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TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT IN RELATION TO PROPOSED DEVELOPMENT AT 50 THE VINEYARD, RICHMOND, SURREY, TW10 6AT.

October 2021.

Clive Fowler, Dip.Arb (RFS), F.Arbor.A, Tech. Cert.Arbor.A

Tree Survey and Arboricultural Impact Assessment in Relation to Proposed Development at 50 The Vineyard, Richmond, Surrey, TW10 6AT.

1. I am instructed by Mr & Mrs S. Craddock to undertake an inspection of trees at the above site in connection with the proposed extension and alteration of the existing dwelling. I carried out my inspection on the 29th September 2021 and this report summarises my findings.

2. Before any works to trees specified within this report are undertaken it would be necessary to write to the Local Authority as trees at and adjacent to this site are the subject of protective legislation.

3. I have been supplied with a copy of the Existing Site Plan and enclose an annotated copy of this drawing as appendix 'b' to this report which indicates the position of the trees with their respective identification numbers (Tree Location Plan).

4. Details of individual trees are given in the attached schedule (appendix 'a'). Species are shown by their common names. All measurements are approximate and stem diameters are measured at 1.5 metres from ground level unless stated. All inspections were carried out from ground level only and no specialist decay detection equipment was used to assess internal wood quality. In some cases it was not possible to fully inspect the trees due to them being situated in neighbouring land.

5. The information contained within the schedule has been collected in accordance with recommendations given in BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'. I have also categorised each tree in accordance with the above Standard and they are colour coded on the enclosed drawing (appendix 'b') to aid their recognition.

   The following categories apply;

   A - Trees of high quality. (Green)

   B - Trees of moderate quality. (Blue)

   C - Trees of low quality. (Grey)

   U - Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years. (Red)

6. In addition to the above, each tree is assigned a subcategory (1 – 3) which are detailed in the table attached at appendix 'e'. It is intended that each subcategory carries equal weight – for example an A 1 category tree would have the same retention priority as an A 2 tree.

7. The specification for pruning works are as per recommendations given in BS 3998 'Tree Work - Recommendations'.

General.

8. To the front of the property the only trees present are a small yucca with a leaning stem and a number of pruning stubs (T.13) and a well established chusan palm (T.14) that grow in raised planters adjacent to the lightwell and steps leading to the existing basement level. To the south west of the existing building and in neighbouring land are a low quality cherry tree that has been heavily cut back in the past and which is of poor form (T.1) and a twin stemmed holly that is situated close to the boundary wall and has previously been contained in size (T.2). Further along the garden and in neighbouring land to the west are an unbalanced domestic apple tree (T.4) with a crown incline towards the south and, to its north, is a larger mature pear tree that has clearly visible decay in its main crown framework (T.5).

9. Within the garden of the subject property itself and towards the north western corner of the rear garden are a small and suppressed pear tree with congested stem unions (T.6) and an apple tree that has two main stems and is exhibiting good vigour following previous pruning works (T.7). A much larger robinia 'Frisia' is located towards the northern boundary (T.8) and has a number of defects common with this cultivar (see appendix 'a') but is of a good appearance. A further tree of this cultivar grows in the north eastern corner of the garden (T.9) and is of much lower quality due to being planted beneath the canopy of a large mature ash in neighbouring land (T.10) and is consequently of poor form and surplus to requirements.

10. Also in the north eastern part of the rear garden is a contorted willow (T.11) which, although of a good appearance, has a large amount of dead wood in its middle crown and areas of associated bark dieback. Its condition should be monitored following the removal of dead wood. A well established gleditsia (T.12) grows close to the previous tree and unfortunately has very limited live growth remaining and is consequently recommended for removal.

Proposed Development/Methodology.

11. These proposals relate to the extension and alterations to the existing building and are identical to the previously Approved Planning Application No. 18/2585/HOT. I understand that the Council's Tree Preservation Officer was consulted at the time of the previous Application (as detailed in the Officers Report) and does not appear to have raised any objections at that time.

