with BS5837:2012. This is used to identify the quality and value of the existing tree stock allowing informed decisions to be made concerning which trees should be removed or retained in the event of development. BS5837 requires retention of better quality trees where possible (category A and B).

4.1.3

Trees that require immediate attention, either due to serious hazard to life or property, or trees affected by pests or pathogens that may cause widespread or serious damage unless controlled or eradicated should be brought to the attention of the relevant person or organisation (including statutory authorities where applicable).

5. Tree Survey and analysis

5.1 Species

Common name	Scientific name
Apple	<i>Malus</i> sp.
Bay	<i>Laurus</i> sp.
Camellia	<i>Camellia</i> sp.
Cedar	<i>Cedrus</i> sp.
Cypress	<i>Cupressus</i> sp.
Lime	<i>Tilia</i> sp.
Magnolia	<i>Magnolia</i> sp.
Oak	<i>Quercus</i> sp.
Pittosporum	<i>Pittosporum</i> sp.

5.2 Distribution of categories

BS5837 Category	Number of trees	Percent of trees
B1	1	11.1%
C1	8	88.9%
Total	9	100%

5.3 Key to survey

5.3.1

Ref – Reference number allocated to the tree or group of trees:

T = Single tree

G= Group of trees

DBH – Diameter at Breast Height. The tree diameter measured at 4.5 feet above the ground. Where the level of the ground is uneven measurements are taken above the upper side of the slope.

RPA – Root Protection Area. RPA's for single stem trees should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem one of two calculations are formulated in accordance with BS5837:2012.

Branch spread – The longest branches measured to the North, East, South and West

Height of first branch – First significant branch from ground level measured from the main stem

Height of canopy – First significant branch from ground level measured from the branch tip

ERC – Estimated Remaining Contribution.

0-10 = Unsuitable for retaining

20+ = Short term retention potential

30+ = Mid to long term retention potential

40+ = Long term retention potential

Age – Categorised into the following:

Y = Young

SM = Semi-mature

EM = Early-mature

M = Mature

OM = Over-mature

BS5837:2012 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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012] 4.5.7.</i>			
	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)	
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	
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	

Ref	Height (metres)	Common name	Stem Diameter (mm)	Branch Spread (metres)				Height of first branch (metres)	Height of canopy (metres)	Age	Remaining life span	General observations	Category	RPA (metres)
				North	East	South	West							
T1	7	Cedar	130	1	1	1	1	2	2	Y	30+	Co-dominant stems with tight union, limited visibility due to access	C1	1.6
T2	5	Pittosporum	120	1	1	1	1	2	2	M	30+	No notable observations	C1	1.4
T3	3	Camellia	80	1	1	1	1	2	1.5	SM	30+	No notable observations	C1	1.0
T4	3	Bay	80	1	1	1	1	1.5	1.5	SM	30+	No notable observations	C1	1.0
T5	5	Apple	320	3	3	2	3	2	2.5	M	30+	Previously reduced, limited visibility	B1	3.8
T6	3.5	Lime	200	0.5	0.5	0	0.5	2	2	Y	20+	Previously topped, epicormic growth, limited visibility	C1	2.4
T7	5.5	Magnolia	220	3	2	3	3	1	3	M	20+	Large diameter pruning cuts, tight unions, limited visibility	C1	2.6
T8	6	Cypress	200	1	1	1	1	0.5	0.5	Y	20+	No notable observations	C1	2.4
T9	5	Oak	140	2	2	2	2	2	2	Y	30+	Previously topped	C1	1.7

6. Arboricultural Impact Assessment

6.1 Introduction

6.1.1

It is our duty to evaluate and provide a methodology on the direct and indirect effects of the proposed design on trees above and below ground implementing constraints where necessary and recommend mitigation strategies on and adjacent to the site in accordance to BS5837:2012.

6.1.2

Site access for construction traffic is from the front of the property via Church Road.

6.2 Observations

Trees selected for removal

6.2.1

Ref	Description of tree work
N/A	N/A

Loss of trees

6.2.2

If necessary any small trees with a diameter of below 75mm diameter may be felled to accommodate for the proposed development and improve site access. There are no recommendations to remove trees within this report.

Tree surgery

6.2.3

Tree work may be required prior to the commencement to allow for the construction and to avoid damage during construction by machinery or vehicles. All work should be carried out by a competent and fully qualified arborist with liability insurance in accordance with British Standard 3998:2010 "Recommendations for Tree Work".

