PLANNING APPLICATIONS COMMITTEE
9th December 2010

Item No: 07

UPRN	APPLICATION NO.	DATE VALID
	10/P2238	03/08/2010

Address/Site: 2 High Cedar Drive, West Wimbledon, SW20 0NU

(Ward) Village

Proposal: Erection of Front Extension

Drawing Nos: DP/1445/RG/03D, 04D, 05A, OS Site Plan & Arboricultural Implications Assessment and Method Statement by ACS Consulting Urban & Rural Tree Management, dated 14/07/2010.

Contact Officer: David Gardener (0208 545 3115)

RECOMMENDATION

Grant Planning Permission subject to conditions

CHECKLIST INFORMATION
- Heads of agreement: None
- Is a screening opinion required: No
- Is an Environmental Statement required: No
- Has an Environmental Impact Assessment been submitted: No
- Press notice: No
- Site notice: Yes
- Design Review Panel consulted: No
- Number of neighbours consulted: 24
- External consultations: None
- Number of jobs created: N/A

1. INTRODUCTION

1.1 The application is brought before Planning Applications Committee due to the number of representations received as a result of public consultation.

2. SITE AND SURROUNDINGS

2.1 The application site comprises a two-storey detached dwellinghouse, which is located on High Cedar Drive, a cul–de-sac comprising large detached houses.

2.2 The house is orientated so that its front elevation, which faces west, at right angles to the road sits behind a free standing, double garage, which opens onto High Cedar Drive facing south. A large Cedar Tree, which is protected by a Tree Preservation Order (TPO), is located west of the house, close to the garage. The tree is of significant amenity value.

2.3 The surrounding area is residential, comprising detached houses to the south, east and west of the site. The rear garden boundaries of terrace houses on Cedarland Terrace are located north of the site. The application site sits adjacent to the Merton (Wimbledon West) conservation area.

3. CURRENT PROPOSAL

3.1 The applicant seeks full planning permission to move the existing double garage further to the south, and to erect a single storey extension, 3m in height behind, and attached to the garage and linked to the front elevation of the house. The flank wall would abut the site's northern boundary. The proposal has been amended since it was first submitted with the additional forward projection of the garage reduced from 1.7m to 0.4m from the front of the existing garage.

4. PLANNING HISTORY

The following planning history is relevant:

4.1 LBM Ref: 10/P0860 - Erection of single storey extension on western elevation of house involving repositioning of existing double garage. Refused, 25/05/2010, for the following:

'In the absence of an accurate tree survey or arboricultural implications assessment, and in light of the proximity of the works to an existing Cedar tree, protected by the Merton (No. 32) Tree Preservation Order 1985, it is not possible to adequately assess the impact of the proposal upon the health of the tree. The proposal cannot therefore, be adequately assessed against policies NE.11: Trees; Protection and NE.12: Trees, Hedges and Landscape Features of the Adopted Merton Unitary Development Plan (October 2003).'

5. POLICY CONTEXT

5.1 The relevant policies in the Adopted Unitary Development Plan

(October 2003) are:

BE.3 (Development Adjacent to a Conservation Area), BE.15 (New Buildings and Extensions; Daylight; Sunlight Privacy; Visual Intrusion and Noise), BE.23 (Alterations and Extensions to Buildings), BE.24 (Roof Extensions and Dormer Windows), NE.11 (Trees-Protection), NE.12 (Trees-Hedges and Landscape Features)

5.2 The following Supplementary Planning Guidance (SPG) is also relevant:
Residential Extensions, Alterations and Conversions (November 2001).

6. CONSULTATION

6.1 The application has been publicised by means of a site notice and letters to neighbouring occupiers. In response, five letters of objection have been received from individual properties, in addition to two letters of objection from the Wimbledon Society and the North West Wimbledon Residents' Association (NWWRA). The letters of objection are on the following grounds:

- Disturbance to root system and reduction of lower branches of Cedar Tree
- Visually intrusive
- Loss of outlook from gardens on Cedarland Terrace
- Out of character
- Poor design and siting within the front garden area
- Overdevelopment of front part of property
- Large cars will not be easily accommodated on the reduced forecourt
- Undesirable precedent for other properties in High Cedar Drive

6.2 Wimbledon Society

Object on basis that the proposed development is contrary to Policies NE.11 and NE.12 as it will be well within the root protection area of the Cedar Tree, and that details of underground works so that root damage and tree loss is avoided, have not been provided. The proposal will therefore inevitably cause damage to the tree, which has significant amenity value.

6.3 North West Wimbledon Residents Association

The proposal would seriously damage the root system and canopy of the Cedar Tree, and would result in a loss of privacy to No.3 High Cedar Drive. The extension, which would come to the boundary fence, would result in a sense of enclosure to properties on Cedarland Terrace.

6.4 Transport Planning – No objections.

6.5 Tree Officer – No objections subject to conditions.

7. PLANNING CONSIDERATIONS

The main issues to be considered concern the design of the proposal and its impact on neighbouring amenity and the Cedar Tree, which is protected by a Tree Preservation Order (TPO).

7.1 Visual Amenity

7.11 The proposed single storey extension has been designed so that it integrates with the house and detached double garage, which is to be moved marginally forwards. The extension would be discreetly located behind the double garage, would feature a flat roof and materials to match, and would not project beyond the flank wall of the garage. The extension would therefore, given its design and siting, have a minimal visual impact of views of the large Cedar Tree, which is located close by, and which makes a significant contribution to the character and appearance of the street and wider setting. The side wall is enlivened with a large glazed window, which avoids the creation of too great an expanse of unbroken wall. Although the extension sits within the front garden, its location behind the existing substantial garage, and its location away from the main access road towards the northern boundary is considered to be acceptable in terms of visual impact.

7.12 Although the front garden area would be reduced, a sizeable and usable space would be retained. The double garage would retain its existing design and would only be moved marginally closer to the street. Overall it is considered that the proposal would not have an unacceptable impact on the character and appearance or the wider setting. The proposal is accordingly considered acceptable in terms of visual amenity.

7.2 Residential Amenity

7.21 The proposed single storey extension would abut the north boundary of the application site, which is sited to the rear of houses along Cedarland Terrace. There is a gap of approx.1m between the north boundary of the application site, where the extension is to be located, and the rear boundary of houses along Cedarland Terrace, where a path is located. The extension would have a height of 3m, which is not considered excessive, given its distance from the rear elevation of houses along Cedarland Terrace, which are approx. 16m from the extension.

7.22 The proposed single storey rear extension would not project forwards of the west facing flank wall of the existing detached double garage, so there would not be a reduction in the separation distance between the double garage and No.3 High Cedar Drive, which faces the application site (the cedar tree is located between the proposed single storey

extension and the front elevation of No.3). Given the single storey extension can only be viewed from the front elevation of No.3, its modest height and width, and the fact that the double garage is to be located only a marginal distance to the south to make space for the extension, and no closer to No.3, it is not considered that the proposal would be visually intrusive, overbearing or result in an unacceptable loss of outlook when viewed from No.3. The proposed window in the elevation of the window facing No.3 is not considered to have an unacceptable impact on privacy. The originally submitted plans have been amended to reduce the increased proposed forward projection of the garage from 1.7m to 0.4m. This leaves a sufficiently deep forecourt to avoid overhanging of cars beyond the driveway area. Overall it is considered that the proposal is acceptable in terms of its impact on residential amenity.

7.3 Impact on Cedar Tree

7.31 The previous application was refused because the applicant did not provide any information regarding how a large Cedar Tree, which is subject to a TPO was to be protected. The applicant has now submitted an Arboricultural Implications Assessment and Method Statement and Tree Protection Plan, which are considered to be acceptable. The tree report advises that a low invasive foundation scheme, either pile and beam or raft will limit any adverse impact. Light pruning works are also proposed to raise the northern section of the canopy to 4m, which the consultant considers will help balance the crown, which has already been lifted on the other side. The Council's Tree Officer has requested that conditions relating to tree protection, foundation design and site supervision are attached with any approval, to ensure that the Cedar Tree is adequately protected. Subject to these conditions, they are happy that the proposal is acceptable in terms of potential impact on the tree.