12. I have assessed the proposed site layout whilst having regard to tree protection measures recommended in BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations' and taking into account the

Root Protection Areas (RPA's) shown in appendix 'c'. Where necessary in relation to trees T.1 – 3, these RPA's have been 'offset' as detailed in Section 4.6.2 – 4.6.3 of BS5837: 2012 to take into account impediment to root growth to their east. I have also prepared a Tree Protection Plan which is enclosed as appendix 'f' to this report.

13. No trees are proposed for removal as a direct result of this development and the only recorded plant recommended for removal in appendix 'a' & 'c' is the young gleditsia (T.12) to the rear of the property that is in poor condition.

14. To the front of the site, the small yucca and chusan palm tree (T.13 & 14) will be unaffected by the proposals and will be protected by the retention of the existing surrounding structures (including railings).

15. The proposed works are located to the south west of the existing building and the only trees located adjacent to such area are a low quality cherry (T.1), a twin stemmed holly of limited Arboricultural merit (T.2), and a small and distorted single stemmed smoke bush (T.3) which is of no public amenity value (all of which grow in neighbouring land). When taking into account the potential impact of the proposals upon such trees I have considered Sections 4.6.2 & 4.6.3 of BS5837:2012 which states the following;

4.6.2 'Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution'.

4.6.3 'Any deviation from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system'

a)The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus).

16. In this case the existing building and substantial boundary wall will have clearly restricted the growth of the root systems of the adjacent trees in the direction of the proposals and it is therefore justified to conclude that the proposed alterations to the foundations (which may include underpinning) will not have a significant impact upon their health or stability. In this case the RPA's have been 'offset' into the garden area of the neighbouring property to take into account this situation. It is anticipated that any scaffolding arrangement in order to construct the extension will consist of a 'flying scaffold' requiring no or very limited access into the neighbouring property. Should any such access be required, ground protection in accordance with Section 6.2.3 of BS5837: 2012 will be combined with temporary fencing as detailed in figure 3 of the same Standard and will protect any areas of potential disturbance (see appendix 'c', 'd' & 'f').

17. All demolition works will be undertaken from within the subject property only and in full accordance with Section 7.3 of the above Standard.

18. Further to the rear of the property the proposed garden store will be constructed within an area already covered with hard surfacing and behind the substantial brick boundary wall which is to be retained. There will therefore be no Arboricultural implications in relation to this structure.

19. Further to the north of the rear garden, all other trees are located clear of the proposed works or working / storage areas and they will be excluded from the development area by the erection of sturdy temporary fencing as detailed in appendix 'c', 'd' & 'f',

20. Any proposed new services etc. must be carefully considered at an early stage so as to ensure that excavation within Root Protection Areas is avoided or kept to an absolute minimum. Where such works are unavoidable (and following consultation with an Arboriculturalist) any excavations in such areas must be carried out in strict accordance with Section 7.2 and 7.7 of BS5837: 2012 and in the presence of the Project Arboriculturalist.

21. All tree protection will be installed prior to any other site preparation works and must be maintained throughout the development process. Areas have also been designated for the delivery and storage of materials and site huts, avoiding RPA's and ensuring that damage to the existing garden areas is kept to a minimum.

Conclusions.

22. This previously Approved development has been carefully designed so as to take into account all trees of significance and providing the above guidelines in relation to BS 5837: 2012 are followed and tree protection is installed prior to any development activity and maintained throughout the construction period, trees to be retained should be safely integrated within the proposals.

23. Prior to commencement of any works detailed in appendix 'a', it will be necessary to write to the Local Authority as trees at this site are the subject of protective legislation. Every effort should also be made to ensure that the protection afforded by the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000 in relation to nesting birds and disturbing or damaging bat roosts is fully complied with.

24. Any tree works which are undertaken should preferably be carried out by an Arboricultural Association Approved Contractor. Such works must be carried out to a minimum standard of BS3998 and in accordance with good Arboricultural practice.

C. Fowler.

C.E. Fowler Dip. Arb (RFS), F. Arbor.A, Tech. Cert. (Arbor.A).

Appendix ‘a’
Tree details

Clive Fowler Associates: Tree Survey at 50 The Vineyard, Richmond, Surrey, TW10 6AT.