Ref	Description of tree work	Justification
T7	Crown raise by up to 3 metres from ground level pruning only to the boundary	To mitigate from potential branch during construction, only 2x 10mm diameter branches require pruning

Areas designated for structural landscaping**6.2.4**

We have not been made aware of any plans for any alterations of soil levels within RPA's.

Above ground constraints**6.2.5**

Delivery of building materials should be off-loaded on existing hard standing and away from the Root Protection Area (RPA) of the trees. Any movement of materials within the RPA are to be transported by foot on existing hard standing areas or where sufficient ground protection has been installed. Equipment using hydraulic arms need to stay out of striking distance of trees and their branches.

Root Protection Area (RPA)**6.2.6**

Access within the root protection area must be confined to existing hard standing. It is not permitted to dig within the RPA's unless it is outlined in this report and supervised by a competent arboricultural consultant. If digging is required within the RPA it must be completed by use of hand tools and gentle soil displacement methods (e.g. air spade) that avoid potential damage to tree roots, a professional arboriculturist must be present to supervise this type of work. If it is visualised that underground utility services are to be installed within any RPA an additional method statement must be requested from us.

Impact Summary**6.2.7**

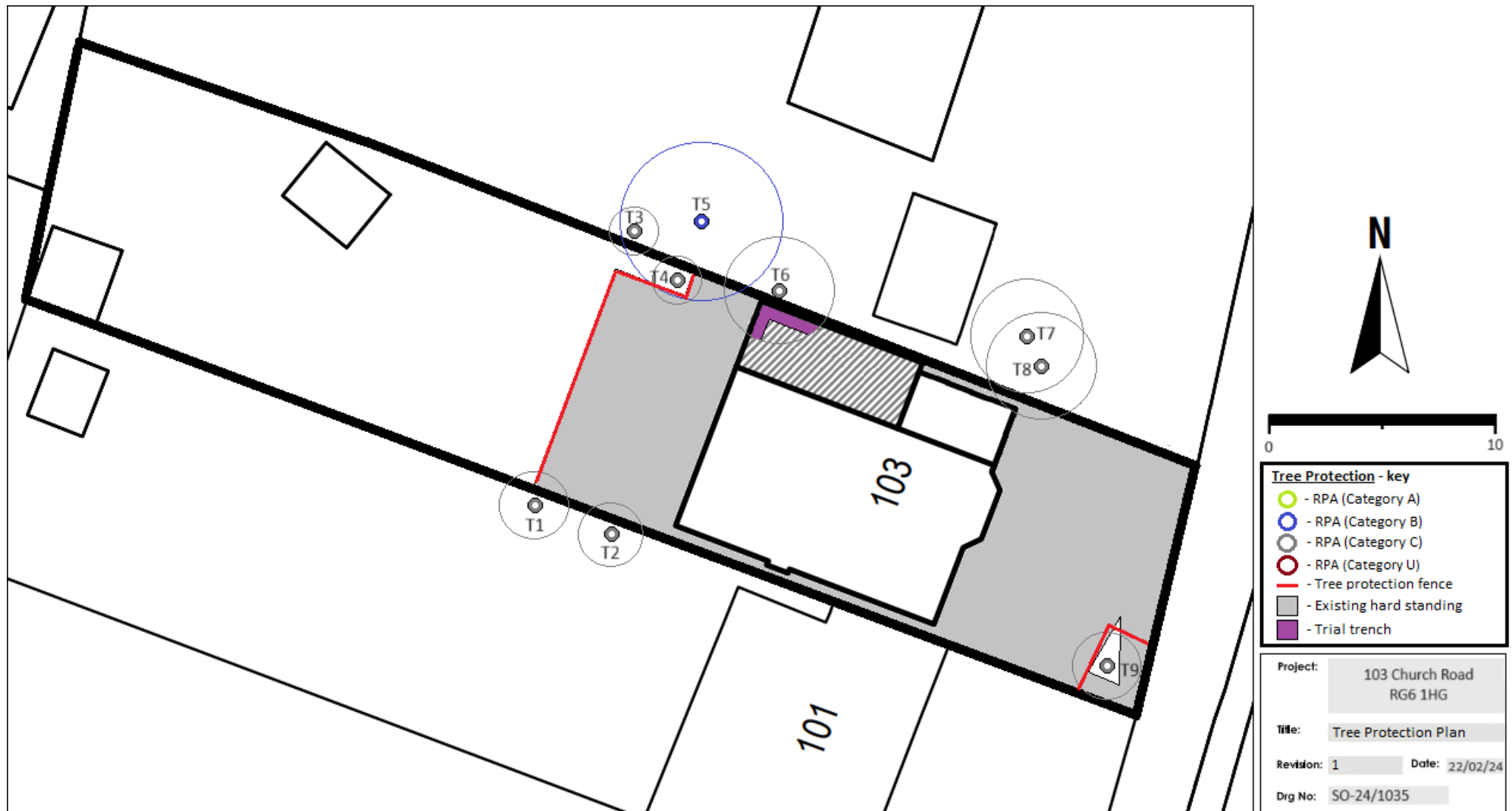
If precautions are followed as per the method statement included within this report there will be minimal impact on the trees rooting system. It is proposed a trench be dug to determine if there are any significant roots within the footprint of the proposed design. If significant roots are found the foundation design will need to be reassessed and an alternative method of construction will need to be implemented. If a significant rooting system is found that is not deemed practical for a strip foundation then a suitable foundation design that can bridge significant roots can be employed.