8. SUSTAINABILITY AND ENVIRONMENTAL IMPACT ASSESSMENT REQUIREMENTS

8.1 The application does not constitute Schedule 1 or Schedule 2 development. Accordingly, there are no requirements in terms of an Environmental Impact Assessment.

9. CONCLUSION

9.1 It is considered that the proposal is appropriately located, is not excessive in terms of its size and is of an acceptable design, and as such would not impact on the character or appearance of the existing dwellinghouse and wider setting. The proposed extension would also not have an unacceptable impact on neighbouring amenity as it would be located to the back of properties located along Cedarland Terrace, and would not project forwards of the flank wall of the double garage, which faces No.3 Cedar High Drive. The applicant has also overcome

the reason for refusing the previous application by submitting an Arboricultural Implications Assessment and Method Plan and Tree Survey detailing how the Cedar Tree, to the west of the site is to be protected. The application is accordingly considered acceptable in terms of its impact on visual and residential amenity and on the protected Cedar Tree.

RECOMMENDATION

GRANT PLANNING PERMISSION subject to the following conditions:

1. A.1 (Commencement of Development)

2. B.2 (Matching Materials)

3. C.8 (No Use of Flat Roof)

4. Tree Protection – Before any site works commence, the tree protection measures shown on the approved Tree Protection Plan shall be installed and be maintained until the completion of all site works, and all works shall be carried out in accordance with the approved Arboricultural Method Statement, in particular including the requirement that all works within the Root Protection Area be hand dug and all roots with a diameter greater than 25mm be retained unless agreed with the appointed consultant under Condition 6, and all roots over 50mm diameter be retained.

   Reason: To protect and safeguard the existing retained Cedar Tree in accordance with policy NE.12 of the Adopted Merton Unitary Development Plan 2003.

5. Design of Foundations – No work shall be commenced until details of the proposed design and method of construction of the pile and beam or raft foundations to be used have been submitted to and approved in writing by the Local Planning Authority and the work shall be carried out strictly in accordance with the approved details. The design and method of construction shall incorporate the recommendations in the approved Arboricultural Method Statement and BS 5837:2005.

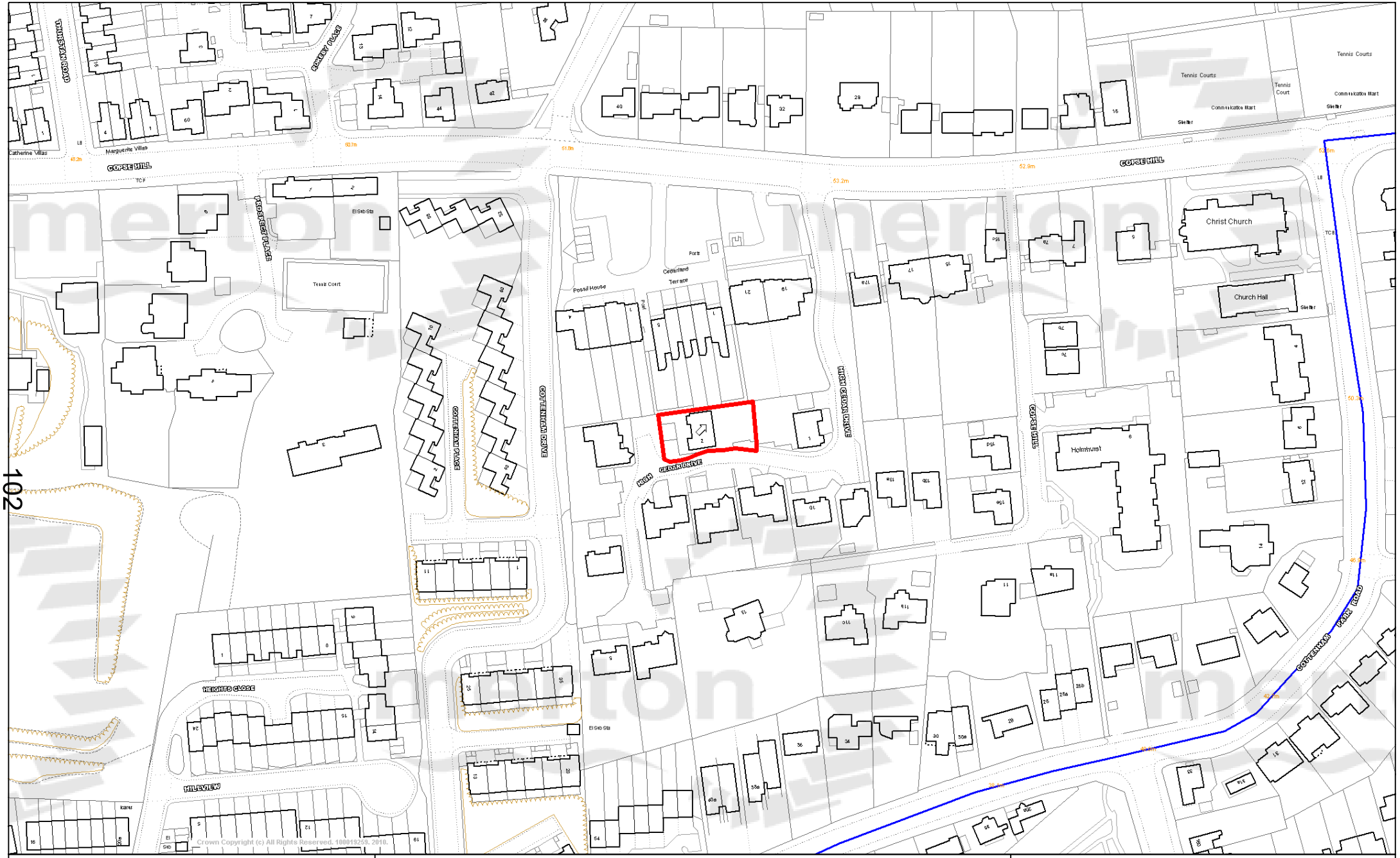
   Reason: To protect and safeguard the existing retained Cedar Tree in accordance with policy NE.12 of the Adopted Merton Unitary Development Plan 2003.

6. F.8 (Site Supervision (Trees))

Reason for Approval:
It is considered that the proposed single storey extension to the front of the house and relocation of the double garage would not have a detrimental impact upon visual or residential amenity or on the Cedar Tree, which is protected by a Tree Preservation Order. The proposal accords with the

Council's Adopted Unitary Development Plan and London Plan Policies. The policies listed below were relevant to the determination of this proposal.