No.	Species	Diameter @ 1.5 m (cm)	Age Class	Crown radius (m)	Height to 1st branch (m)	Crown height (m)	Height (m)	Condition / vitality	Estimated remaining contribution (years)	Category	Works	Notes.
1	Cherry	27 (est.)	Middle aged	2.5 north 2 east 3.25 south 2.5 west	4 south	1.3	7	Fair	10>	C 2 (est.)	Secateur where necessary back to boundary line.	Low quality tree in neighbouring land which is severely suppressed to the north. Upper trunk incline towards the north. Evidence of previous heavy pruning / pollarding with a large stub at old reduction point to the north. High lifted in the past. Slightly yellowing foliage. Not fully inspected.
2	Holly	26 & 23 (est.)	Middle aged	3 north 2 east 2 south 2.75 west	3 east	3	6.75	Good	20>	C 2 (est.)	Cut back to boundary line where necessary using secateurs and loppers only (maximum cut diameter 2 cm).	Two main stems arise at around 0.4 metres. Grows close to boundary wall. Reduced in height in the past. Lower growth regularly cut back to the east to clear stairway. Pruning stubs and dead ivy noted. Not fully inspected.
3	Smoke bush	12 (est.)	Mature	1.75 north 0.75 east 1 south 1 west	2.2 south east (est.)	2 over site	4.5	Good	10>	C 2 (est.)	No action.	Purple leaved single stemmed shrub with an unbalanced crown with an incline towards the north. Poor form / appearance. Climbing plant high in crown. Not fully inspected.

Notes: Diameter at 1.5 metres refers to trunk diameter. Categories are as defined in BS 5837 (2012) - **A = High quality - B = Moderate quality - C = Low quality - U = Less than 10 years life expectancy - poor quality.** Crown height clearance / height to first branch = from ground level - Estimated remaining contribution = probable life expectancy as assessed at time of inspection. All measurements are approximate.

No.	Species	Diameter @ 1.5 m (cm)	Age Class	Crown radius (m)	Height to 1st branch (m)	Crown height (m)	Height (m)	Condition / vitality	Estimated remaining contribution (years)	Category	Works	Notes.
4	Apple	27 (est.)	Middle aged	2.25 north 3 east 3.75 south	1.8 east	3.5 over site	5.5	Good	20>	C 2 (est.)	No action - in neighbouring ownership.	Fruit tree which grows close to canopy of larger pear and is suppressed to the north as a result. Main crown framework is distorted towards the south. Unbalanced crown with an incline towards the south and evidence of previous reduction to the north. Not fully inspected.
5	Pear	38 (est.)	Mature	4 north 3.75 east 4.75 south 4.5 west	3 west (est.)	2.5	9	Fair	10>	C 2 (est.)	No action - in neighbouring ownership.	Old fruit tree forming its main crown framework at between 2.5 & 3.7 metres with a potentially weak stem union to the south. Old pruning wounds in lower crown with some evidence of decay. Heavily reduced or damaged in the distant past at around 4 metres with a large decaying framework stem in central part of crown. Scattered dead wood and stumps. Not fully inspected.

Notes: Diameter at 1.5 metres refers to trunk diameter. Categories are as defined in BS 5837 (2012) - **A = High quality - B = Moderate quality - C = Low quality - U = Less than 10 years life expectancy - poor quality.** Crown height clearance / height to first branch = from ground level - Estimated remaining contribution = probable life expectancy as assessed at time of inspection. All measurements are approximate.

No.	Species	Diameter @ 1.5 m (cm)	Age Class	Crown radius (m)	Height to 1st branch (m)	Crown height (m)	Height (m)	Condition / vitality	Estimated remaining contribution (years)	Category	Works	Notes.
6	Pear	15	Middle aged	2.25 north 2 east 1.75 south 1.5 west	1.2 south	3.5	5	Fair	10>	C 2	No action or remove dead wood and stumps.	Poor quality fruit tree with numerous branch stubs and a congested crown framework at around 3.5 metres. Limited crown development due to suppression. Some areas of dieback. Limited potential.
7	Apple	4 & 8	Middle aged	2.5 north 2 east 2.5 south 2.25 west	1.25 north east	1.6	4.75	Good	20>	C 2	No action.	Fruit tree with two main stems at 1.25 metres - with the larger sinuous stem growing towards the south west. Grows under canopy of larger trees and is partially suppressed as a result. Previously heavily reduced with vigorous regrowth.
8	Robinia Frisia	33	Middle aged	5 north 4 east 4.5 south 5.5 west	4.8 south	3	12	Good	20>	C 2	Remove dead wood.	Yellow foliaged cultivar with two main stems arising at around 3.7 metres with a potentially weak union. Sunken area on trunk to the east at 1.5 metres with dead bark as is common with this cultivar. Previously heavily reduced at around 6 metres. Partial suppression to the east. Scattered dead wood.