Issues to be addressed by an arboricultural method statement**6.2.9**

Method
Tree protection fencing
Trial trench

6.3 Conclusion**6.3.1**

The proposed development falls within the RPA of a single tree, therefore specialist construction techniques must be implemented to avoid potential root damage to the tree. A trench is to be dug with use of an Airspade or hand tools within the RPA. A method statement has been included within this report to outline best practice in regard this. To further protect the trees protection fencing must be installed before construction begins as indicated within the Tree Protection Plan.



7. Tree Protection Plan

7.1 Introduction

Circulation

7.1.1

It is vital that all parties involved in the planning of the development are privy to the information of this report. Copies of the report should be circulated to all individuals as soon as it is made available.

Accountabilities

7.1.2

Tree protection measures should be implemented for the short and long term in co-ordination with the client and all personnel involved in the development

7.1.3

It is the responsibility of the client and agent to hand a copy of this report to the site manager and to ensure that the compliance of the tree protection scheme is followed. The client and agent must make sure the site manager is updated on any authorised changes to this document. They must also ensure all planning conditions in relation to trees, underground works, services and landscaping have been approved before work begins.

7.1.4

It is the responsibility of the client and site manager to make available this report to personnel prior to and during site construction. Personnel must be briefed on the tree protection plan and arboricultural method statement and its importance. The client and site manager must make sure that personnel are updated on any authorised changes to this document.

7.1.5

Compliance of this document and any variations of this document is compulsory.

Schedule of works**7.1.6**

Arboricultural work and tree protection installation should be carried out in the following order. Any deviation from this order should be approved by the Local Planning Authority:

1. Tree Protection fencing to be installed by a competent contractor and approved by a competent arboricultural consultant.
2. The excavation of the trench must be supervised and recorded by a competent arboricultural consultant.
3. Tree protection fencing to be removed post construction after approval of a competent arboricultural consultant.
4. Construction and arboricultural site monitoring by a competent arboricultural consultant at agreed intervals.

7.1.7

Site prohibitions

1. Contractor's car parking on site is confined to existing hard standing or outside of any RPA.
2. Root Protection Areas are no-dig zones unless supervised by a competent arboricultural consultant.
3. Fires are prohibited on site.
4. Storing of materials, spoil, fuel and mixing of cement and concrete must be confined to hard standing in a zone outside of the Root Protection Areas. The slope of the ground must be taken into account to avoid harmful liquid spills to protected areas.
5. Felling, cutting, or damaging any retained trees is not allowed. This includes attaching signs or using trees as structural support
6. Equipment using hydraulic arms stay out of striking distance of trees and their branches

Compliance

7.1.8

Non-compliance of the tree protection plan means work must be halted immediately and instantly reported to the site manager. This will then need to be reported to the Local Planning Authority tree officer and SouthOaks.

7.3 Arboricultural Method Statement

Ground protection

7.2.1

Where construction working has been allowed within the RPA existing hard surfacing should be retained to act as temporary ground protection. If no hard surfacing is present at the time of construction new temporary ground protection that is capable of supporting any traffic entering the site should be installed prior to the work starting.

The primary method of protecting the ground when erecting scaffolding within RPA's is by installing geotextile fabric and side butting scaffolding boards on a compressible layer such as bark chippings on a geotextile membrane.

