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Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

At:-

33 Priory Road
London
N8 8LP

On behalf of:-

Neil Brock

Prepared by:

Simon Stephens MA Oxon, Dip
Arb(RFS), MArborA, C Env. MICFor
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Survey Date:	28 th July 2020
Report Date:	5 th August 2020
Project no:	1565

CONTENTS

- 1 BACKGROUND**
- 2 SURVEY DETAILS AND SCOPE**
- 3 SURVEY LIMITATIONS**
- 4 LEGAL PROTECTION OF TREES**
- 5 ARBORICULTURAL METHOD STATEMENT**
- 6 ARBORICULTURAL IMPACT ASSESSMENT**
- 7 REFERENCES**

Appendices

- A Tree Protection Plan: drawing no: 1565-01**
- B Tree Schedule**
- C BS 5837:2012 - Trees in relation to design, demolition and construction, Table 1**
- D Tree Protection Fencing Detail**
- E Site photos**
- F Proposed building sections**

1 BACKGROUND

- 1.1** This Arboricultural Impact Assessment has been instructed by Neil Brock to assess the arboricultural impact of the proposed demolition of existing garages and the construction of a new dwelling on the same footprint on land to the rear of 33 Priory Road.
- 1.2** Trees were surveyed, with findings shown in the Tree Schedule in Appendix B and plotted on the Tree Protection Plan in Appendix A. This also shows tree protection measures, which are specified in the Arboricultural Method Statement in section 5 below. The arboricultural impact is assessed in section 6, which assumes that these measures are followed.
- 1.3** The tree survey was undertaken, and this report has been prepared, by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.
- 1.4** This survey and report have been prepared in accordance with recommendations provided in BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations.
- 1.5** Documentation supplied:
 - Proposed Basement and Ground floor Plans: drawing no 1579/10-P01 revA
 - Proposed Sections: drawing nos 1579/10-S01 revB and 1579/10-S02 revB

2 SURVEY DETAILS AND SCOPE

- 2.1 The site survey included trees and shrubs, within influencing distance of the proposed development, with a stem diameter over 75mm at 1.5m height, located within the area shown on the Tree Protection Plan, included as Appendix A.
- 2.2 Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.
- 2.3 Tree details have been added to the plan received, which is included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:
- **Number:** an identity number for each tree, prefixed with a "T", which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees, normally of the same species, are located close together and are similar in character and requirements, they have been treated as a Group under a single Number, prefixed with a "G".
 - **Species:** common name.
 - **Tree height:** approximate height in metres.
 - **Stem diameter:** diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.
 - **Branch spread:** approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.
 - **Canopy clearance:** approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
 - **Age class:** Young, Semi-mature, Early mature, Mature, Over-mature, Veteran.
 - **Condition:** features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
 - **Management Recommendations:** recommendations to ensure the health and safety of the tree, within the future development.
 - **Estimated Remaining Contribution:** <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.
 - **Category grading:** tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:
 - Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red)
 - Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)

- Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue)
- Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)
- Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:

- Subcategory 1: mainly arboricultural values.
 - Subcategory 2: mainly landscape values.
 - Subcategory 3: mainly cultural values, including conservation.
- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.
 - **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
 - **Root Protection Area (RPA):** the area in m², as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most situations, should be fenced off to prevent root damage from construction activities.

3 SURVEY LIMITATIONS

- 3.1 No internal decay devices, or other invasive tools to assess tree condition, were used.
- 3.2 No soil excavation or root inspection was carried out.
- 3.3 This survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.
- 3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually, by a suitably qualified person.

4 LEGAL PROTECTION OF TREES

- 4.1** The Haringey Council website was viewed on 05-08-2020, showing that the site does not contain any Tree Preservation Orders, nor does it fall within a Conservation Area. The presence of Planning Conditions currently attached to the site, was not checked.