Notes: Diameter at 1.5 metres refers to trunk diameter. Categories are as defined in BS 5837 (2012) - **A = High quality - B = Moderate quality - C = Low quality - U = Less than 10 years life expectancy - poor quality.** Crown height clearance / height to first branch = from ground level - Estimated remaining contribution = probable life expectancy as assessed at time of inspection. All measurements are approximate.

No.	Species	Diameter @ 1.5 m (cm)	Age Class	Crown radius (m)	Height to 1st branch (m)	Crown height (m)	Height (m)	Condition / vitality	Estimated remaining contribution (years)	Category	Works	Notes.
9	Robinia Frisia	18	Middle aged	3.5 north 3 east 5 south 3 west	3.7 north east	2.9	8	Good	20>	C 2	No action.	Well established tree which is unfortunately planted beneath the canopy of a large ash and also suppressed by a willow to its south and is consequently of poor form. Previously reduced at around 4.75 metres. Dead wood, crossing branches and stubs scattered throughout middle crown area. Surplus to requirements.
10	Ash	90 (est.)	Mature	9 north 9 east 9 south 6 west	3.5 west	3	17	Fair	20>	B 2 (est.)	No action - in neighbouring ownership.	Large tree in neighbouring land with a well balanced crown. Main crown framework arises at around 4.75 metres with sucker growth below. Possibly pollarded at main crown break in the distant past where three main stems arise. Slightly sparse upper crown should ideally be monitored for Ash Dieback. Not fully inspected.

Notes: Diameter at 1.5 metres refers to trunk diameter. Categories are as defined in BS 5837 (2012) - **A = High quality - B = Moderate quality - C = Low quality - U = Less than 10 years life expectancy - poor quality.** Crown height clearance / height to first branch = from ground level - Estimated remaining contribution = probable life expectancy as assessed at time of inspection. All measurements are approximate.