Adopted Merton Unitary Development Plan (October 2003):
BE.3 (Development Adjacent to a Conservation Area)
BE.15 (New Buildings and Extensions; Daylight; Sunlight Privacy; Visual Intrusion and Noise)
BE.23 (Alterations and Extensions to Buildings)
BE.24 (Roof Extensions and Dormer Windows)
NE.11 (Trees-Protection)
NE.12 (Trees-Hedges and Landscape Features)



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2 High Cedar Drive

Scale 1/1250

Date 23/11/2010

London Borough of Merton
100 London Road
Morden
Surrey
SM4 5DX

H.M. LAND REGISTRY

TITLE NUMBER	
SGL451984	

ORDNANCE SURVEY PLAN REFERENCE	COUNTY	SHEET	NATIONAL GRID	SECTION
	GREATER LONDON		TQ 2370	L

Scale: 1/1250

BOROUGH OF MERTON

FILED PLAN
SpH
4/86

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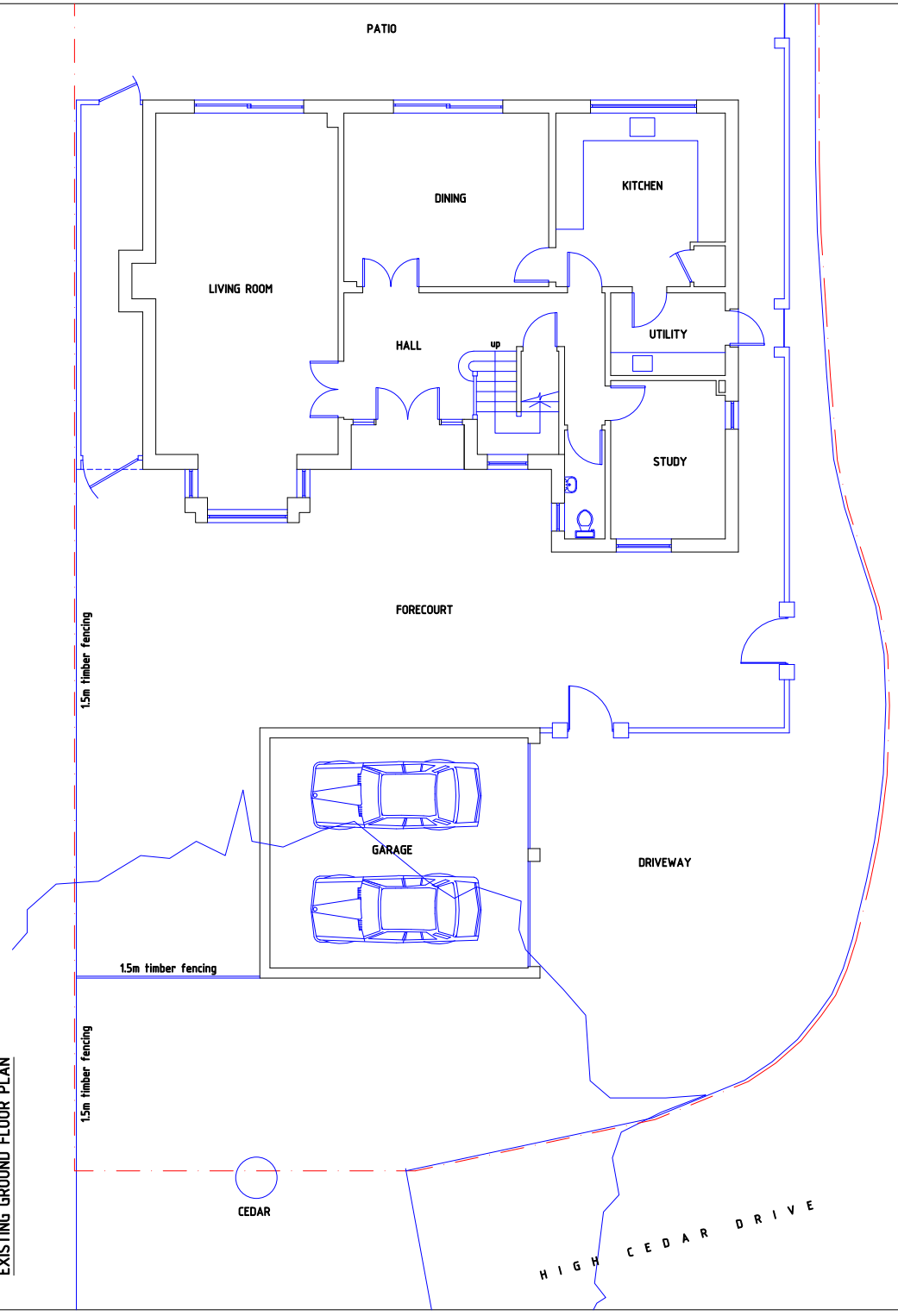
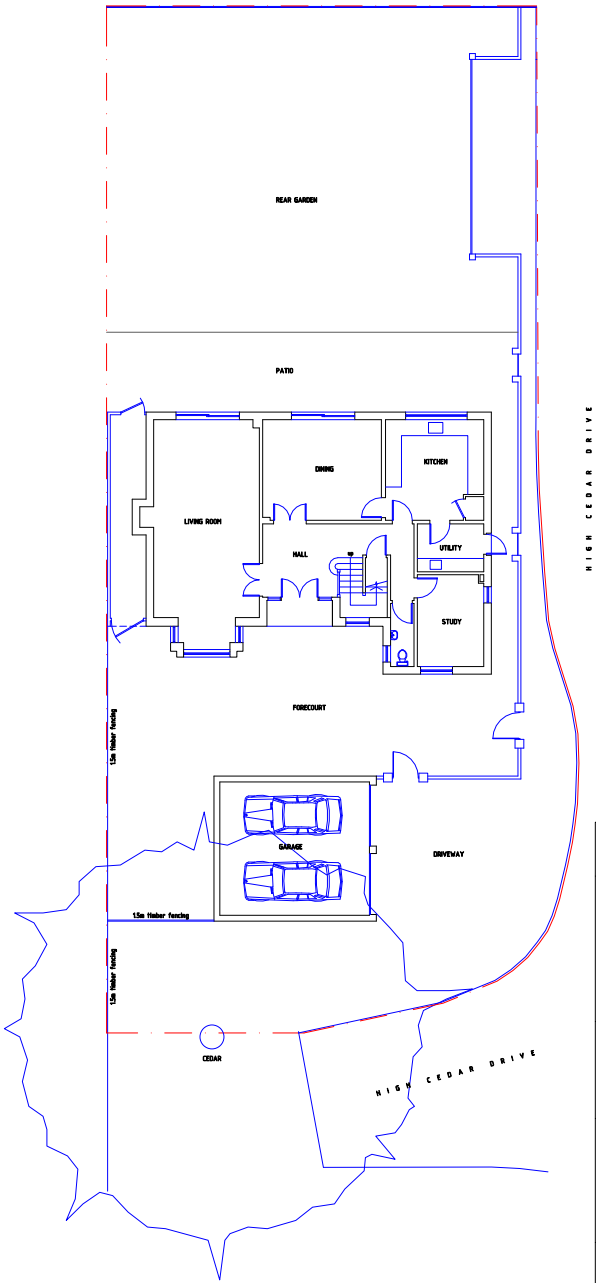


EXISTING GROUND FLOOR PLAN



EXISTING SITE PLAN
Scale: 1/200

Client	MR D.J. PATEL
Project	2 HIGH CEDAR DRIVE WIMBLEDON SW20 0NU
Drwg. Title	EXTENSION

Direct Planning Limited
Town Planning Consultants and Architects, Established. 1988