5 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1** The proposal is to construct a new dwelling on the footprint of the existing garages behind 33 Priory Road. This will be single storey with a basement and roof garden as shown on the elevations in Appendix F. The ground floor plan has been added to the Tree Protection Plan in Appendix A, which also shows the proposed footprint for the basement and roof terrace.
- 5.1.2** There are no trees on the site, however there is an Ash, T1, close to the building, which is shown in the photos included in Appendix E. Although this is not a high-quality specimen and there is a risk of it succumbing to the ash dieback disease, every effort will be made to preserve the tree to maintain screening to adjacent properties.
- 5.1.3** Following demolition of the existing garages, an explorative trench will be dug where indicated on the tree protection plan. Once the hard surfacing and garage foundations have been removed using an excavator, all further excavation will be by hand to a depth of 1m, retaining all roots over 25mm in diameter.
- 5.1.4** The retained arboricultural consultant will then inspect and decide wherever the tree can be retained:-
- If there are major roots underneath just the corner of the garage, modifications of the layout may be possible to avoid them.
 - If major anchor roots are growing under the central section of the garage the tree will have to be removed.
 - If less significant roots are growing under the garage, it is possible that the tree could be safely retained, possibly after some crown reduction/thinning to help maintain the root/shoot ratio and to reduce any risk of windblow.
- 5.1.5** Excavation for the basement will be to a depth of approximately 3m. This will be carried out in 2m sections, with a section of retaining wall being constructed, as soon as possible after excavation, before the next section is dug, which will reduce the chance of the cut face collapsing into the site.

- 5.1.6 If the tree has to be removed, it will be replaced with a new tree in the same location as the existing tree, but slightly further from the building.

5.2 Tree Work

- 5.2.1 Details of proposed tree works are included in the Tree Schedule included as Appendix B.
- 5.2.2 It is hoped that the Ash, T1, can be retained, but with the smaller of the two stems removed. However, it is possible that this will prove impossible in which case the tree will be replaced.
- 5.2.3 All tree work must be undertaken to the standards set out in BS 3998:2010 Tree work – Recommendations.

5.3 Root Protection Areas

- 5.3.1 Root Protection Areas are shown for all trees in the tree schedule attached as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan attached as Appendix A. This shows the distance that construction must normally be kept back from a tree, to provide the Root Protection Area recommended in BS 5837.

5.4 Tree Protection Fencing

- 5.4.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, attached as Appendix A.
- 5.4.2 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D.
- 5.4.3 If preferred, instead of Tree Protection Fencing, solid timber hoarding can be used provided it is of solid construction and at least 2m in height. In this case, post holes must not be dug within the Root Protection Area with ballast boxes used instead.
- 5.4.4 After erection of Tree Protection Fencing, 2 days notice must be given to the Local Planning Authority before demolition, starts on site. Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the Local Planning Authority.

5.4.5 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

TREE PROTECTION AREA

KEEP OUT

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS
THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:

- The Protection Fence must not be moved
- No person or machine must enter the area
- No materials or spoil must be deposited
- No excavation must be permitted

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN
PERMISSION OF THE LOCAL PLANNING AUTHORITY

5.5 Ground Protection Area

5.5.1 The Ground Protection Area, which is shaded cyan on the Tree Protection Plan, contains soft ground where ground protection must be installed to allow construction access and to protect underlying roots.

5.5.2 The Tree Protection Fencing must be erected 1.2m from the building line, with the ground between the fencing and the building protected by either 25mm plywood or side butting scaffold boards, on top of a compressible layer of sand or woodchips, laid onto a geotextile. Alternatively, scaffold boards can be fixed on a driven scaffold frame, so as to form a suspended walkway above the geotextile.

5.6 Hand Dig Area

5.6.1 The Hand Dig trench, shown cross-hatched red on the Tree Protection Plan, must be dug to a depth of 1m by hand, retaining all roots over 25mm in diameter. The existing garage foundations can be removed using an excavator providing it can work only from areas of hardstanding, or from outside the Root Protection Area. A banksman must be present during this operation and excavation must go no deeper than the base of the foundations and must cease immediately if roots are found. All further excavation within the Hand Dig area must be by hand, using an air spade.

5.6.2 Following completion of the hand dig trench, the arboricultural consultant will specify which roots can be neatly severed, using secateurs or a hand saw.