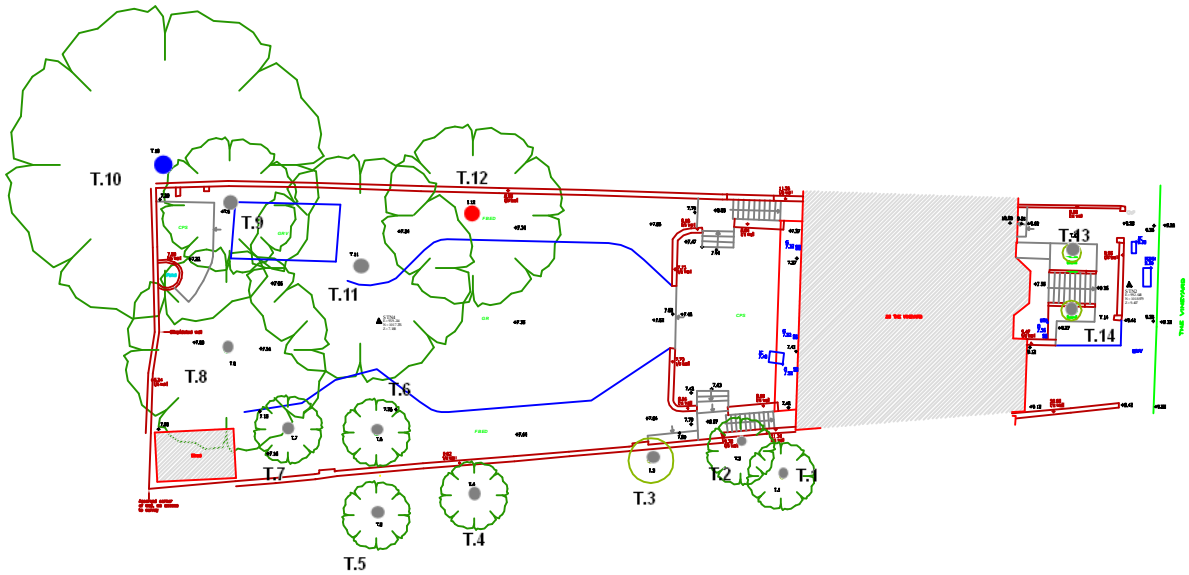
No.	Species	Diameter @ 1.5 m (cm)	Age Class	Crown radius (m)	Height to 1st branch (m)	Crown height (m)	Height (m)	Condition / vitality	Estimated remaining contribution (years)	Category	Works	Notes.
11	Contorted willow	26 & 32 at 1.3 m	Mature	3.75 north 4.5 east 4.75 south 4.75 west	1.35 south east	1.5	8.5	Fair	10>	C 2	Remove dead wood and stubs. Monitor condition.	Two main stems arise at around 0.85 metres. Partially suppressed to the north west. Large amount of medium and large diameter dead wood in middle crown - some with large areas of bark dieback in adjacent parent stems etc. Previously reduced with good regrowth. Sunken area on trunk to the north west below large pruning wound & associated dead bark. Monitor condition.
12	Gleditsia	21	Young	2.5 north 3.25 east 4.5 south 3.25 west	4 south west	2.7	8	Poor	<10	U	Remove.	Well established tree with two main stems arising at around 3.7 metres which is in a serious state of decline with very limited live growth remaining.
13	Yucca	18 at 0.8 m	Mature	1	1.3	1.3	2.5	Good	10>	C 1	No action.	Main crown framework arises at around 1.3 metres. Several stems removed to the east to clear path - leaving stubs. Area of decay to the south at 0.3 metres. Incline towards the north east. Sucker growth emerging.

Notes: Diameter at 1.5 metres refers to trunk diameter. Categories are as defined in BS 5837 (2012) - **A = High quality - B = Moderate quality - C = Low quality - U = Less than 10 years life expectancy - poor quality.** Crown height clearance / height to first branch = from ground level - Estimated remaining contribution = probable life expectancy as assessed at time of inspection. All measurements are approximate.

No.	Species	Diameter @ 1.5 m (cm)	Age Class	Crown radius (m)	Height to 1st branch (m)	Crown height (m)	Height (m)	Condition / vitality	Estimated remaining contribution (years)	Category	Works	Notes.
14	Chusan palm	30	Middle aged	1.75	1.9	1	3.5	Good	10>	C 1	No action.	Well established palm that grows within a raised bed / container.

Notes: Diameter at 1.5 metres refers to trunk diameter. Categories are as defined in BS 5837 (2012) - **A = High quality - B = Moderate quality - C = Low quality - U = Less than 10 years life expectancy - poor quality.** Crown height clearance / height to first branch = from ground level - Estimated remaining contribution = probable life expectancy as assessed at time of inspection. All measurements are approximate.

Appendix ‘b’
Tree Locations.



Tree Location Plan
Clive Fowler Associates.
September 2021.
Originally produced in colour.

A
B
C
U

Tree Categories.

NOTES

All dimensions are to be checked on site by the contractor before any work is commenced.
In the case of apparent discrepancy refer immediately to Twickenham Surveys.
The accuracy and completeness of this survey is dependent on the original survey brief including the scale intended.
The type and extent of information and the survey accuracy will have been matched to the client's original requirements.
Twickenham Surveys accepts no responsibility or liability to later users without prior consent.
Surveyed boundary features may not represent the extent of legal ownership.
The detail of this survey was established for a brief requiring a 1:100 plot. It is therefore suitable for plotting or planning/designing at scales of 1:100 or smaller.
The survey grid is not related to Ordnance Survey National Grid.
Level positions are indicated by a cross.
Levels relate to previous survey, carried out by others.
This survey did not include locating underground services and equipment.
Tree girths are representative only and reference should be made to the tree schedule if included in the survey brief.
Tree species (where shown) should be treated with caution and expert identification is advised.
Levels are taken on b/s kerb unless otherwise indicated.

