



ALLARBORICULTURE

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ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

BS5837:2012

On behalf of:
Daniel Goss-Custard

Site address:
Cottages, Stanlake
Park Twyford,
RG10 0BN

Prepared by:
Kristian
Chesterman BSc
(Hons)

Report reference:
AAAIACOTT

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19th September
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1.0 Instruction

All Arboriculture has been instructed by Daniel Goss-Custard 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 28th May 2024. The tree survey was carried out on the 29th May 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. 2405-D001-P4-Proposed Site Layout
2. British Standards Institute - BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*
3. Tree Protection Plan – AATPPCOTT

4.0 Site Description

The site is in the rural area of Twyford and consists of 2 semi detached residential cottages. The site is relatively flat with no abrupt changes in level. The proposal is the erection of a side extensions to both cottages. The site falls under the jurisdiction of Wokingham Borough Council who have not been approached to ascertain if the trees are within a conservation area and or subject to a Tree Preservation Order.

5.0 Vegetation Description

The vegetation consists of 1 Category B tree, 4 Category C trees and 1 Category C group. 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	None
Facilitation pruning	None
Demolition within RPA	None
New surfacing within RPA	None
New structures within RPA	None

Building construction in relation to tree roots: No tree removal or facilitation pruning is required for the implementation of the proposed. The proposed is outside of the RPA of the retained trees and therefore traditional construction methods may be used and will not impact the retained tree.

Building construction in relation to tree crowns: It is important that sufficient growing space is allowed between the mature crown extent of each tree and the roof edge of the proposed structures. This is to reduce conflicts of interest in the future and to reduce the pressure to prune trees to keep them clear of roofs.

Tree root and canopy protection: The RPA (Root protection area) 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.

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.

Shading: The shading effects of trees should be taken into consideration when locating fenestration. Where structures are located too close to trees and to the north of them, the shade cast by the trees may prompt requests to fell or prune in the future and is therefore not encouraged by local planning authorities.

7.0 Arboricultural method statement

Implementation and phasing of the proposed development: Prior to any building work 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 and ground protection will be discussed and a time to reconvene in order to assess the heras fencing and ground protection will be agreed. The schedule of events during the development phase will be as follows:

Heras fencing and ground protection will be installed as indicated in plan AATPPCOTT.

Tree protection barriers: Protective fencing will be installed prior to the commencement of any development activity and will be retained in the positions shown on the tree protection plan (AATPPCOTT). 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 T1 and T2 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.

Storage and handling of materials: This site has sufficient space for materials to be stored and handled as shown on the Tree Protection Plan (AATPPCOTT).

Contractors parking: There is sufficient space on site for parking.

Welfare facilities: Toilets and hand washing facilities shall be made available within the property and there is sufficient space for temporary facilities if required.

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.

Special surfacing: For new surfacing such as pathways or paving 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 RPA's will need to be carried out strictly by hand.

For **new** roads and vehicular access, at least 100mm Cellweb TRP will be required dependent on the site specific traffic loadings:

100 mm is suitable for domestic traffic, such as cars and transit vans with a gross weight of up to 6 tonnes;

150 mm is suitable for emergency access and refuse collection, with a gross weight of up to 30 tonnes

200 mm is suitable for HGV and construction traffic, with a gross weight of up to 60 tonnes

Supervision: The project arborist will attend the site to inspect the heras fencing and ground protection to ensure that it has been laid out as prescribed in the method statement and meets the requirements of BS5837:12. It is the responsibility of the site manager to inform the arboricultural consultant when inspections are required for example, when heras fencing is ready to be inspected.

Treeworks: At the time of writing this report, no pruning works are required.

