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ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

BS5837:2012

On behalf of:
Hadi Moallemi

Site:
8 Kelmscott Close,
Caversham, Reading,
RG4 7DG

Prepared by:
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BSc (Hons)

Report Reference:
AAAIA8KEL

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1.0 Instruction

All Arboriculture has been instructed by Hadi Moallemi to undertake a tree survey in accordance with BS5837:2012 *Trees In relation to design, demolition and construction – Recommendations*, and to produce an Arboricultural Impact Assessment, Arboricultural Method Statement and Tree Protection Plan. The instruction was received on the 14th September 2024. The tree survey was carried out on the 20th September 2024.

2.0 Statement of purpose

The purpose of this report is to provide local planning authorities with sufficient arboricultural information to consider the effect of the proposed development on nearby trees, and to demonstrate that trees have been carefully considered throughout the development process. The report includes an arboricultural method statement that describes how work will be undertaken to provide adequate protection of retained trees.

3.0 Associated documents and drawings

This report should be read in conjunction with the following documents and drawings:

1. Proposed site plan
2. British Standards Institute - BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*
3. Tree Protection Plan – AATPP8KEL

4.0 Site description

The site is in the urban area of Caversham, Reading and is a detached residential dwelling. The proposal is the demolition of the existing dwelling and erection of a detached residential dwelling. The site falls under the jurisdiction of Reading Borough Council who have advised T3 is subject to a Tree Preservation Order.

5.0 Vegetation description

The vegetation consists of 4 category B trees, 1 category C tree and 2 category C groups. Some tree protection measures and working methodology (in accordance with BS 5837:2012) will ensure they are not detrimentally affected during construction.

6.0 Arboricultural impact assessment

Table 1: Summary of impacts

Tree removal	T4, T7 and part of G8
Facilitation pruning	T1, H2, part of G5
Demolition within RPA	T3
New surfacing within RPA	None
New structures within RPA	T2, T3

Building construction in relation to tree roots: The removal of T4, T7 and part of G8 is required for the implementation of the proposed. G8 consists of 4 x self seeded sycamore trees and the removal of two of these is required. All are low quality and it is recommended these are replaced with better specimens elsewhere on the site.

The incursion of the proposed into the RPA of T3 will require a special engineering solution to prevent damage to the tree. The incursion into the RPA of T3 will occupy 13.5m² of the RPA. As T3 has a total RPA of 567.6m², the incursion will occupy 2.38% of the trees total RPA.

Pad and ground beams or similar specialist foundations will be used if a design is agreed by a suitably qualified engineer. All works within and close to the RPA of T3 will be carried out by hand and under strict arboricultural supervision. The pad locations can be excavated using an air spade to avoid undue damage with work halted if large roots (>25mm dia.) are discovered. Any large roots discovered will be wrapped in hessian and only pruned with the written consent of the LPA tree officer.

Building construction in relation to tree crowns: The facilitation pruning of T1, H2, part of G5 is required to facilitate the development. G5 consists of over grown shrubs. T1 has low branches that overhang the entrance of the site. The low branches are also potentially vulnerable to damage during construction. To reduce the risk of accidental damage, the lateral branches on the vulnerable side of the crown will be crown lifted to 4m by tip reducing low, hanging branches. The health and appearance of the tree will not be affected.

Tree root and canopy protection: The RPA's (Root protection areas) of the retained trees should be protected during the development phase with heras fencing and ground protection to ensure heavy machinery is not operated, or materials stored within the rooting area. This can be detrimental to the trees, causing soil compaction and root die back. The protection of the RPA and canopy spread is detailed in the Arboricultural Method Statement below.

Special surfacing: I have not been provided any information regarding new surfacing. For any new surfacing within the RPA's of retained trees, the existing ground will be graded up to form a no dig surface utilising a 3D load spreader, a no-fines aggregate and a porous wearing course. All works close to and within the RPAs will need to be carried out strictly by hand.

Materials delivery, storage and handling: Materials should not be handled or stored within the RPAs of retained trees; the load exerted can result in soil compaction and leachate from spills can be toxic to trees.

Surface drains, soakaways and services: It is important that services, surface drains and soakaways avoid the RPAs of retained trees as roots can be damaged during trench excavations. The location of services should therefore be agreed with the local planning authority prior to the development phase commencing.