TOPOGRAPHICAL SURVEY

50 THE VINEYARD
RICHMOND
TW10

Drawing No. : 1863LS
Scale : refer grid
Date : April 2018
Drawn by : JWHD
Checked by : SC

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Appendix ‘c’
Recommended Root Protection Areas

Clive Fowler Associates : Recommended Root Protection Areas (Radius) at 50 The Vineyard, Richmond, Surrey, TW10 6AT.

Tree No	Species	Recommended Distances for Root Protective Areas (Metres). (Offset RPA shown where appropriate).	Comments.
1	Cherry	3.25 (33m^2)	Root growth towards the property impeded by structures and difference in ground levels and 'offset' adjustment to RPA made as per. Section 4.6.2 - 4.6.3 of BS5837:2012. Should scaffolding be required at ground level within neighbouring property - protect with a combination of fencing and ground protection as detailed in Section 6.2.3 and figure 3 of BS5837: 2012.
2	Holly	4.25 (54m^2)	As previous.
3	Smoke bush	1.5	As previous.
4	Apple	3.25	Located away from development works.
5	Pear	4.75	As previous.
6	Pear	2	As previous.
7	Apple	1.25	As previous.
8	Robinia Frisia	4	As previous.
9	Robinia Frisia	2.25	As previous.
10	Ash	11	As previous.
11	Contorted willow	5	As previous.
12	Gleditsia	n/a	In a serious state of decline.
13	Yucca	2.25	Root system contained within raised bed / planter. Protected by existing structures.
14	Chusan palm	3.75	As previous.

Note 1. Root Protection Area Radii are shown in ¼ metre graduations. Note 2. It should be emphasised that the above relates to the distance from the centre of the tree to protective fencing.
Note 3. With appropriate precautions, temporary site works can occur within the protected area, e.g. for access for scaffolding (see BS 5837 - 2012).
Note 4. N/a = not applicable.

Appendix 'd'
Extracts from BS5837: 2012

Extracts from BS5837: 2012.

6.2 Barriers and ground protection

6.2.1 General

6.2.1.1 All trees that are being retained on site should be protected by barriers and/or ground protection (see **5.5**) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed (see **6.2.3**).

6.2.1.2 Areas of retained structural planting, or designated for new structural planting, should be similarly protected, based on the extent of the soft landscaping shown on the approved drawings.

6.2.1.3 The protected area should be regarded as sacrosanct, and, once installed, barriers and ground protection should not be removed or altered without prior recommendation by the project arboriculturist and, where necessary, approval from the local planning authority.

6.2.1.4 Where required, pre-development tree work may be undertaken before the installation of tree protection measures, with the agreement of the project arboriculturist or local planning authority if appropriate (see also **8.8.1**).

6.2.1.5 It should be confirmed by the project arboriculturist that the barriers and ground protection have been correctly set out on site, prior to the commencement of any other operations.

6.2.2 Barriers

6.2.2.1 Barriers should 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 should be maintained to ensure that they remain rigid and complete.

6.2.2.2 The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated in Figure 2. 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.

6.2.2.3 Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturist and, where relevant, agreed with the local planning authority. For example, 2 m tall welded mesh panels on rubber or concrete feet might provide an adequate level of protection from cars, vans, pedestrians and manually operated plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the