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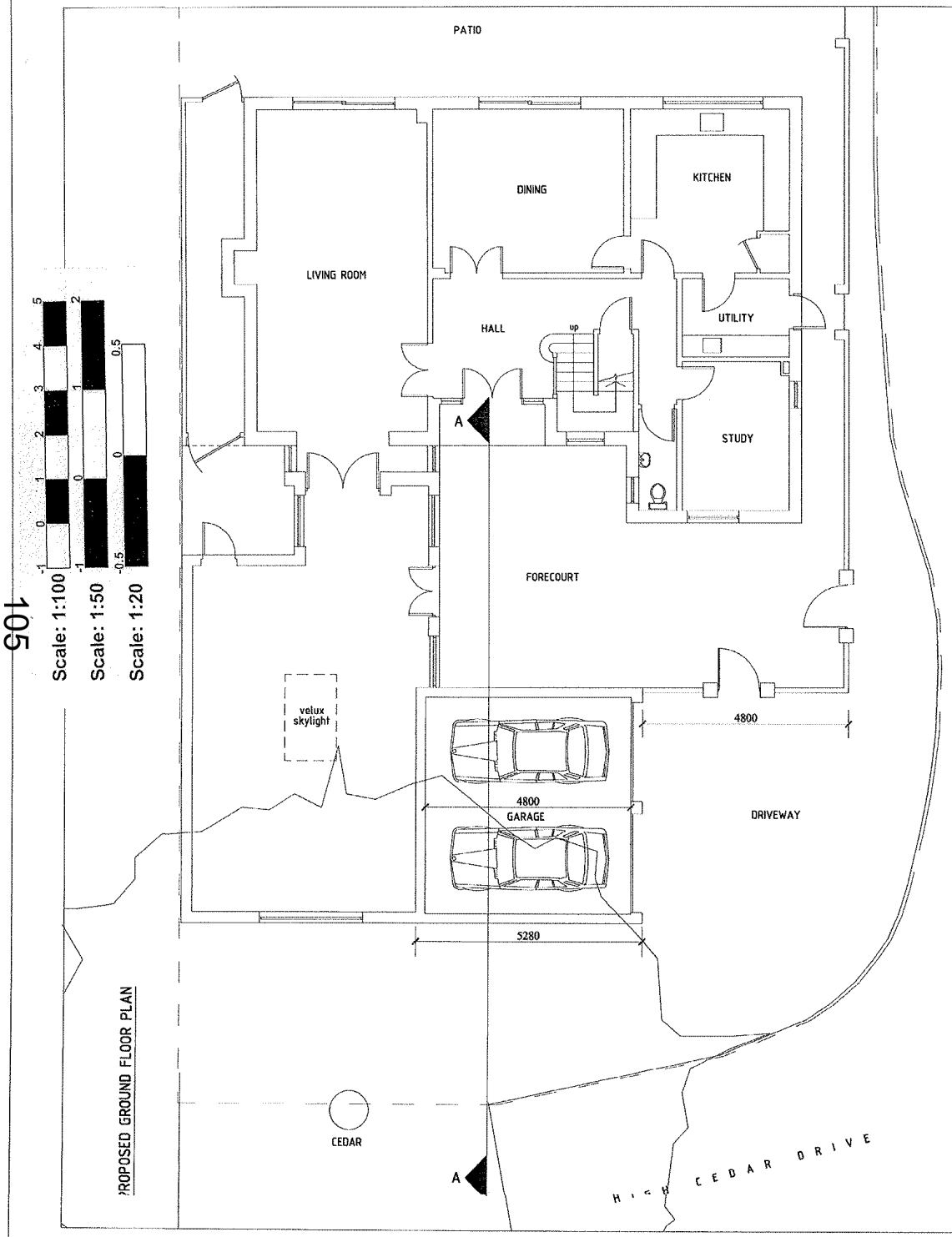
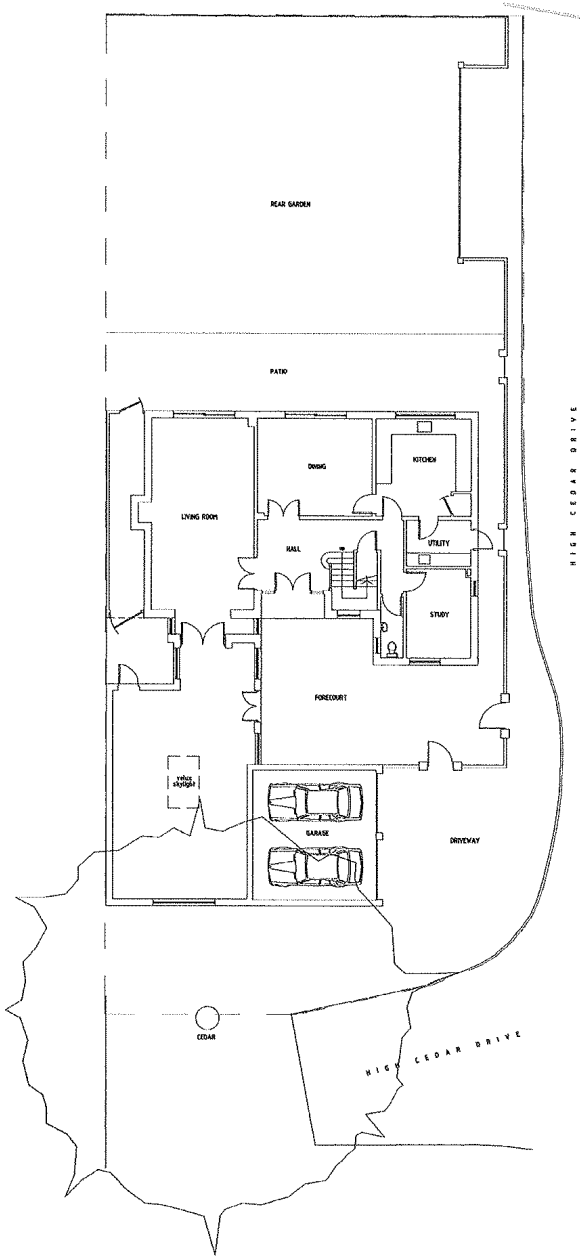
95/97 High Street, Orpington, Kent
Tel: 01689 875999
Fax: 01689 875599
Email: enquiries@directplanning.co.uk

Drawn by	R GOKCE
Scale	1:100
Date	FEB. 2010
Project/Drwg. no.	DP/1445/RG/01



PROPOSED GROUND FLOOR PLAN



PROPOSED SITE PLAN
Scale: 1/200

AMENDED

23 NOV 2010

LONDON BOROUGH OF MERTON

Revised: 26/11/2010

Client	MR D.J. PATEL
Project	2 HIGH CEDAR DRIVE WIMBLEDON SW20 0NU
Drwg. Title	EXTENSION

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Date	FEB. 2010
Project/Drwg. no	DP/1445/RG/03D

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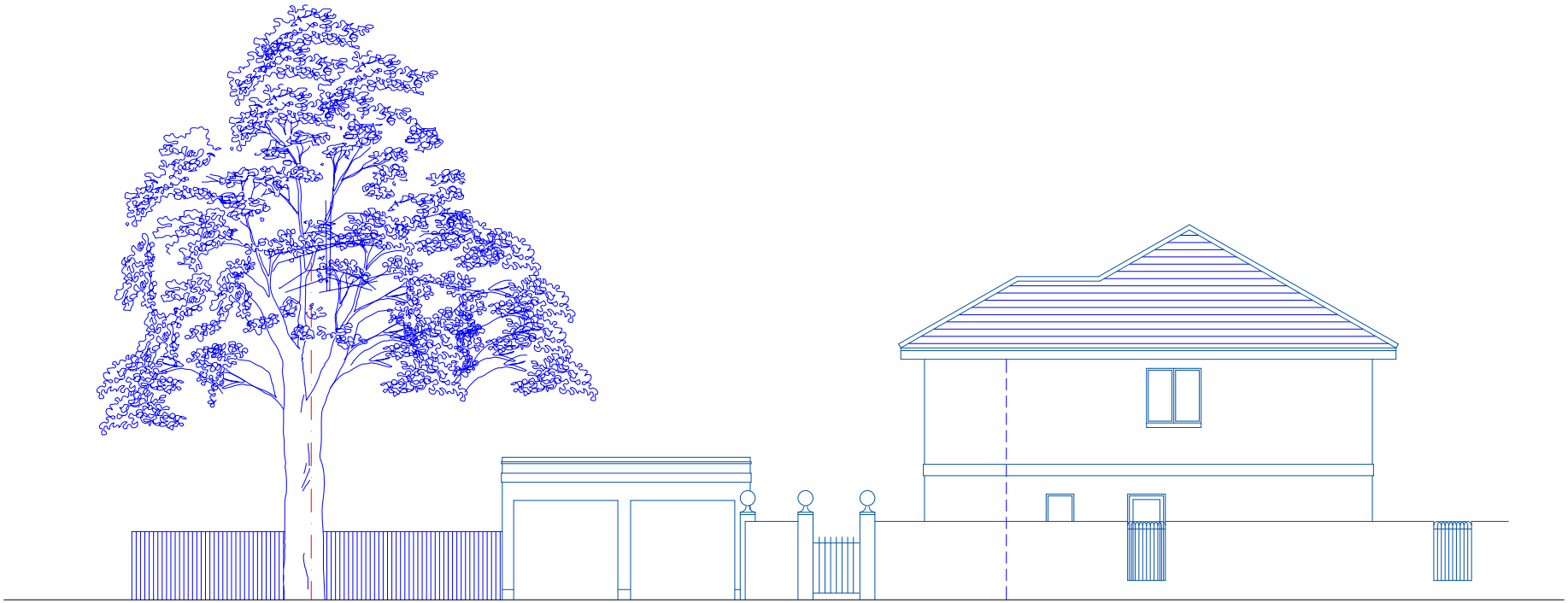
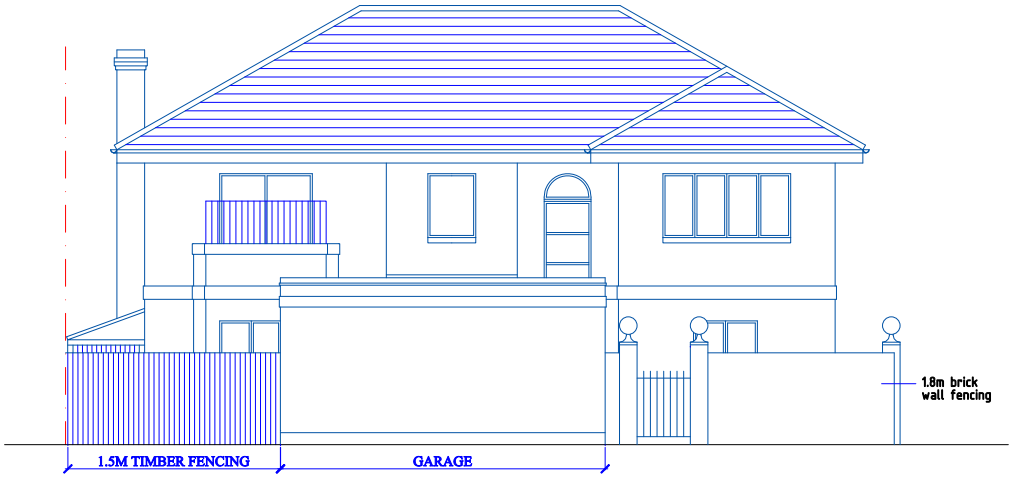


