

FRANK WRIGHT TREE CONSULTANCY



Arboricultural Impact Assessment and Tree Protection Method Statement
for
5 Fourth Avenue, Havant

Prepared by
Frank Wright
HNDFor, Tech Cert Arb.

13 August 2015

Ref: FWTC/211/AIA

<http://www.frankwrighttreeconsultancy.co.uk>



Arboricultural Report

Site: 5 Fourth Avenue, Havant

Report for: Ms Charmaine Williams

Report by: Frank Wright

Date: 13 August 2015

Summary

This report has been undertaken to assess the arboricultural implications of the proposed development at 5 Fourth Avenue, Havant.

The development itself will not require the removal of any trees. test Recommendations have been made in this report which will restrict site working procedures during construction in order to safeguard retained trees.

Trees are a material consideration in planning policy and the impact of the proposed development on amenity and character is considered to be acceptable and in accordance with the principles of the National Planning Policy Framework and Havant Borough Council local planning policy, in terms of trees.

Frank Wright

13 August 2015



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Section 1 – Introduction

1.1 Purpose of this Report

- 1.1.1 This report has been undertaken to assess the arboricultural implications of the proposed development at 5 Fourth Avenue, Havant. The report has been produced following a survey of all the trees in proximity to the site that may be affected by the proposals.
- 1.1.2 The report makes recommendations for tree protection during construction and may be used to support a planning application to Havant Borough Council for development.

1.2 Methodology

- 1.2.1 The tree survey at appendix 1 is based on the recommendations made in the British Standard BS5837:2012 “Trees in relation to design, demolition and construction - Recommendations”. The constraints have been measured against the Site plan supplied by Innovate 4 Architects ref. PL02.
- 1.2.2 Throughout the report, reference is made to the tree constraints plan detailing the root protection areas for all trees which are to be retained. The tree constraints plan can be found at appendix 2. The tree protection plan can be found at appendix 3.
- 1.2.3 The trees have been given a reference number. Individual trees are identified by a reference T(n) and groups of trees by reference G(n). The numbers correspond to the tree survey plans appended to this report.

1.3 Limitations

- 1.3.1 The tree survey was undertaken from ground level using binoculars. The survey is for the purposes of the report only and does not form a full safety assessment. All heights are estimated, but provide a satisfactory degree of accuracy for planning purposes.
- 1.3.2 The contents of this report are based on my site observations and information supplied by Innovate 4 Limited, on whose accuracy I have relied. Conclusions are based on published arboricultural texts along with my own observations and experience in Arboriculture.

- 1.3.3 The positions of trees shown on the tree constraints plan and the tree protection plan have been plotted against topographical drawings if provided by the client. If the topographical plan has not been provided, or if trees are not shown on the topographical plan, they have been plotted as accurately as possible by measuring from known positions, but locations may need to be verified onsite.

1.4 Statutory Controls

- 1.4.1 Checks with the local planning authority have not been made, although it is understood that the red horse chestnut tree (T2) is protected. As statutory controls apply, the client is advised to speak with the council prior to removing any trees, or undertaking any tree work recommended in this report.
- 1.4.2 Trees are a material consideration in the planning process and the application will be assessed against the local planning authority's policies and development guidance outlined in table 1 below.

Policy document	Policy criteria
Havant Borough Core Strategy Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough	Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.
Havant Borough Core Strategy Policy p135 Tree preservation orders and trees within conservation areas	Developers will be required to protect existing trees to be retained during site clearance and building operations.
Havant Borough Council Borough Design Guide SPD para. 4.51 Site Constraints	Development sites typically have constraints. These include neighbouring developments, landscape including trees and hedges, protected habitats and species, flood risk, land/soil contamination risk and services and utilities. Constraints may lead to a reduction in the developable area of the site. Special design solutions, specific construction techniques or mitigation measures will be needed to overcome or minimise them.

Table 1: Policy considerations



Section 2 – Site Survey and Assessment

2.1 Site Description

- 2.1.1 The application site is located in a suburban area to the east of Havant in south Hampshire. The gardens associated with the houses are all mature with a wide variety of ornamental trees and shrubs making a positive contribution to this part of Havant.
- 2.1.2 The development site measures approximately 750m² and is rectangular in shape. The ground is level with a raised bank to the bottom of the garden, supporting T7.