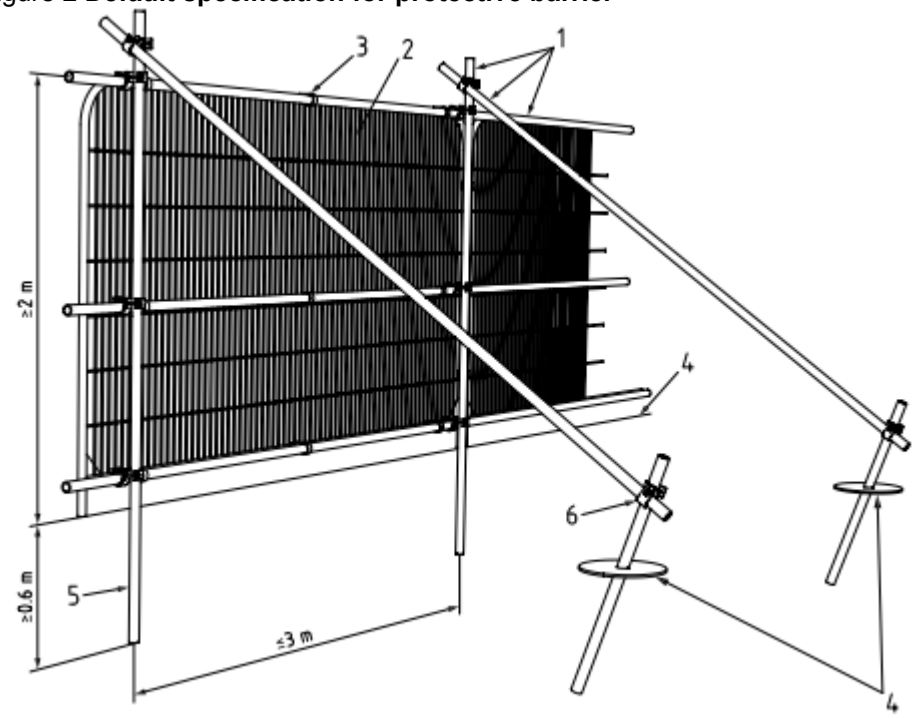
fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 3a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

NOTE 1 Examples of configurations for steel mesh perimeter fencing systems are given in BS 1722-18.

NOTE 2 It might be feasible on some sites to use temporary site office buildings as components of the tree protection barriers, provided these can be installed and removed without damaging the retained trees or their rooting environment.

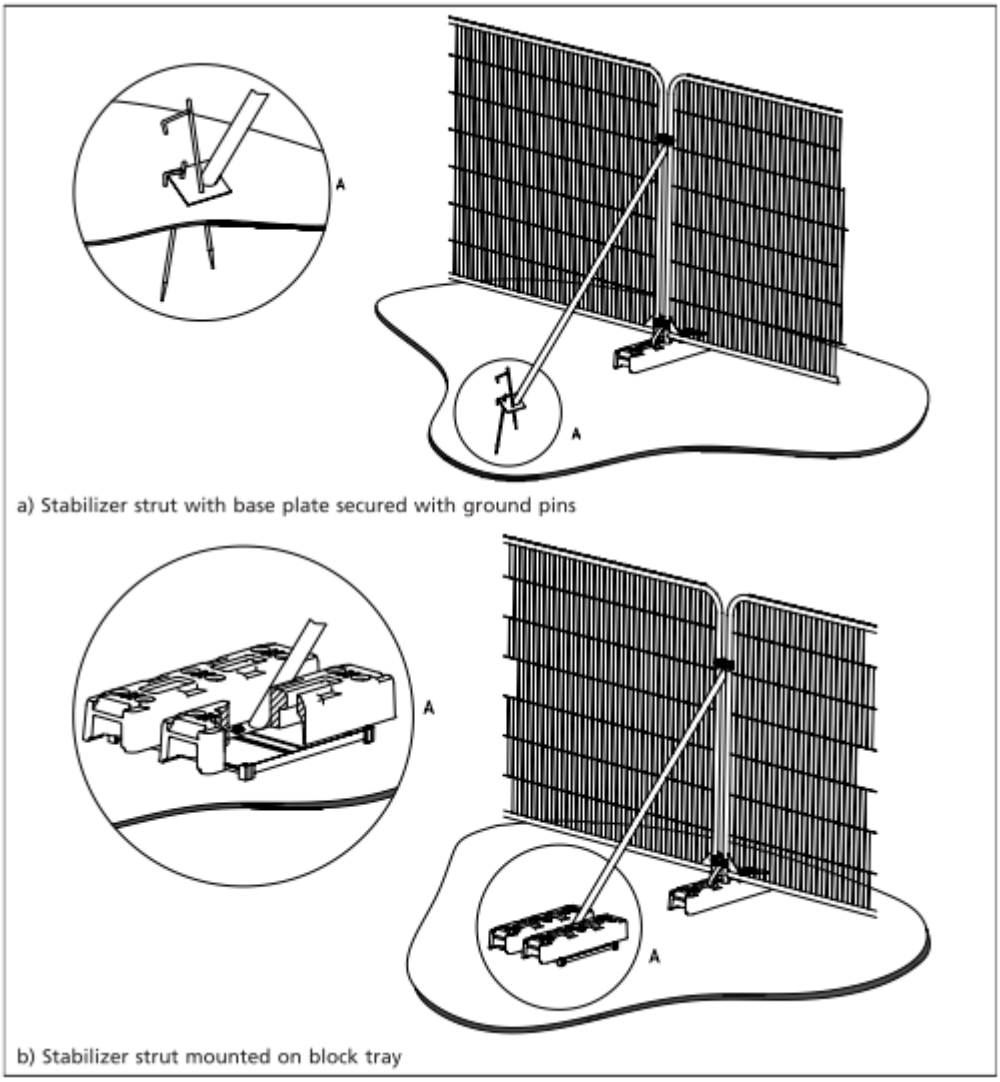
6.2.2.4 All-weather notices should be attached to the barrier with words such as: "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