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

Site clearance of a light nature
Main construction phase
Removal of all non-essential equipment
Landscaping hard and soft (if required)
Completion

Contacts

Architect and Agent:

Name:

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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)
T1	Pear <i>Pyrus communis</i>	6	58	2	2	3	Early Mature	Previously reduced.	C	6.9
				2	2					
T2	Pear <i>Pyrus communis</i>	6	54	2	2	3	Early Mature	Previously reduced.	C	6.4
				2	2					
T3	Thuja <i>Thuja occidentalis</i>	14	59	4	4	1	Early Mature	Lean to the West. Self corrected.	C	7.0
				4	4					
T4	Oak <i>Quercus robur</i>	16	72	7	7	3	Early Mature	Lean to the South. Reasonable tree.	B	8.6
				7	7					
G5	Mixed group	4	20	1	1	<1	Early Mature	Low quality group. Ivy clad.	C	2.4
				1	1					
T6	Cherry <i>Prunus avium</i>	4	32	2	2	1	Early Mature	Lean to the East. Previously reduced.	C	3.8
				2	2					

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

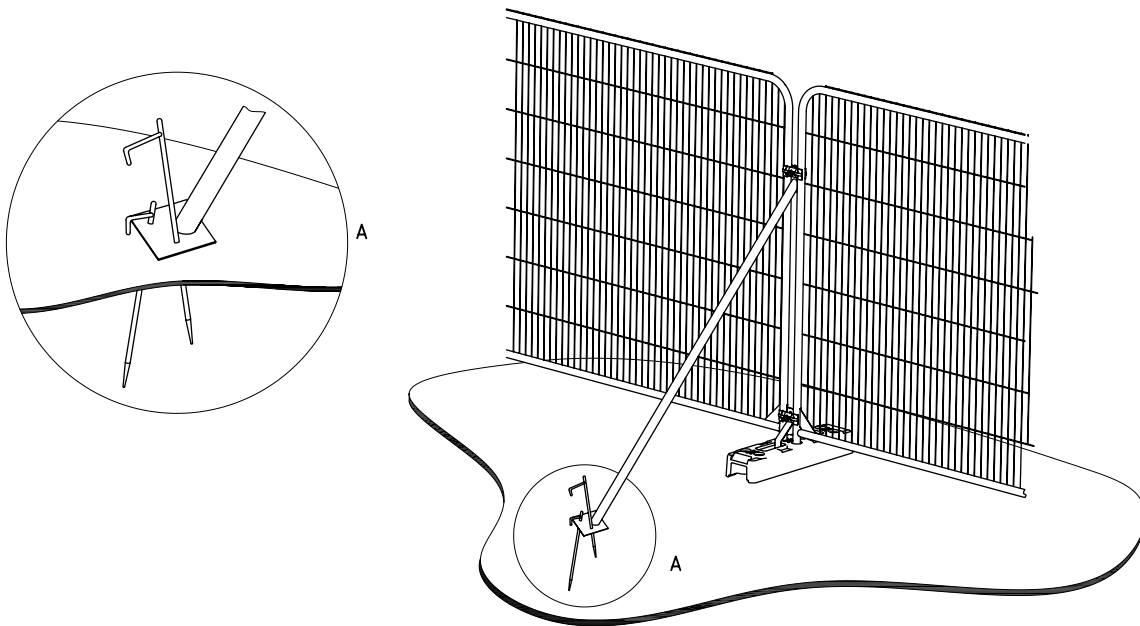
C – Trees of low quality

APPENDIX 2 – Protective fencing

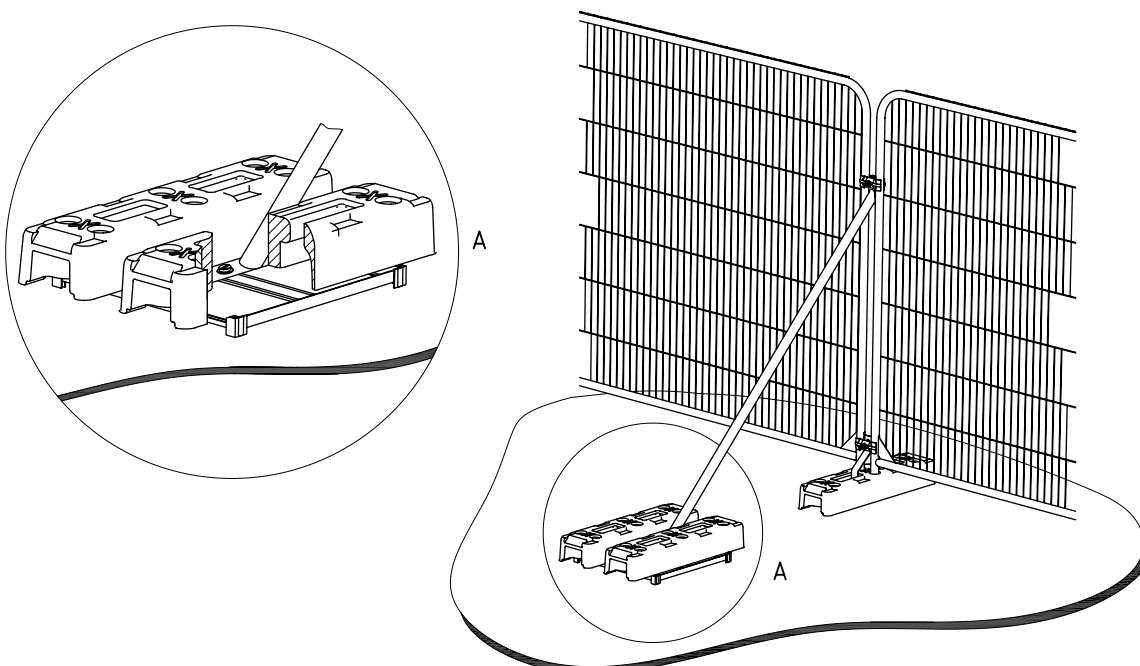
Protective fencing should be erected before any construction commences on site. It should also be in position to protect important trees prior to demolition.

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.