5.6.3 Further excavation, either to a greater depth or outside the hand dig trench, can be carried out with an excavator, since it is unlikely that significant live roots will be found.

- 5.6.4 Heavy-duty polythene must be used to line the side of the hand dig trench adjacent to the trees, before the retaining wall is constructed, to avoid the toxic affects of cement on tree roots.
- 5.6.5 As soon as the retaining wall has been constructed, topsoil must be used to fill the void between the wall and the tree.

5.7 General measures

- 5.7.1 No construction activity whatsoever, including routing of underground services, storage of materials or on-site parking, must be allowed within Ground Protection Area or outside the area bounded by the Tree Protection Fencing.
- 5.7.2 No mixing of cement, or concrete, or storage of fuel must take place within the Ground Protection Area.
- 5.7.3 Fires must not be lit.
- 5.7.4 Landscape works carried out within Root Protection Areas must be undertaken with great care so as not to damage shallow roots. Rotovators or other heavy mechanical cultivation must not be used within the Root Protection Areas.
- 5.7.5 A copy of the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.8 Bat roosts

- 5.8.1 The current legislation makes it a criminal offence to disturb, damage or destroy any bat roost or hibernation area. However, the ash tree is not considered suitable for bats to use either for hibernation or temporary roost sites. The lack of cavities, cracks, loose bark or slab ivy makes it unlikely that bats will use the trees, except possibly for foraging for food. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

5.9 Birds

- 5.9.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1st March to 31st July, however this can vary depending on species and location. During these months a careful inspection must be made before work commences and works must be postponed if active nests are found.

5.10 New Tree Planting

- 5.10.1 If the arboricultural consultant advises that the Ash, T1, can not be retained, a new semi-mature tree must be planted in its place. This tree will be at least 25-30cm girth with a height of 5.5-6.0m.
- 5.10.2 The species to be used will depend on availability of the most suitable specimen at a specialist nursery. A small growing, broadleaved species that will develop a broad canopy providing screening between 3m and 6m is required. Possible species include *Acer campestre* (Field maple), *Carpinus betulus* (Hornbeam), *Sorbus aria* (Whitebeam or various varieties of cherry).
- 5.10.3 The tree must be double staked and planted in a 1m by 1m tree pits of the same depth as the rootball, incorporating 160litres of tree planting compost. Planting must be carried out during the first planting season (December to March) after the start of construction. Should the tree die within 5 years of planting it must be replaced during the next planting season.
- 5.10.4 The quality of all nursery stock, standards of workmanship and maintenance must comply with the relevant sections of British Standard BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations.

5.11 Arboricultural Supervision

- 5.11.1 A qualified Arboricultural Consultant must be retained during the period of construction to carry out the following:
- to inspect the trial hand dig trench and advise on whether the Ash tree can be retained, any root/shoot pruning required.
 - to liaise with the contractor, prior to excavation adjacent to the tree starting to agree the contractor's detailed Method Statement for all works adjacent to the tree.
 - If, required to locate a suitable semi-mature specimen to replace the Ash tree, T1.
 - as necessary, to advise on any issues at the request of the local planning authority, the client, architect or contractor.

The details of each site visit must be recorded using a site visit proforma, with copies circulated to the contractor, developer and the local authority Tree Officer.

6 ARBORICULTURAL IMPACT ASSESSMENT

- 6.1 The intention is to retain and protect the existing ash tree to retain screening for neighbours.
- 6.2 However, depending on the root morphology found, it is acknowledged that there is a significant risk that there will be no option but to remove the tree. In this case, a new semi-mature tree will be planted in the same location. Since there is a risk of the existing tree succumbing to the Ash Dieback disease, this option might be preferable for tree cover in the vicinity in the medium term. On planting, the new semi-mature tree would be of similar height to the existing ash tree, however the crown spread will be less. Within 3 years it is anticipated that the crown spread would also be comparable.
- 6.3 Either the existing ash tree or a newly planted tree will provide good screening when the tree is in leaf, between April and November. During the winter, screening will be much reduced although somewhat better with a new tree which will have a more compact branch structure than the ash.
- 6.4 Provided the recommendations in this report are followed, the arboricultural impact of these proposals on tree cover is considered acceptable. Arboricultural supervision has been included to assist with tree protection measures and new, semi-mature tree planting will be undertaken if needed.