Figure 2 **Default specification for protective barrier**



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3 **Examples of above-ground stabilizing systems**



6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

6.2.3.2 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

6.2.3.3 New 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.

6.2.3.4 The locations of and design for temporary ground protection should be shown on the tree protection plan and detailed within the arboricultural method statement (see **6.1**).

6.2.3.5 In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.

Appendix ‘e’
Table 1 from 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 **4.5.7**.*			See Table 2
	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)	See Table 2
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	See Table 2
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	See Table 2

Appendix ‘f’
Tree Protection Plan.

NOTES

Tree Protective Fencing in accordance with figure 3 of BS5837: 2012 shown by blue dotted line.

Gate in fencing to allow garden access (no Contractor access permitted beyond fencing).

T.10

T.9

T.11

T.12 - poor condition.

T.12

REAR GARDEN

Extent of RPA's in this area will be restricted by existing structures.

No.52

EXISTING BALCONY

EXISTING LIGHTWELL

T.13

T.14

Palm & Yucca protected by surrounding features.

FRONT APRON TO BE REPAVED

CHIMNEYS RESTORED TO ORIGINAL HEIGHT AND DESIGN (TO MATCH NO.52)

rooflight

flat roof behind parapet

BOUNDARY WALL REBUILT (BRICKS TO MATCH EXISTING)

Storage area

NEW EXTENSION SET BACK 1 METRE FROM MAIN BUILDING LINE

GARAGE ADJACENT

new garden store - see dwg TV/06

Potential storage area.

T.8

T.7

T.6

SHED

T.3

T.2

T.1

SITE BOUNDARY SHOWN DOTTED

T.4

T.5

garden of 38 Mount Ararat Road

Ground protection and protective fencing provided in these areas in accordance with Section 6.2.3 & Figure 3 of BS5837: 2012 - should scaffolding access be required at ground level (to encompass any areas within RPA's that may be disturbed).

Offset RPA's of T.1 - 3 to take into account impediment caused by structures.

North

0 1m 2m 3m 4m 5m 10m

Tree Protection Plan.
Clive Fowler Associates.
October 2021.
Originally produced in colour.
Scale as shown.

THE VINEYARD

REV	DATE	DESCRIPTION
A	25:09:18	EXTENSION SET BACK INCREASED TO 1 METRE

htp architecture
22a Hill Street Richmond Surrey TW9 1TW
Tel: 0208 940 3323 Fax: 0208 948 4256 mail@htparchitecture.co.uk

PROJECT
50 THE VINEYARD
RICHMOND SURREY
TW10 6AT

DRAWING TITLE
PROPOSED EXTENSION & ALTERATIONS
PROPOSED BLOCK PLAN/SITE PLAN & ROOF PLAN

SCALE DATE DRAWN BY

JOB No DRAWING No
18025