a) Stabilizer strut with base plate secured with ground pins

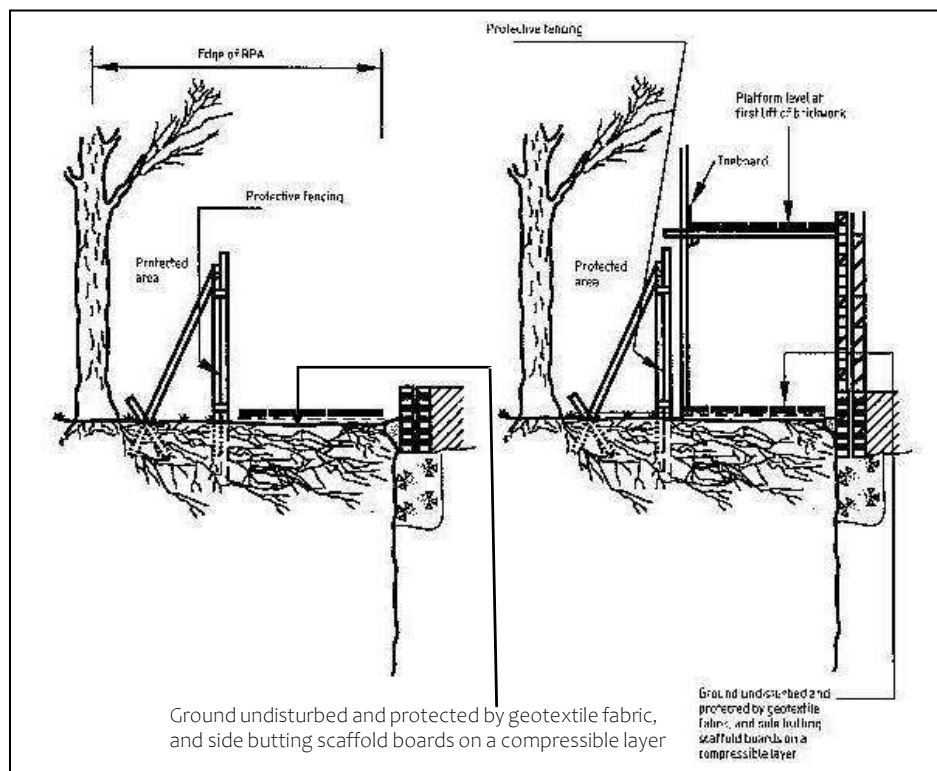


b) Stabilizer strut mounted on block tray

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.

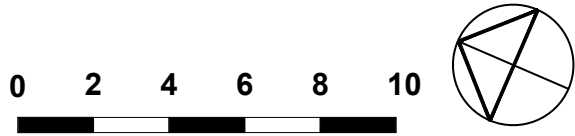
Where scaffolding is proposed above the area requiring protection the footway can be suspended above ground level using the upright scaffold poles onto which horizontal supports can be attached and then boards used to form the footway surface. A geotextile mat should be laid on the ground beneath to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