EXISTING SIDE ELEVATION [NORTH]



EXISTING FRONT ELEVATION [VIEWED FROM HIGH CEDAR DRIVE - WEST]

Client
MR D.J. PATEL

Project
2 HIGH CEDAR DRIVE
WIMBLEDON
SW20 0NU

Drwg. Title
EXTENSION

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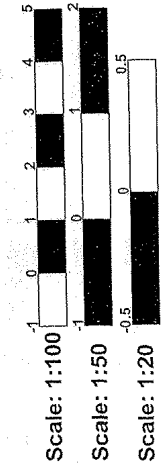
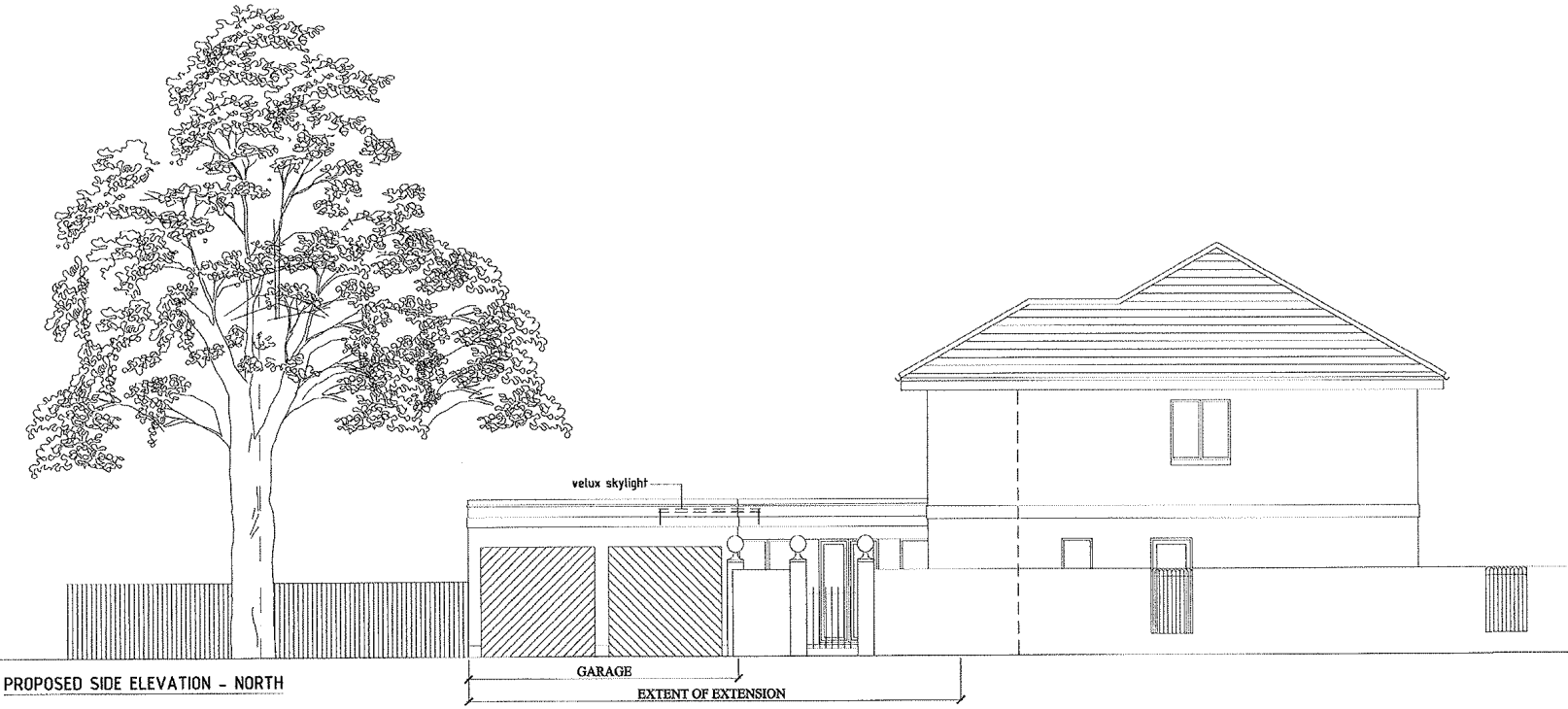
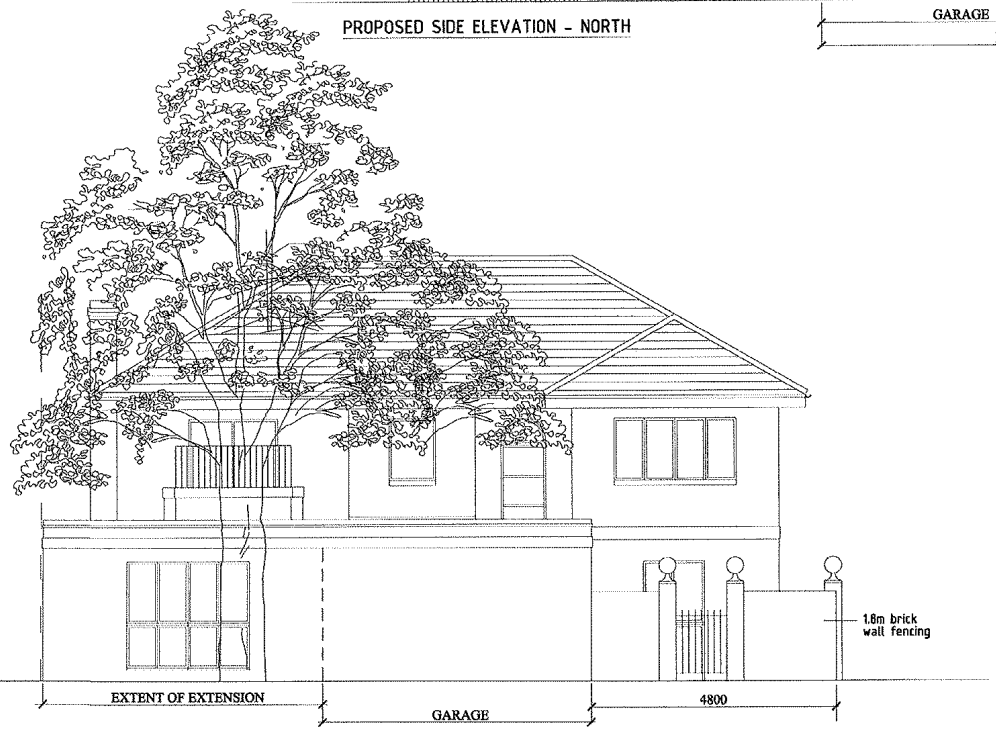
Date
FEB. 2010