7.0 Arboricultural Method Statement

Implementation and phasing of the proposed development: Prior to any works commencing on site, a meeting will be held with the tree consultant and site manager present. During the meeting details regarding the location of heras fencing, ground protection and tree stem protection will be discussed and a time to reconvene in order to assess the protection will be agreed.

Demolition: The demolition of the small shed within the RPA of T3 will take place at the same time as the tree operations prior to any construction contractors moving onto the site and prior to any construction works. As the shed is small and dilapidated, this can be removed by hand. To ensure that disruption is minimised to the roots and crown of T3, the small shed will be demolished by hand / hand tools and arisings will be stored next to the existing dwelling outside of the RPA's of retained trees.

Demolition of the existing dwelling will only commence once all tree protection has been installed and inspected by the project arboriculturist.

Tree protection barriers: Protective fencing will be installed prior to the commencement of any construction development activity and will be retained in the positions shown on the tree protection plan (AATPP8KEL). The fencing will be to the BS 5837:2012 'Trees in relation to design, demolition and construction – recommendations' (section 6.2) i.e. preformed galvanised steel mesh panels ('Heras' or similar) facings on a driven braced scaffold pole framework. It will be retained at the locations shown until construction is completed. It may be moved or removed only with notice to and consent from the local planning authority.

Ground protection: Temporary ground protection to be installed within RPA's of T3 and G8 should be capable of supporting 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.

In case of increased load on the driveway, ground protection should be installed in the RPA's of T1 and T3 for wheeled or tracked construction traffic exceeding 2t 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.

Protective trunk wrapping: To be attached to the trunk of T1 prior to the commencement of **all works on site**, and retained in place throughout construction. To comprise of a minimum of three wrappings of clean dry hessian around the trunk from ground level up to 2.3m high and held in place using sisal. Onto the hessian a minimum of three wraps of chestnut pailing and is to be held in place by 2.5mm mild steel galvanized wire in three locations and fixed into place using fencing staples fixed into the chestnut pailing. The wire is to be secured to the chestnut pailing by fencing staples.

Storage and handling of materials: This site has sufficient space for materials to be stored and handled.

Contractors parking: There is sufficient space on site and on Kelmscott Close for parking.

Welfare facilities: There is sufficient space for temporary facilities onsite.

Surface drains, soakaways and services: RPAs will be avoided in the drainage design however, in the unlikely event that existing cables need to be unearthed within an RPA, the method for doing so will accord with the recommendations in the NJUG Publication: Volume 4: Issue 2: 16/11/2007: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Trenches will be dug by hand and any roots over 2.5cm in diameter will be retained undamaged. Smaller roots may be cut back to the proximal face with a clean, sharp pair of secateurs. The trench backfill around the roots shall be a granular material that can be compacted to the point where it can bear the new surfacing without subsiding but without abrasion of tree roots and without raising the soil bulk density to the point where root growth cannot take place. Should it be necessary, this operation will be overseen by the project arboriculturist.

Supervision: The project arboriculturist will attend the site to inspect all tree protection and ensure that it has been laid out as prescribed in the method statement and meets the requirements of BS5837:12. Any excavations close to or within the RPA of retained trees will be overseen by the project arboriculturist. It is the responsibility of the site manager to inform the arboricultural consultant when inspections are required for example, when heras fencing and ground protection is ready to be inspected.

Tree works: The removal of T4, T7 and part of G8 is required and the facilitation pruning T1, H2, part of G5 is required. T1 will be crown lifted to 4m by tip reducing low, hanging branches. The health and appearance of the tree will not be affected. All tree work shall be carried out in accordance with BS3998:2010 Tree Work – Recommendations by suitably qualified personnel.

Tree planting: It is respectfully suggested that if additional tree planting is required then this should be secured through an appropriately worded planning condition.

Sequencing of Works

1. Removal of shed strictly by hand and carry out tree work operations. All tree works are to be carried out by a competent and experienced arborist to current British Standards.
2. Installation of tree protective fencing, ground protection and tree trunk protection as shown on the TPP.
3. Arboricultural Consultant to check tree protection at this stage.
4. Demolition and main construction phase including arboricultural supervision
5. Remove tree protection when all construction activity has ended.
6. Completion

Contacts

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Unknown

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Site Manager:

Unknown.