2.2 Soil Analysis

- 2.2.1 The National Soil Resources Institute soilscape viewer reveals a freely draining slightly acid loamy soil.

2.3 Appraisal of Tree Cover

- 2.3.1 The trees are generally mature specimens and include silver birch, apple and silver lime. There is a silver birch and a horse chestnut in the adjacent garden which can be seen from Fourth Avenue through glimpsed views between buildings.
- 2.3.2 Whilst the majority of trees are in reasonable condition, the pink chestnut (T2) is showing serious signs of decline. The BS5837 grading of the trees is limited by virtue of their condition and limited public amenity value.
- 2.3.3 Of particular note is the silver lime tree (T7) located to the southwest end of the garden. This is a mature tree that has previously been topped at approximately 2m. Whilst the tree provides useful screening from the adjacent dwelling, consideration may be given to re-reducing the size of the tree. It is considered within the tree's ability to tolerate this work and would help maintain a suitable relationship between the applicant property and the adjacent dwelling.



Section 3 – Impact of Development Proposals

3.1 The Proposal

- 3.1.1 This application is for a part two storey and part single storey rear extension at 5 Fourth Avenue, Havant.

3.2 Tree Removal

- 3.2.1 The development proposal has been designed following a detailed tree survey and full analysis of the arboricultural constraints relating to the site.
- 3.2.2 No trees will require removal to facilitate this development.

3.3 Risk to Retained Trees

- 3.3.1 The proposed layout will encroach into the BS5837 calculated root protection areas of retained tree T2 by approximately 0.5m. This represents approximately 0.5% of the tree's total root protection area of 91m² and is distant from the trees structural root protection area, ensuring that only small diameter roots could be encountered. The tree has good access to hospitable rooting soil in all other directions.
- 3.3.2 Although the tree is exhibiting signs of decline, the encroachment will not exacerbate this, subject to the implementation of the ground protection measures required during the construction phase of this project.
- 3.3.3 As with all trees in proximity to development, there remains a risk that trees could be damaged by construction processes. In order to ensure the protection of the trees on the site a tree protection plan and method statement has been prepared at appendices 3 and 4 of this report. This will involve installing protective fencing to prevent access to areas of the site during development.

3.4 Services and Sight-lines

- 3.4.1 At present the exact location of new underground services is unknown. However, it is anticipated that all incoming services will be brought through from the host dwelling. In the event that new services are required, there is sufficient space to the rear of the extension for these to be positioned outside of the root protection areas of retained trees. Further details can be found at appendix 4.

- 3.4.2 Given that there will be no significant increase to the volume of traffic accessing the site, sight lines are not considered to be relevant.

3.5 Post Development Pressures

- 3.5.1 The proposed building has been designed around the retained trees, ensuring that the relationship is acceptable and will not cause future conflict. Accordingly, there will not be post-development pressures to heavily prune or remove trees in the future.

3.6 Detailed Summary of Impact

Trees which can be successfully incorporated into the development	
T1, T2, T3, T4, T5, T6, T7, T8	The successful retention of these trees relies on the implementation of the tree protection recommendations made in this report.
Trees to be removed to facilitate development	
none	
Trees to be removed regardless of development	
none	
Trees which require special protection measures.	
T2	To reduce impact on this tree, it will be necessary to install tree protection fencing and temporary ground protection. The full specification and methodology for its installation can be found at appendix 4.

Table 3: Summary of Impact

Section 4 – Conclusions

- 4.1 Subject to the implementation of the tree protection plan at appendix 3 and the tree protection method statement at appendix 4, the development may be constructed without adversely affecting retained trees.
- 4.2 The development successfully integrates into the existing landscape demonstrating that local planning policy and the principles of the National Planning Policy Framework have been satisfied.

Appendix 1 BS5837 Tree Survey



Site: 5 Fourth Avenue, Havant

Client: Ms Charmaine Williams

Arboricultural Surveyor: Frank Wright

Ref: FWTC\211\TSS

Survey Date: 08 August 2015

This tree survey schedule is based on recommendations of BS5837:2012. All trees were inspected from ground level only, with binoculars where necessary. Measurements have been estimated for offsite trees and trees which cannot be accessed due to dense undergrowth/obstructions. Please note that this is not a safety survey, but an assessment of the trees' ability to tolerate construction. You are advised to contact us before carrying out any recommended tree work and/or construction as further survey work and approval from the local planning authority may be necessary.

