ARBORICULTURAL IMPACT ASSESSMENT AND BS5837 SURVEY OF 1 & 2 EAST LODGE, LUDGROVE, RG40 3AD

Carried out by Matthew Rowden for Alex Folefac, Applicant

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3. INSTRUCTION

To assess trees on the site for any potential impact that the proposed development may have on them, and the constraints that the trees may pose on the proposals. This is in accordance with current guidance BS5837:2012, and to implement control measures and/or design alterations to the proposals where necessary.

4. LIMITATIONS

This survey is valid for 1 year, dependent on changing site conditions. I must be kept in direct supervision of the site at all times in regards to all arboricultural matters in order for the findings in this report to remain valid.

5. SITE DETAILS

The site is a residential plot in Ludgrove, just outside Wokingham. It has one main structure on the site (two lodges combined into one), with the driveway access currently running from the south west aspect of the main structure. The site is densely wooded.

The BGS lists the soil conditions for the site as “London Clay Formation-Clay, silt and sand. These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained slurries

of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds."

With that in mind, there are some below ground constraints posed by the trees to the structure in terms of subsidence risk.

6. LEGAL RESTRICTIONS

All trees are covered by a blanket TPO, ref: 1434/2012.

7. PROPOSALS

The proposal is to extend the driveway to the north aspect and erect a car port that is 6200mm x 12400mm. The apex of the roof will be 4.2m high, and it is to be a timber framed building with a clay tile roof. The top dressing of the extended drive way is to be block pavias.

8. DRAWINGS AND DOCUMENTS

The client has provided detailed drawings and documents for the purposes of this assessment. For ease of identification, the trees relevant to this report have been numbered as T1- T7 and grouped where applicable.

9. SUMMARY

The trees present some constraints to the proposals, but providing the driveway is extended using a geo cellular membrane, and the footings for the car port are on ground screws, the impacts to the trees on the site can be minimised. Just one tree requires pruning, with no trees recommended for removal.

10. FINDINGS (PLEASE SEE APPENDICES 2 & 3 FOR SPECIFIC DETAILS)

A. Identification of the constraints posed by the trees to developing the site under the current proposal.

Trees 1, 2, 4, 6 and 7

i. The root protection area of these trees overlaps a small area of the proposed driveway extension and the structure location, and places light constraints on the site access.

Trees 2, 5, 6, and 7

ii. These trees will drop leaves/ needles/ detritus in the gutters of the new structure, and will shade it. These shading constraints are light and unlikely to place the trees under further pressure to be pruned.

Tree 2

iii. The canopy currently will need pruning to allow the car port to fit into the location.

B. Potential impacts of the proposal on the trees

All trees:

i. The rooting area of these trees is in the top 600mm of soil and very susceptible to compaction from vehicular movements. This can result in root death, loss of oxygen in the soil, reduced moisture percolation and diminished nutrient uptake, leading to stress and eventual strain.
ii. Conventional trenched footings for the carport, combined with conventional dig for the driveway has the potential to cause moderate root damage to all the surveyed trees.

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iii. The pruning to the tree can allow ingress of opportunistic pathogens, reduced photosynthetic coverage, loss of transpiration pull and disruptions to hormone pathways.
iv. In this instance, the necessary pruning is not severe, and easily falls within the phenological guidance of BS3998:2010.

C. Potential impacts of trees on the current proposals

All Trees

i. Tree protective fencing must be erected as shown on the TPP to prevent any tools, materials, fuel or other contaminants from being stored within the construction exclusion zone.
ii. The driveway construction must be "no-dig". The best solution would be a 100mm layer of Cellweb® that can then be built up and overlaid with block pavias.
iii. The footings for the car port must be one ground screws: besides the superior ground holding capabilities of these footings on London clay, the impacts to the rooting area of the trees may then be minimised.

11. CONCLUSION

The constraints presented by the trees on the site are of moderate significance, with the design alterations of ground screws for the footings and Cellweb® on the driveway to make the build possible. Just tree 2 requires pruning.
The issues for the arboricultural method statement to address are:

i. Tree protective fencing, erection and signage.
ii. Cellweb® roll out.
iii. Ground screw installation.
iv. Supervision and final sign off.

12. RECOMMENDATIONS:

Follow the AMS (appendix 3 below). Do not deviate and seek arboricultural advice whenever necessary.