Critical phases of pre-commencement, induction, construction & completion

REFERENCE	ACTIVITY	ONE OFF OR REPEAT	ATTENDEES	ACTION
1	Pre-commencement meeting (to discuss working methods, timescales and tree protection schemes)	One off	Developer, Arboricultural Consultant, Site Manager/Agent, Ground Works Contractor, Council Arboricultural Officer	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
2	Tree works and removal of shed	One off	Arboricultural Consultant, Site Manager/Agent, Ground Works Contractor	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
3	Installation and inspection of all tree protection	One off	Arboricultural Consultant, Site Manager/Agent,	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
4	Demolition of existing dwelling	Repeat until works completion	Developer, Arboricultural Consultant, Site Manager/Agent,	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
5	Installation of foundation and construction phase	Repeat until works completion	Developer, Arboricultural Consultant, Site Manager/Agent,	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
6	Installation of hard surfaces, landscaping, bin and bike stores	Repeat until works completion	Arboricultural Consultant, Site Manager/Agent, Ground Works Contractor	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
7	Final assessment – after tree protection removal	One off	Arboricultural Consultant, Site Manager/Agent, Council Arboricultural Officer	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days
8	Additional inspections (if necessary) to ensure periods not greater than three months elapse between any of above listed monitoring events	Dependent on progress of the project	Arboricultural Consultant, Site Manager/Agent	Arboricultural Consultant to record minutes – copies to be submitted to Developer and Council Arboricultural Officer within 5 days

Variations and Incidents

Any proposed variations to the proposed working method (relating to arboricultural matters) will be referred by the on Site Manger/Agent to the Developer who will seek advice from the Arboricultural Consultant. The Arboricultural Consultant shall advise on minor amendments and will subsequently report these to the Arboricultural Officer by e mail or minutes. Issues directly relating to tree surgery or tree retention will be forwarded by the Arboricultural Consultant (with recommendations) to the Arboricultural Officer for approval. Except in an emergency situation and when the Arboricultural Officer is unavailable, no such actions will occur without the written approval of the Arboricultural Officer.

APPENDIX 1 - Tree Schedule Schedule

Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground (m)	Life stage	General observations	BS 5837 cat	Root protection area (m)
1	Cherry <i>Prunus avium</i>	16	52	6	6	2	Early Mature	Reasonable tree. Council owned.	B	6.2
				6	6					
2	Cypress hedge <i>Cupressus × leylandii</i>	3	20	5	8	4	Early Mature	No significant defects.	C	2.4
				7	7					
3	Cedar <i>Cedrus libani</i>	22	112	5	4	3	Early Mature	Off site tree.	B	13.4
				4	6					
4	Crab apple <i>Malus sylvestris</i>	6	22	2	2	2	Early Mature	Poor form. Ivy clad.	C	2.6
				1	1					
G5	Mixed shrubs	4	20	2	2	<1	Early Mature	Poor quality group and overgrown. Ivy clad.	C	2.4
				2	2					
6	Cherry Plum <i>Prunus cerasifera</i>	7	30	1	1	1	Early Mature	Inspection restricted by G5.	C	3.6
				1	1					

Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground (m)	Life stage	General observations	BS 5837 cat	Root protection area (m)
7	Lawsons Cypress <i>Chamaecyparis lawsoniana</i>	12	29	2	2	<1	Early Mature	Slightly suppressed.	C	3.4
				2	2					
G8	4 x Sycamore Group <i>Acer psuedoplatanus</i>	12	40	3	3	3	Early Mature	Ivy clad self seeded group. Co dominany.	C	4.8
				3	3					
9	Maple <i>Acer platanoides</i> <i>Crimson King</i>	14	44	5	5	2	Early Mature	Ivy clad. Deadwood present.	B	5.2
				5	5					
10	Sycamore <i>Acer psuedoplatanus</i>	17	55	5	5	2	Early Mature	Reasonable off site tree.	C	6.6
				5	5					

APPENDIX 1 - Tree Schedule Schedule

Survey Key

Diameter (mm)

Stem diameter in millimetres measured at 1.5m above ground level. Where the stem is divided below 1.5m, measurement is taken as directed by BS:5837 Annex C.

RPA - Root Protection Area

RPA circle radius is determined from Annex D of BS:5837. R- Radius

A – Area

Branch Spread (m)

Radial crown spread in metres, measured for each of the four cardinal points of the compass from the centre of the trunk.

N E
W S

Low branches

Height above ground in metres of the lowest branch and use of the 4 cardinal points of the compass.