APPENDIX3 – Tree Protection Plan

Special surfacing:
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.

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.



Ground protection:
Temporary ground boarding 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.

RPA for Cat A* tree

RPA for Cat B* tree

RPA for Cat C* tree

RPA for Cat U* tree

Tree Canopy

Heras Fencing

Ground Protection

Material Storage

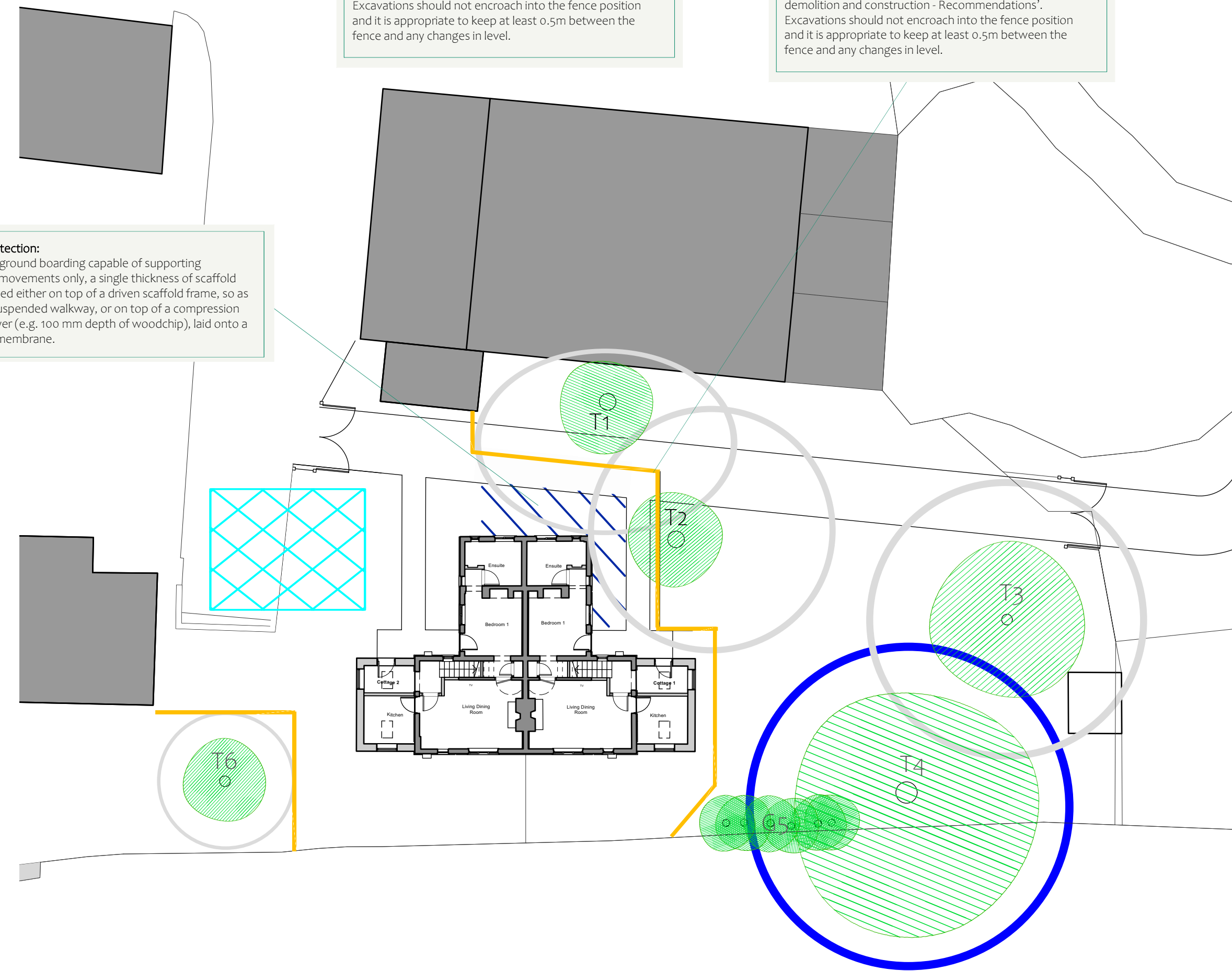
All Arboriculture
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Client: Daniel Goss-Custard
Consultant: Kristian Chesterman