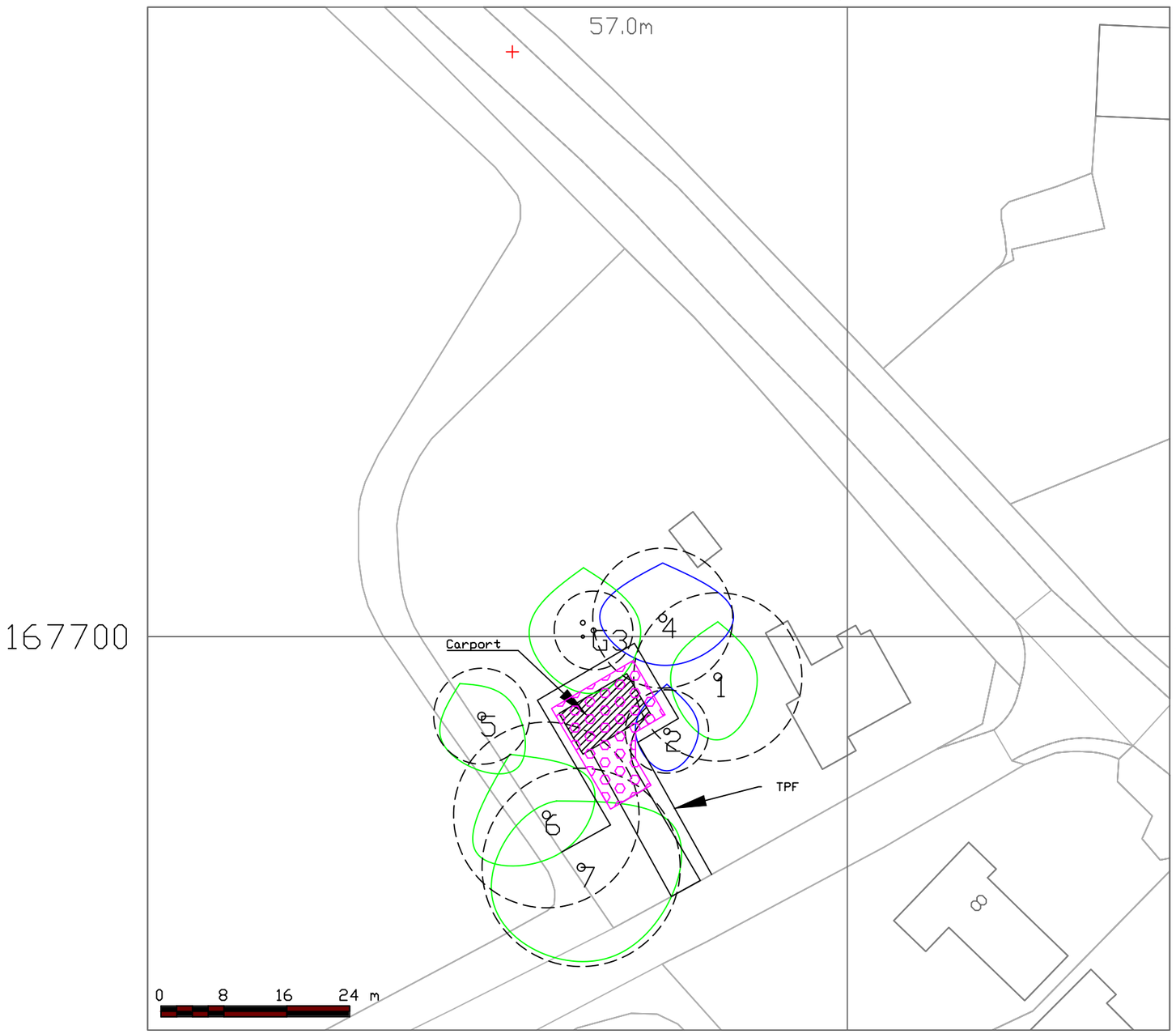
i. Erect tree protective fencing as per TPP.
ii. Commence and fully complete build.

Matthew Rowden *BTEC L3 NatDipArb, ABC L6 ProfDipArb*

13. REFERENCES

a. BS5837:2012 - Trees in relation to design, demolition and construction
b. TDAG 2014
c. Cutler & Richardson 1981, Kew root survey.