Age class

(NP) Newly planted – a tree within 3 years after planting

(Y) Young – a tree within its first one third of life expectancy

(EM) Early Mature – a tree within its second third of life expectancy

(M) Mature – a tree in its final one third of life expectancy

(OM) Over Mature – a tree having reached its maximum life span and is declining in health and size due to old age

(V) Veteran – a tree in the second or mature stage of its life and has important wildlife and habitat features including; hollowing or associated decay fungi, holes, wounds and large dead branches.

(A) Ancient – a tree in the ancient or third and final stage of their life that is of interest biologically, aesthetically or culturally because of its age, size and condition

Physiological Condition

GOOD – a tree in a healthy condition with no significant problems

FAIR – a tree generally in good health with some problems that can be remediated POOR – a tree in poor health with significant problems that can't be remediated DEAD – a tree without sufficient live material to sustain life

Structural Condition

An assessment of the structural/safe condition of the tree categorised into:

GOOD – a tree in a safe condition with no significant defects

FAIR – a tree in a safe condition at present but with defects or with significant defects that can be remediated POOR – a tree with significant defects that can't be remediated.

EC - Estimated remaining contribution in years (based on the species and its current condition)

<10 Up to 10 years

10+ 10 years or more

20+ 20 years or more

40+ 40 years or more

Category (Tree quality assessment)

Category U – Tree in poor condition that cannot realistically be retained for longer than 10