Project/Drwg. no.
DP/1445/RG/02





PROPOSED SIDE ELEVATION - NORTH



PROPOSED FRONT ELEVATION [VIEWED FROM HIGH CEDAR DRIVE - WEST]

Revised: 26/11/2010

Client	MR D.J. PATEL
Project	2 HIGH CEDAR DRIVE WIMBLEDON SW20 0NU
Drwg. Title	EXTENSION

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Drawn by	R GOKCE
Scale	1:100
Date	FEB. 2010
Project/Drwg. no.	DP/1445/RG/04D

PROPOSED SIDE ELEVATION - CROSS SECTION A-A [NORTH]

Revised: 10/05/2010

Client	MR D.J. PATEL
Project	2 HIGH CEDAR DRIVE WIMBLEDON SW20 0NU
Drwg. Title	EXTENSION

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Drawn by	R GOKCE
Scale	1:100
Date	FEB. 2010
Project/Drwg. no.	DP/1445/RG/05A

14th July 2010

Our Ref: eb/aiams1/e/highcedardrivems

Your Ref:

Mr D. J. Patel
2 High Cedar Drive
Wimbledon
SW20 0NU

Dear Mr Patel

Arboricultural Implications Assessment and Method Statement for:2 High Cedar Drive SW20

Please find attached my arboricultural report and associated plans for your assistance with the planning application, which I have prepared in relation to the proposed development scheme.

Please note that this report is prepared for your use only and in conjunction with the plans included in the report.

I hope that this information is clear helpful at this stage but if I can be of any further assistance please do not hesitate to contact me.

Yours sincerely

Edward Buckton
enc,

ARBORICULTURAL IMPLICATIONS REPORT

for :

2 High Cedar Drive
SW20

Produced for: Mr Patel

Prepared by:
Edward Buckton
BSc (hons) Forestry, M.Arbor.A.

Date: 14th July 2010

Reference:
eb/aiams1/e/highcedardrive

ACS Consulting (London)
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Contents

Appendices

Arboricultural Implications and Tree Protection Methods

Summary of Conclusions and Recommendations

Subject to the implementation of the proposed scheme in accordance with the recommendations set out in this report, the landscape and important trees will not be adversely affected either directly by or resulting from the construction of the proposed scheme.

As a consequence of the above, the scheme will have a negligible impact upon the visual character and appearance of the area.

Recommendations

1. **Undertake a pre-commencement site meeting**
2. **Agree the sequence of events**
3. **Adhere to the tree protection measures stipulated in this report**
4. **Monitor tree protection during construction period**

1.0 Introduction and Scope

1.1 This report has been commissioned by Mr Patel to; i) assess the trees in accordance with BS 5837:2005 'Trees in relation to construction- Recommendations' (The BS); ii) detail the arboricultural consequences of the proposed project and assess its visual impact upon trees and amenity; iii) provide recommendations for effective tree protection, which are commensurate and appropriate for the scale and type of development; iv) develop a tree protection strategy for the duration of the construction including any land preparation or demolition works.

1.2 Reference to 'the proposed scheme' below will mean either the approved scheme for which planning consent has been granted or the scheme under consideration by the Local Planning Authority (LPA).

1.3 The trees were inspected, in accordance with BS 5837:2005 'Trees in relation to construction- Recommendations' on the 29th June 2010 and a total of 1 tree records are provided.

1.4 This report sets out the protection measures that will be adopted to ensure effective tree preservation. The basic principles are that; the established fenced and ground protected areas are exclusion zones for the duration of the construction (or as duly agreed) and; excavations within the BS root protection areas (RPA) will be subject to professional assessment (see Note 1).

1.5 A full hazard assessment of the trees (including for example the assessment of decay or defects and its implications), has not been undertaken as this information is considered beyond the scope of this report. Naturally, any obvious hazards have been identified in the schedule and, I recommend that these are acted upon as soon as practicable.

1.6 Any operational practices recommended in this report are to be undertaken by the appropriate specialist company. Operatives are to carry out the relevant risk assessment and record such information, prior to commencement of tasks and work in accordance with current Health and Safety standards, practices and legislation. Unless formally agreed, no contractors are assessed, appointed or monitored by ACS Consulting. Responsibility and liability of all actions, non-actions, products and services associated directly with this report will be limited to the relevant client and contractor.

General Site Description

1.7 The site comprises a two storey residential property with separate garage. The site is predominantly flat. A Tree Preservation Order (TPO) exists at the site. The trees included in the TPO are identified.

2.0 Tree Appraisal & Implications

2.1 The tree details are presented at **Appendix 1**. These details conform to those recommended by BS 5837:2005 'Trees in relation to construction-Recommendations'. The position of the trees is shown on the Tree Protection Plan (TPP) at **Appendix 2**.

2.2 The implications of the proposed scheme, in terms of tree pruning and other works are detailed in the table below. An assessment of the visual impact of the works resulting from the scheme OR as a consequence of sensible arboricultural husbandry is also provided.

Tree Works	Tree Nos	Visual Landscape Impact of Works*	Available Replacement Planting(Y/N)	Comments
Crown Lift northern section of canopy to 4m	1	Low	NA	To provide additional clearance to facilitate construction. Balance crown
Total		Low		

*This is a preliminary visual appraisal based upon the opinion of the author having inspected the trees in the context of their current surroundings. – None (no change or beneficial impact) Negligible or indiscernible difference to treed landscape; Low – Noticeable but mitigated by retention of other landscape trees and features; Medium – Obvious but temporary alteration to the treed landscape; High – Obvious and permanent alteration to the landscape.

Visual receptors include the public or community at large, residents, visitors or other groups of viewers together with the visual amenity of potentially affected people.

Specifications for recommended tree works:

General

All work is to conform to BS 3998:1989 'Tree Work' (with amendments) and with current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover, equipment and PPE. All works and processes are to comply with all relevant Health and Safety legislation.

1. Crown reduction will include reducing the height and spread of a tree's canopy (branching structure) whilst retaining the tree's natural tree form (species determined). The amount of reduction will be referred to as a percentage of the whole (canopy)

combined with guidance on metre length e.g. 20% (upto 2m) for a 10m high canopy (excludes the ground clearance). Crown reduction work will be undertaken for a specific purpose which may include containing tree growth in a given location or reducing wind purchase and stress.

1.1 Part reduction include pruning back from structures or boundaries and which is normally applied to no more than two sides of a tree's canopy. The amount of pruning is specified in metres. The result form will be even and provide a framework for re-growth in an even form. The extent of pruning will not impinge upon tree condition and seek to preserve so far as possible, the natural outline of the tree, which is species determined.

2. Crown Cleaning involves the removal of all dead wood small and large diameter, stubs and broken branches. Some small, densely arranged shoots (including epicormic shoots) will be thinned out or removed as recommended.