Appendix 1 - Tree protection plan (in DWG and PDF format)
Appendix 2 - Tree survey schedule
Appendix 3 - Arboricultural method statement.



General Notes

Key

Cat. A Trees	
Cat. B Trees	
Cat. C Trees	
Cat. U Trees	
RPA	
TPF	
Ground Protection	

No.	Revision/Issue	Date

Firm Name and Address

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Project Name and Address
1 & 2 East lodge,
Ludgrove. RG40
3AD

Project	Sheet
RTC/AF/1&2ELL/BS5837/V1	A3 Tree Protection plan Appendix 1
Date: 30/01/2026	
Scale: 1:200 @ A3	

TREE NO. ON PLAN	SPECIES	HT (M)	CROWN SPREAD (M) N E S W	STEM DIA. @1.25M (MM) RPA CIRCLE RADIUS (M) RPA (M2)	LIFE STAGE	ESTIMATED REMAINING CONTRIBUTION IN YEARS	GENERAL OBSERVATIONS PHYSIOLOGICAL CONDITION- P STRUCTURAL CONDITION - S	PRELIMINARY MANAGEMENT RECOMMENDATIONS	CATEGORY OF RETENTION AND SUB CATEGORY
1	*Thuja plicata*	23	7 5 8 6	890 10.7 358	M	>40	P- Good S- Good RPA overlaps proposals.	Erect TPF as per TPP. Car port to be erected on ground screws for the footings, with 100mm Cellweb® to make up the internal hard surfacing.	A1
2	*Taxus baccata*	8	6 4 5 4	440 5.3 88	M	>40	P- Good S- Fair RPA overlaps proposals. Canopy overlaps proposals	Erect TPF as per TPP. Crown lift N aspect to 4m and reduce by 2m. Car port to be erected on ground screws for the footings, with 100mm Cellweb® to make up the internal hard surfacing.	B1

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TREE NO. ON PLAN	SPECIES	HT (M)	CROWN SPREAD (M) N E S W	STEM DIA. @1.25M (MM) RPA CIRCLE RADIUS (M) RPA (M2)	LIFE STAGE	ESTIMATED REMAINING CONTRIBUTION IN YEARS	GENERAL OBSERVATIONS PHYSIOLOGICAL CONDITION- P STRUCTURAL CONDITION - S	PRELIMINARY MANAGEMENT RECOMMENDATIONS	CATEGORY OF RETENTION AND SUB CATEGORY
G3	*Quercus robur*	18	7 6 8 7	420 5 80	M	>40	P- Good S- Good Canopy overlaps proposals of low sig.	Erect TPF as per TPP.	A2
4	*Salix caprea*	17	7 9 6 8	740 8.9 248	M	>40	P- Good S- Fair RPA overlaps proposals of low significance.	Erect TPF as per TPP. Car port to be erected on ground screws for the footings, with 100mm Cellweb® to make up the internal hard surfacing.	B2
5	*Pinus sylvestris*	19	5 4 8 6	510 6.1 118	M	>40	P- Good S- Good	Erect TPF as per TPP.	A2

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TREE NO. ON PLAN	SPECIES	HT (M)	CROWN SPREAD (M) N E S W	STEM DIA. @1.25M (MM) RPA CIRCLE RADIUS (M) RPA (M2)	LIFE STAGE	ESTIMATED REMAINING CONTRIBUTION IN YEARS	GENERAL OBSERVATIONS PHYSIOLOGICAL CONDITION- P STRUCTURAL CONDITION - S	PRELIMINARY MANAGEMENT RECOMMENDATIONS	CATEGORY OF RETENTION AND SUB CATEGORY
6	*Quercus robur*	20	9 7 5 10	980 11.8 434	M	>40	P- Good S- Good RPA overlaps proposals.	Erect TPF as per TPP. Car port to be erected on ground screws for the footings, with 100mm Cellweb® to make up the internal hard surfacing.	A2
7	*Quercus robur*	22	9 13 12 12	1050 12.6 499	M	>40	P- Good S- Good RPA overlaps proposed extended driveway access.	Install log roll to height of 2m to protect stem from construction traffic Driveway access to be on 100mm Cellweb®.	A2

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SURVEY SCHEDULE KEY

1. Tree ID: Refers to numbers as shown in the tree protection plan.

2. Species: common name and scientific name

3. Height (measured in meters)

4. Crown spread (measured in meters at the points of North, South, East and West). Where "#" is used as a suffix, the measurements are approximate.