7 REFERENCES

- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*
- *BS8545:2014 Trees: from nursery to independence in the landscape. Recommendations.*
- *Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (www.ntsgroup.org.uk)*
- *Mattheck & Breloer (1994). HMSO London. Research for Amenity Trees No4: The Body Language of Trees.*

APPENDIX A

Key

Category U

Category A

Category B

Category C

Crown spread:
retained trees

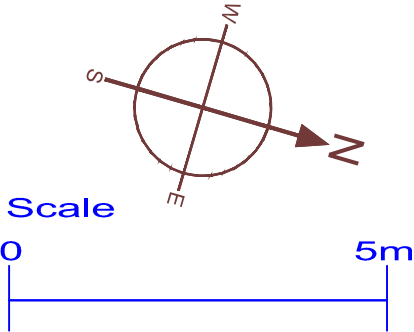
Trees For Removal

Root Protection Area

Tree Protection Fence

Hand Dig Area

Ground Protection Area



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JOB TITLE

GARAGES to rear of
33 PRIORY ROAD

DRAWING TITLE

TREE PROTECTION PLAN

DRAWING NUMBER

1565-01

REV

REVISIONS

SCALE

1:100 at A3

DATE

AUG 20

DRAWN BY

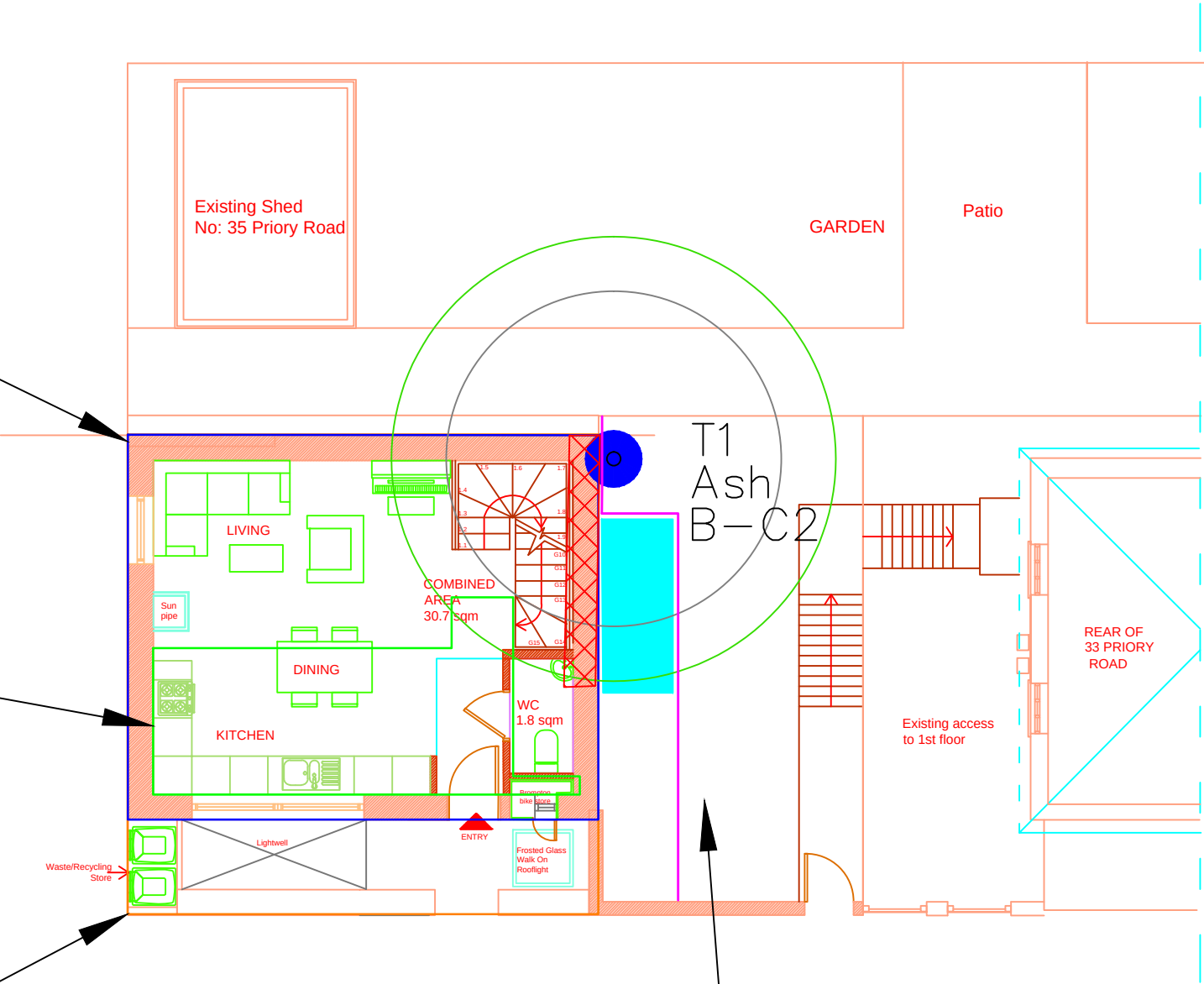
sjss

Extent of ground floor
(blue line)

Extent of roof terrace
(green line)

Extent of basement
(orange line)

Dense
undergrowth



Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Cleara- nce (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distance (m)	Root Protect. Area (m2)
				N	S	E	W								
T1	Ash	6.5	220	3.5	3.5	3.5	3.5	1.8	Semi- mature	Twin stems from base - 100,190mm. Growing outside site, immediately adjacent to corner of garage. Showing reasonable vigour.	Remove smaller stem from base and remove lowest side branch growing over garage. Trim other lateral branches to provide adequate clearance for roof garden.	15-30	B-C2	2.6	22

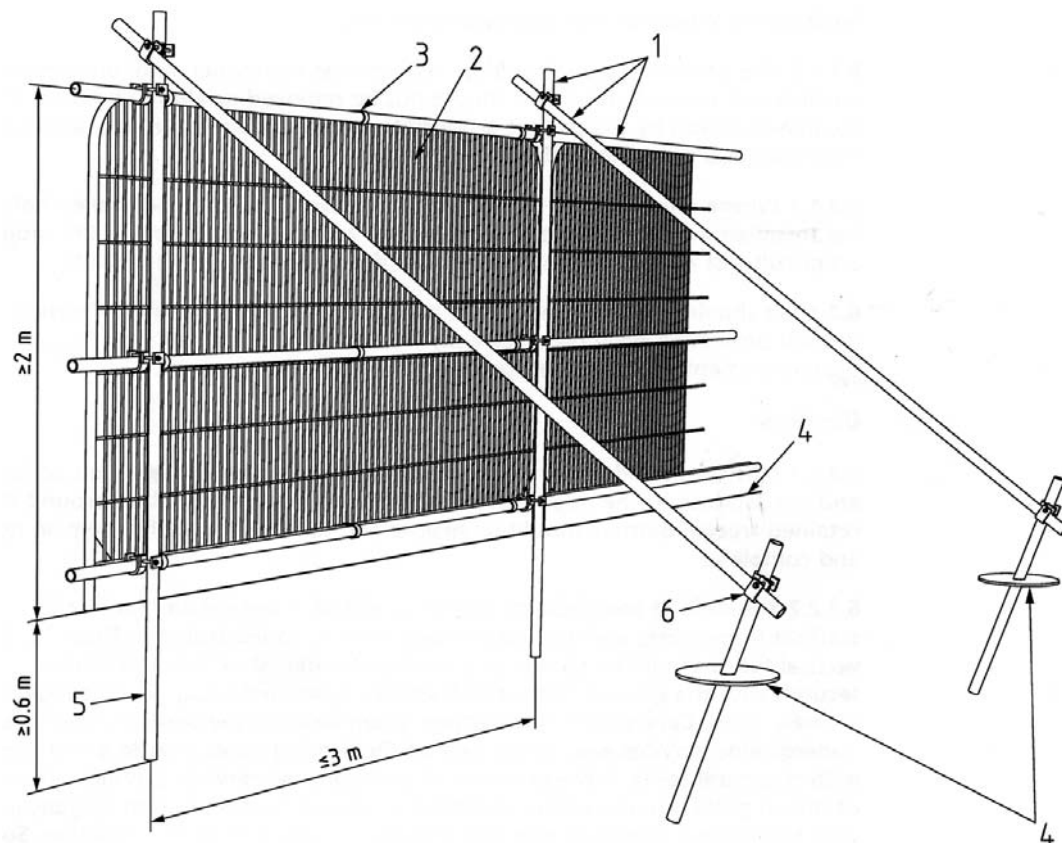
BS 5837:2012, Table 1 Cascade chart for tree quality assessment