3. Crown lifting includes the removal of the lowest lateral branches and shoots, (which would not result in irrevocable tree injury), to a specific height above ground level measured in metres.

4. Felling involves the careful removal of a tree to ground level (or other specified height), either in sections or in one unit (straight felling). The method of felling will be suited to the constraints of the site and judged by the competent operator undertaking the task.

2.3 As a consequence of my assessment above, I believe the visual impact of the scheme to be negligible in the context of trees and their sustainable contribution to the landscape and local amenity.

2.4 It will be necessary for all tree work to conform to BS 3998:1989 'Tree Work' (with amendments) and to current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor with appropriate equipment and PPE and who has the appropriate experience and insurance cover. Commencement of all or some of the proposed works may be subject to written authorisation from the Local Planning Authority (LPA) should planning consent be obtained. We strongly advise that authorisation for any tree works is obtained from the LPA prior to commencement.

2.5 In addition, prior to the commencement of any tree works, an ecological assessment of specific trees may be required to ascertain whether protected species (e.g. nesting birds, bats, badgers and invertebrates etc) may be affected.

2.6 Specific Comments on Tree Stock in Relation to Scheme (Impact of scheme on trees)

2.6.1 The only tree within influence of the proposals is a mature specimen of Deodar Cedar. The tree is in good condition with only minor defects including deadwood and a number of crossing branches. The tree has reached maturity and I expect that any future increase in size will be slow The tree has been lifted in the past and cut back from the property opposite the site (3 Cedar Road) and the wound occlusion is good.

2.6.2 The principal arboricultural implication of the scheme is the construction of the single storey extension with the RPA of the tree. A low invasive foundation design, encompassing either a pad and beam or small bore pile foundation will limit any adverse impact of the scheme. The land levels are conducive with such a design and therefore do not require damaging excavation with the rooting area of the tree. The piles or pads can be position so that they avoid significant roots and cater levered if necessary. This process will be supervised by the appointed arboriculturalist.

2.6.3 The relationship between trees, their growth and living space is a common cause for conflicts, through excess shading, dropping of debris such as leaves and fruits and the mere size of trees can cause concern. In this current proposal, the orientation of the living space and windows mean that no direct shading will occur. Gutter guards will be employed to prevent needle build-up in the drainage system and the sky light design will allow for cleaning from within the building.

2.6.4 Light and tolerable pruning works are proposed to raise the canopy and cut it back to previous reduction points. Due to the maturity of this example and the slow growth rate of the species, I do not expect that the resulting regrowth will cause conflict with the extension or result in post development pressure. Owing to the fact the canopy has been lifted and cut back on the opposite side, the recommended works will serve to help balance the crown and will not affect the amenity value. On this basis, there seems no reason to expect undue or irresistible pressure to be placed upon retained trees.

3.0 Tree Protection Measures

General

3.1 A tree's BS root protection area (RPA) is based upon a radius measurement taken from the trunk centre and is included with reference to Table 2 of the BS (See **Appendix 1**). Professional arboricultural judgement may identify modifications to the morphology of an RPA. Any work within a tree's RPA will be subject to professional advice and the guidance set out in this report, particularly where construction is required within this area but beyond the position of fixed tree protection fencing.

3.2 Effective tree protection will be afforded subject to following a logical sequence of events, which **will follow a pre-commencement site meeting** (see 4.0). Invitees will include LPA representatives and the site agents and any specialist supervisors:

('S' refers to the stage in order)

S1 Undertake any agreed and or necessary tree works.

S2 Erect protective fencing and install ground protection/site huts

S3 Carry out ground works including excavations for foundations and services

S4 Erect scaffolding and complete construction works

S6 Remove protective fencing

3.3 The protection fencing will be erected in the position indicated on the Tree Protection Plan (TPP) at **Appendix 2**.

3.4 The type of fencing and its recommended specification is attached at **Appendix 2** also. In this case both, hoarding or fixed Heras fencing will be effective.

3.5 The protection fencing will remain in position for the duration of the construction phases, including the removal of the existing structures and land preparation. Clear signs will be attached to the fencing once erected – suggested wording will be **'Protected Trees – No Access and Do Note Move this Fence'**.

Fig.1 Example of site signage (Tree protection)

It is possible to increase tree protection during construction by positioning tree protection in stages and agreeing that particular construction processes can be brought forward or delayed in the development period. For example, the hard standing areas may be constructed toward the end of the development enabling a higher degree of protection for the maximum amount of time. Where appropriate, the TPP indicates, by colour coding, the position of fencing which will be re-located or removed to provide space for construction at most effective times. Any alteration to the position of fencing will be agreed with the LPA.

3.6 Where, for construction purposes, it is necessary to position tree protection fencing within the RPA of the tree, suitable ground protection will be installed to prevent undue soil/root compaction from pedestrian and/or vehicular traffic. At **Appendix 3** are recommended examples of effective ground protection suited for this location. Included in the Appendix also is a diagrammatic indication of how ground protection or hard surfacing offers effective root/soil protection. The type of ground protection will be suitable for the type of proposed traffic e.g. scaffold boards over compressible material will be suitable for pedestrian and light machinery such as wheel barrows but polyethylene or steel ground plates will be

used for heavier machinery and temporary re-enforced concrete may be suitable by agreement.

3.7 Hand excavations, which are required and agreed to occur within the RPA of the tree and may encounter roots. Although soil excavation near trees and root pruning is outlined in **Appendix 5**, specifically in this case however the treatment of roots will be undertaken in the following ways:

i) Clearly mark out the area for hand dig (using biodegradable marker paint) (see TPP)
ii) Use hand tools (forks and spades) to remove the spoil and deposit beyond RPA.
iii) Identify roots to be retained by brushing or the use of compressed air
iv) Roots <25mm Ø will be pruned using sharp pruning tools. Roots will be pruned back to a side shoot or suitable position, ensuring the exposed face is kept to a minimum.
v) Roots >25mm Ø will be retained (unless pruning is agreed) by specific construction design. Retention of roots 50mm Ø or more will be by the use of void-formers.

4.0 Underground Services & Foundations

4.1 The proposed scheme can make use of some existing services (e.g. main drainage and electricity). There is no requirement for new excavations in the vicinity of retained trees at this stage.

4.2 The foundations of the structures located within the BS RPA of tree No 1 and will be constructed by adopting one of the following methods (subject to confirmation by the consulting engineers):

Pile and beam foundation with 200mm piles at 2.5m centres
Raft (slab) foundations

Prior to installing foundations, any overhanging branches will be pruned back to permit the safe of the use of piling rig. The power unit of the piling rig will be located away from the tree and its protection. A granular fill material will be used, over a geotextile fabric to temporarily dissipate load exerted by the piling rig.

5.0 Soil Grade Level Changes

5.1 There are no significant changes proposed to soil levels (existing grade level), within the RPA of any retained tree. As such, no specific instructions are required to address grade changes and tree preservation.

6.0 Site Supervision - Arboricultural Specialist

6.1 It is important to recognize that the Local Planning Authority Officers (Enforcement Departments) have stringent powers to serve a **Temporary Stop Notice** through recent changes in the legislation governing planning and development. Circular 02/2005 (see Note 2). It is therefore important that works, which may impact upon trees and amenity, are suitably controlled by competent personnel. Identified below are details of a site monitoring process designed to minimize potential risks to retained trees on or off site.

6.2 A **pre-commencement** site meeting, involving invited representatives from the developer, contractors and engineers (as appropriate) and relevant LPA officers, will be undertaken to establish the principal timings and actions.

6.3 So as to ensure that the tree protection measures are implemented, an arboricultural specialist will be appointed to record the condition of the trees to be retained and the position and type of tree protection erected and or installed. The specialist will make a record of visits and which will be retained by the contractor/developer and or left on site for inspection (see **Appendix 4**).