5. Stem diameter measured at 1.5m height in mm. Root protection area (RPA) radius is shown in meters, and RPA in square meters is displayed at the bottom.

6. Life stage: Young (Y) (small trees at a very early stage of their growth), young mature (YM)(larger trees at an early life stage with the potential to still grow considerably larger), Mature (MA)(trees which have reached their maximum size and are self sustaining at the point), Over mature (OM)(trees that are beginning to decline and starting to die back from the tips), Veteran (V)(trees that are rapidly in decline and steadily losing canopy spread), Dead (D)

7. Estimated remaining contribution in years: Until such a time as any residual amenity is lost.

8. General observations - a visual assessment of the physiological and structural condition of the tree, classed as :Poor, fair, good, dead, decline. Physiologically refers to the vitality and vigour of the tree; Structural refers to the presence of physical defects within the tree's structural makeup. For example, a multi stemmed tree from a lapsed pollard with multiple defects in those unions, but with good vitality and good leaf cover would be classed as physiologically good, but structurally poor.

9. Preliminary management recommendations - recommendations to maintain the tree as part of the proposals, or assessing whether its retention is viable, whether it be the suggestion of aerial inspections, remedial pruning, or detailed decay inspections.

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10. Categories and sub-categories of retention: See figure 1 below.

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

Fig.1

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APPENDIX 3

ARBORICULTURAL METHOD STATEMENT FOR 1 & 2 EAST LODGE, LUDGROVE, RG40 3AD

Carried out by Matthew Rowden for Alex Folefac, Applicant

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1. RESPONSIBILITIES

It is the responsibility of the site manager to respect the tree protection measures and observe the necessary precautions within and adjacent to them. All personnel must be inducted by the site manager and the tree protection measures explained and enacted to the letter of this method statement.

As the arboriculturist appointed for this site, I must be present onsite prior to work commencing to ensure that my protection measures have been followed. I must attend site whenever there are arboriculturally sensitive activities occurring, and must send regular supervision reports to Wokingham Borough council with site meetings arranged if the planning officer or handling team so wish.

In this instance, I believe that I will need to visit site to check the installation of the tree protective fencing, driveway rollout, ground screw installation and then final sign-off once the build is complete.

2. COSHH

a. A cement mixing area will be sited away from the construction exclusion zone (CEZ) and, if necessary, a protective bund installed to prevent contaminated washings or rainwater draining into the CEZ.
b. These will be positioned on the existing hard surfacing to the south aspect on the driveway.

3. CONTRACTOR PARKING AND SITE OFFICE

a. Contractor parking will be on the existing driveway. No revisions to the highway for construction traffic will be necessary at this time.
b. No site office necessary.

4. RESTRICTIONS WITHIN CONSTRUCTION EXCLUSION ZONE

Inside the exclusion area of the CEZ, the following shall apply:

a. No excavation by any means without arboricultural site supervision.
b. No hand digging without a written method statement having first been approved by the developer's arboriculturist.
c. No storage of plant or materials.
d. No storage or handling of any chemicals.
e. No vehicular access.
f. No development activity.

5. TREE PROTECTION FENCING

a. Barriers must be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers must be maintained to ensure that they remain rigid and complete.
b. Given the site circumstances, 2 m tall welded mesh panels on rubber or concrete feet will provide an adequate level of protection from pedestrians and manually operated plant.
c. The fence panels must be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers must be at least 1 m and must be uniform throughout the fence.
d. The panels must be supported on the inner side by stabiliser struts, which should normally be attached to a base plate secured with ground pins (see figure below).