Site: Cottages, Stanlake Park
Twyford, RG10 0BN
Title: Tree Protection Plan

Scale at A3:	Date:	Document Ref.
1:100	19/09/2024	AATPPCOTT



Cellweb® TRP

Tree Root Protection

Cellweb® TRP is a 3D cellular confinement tree root protection system. The system provides a 'no dig' solution for the construction of new hard surfaces within root protection areas (RPAs). Cellweb® TRP has been designed and independently tested to comply with recommendations made in Arboricultural Practice Note 12 and BS 5837 2012 – Trees in relation to design, demolition and construction.



Cellweb® TRP Key Functions

Cellweb® is a 'no dig' solution which is constructed directly on the existing ground surface. This eliminates the requirement for excavation, preventing root severance.

Cellweb® is a completely porous system allowing continued water permeation and gas exchange between the rooting environment and atmosphere.

Cellweb® spreads point loads, minimising increases in soil compaction within the rooting environment. This maintains an open graded soil structure allowing continued root growth, water, gas and nutrient migration.

The Cellweb® TRP system comprises the following three components

Treetex™ Geotextile. Following minimal ground preparation the Treetex™ is laid onto the existing ground and top soil. This acts as a separation layer, separating the system above from the soil and rooting environment below. Treetex™ performs as a hydrocarbon pollution control measure in accordance with BS5837, holding 1.7lt of oil per square meter.

Cellweb® 3D Cellular Confinement. The Cellweb® is installed on top of the Treetex™ layer. This is fixed to the ground using ten steel J pins per panel. The panels can be cut to the required shape and adjoining panels can be connected using heavy duty staples or cell ties.

4-20mm Clean Angular Stone. The expanded Cellweb® is infilled with a 4-20mm clean angular stone. The confined angular stone locks together to produce a rigid stone mattress, while maintaining air pockets for continued water permeation and gas exchange. The low fines content of the stone prevents the Treetex™ layer from becoming blocked over time.

Which depth of Cellweb® TRP?

The Cellweb® System is provided in four different depths; 200mm, 150mm, 100mm and 75mm. The depth required is determined by the proposed traffic loadings and the site ground conditions. Geosynthetics in house engineering department can provide a free site specific technical recommendation. For free technical and engineering support please contact Geosynthetics Ltd 01455 617139 or the full installation guide can be found on our website www.geosyn.co.uk.

Indicative Cellweb with overfill