Notes:

Ref: Tree reference number - (T)ree, (G)roup of trees

Ht: Height (m)

Dia: Stem diameter (cm) measured at 1.5m from ground level. * indicates multi stemmed tree (individual measurements available on request).

For groups, the largest stem diameter has been recorded, along with the total number of stems where practical. ^ indicates an estimated measurement.

Crown Spread: Crown spread (m) from trunk (cardinal points - N, E, S, W)

Life stage: NP- Newly planted; Y-Young; SM- Semi Mature; EM-Early Mature; M-Mature; OM-Over Mature

Life expectancy: Estimated remaining contribution (years)

Grade: In accordance with BS5837:2012 Trees in relation to design, demolition and construction - Recommendations

BS5837 Tree Survey

Ref.	Species	Ht	Dia (cm)	Crown spread (N,E,S,W)	Crown height	First branch	Observations	Recommended works	Age class	Life exp.	Grade
T1	prunus domestica	4	20^	2, 2, 2, 2	2	1-360	Off site tree; previously reduced		M	10+	C
T2	Aesculus x carnea	11	45^	3, 2, 2, 3	4	6-S	Off site tree; Reduced vitality with twiggy dieback; previously topped at 7m; necrotic bark notably on north side of trunk which looks like onset of Pseudomonas syringae pv aesculi		MA	<10	U
T3	Betula pendula	12	30^	1, 2, 2, 2	2	2-SW	Off site tree; split branch to south west reduced		MA	20+	B
T4	Betula pendula	13	38	5, 4, 4, 4	2	2-S	Surface rooting with mower damage; reduced vitality with 90% normal foliage density; canopy lifted over play equipment		MA	20+	B
T5	Malus sylvestris	5	16	3, 4, 3, 2	1	1-NE	Removed codominant at ground level; leaf blight		MA	20+	C
T6	Crataegus monogyna	8	35*^	5, 4, 3, 2	1	1-N	Off site tree; trunk split (old wound); more recent branch failure to west	Crown clean removing snapped branches	MA	<20	C
T7	Tilia tormentosa	14	67	8, 7, 2, 4	1	3-NE	Previously pollarded at 1.5m with substantial regrowth forming full crown; pruned to south from adjacent dwelling; ivy severed	Clear base for closer inspection	M	40+	B

BS5837 Tree Survey

Ref.	Species	Ht	Dia (cm)	Crown spread (N,E,S,W)	Crown height	First branch	Observations	Recommended works	Age class	Life exp.	Grade
T8	Prunus cerasifera 'Pissardi'	6	57*^	4, 3, 3, 3	1	0-NE	Previously reduced		MA	20+	C

Appendix 2 Tree Constraints Plan

Tree Schedule

Tref	Species	Age Class
T1	prunus domestica	M
T2	Aesculus x carnea	MA
T3	Betula pendula	MA
T4	Betula pendula	MA
T5	Malus sylvestris	MA
T6	Crataegus monogyna	MA
T7	Tilia tormentosa	M
T8	Prunus cerasifera 'Pissardi'	MA

Proposed Tree Work

Tref	Species	Works Required
T6	Crataegus monogyna	Crown clean removing snapped branches
T7	Tilia tormentosa	Clear base for closer inspection