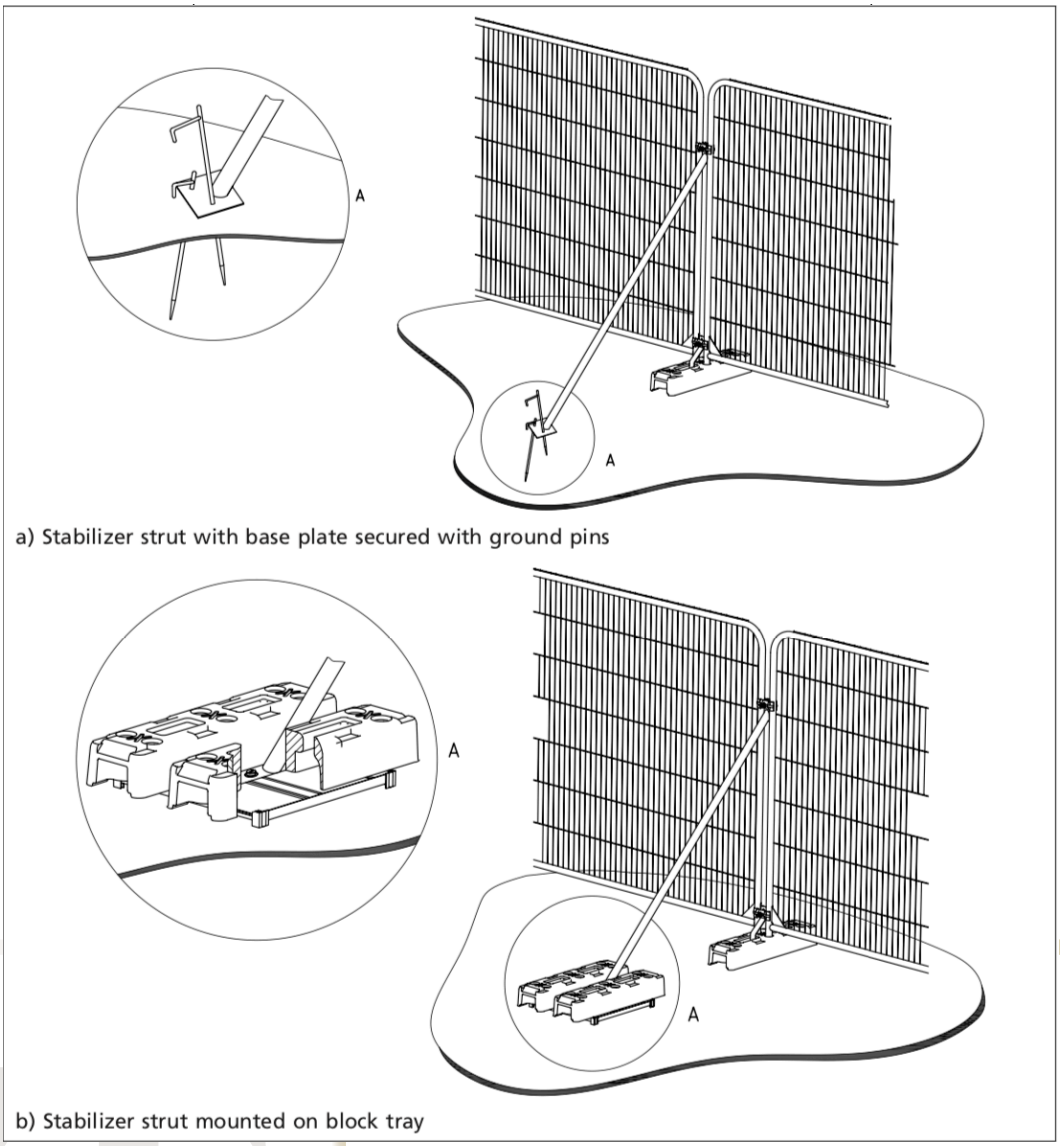

Figure 1: Fencing secured with rubber feet

6. GROUND PROTECTION INSTALLATION

a. Tree roots are very shallow, the majority occupying the top 600mm deep layer of soil. With this in mind, the access cannot be laid in the traditional fashion of excavating to >500mm and compacting hardcore prior to applying the top surface. Instead, the following control measures must be implemented to ensure the trees are not constrained by the proposal and extensive root damage doesn't occur:
b. The proposed area of excavation is for industrial machinery (up to a 3.5 ton excavator [a 100mm layer of cell web will only permit loading of 3.5 tons which may constrain the build]).
c. This is a "no dig" solution, so there is no need to remove any top soil. Scrape off the top layer of turf and debris using hand tools.
d. Install Treetex geotextile membrane up to the boundaries of the proposed access route and to act as a pollution barrier and a separation layer.
e. Install a 60mm layer of clean angular stone (type 4/20mm) as a sub base, to level the area where possible. Often sand is used to level out hollows.

f. Install 100mm layer of Cellweb® TRP up to the edges of the proposed extension area and working area, banking up the sides of the separation membrane with angular stone. Infill the TRP with clean angular stone, size 4/20mm. Commence roll out within the RPA as a no dig solution, as ground level can be adjusted more flexibly outside of the RPA.
g. Overfill by 25mm with clean angular stone, size 4/20mm, then apply top dressing of block paving.