7.2.2

Ground protection might comprise of the following:

1. Pedestrian movements only – A suspended walkway consisting of single thickness scaffold boards on top of either a driven scaffold frame, or on top of a compression resistant layer (e.g. woodchip).
2. Plant up to a weight of 2 ton – Inter-linked ground protection boards placed on top of a compression resistant layer (e.g. woodchip), laid onto a geotextile membrane.
3. Construction traffic exceeding 2 ton – Proprietary systems or pre-cast reinforced concrete slabs or other engineering specification in conjunction with arboricultural advice. .

7.2.3

Tree protection fencing is to be installed according to the schedule of works before any materials or machinery are brought onto the site. It should be confirmed by a competent arboricultural consultant that the fencing has been correctly set out on site prior to the commencement of any other operations. Fencing should be fit for purpose of excluding construction activity around trees, they should be maintained to remain structurally sound.

7.2.4

The default barrier specification should consist of vertical and horizontal scaffold framework, the verticals should be spaced at a maximum of 3 meters apart (see figure 1) with mesh panels welded onto the framework. The uprights driven into the ground should not make contact with structural roots or underground services.

Figure 1 – Default specification for protective barrier

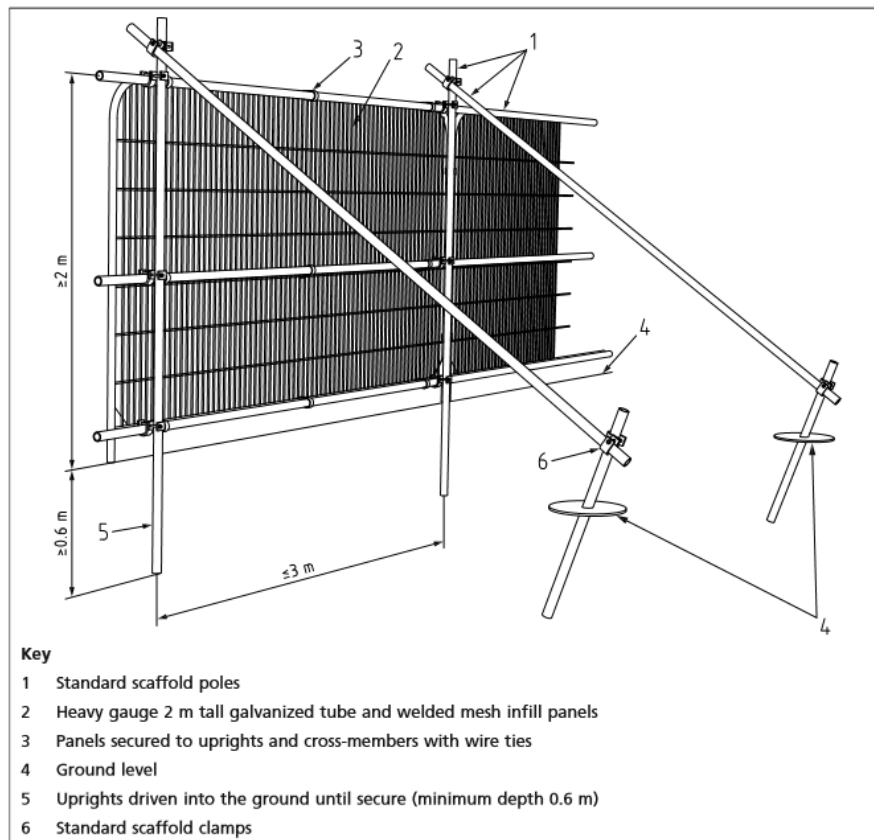
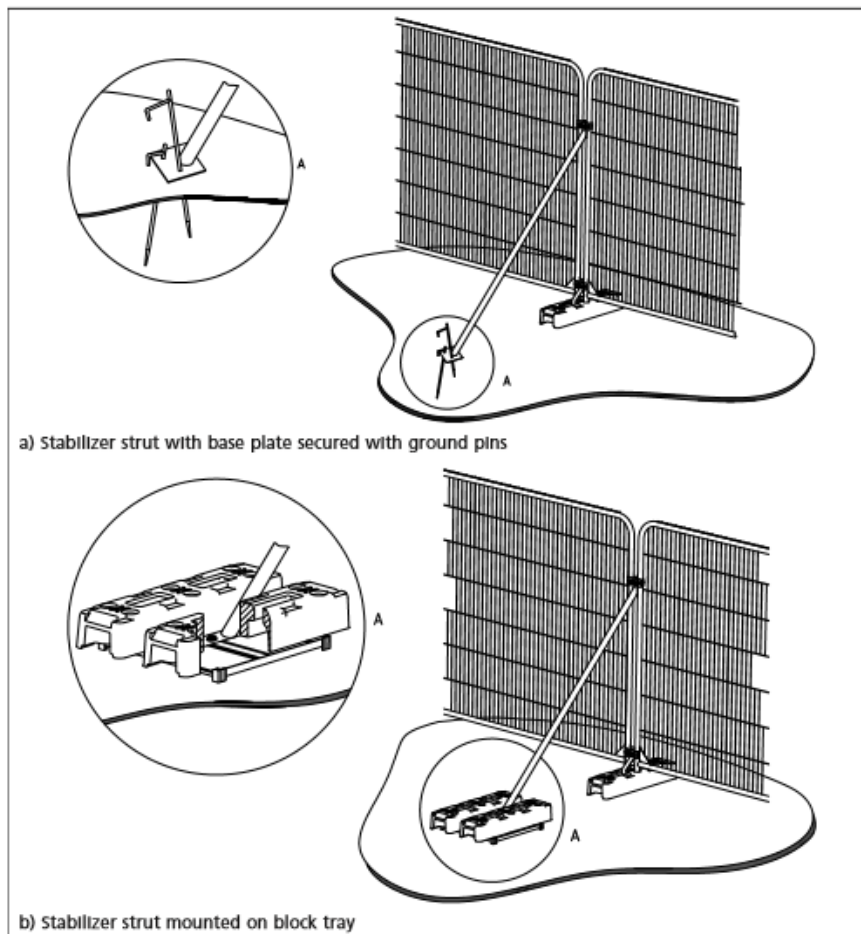