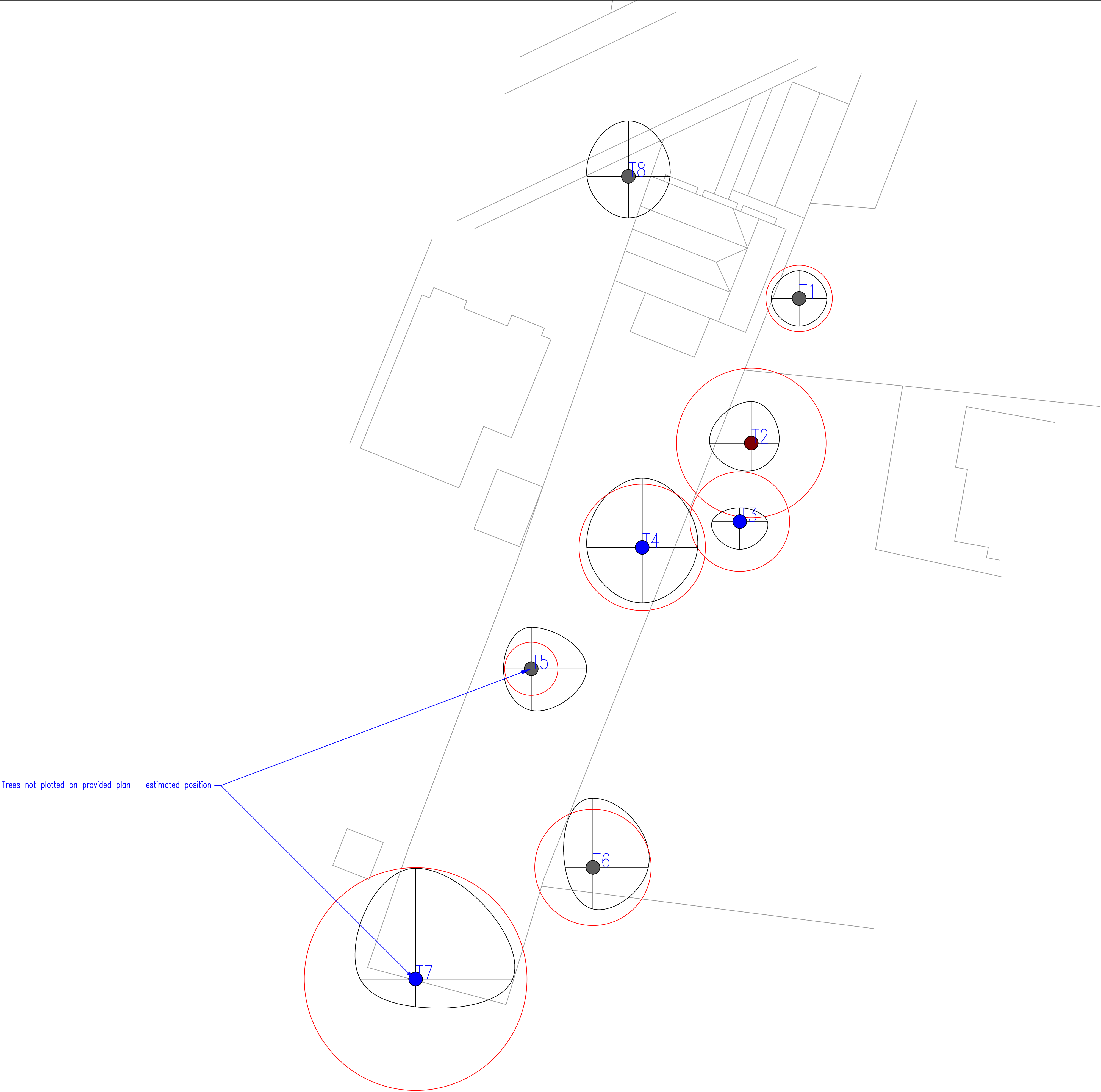
Tree Working Procedures

All tree work to be undertaken by a competent tree surgeon and in accordance with British Standard 3998 recommendations.

Checks shall be made with the local planning authority prior to undertaking any tree work to ensure that the trees are not protected or that the relevant permissions have been granted.

Excavations within the root protection area of trees to be undertaken using hand tools only taking care not to damage roots. No root over 25mm shall be cut without prior approval of an arboriculturist.

Bats and their roosts and wild birds and active nests (including nests under construction) are protected by wildlife legislation. If it is considered that the tree work may impact on any of these, work should be stopped immediately and advice sought from Natural England



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Trees have been surveyed in accordance with the British Standard BS5837:2012
Trees in relation to design, demolition and construction – Recommendations.
Each tree has been categorised by an arboriculturist in accordance with the Table 1 cascade chart for tree quality assessment, with consideration given to amenity, ecological and historic value as well as future potential.