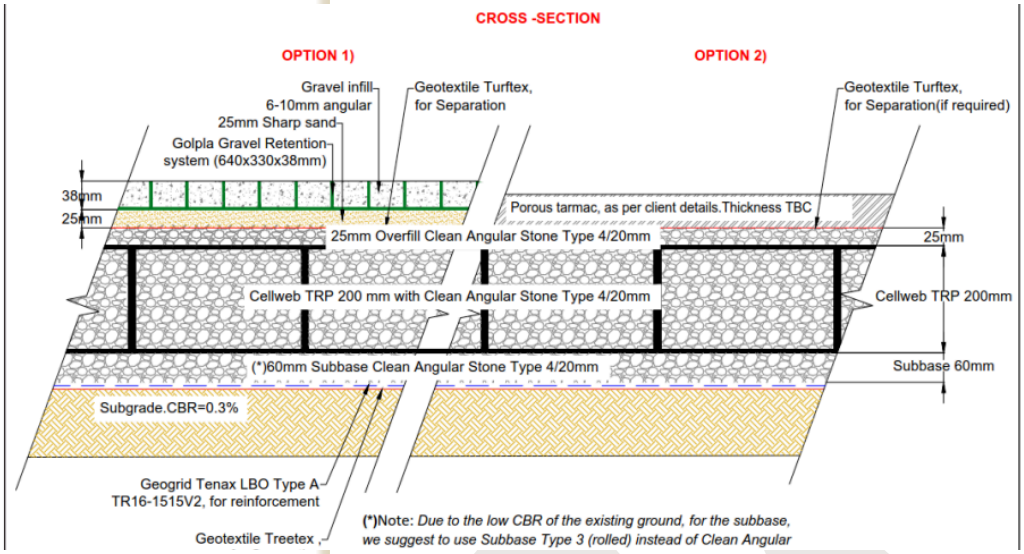

Fig.1

7. FOUNDATIONS:

These are normally constructed by excavating up to a 3m deep trench with infill of ballast, sharp sand and concrete. Due to the aforementioned rooting area of the trees in the top 600mm of soil, this is not permissible, so alternatives may be used instead using this method statement:

Ground screw foundations

a. The ground protection must be rolled out as per the TPP.
b. Within this protected area, highlight the areas where the piles need to go, referring to the architects plans, and remove the ground protection in these areas, retaining it as a work area surrounding the future pile holes.
c. The ground screws are to be installed with an excavator mounted auger, drilling a 40mm pilot hole to a depth of up to 2m.
d. The screws must then be wound in using the excavator, to create a hole of 100mm diameter. These must be piled until adequate ground holding capability has been reached.
e. Refer to guidance from the appointed structural engineer for exact figures, but when the necessary torque to drive the screws has reached 4000Nm, that is often sufficient to avoid tree related subsidence/heave.
f. The 200mm flange at the top of the screws may then be attached to a U bolt to allow the remainder of the steel frame to be reacted on top of the screws as a floating raft. From here, the timber frame may then be built up.
f. Bore the holes using an auger, ensuring that the plant used does not exceed the load limit of the ground protection (3.5 tonnes).
g. Remove the subsequent spoil.
h. Install ground screws, raising the property level so that the top of the piles is higher than the original ground level, and leaves an air gap of >200mm.

i. Install beams across the top of the screws, at which point the construction of the super-structure may continue.
j. Raise the ground level on the exterior of the super structure with 200mm of sharp angular stone, size 4/20mm.

7. SEQUENCE OF EVENTS

a. Erect tree protective fencing as per TPP.
b. Site visit by appointed arboriculturist (me). Supervision statement submitted by me to Wokingham borough council.
c. Rollout ground protection.
d. Ground screw installation: This must be done with arboricultural supervision.
e. Commence and fully complete build.
f. Site visit by appointed arboriculturist.
g. Final sign off.