years Category A – Trees of high quality

Category B – Trees of moderate quality Category

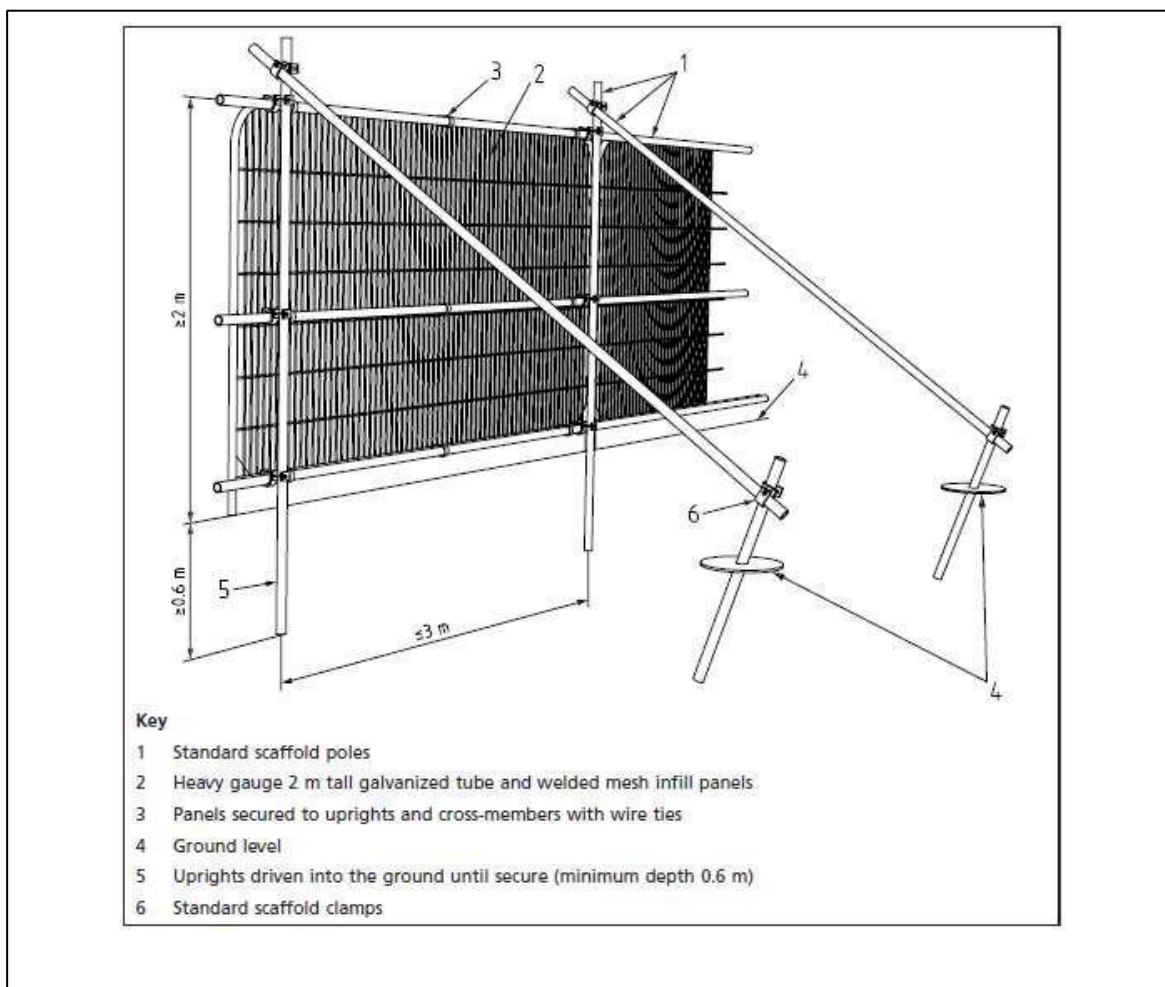
C – Trees of low quality

APPENDIX 2 – Protective Fencing

Protective fencing should be erected before any construction commences on site. It should also be in position to protect important trees prior to demolition.

Protective fencing should stay in position until all construction activity has finished.

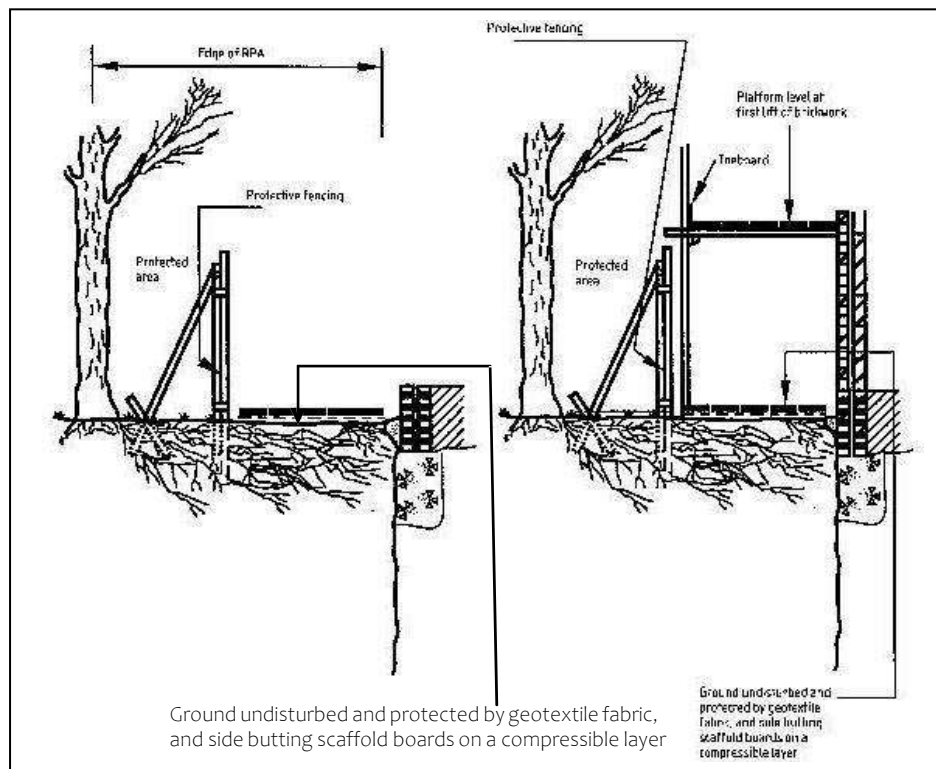
'Fencing should be established at the minimum distance set out in British Standard 5837:2012 *'Trees in relation to design, demolition and construction - Recommendations'*. Excavations should not encroach into the fence position and it is appropriate to keep at least 0.5m between the fence and any changes in level.