Root protection area

Extent of crown spread (dashed outline indicates tree to be removed)

T1

Trunk position with BS5837 colour code (see below)

Tree reference number

Soil sampling station

BS5837 category A tree

BS5837 category B tree

BS5837 category C tree

BS5837 category U tree

Tree Constraints Plan

Project Information

Part two storey and part single storey rear extension to existing dwelling

at

5 Fourth Avenue, Havant

This plan has been recreated from Site plan ref – PL02 created by Innovate 4 Architects with permission from Ms Charmaine Williams, Innovate 4 Limited.

Drawn: FW

Scale: 1:150

#:

Plot size: A1

Date: 2015–08–11

Status:

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Drawing: FWTC/211/TCP

Rev: A

All dimensions to be checked onsite and against construction plans.
This drawing is to be used for tree protection matters only and must not be relied upon for engineering, layout or construction design, including demolition, building, landscaping and service location.

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Appendix 3 Tree Protection Plan

Tree Working Procedures

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Bats and their roosts and wild birds and active nests (including nests under construction) are protected by wildlife legislation. If it is considered that the tree work may impact on any of these, work should be stopped immediately and advice sought from Natural England

Tree Protection

Protective fencing (and ground protection where applicable) shall be erected prior to any demolition or construction work onsite. It shall be retained in place and in good condition for the duration of the development. Fencing shall not be moved without the prior authorisation of an arboriculturist.

Fencing shall consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated below. The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

Ground Protection

Temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

NOTE The ground protection might comprise one of the following:

a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;

b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;

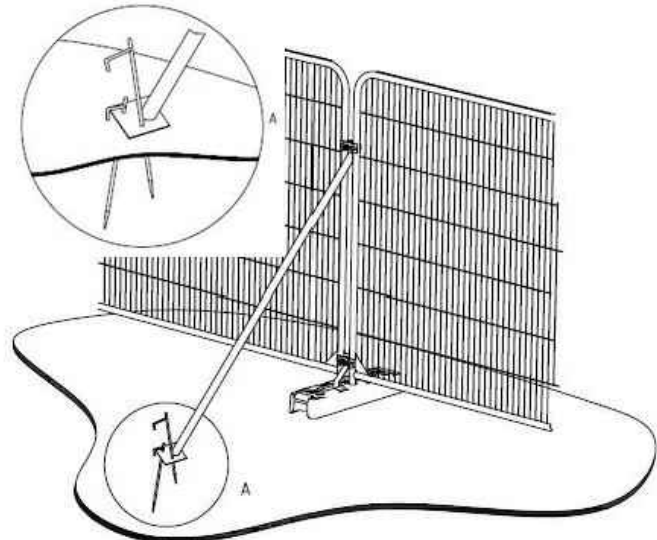
c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

Tree Schedule

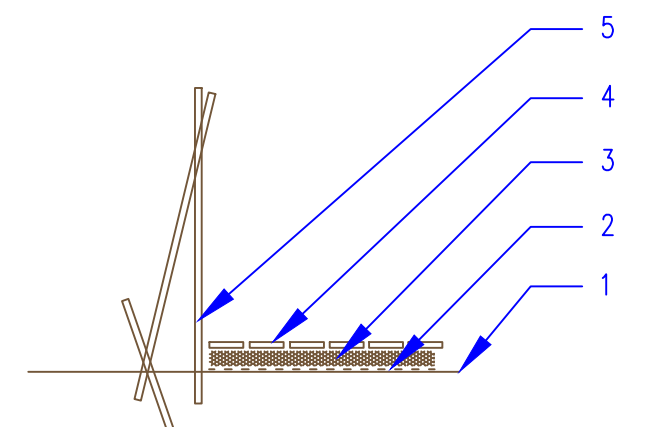
Tref	Species	Age Class
T1	Prunus domestica	M
T2	Aesculus x carnea	MA
T3	Betula pendula	MA
T4	Betula pendula	MA
T5	Malus sylvestris	MA
T6	Crataegus monogyna	MA
T7	Tilia tormentosa	M
T8	Prunus cerasifera 'Pissardi'	MA

Tree Work

Tref	Species	Works Required
T6	Crataegus monogyna	Crown clean removing snapped branches
T7	Tilia tormentosa	Clear base for closer inspection