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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			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

Figure 2

Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m galvanised 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



Examples of above-ground stabilising systems

Figure 3a

Stabiliser strut with base plate secured with ground pins

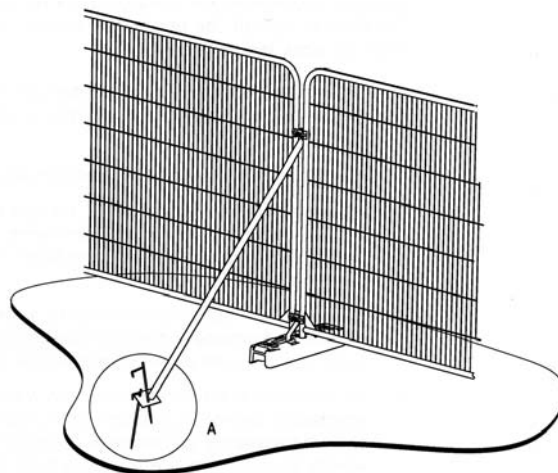
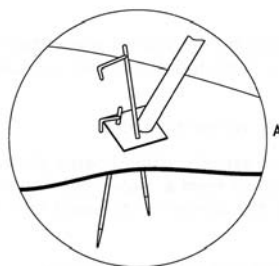
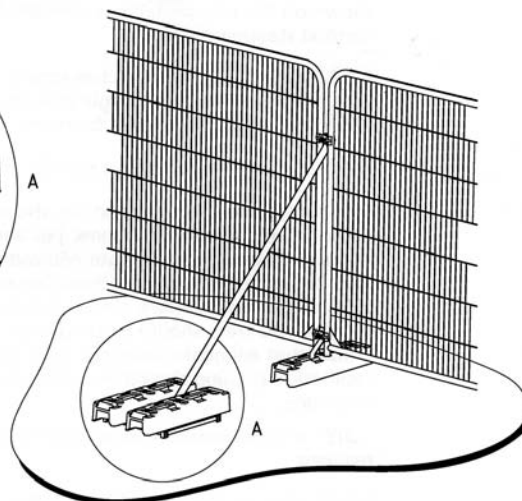
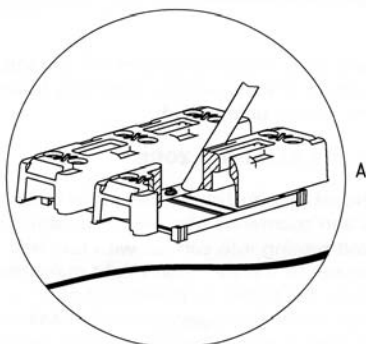