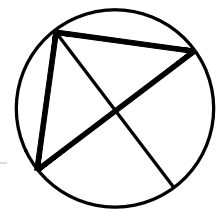
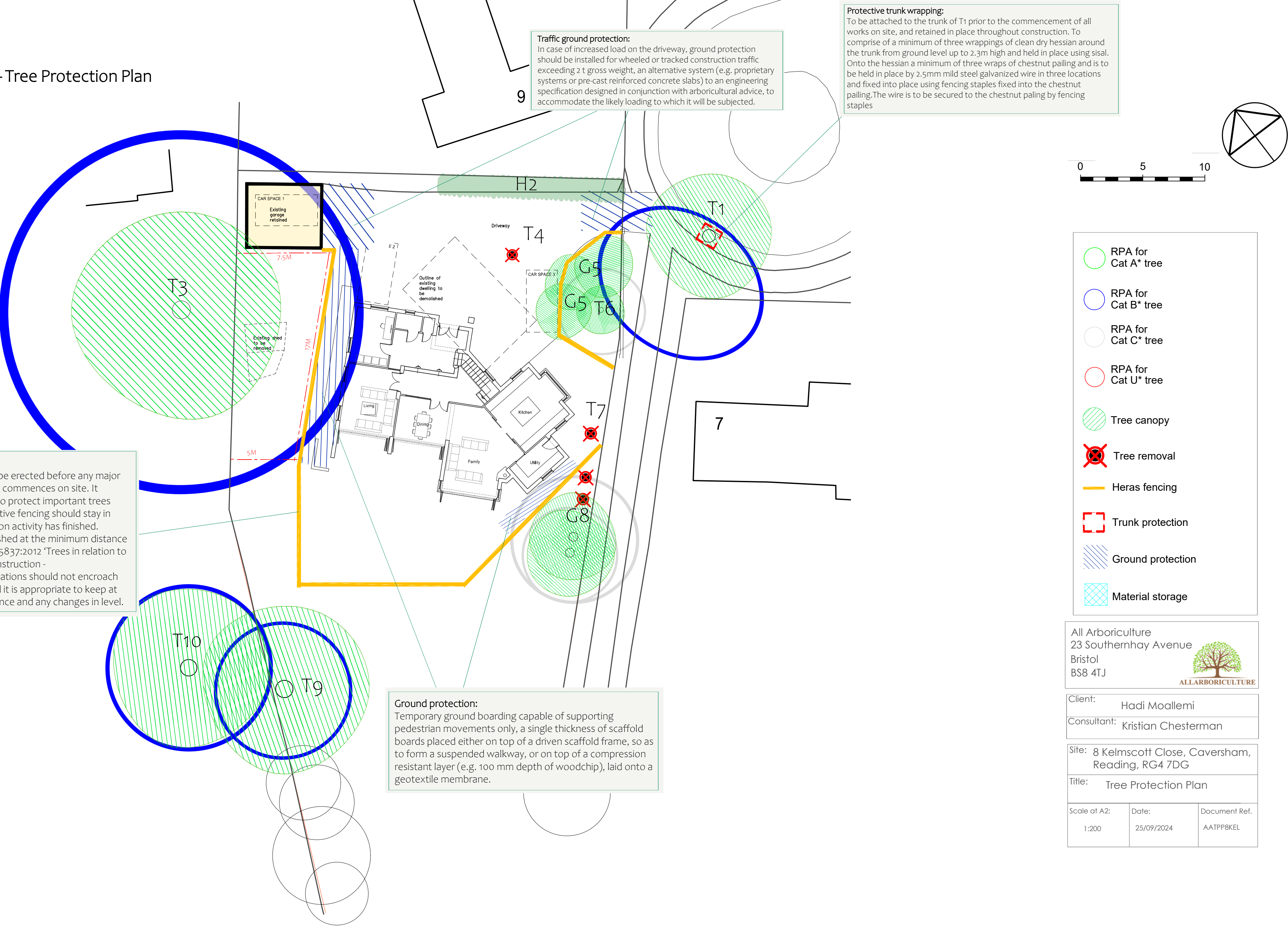
APPENDIX 2 – Ground Protection

Where ground protection measures are necessary, they can be provided by laying a geotextile mat onto the existing ground level and adding to this compressible materials, such as bark mulch or sharp sand to form a safe, level surface. Onto this surface is laid scaffold boards which become the working surface for the duration of the construction phase.

Where scaffolding is proposed above the area requiring protection the footway can be suspended above ground level using the upright scaffold poles onto which horizontal supports can be attached and then boards used to form the footway surface. A geotextile mat should be laid on the ground beneath to prevent contamination from materials dropped through the footway.



APPENDIX 3 – Tree Protection Plan



- RPA for Cat A* tree
- RPA for Cat B* tree
- RPA for Cat C* tree
- RPA for Cat U* tree
- Tree canopy
- Tree removal
- Heras fencing
- Trunk protection
- Ground protection
- Material storage

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Client: Hadi Moallemi
Consultant: Kristian Chesterman

Site: 8 Kelmscott Close, Caversham,
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Title: Tree Protection Plan

Scale at A2:	Date:	Document Ref.
1:200	25/09/2024	AATPP8KEL