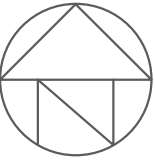
a) Stabilizer strut with base plate secured with ground pins



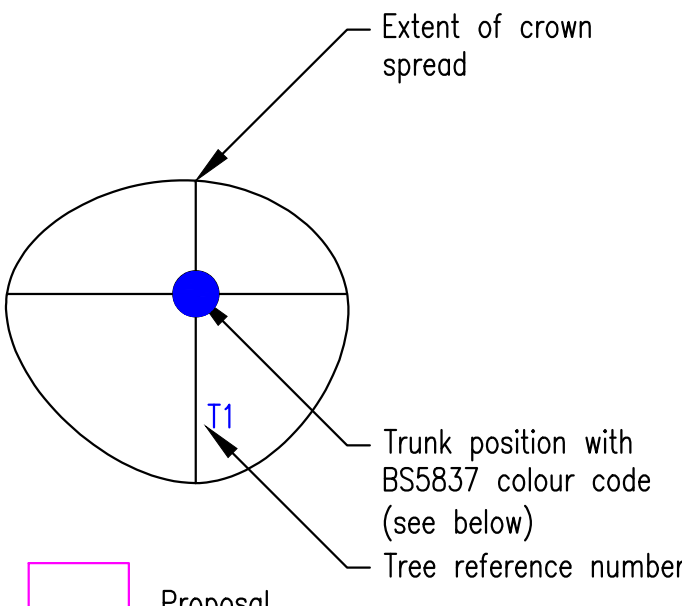
Ground Protection (see above)

- Ground level
- Geotextile membrane
- Compressible layer i.e. bark chips
- Side butting scaffold planks
- Protective fencing

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Trees have been surveyed in accordance with the British Standard BS5837:2012. Trees in relation to design, demolition and construction – Recommendations. Each tree has been categorised by an arboriculturist in accordance with the Table 1 cascade chart for tree quality assessment, with consideration given to amenity, ecological and historic value as well as future potential.



Extent of crown spread

Trunk position with BS5837 colour code (see below)

Tree reference number

Proposal

Ground protection (where applicable – see inset)

Tree protective fencing (see inset)

BS5837 category A tree

BS5837 category B tree

BS5837 category C tree

BS5837 category U tree

TREE PROTECTION PLAN

Project Information

Part two storey and part single storey rear extension to existing dwelling

at

5 Fourth Avenue, Havant

This plan has been recreated from Site plan ref – PL02 created by Innovate 4 Architects with permission from Ms Charmaine Williams, Innovate 4 Limited.