Figure 3b

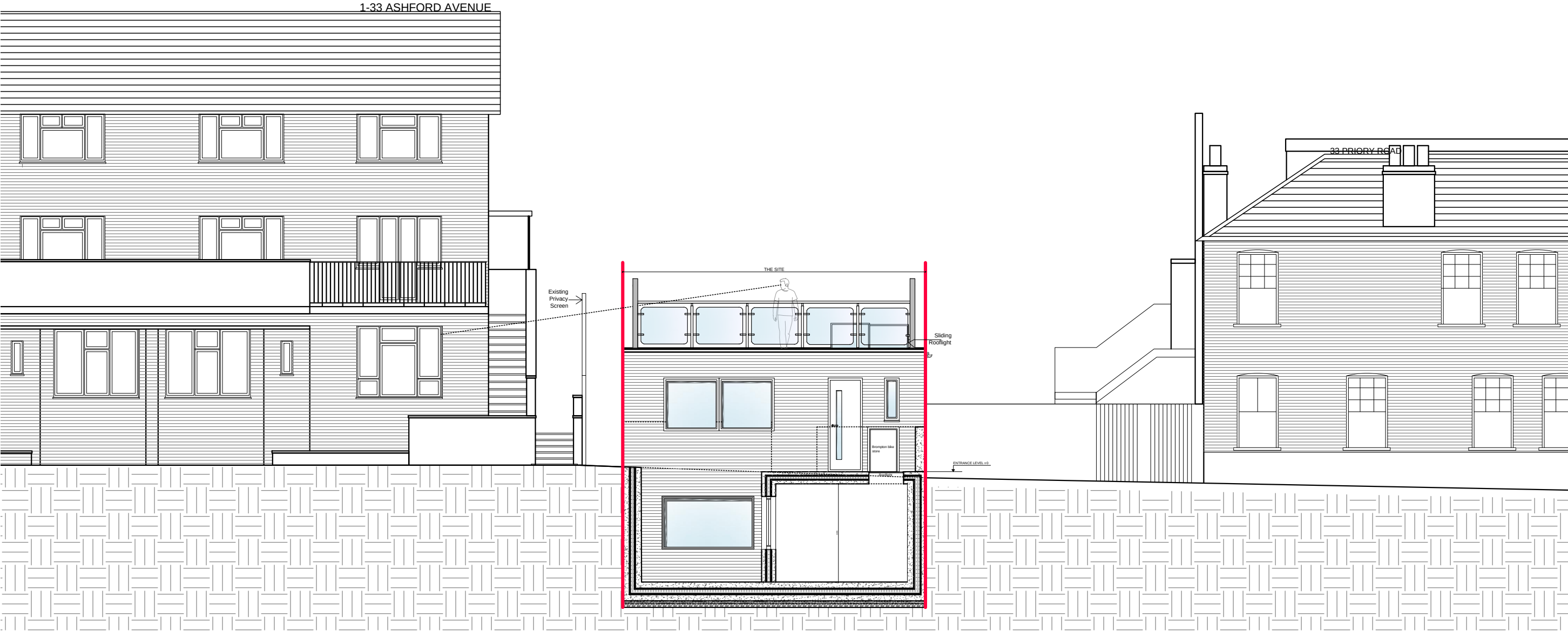
Stabiliser strut mounted on block tray





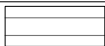
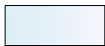