Figure 2



7.2.5

Construction within the Root Protection Area

It has been proposed that a trench be dug to determine if roots are situated within the location of the proposed development to accommodate trench footings. The trench will be located as indicated on the tree protection plan and will run the depth of the level of 200mm below the intended foundations. All work will be undertaken by Airspade or hand dig method. Digging around tree roots is a skill and operatives must proceed with caution. Once a root is located it is often necessary to track and 'trace' the roots location.

- If necessary ground protection must be installed prior to any excavation of soil.
- The excavation will not be wider than 500mm to reduce further disturbance to the soil.
- A competent arboricultural consultant must be present to supervise works and for him/her to photograph the exposed roots. The images should be high quality showing the roots clearly and also a perspective shot showing the tree relative to the trench. At the end of each day the tree officer will be provided with a short report on the operations accompanied with photographic evidence.
- Roots, whilst exposed, should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.
- Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist, as such roots might be essential to the tree's health and stability. Any roots exposed during this operation will be cleanly severed using appropriate hand tools (e.g. sanitised hand saws or bypass secateurs), where less than 25mm in diameter. Roots greater than 25mm in diameter will be retained in situ until the required excavation has been completed.
- Any damaged roots should be cleaned and pruned back to an appropriate place.
- Prior to backfilling, retained roots should be surrounded with topsoil or uncompacted sharp sand (builders' sand should not be used because of its high salt content, which is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.
- If significant roots are found for the foundation design it will need to be reassessed and an alternative method of construction will need to be implemented. It may be deemed possible to bridge significant roots. Where there are no presence of roots the foundations or pads can be

- placed that may have no detrimental impact on the trees, however the supporting beams for the structure must be resting on the foundations / pads above ground level leaving space for root growth.
- Beams must be pre-cast or cast in position using shuttering for the sides and a biodegradable void-former for the base. The ground surface of the RPA should be protected by a breathable geotextile membrane filled with pea shingle to provide a permeable low bearing pressure surface.

7.2.6

Site monitoring and pre-commencement meeting

An auditable system of arboricultural site monitoring is in place according to the schedule of works. A competent arboricultural consultant should monitor site activity at intervals throughout the project and should extend to arboricultural supervision whenever construction and development activity is to take place within or adjacent to an RPA.

The final details of supervision and the frequency of inspection visits will be agreed at the pre-commencement meeting. The supervision arrangement will be sufficiently flexible to allow the supervision of all sensitive works as they occur.

A pre-commencement site meeting involving the land owner, representative of the Client, arboricultural consultant, contractors and engineers (as appropriate), and relevant LPA officers will be held to ensure that all aspects of the tree protection processes are understood and agreed. The meeting is where the details of the program of tree protection will be agreed and finalised, which will then form the basis of any supervision arrangements between the arboricultural consultant and the developer.