Drawn: FW

Scale: 1:150

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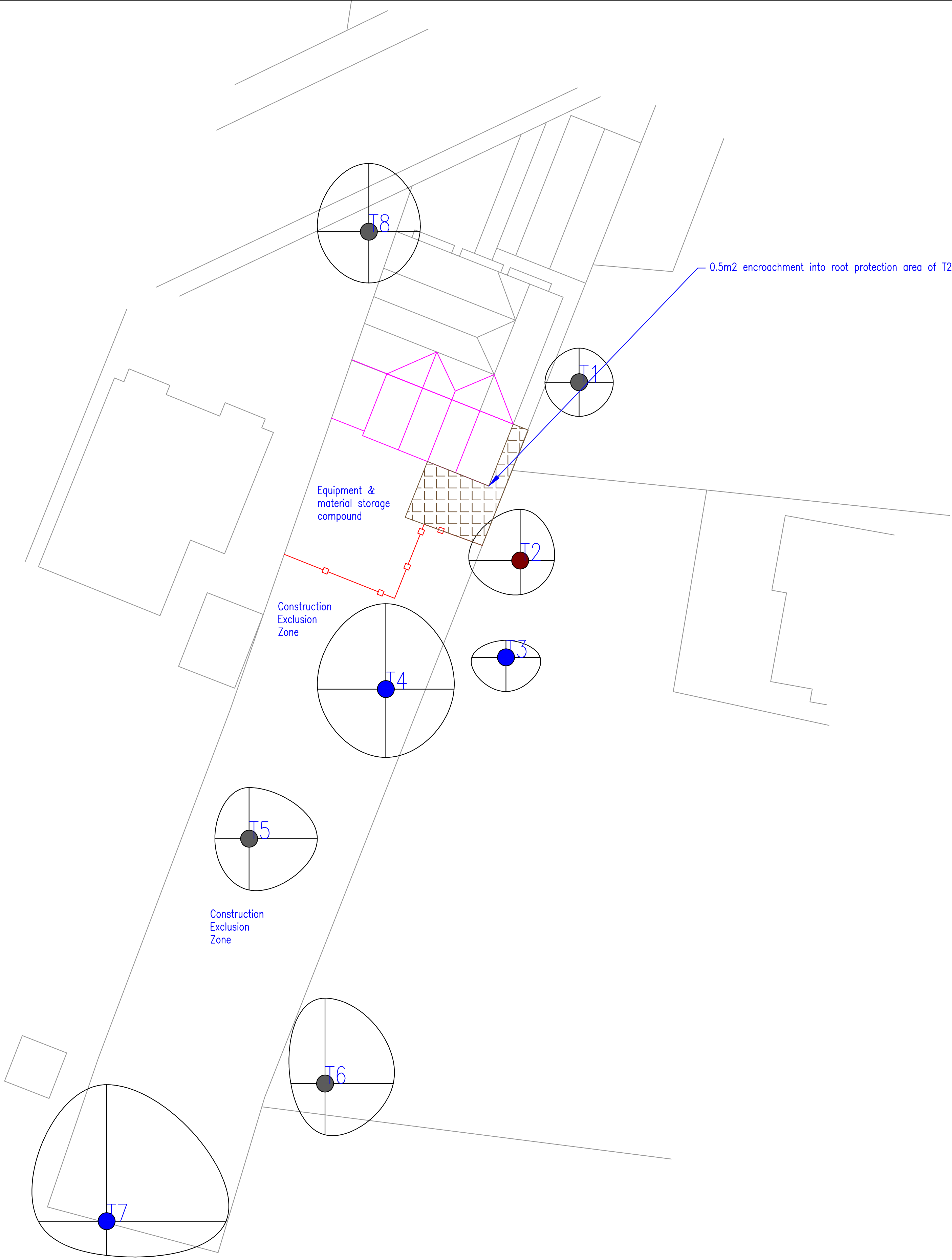
info@frankwrighttreeconsultancy.co.uk
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Drawing: FWTC/211/TPP

Rev: A

All dimensions to be checked onsite and against construction plans. This drawing is to be used for tree protection matters only and must not be relied upon for engineering, layout or construction design, including demolition, building, landscaping and service location.

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0.5m2 encroachment into root protection area of T2

Equipment & material storage compound

Construction Exclusion Zone

Appendix 4 Tree Protection Method Statement



Tree Protection Method Statement

Site: 5 Fourth Avenue, Havant

Client: Ms Charmaine Williams

Prepared by: Frank Wright

Date: 13 August 2015

Contents

1. Introduction
2. Phasing
3. Tree surgery
4. Tree protective fencing
5. Ground protection
6. Installation of services
7. General site working procedures
8. Briefing, supervision and mitigation

1. Introduction

- 1.1. Working methodologies contained in this report have been designed to ensure the protection of trees. The methods and materials specified will also need to be approved by a suitable engineer and project manager before commencing any work onsite.
- 1.2. This method statement details tree protection measures required during the development at 5 Fourth Avenue, Havant. The method statement is to be read in conjunction with the associated tree protection plan ref FWTC/211/TPP.
- 1.3. It remains the responsibility of the construction manager to ensure that the recommendations in this report are implemented. This method statement must be made available to all construction personnel.
- 1.4. If there are any queries relating to tree protection please contact Frank Wright by phoning (01962) 620259 or emailing frank@frankwrighttreeconsultancy.co.uk.



2. Phasing of Work

- 2.1. Development shall proceed as follows:
- 2.2. Tree surgery work, as outlined in the tree survey schedule FWTC/211/TSS.
- 2.3. Installation of temporary tree protective fencing and ground protection to form the construction exclusion zone in accordance with section 4 of this report.
- 2.4. Demolition and construction phase - all tree protection measures maintained for the full duration of this phase and not altered unless with the agreement of the appointed arboriculturist.
- 2.5. Fencing removed by hand on completion of construction, once materials and equipment have been removed from the site, prior to the implementation of soft landscaping.