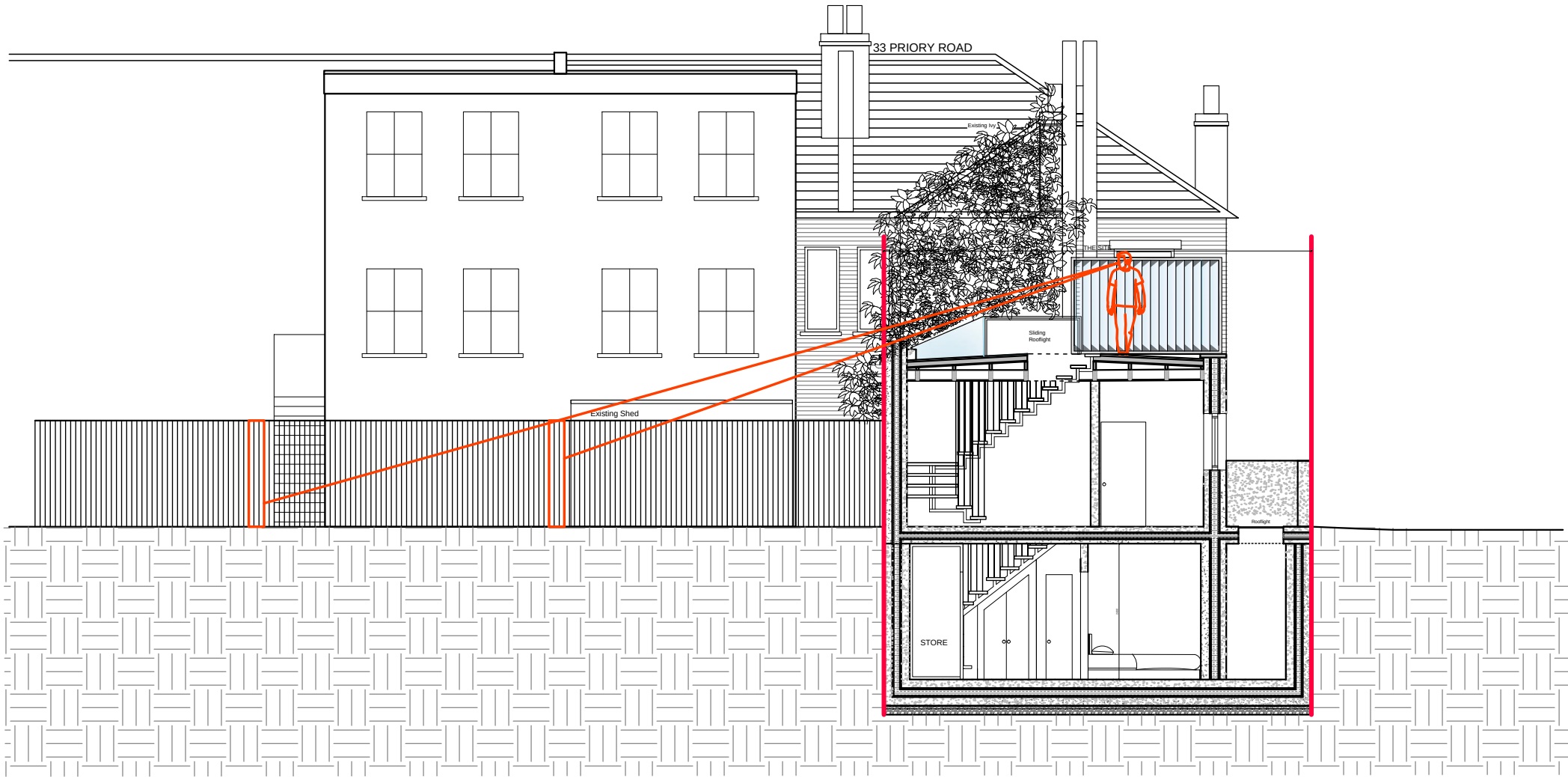
KEY TO PROPOSED MATERIALS	
	Red brick
	Frosted Glass
	Sedum Roof



B A	26/11/19 15/11/19	Design Revised Sliding Rooflight Revised	SM SM	By	LOREN DESIGN LTD. Architects CENTRAL HOUSE,1 Ballards Lane, Suit 5.9,London,N3 1LQ TEL: 020 7729 4878 richard@lorendesign.com	PROJECT: GARAGES 33 PRIORY ROAD N8 8LP	DRAWN: SM		DATE: APRIL 2020	
							CHECKED: -		SCALE: 1:100	
						TITLE: PROPOSED SECTION A-A	SHEET OF: -		STATUS: PLANNING	
							PROJECT NO: 1579/10		DRAWING NO. S01	REV. B
Rev.	Date									

A3 SHEET

KEY TO PROPOSED MATERIALS	
	Red brick
	Frosted Glass
	Sedum Roof



B A	26/11/19	Design Revised	SM SM	LOREN DESIGN LTD. Architects CENTRAL HOUSE,1 Ballards Lane, Suit 5.9,London,N3 1LQ TEL: 020 7729 4878 richard@lorendesign.com	PROJECT: GARAGES 33 PRIORY ROAD N8 8LP	DRAWN: SM		DATE: APRIL 2020			
	15/11/19	Sliding Rooflight Revised				CHECKED: -		SCALE: 1:100			
					TITLE: PROPOSED SECTION B-B	SHEET OF: -		STATUS: PLANNING			
	Rev. Date					PROJECT NO: 1579/10		DRAWING NO. S02 REV. B			
				CLIENT: NEIL BROCK							

A3 SHEET