3. Tree Surgery

- 3.1. No trees shall be removed. All other tree surgery will be completed in accordance with the management recommendations in the tree survey at appendix 1.
- 3.2. All tree work to be undertaken by a competent tree surgeon and in accordance with British Standard 3998 recommendations.
- 3.3. Checks shall be made with the local planning authority prior to undertaking any tree work to ensure that the trees are not protected or that the relevant permissions have been granted.
- 3.4. Bats and their roosts and wild birds and active nests (including nests under construction) are protected by wildlife legislation. If it is considered that the tree work may impact on any of these, work should be stopped immediately and advice sought from an ecologist.



4. Tree protective fencing

- 4.1. Temporary tree protective fencing to be erected in accordance with the British Standard 5387:2012 and as shown on the tree protection plan FWTC/211/TPP. Fencing shall form the construction exclusion zone (CEZ) around all retained trees.
- 4.2. Fencing shall consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated on the tree protection plan. The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.
- 4.3. Laminated signs saying “Tree Protection Zone – Keep Out” shall be attached to fence panels.
- 4.4. Care shall be taken for the duration of the development to ensure that fencing is rigid at all times. No fencing shall be moved without the prior approval of an arboriculturist.

5. Ground Protection

- 5.1. Temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.
- 5.2. NOTE The ground protection might comprise one of the following:
 - a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;
 - b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;



c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

6. Installation of services

- 6.1. Wherever possible, underground services shall be located outside the tree root protection areas.
- 6.2. If this is not possible, installation shall be installed in accordance with the National Joint Utilities Guidance document NJUG 4. No service shall be positioned closer than 1m to the tree stem.
- 6.3. Within the root protection area, all excavation shall be undertaken using an airspade to ensure roots are not damaged. Exposed roots shall be covered in hessian sacking.
- 6.4. Services shall be inserted through the root system, allowing for future root expansion.
- 6.5. The trench shall be backfilled with an inert granular material and top soil mix.

7. General Site Working Procedures

- 7.1. The construction exclusion zone (CEZ) shall be considered sacrosanct at all times during the development and fencing shall not be moved without the approval of an arboriculturalist.
- 7.2. All building materials including chemicals, fuel, cement and equipment will need to be positioned away from the CEZ. The existing area to the west of the extension provides an appropriate surface for material storage.
- 7.3. There shall be no ground level changes or mechanical cultivation within the CEZ.
- 7.4. No fires shall be lit in a position where flames can reach any part of a tree.
- 7.5. Should significant dust enter the CEZ, the root protection area and tree shall be hosed down.



- 7.6. No notices shall be attached to trees with nails.
- 7.7. In the event that roots are discovered during any trenching operations, they shall be cut back cleanly using a pruning saw or secateurs, to a growth point where possible. No root over 25mm shall be cut without prior approval of the appointed arboriculturist.

8. Briefing, Supervision and Mitigation

- 8.1. A pre-commencement site visit shall be undertaken by the arboriculturist and, if available, the Tree Officer from Havant Borough Council. The purpose of the visit is to inspect the tree protection measures prior to the commencement of any demolition/construction activity and to discuss working methodology with the project manager.
- 8.2. At this point, soil compaction readings will be taken using a penetrometer within the tree constraint zone. These will be compared with readings taken on completion of the development. If elevated density levels are detected, compaction mitigation shall include a programme of vertical mulching. This shall involve hand auguring 150mm diameter holes to a depth of 0.5m at 1 m intervals within the RPA of the affected tree. The holes shall be backfilled with pea gravel and organic matter and kept watered through the first summer following completion of the development.
- 8.3. In the event that the tree protective requirements outlined in this report are breached, the appointed arboriculturist will assess the impact of the incident and to recommend remedial works which may include tree work and soil improvement. The local authority shall be notified accordingly.
- 8.4. If it becomes evident that the recommendations made in this report are not practical for the purposes of construction, an alternative arrangement will need to be approved by an arboriculturist. Prior approval shall also be required by Havant Borough Council.