6.4 Key times for site supervision include:

1. Completion of agreed/necessary tree works
2. Erection of tree protection fencing
3. Installation of ground protection
4. Works within RPA's of retained trees
5. Landscaping

NOTE: THE APPOINTED ARBORICULTURAL EXPERT IS TO BE CONSULTED BEFORE ANY WORK, EITHER SCHEDULED OR UNSCHEDULED, IS UNDERTAKEN WITHIN THE ROOT PROTECTION AREAS OF ANY RETAINED TREE. FAILURE TO DO SO MAY LEAD TO ENFORCEMENT ACTION.

6.5 Site monitoring will be at regular intervals, and below is a recommended programme of arboricultural supervision. (This programme may alter dependant upon site circumstances or by agreement.)

Stage	***Action***	***Arboricultural Supervisor (AS) (Required – Y/N)***	***Notes***
1	*Pre-commencement meeting*	*Y*	*LPA, Site Agent(SA) and demolition contractor to attend*
2	*Tree works*	*Y*	*Following completion of tree works*
3	*Installation of Tree protective fencing and ground protection*	*Y*	*PRIOR to demolition works*
4	*Construction Phase for foundations*	*Y*	*At agreed intervals*

7.0 General Site Care

7.1 No fires will be lit on site.

7.2 No access will be permitted to within the fenced or otherwise protected areas (unless for site accommodation or Authorised agreement) at any stage during construction.

7.3 No materials, equipment or debris will be stored within the fenced areas unless agreed with the arboricultural supervisor.

7.4 Areas for mixing are to be located beyond RPAs of trees and contained to prevent leaching into the soil.

7.4 A copy of this report and the Tree Protection Plan is to remain on site at all times.

Note 1. RPA to be assessed by an arboriculturalist. BS 5837:2005 'Trees in Relation to Construction - Recommendations' paras. 5.2.4 and 11.1.1.

Re-building of existing structures located within the protection distances, such as retaining walls, may require soil excavation and root treatment.

Note 2. The Circular 02/2005 gives guidance on the temporary stop notice provisions in Part 4 of the Planning and Compulsory Purchase Act 2004 which inserted sections 171E to 171H to the Town and Country Planning Act 1990.

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APPENDIX 1

ACS Consulting (London)
Tel: 020 8687 1214

Tree Survey Schedule

Site:2 High Cedar Drive , SW20

Date: 29th June 2010

Surveyor:E. Buckton
Ref:ts1/highcedardrive

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
T1	Cedar (C. deodara)	14	9 9 8 9	2	Mature	950	12	11.4	Normal	Good	High	B	1,2	20-40	Rubbing branches and wounds Deadwood (small diameter)

Notes:

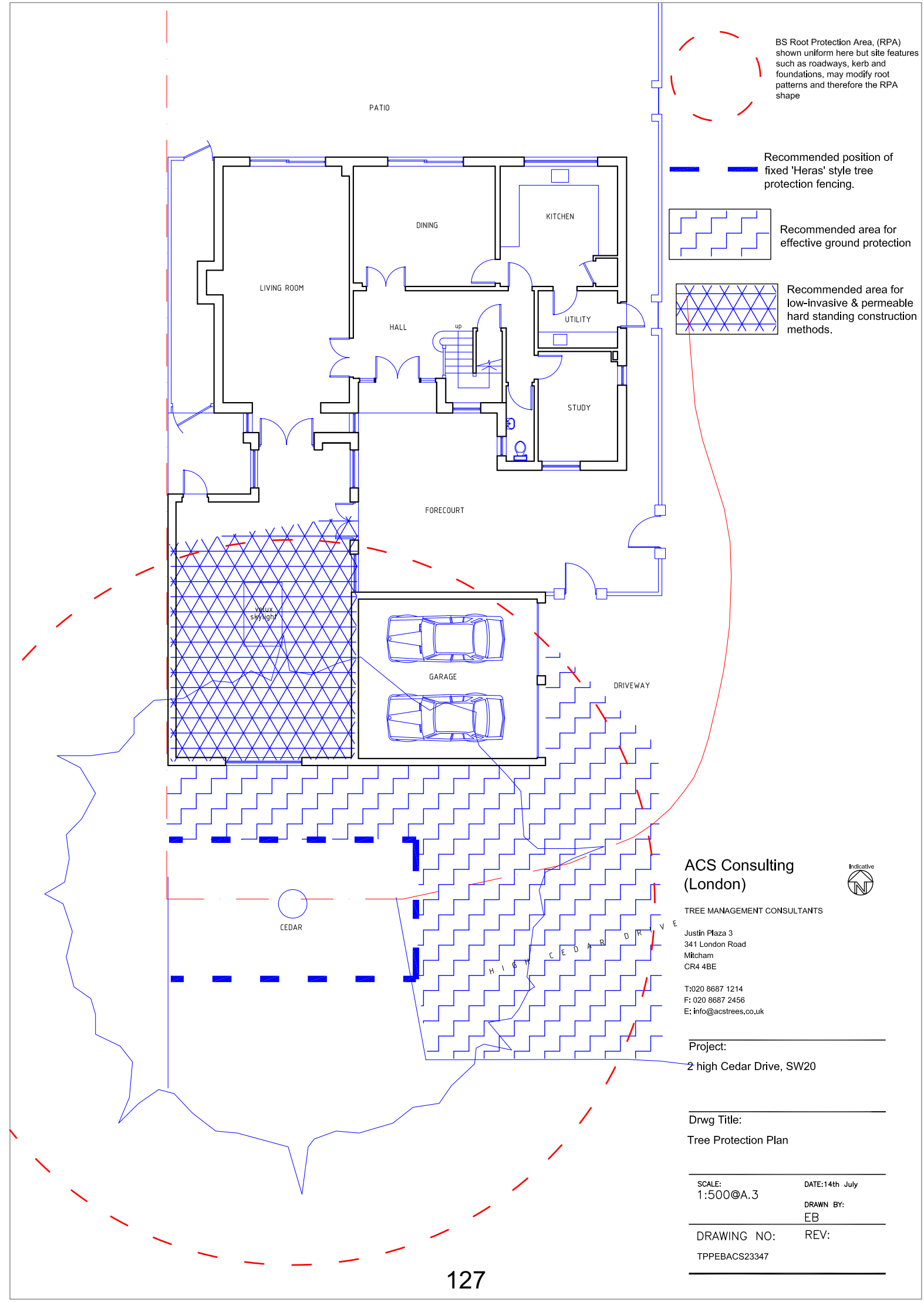
1. Height describes the approximate height of the tree in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is shown above on each of the four compass points (i.e. N, E, S, W) clockwise.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level.
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level or just above ground level for multi stemmed trees. The diameter may be estimated (e), where access is restricted. An average (a) may be taken for tree groups. A full inspection is always recommended.
5. Protection Multiplier is 12 for single stemmed and 10 for multi-stemmed trees.
6. Protection Radius is a radial distance measured from the trunk centre and is used to calculate the BS RPA.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present or suspected.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat. refers to British Standard 5837:2005 Table 1 category and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'R' - Remove or very poor quality.
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservation/ecological, historic and commemorative.
12. Useful Life is the tree's estimated remaining effective contribution in years.

Table 1 — Cascade chart for tree quality assessment

TREES FOR REMOVAL		
Category and definition	**Criteria**	**Identification on plan**
Category R Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	• 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 R category trees (i.e. 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 (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).	DARK RED

TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	**Criteria — Subcategories**			**Identification on plan**
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**	
Category A **Those of high quality and value:** in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B **Those of moderate quality and value:** those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C **Those of low quality and value:** currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

APPENDIX 2



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TREE MANAGEMENT CONSULTANTS

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Indicative

Project:

2 high Cedar Drive, SW20

Drwg Title:

Tree Protection Plan

SCALE:
1:500@A.3

DATE:14th July

DRAWN BY:
EB

DRAWING NO:
TPPEBACS23347

REV:

Tree Protection Fencing

Specifications (specifically identified by outline box)

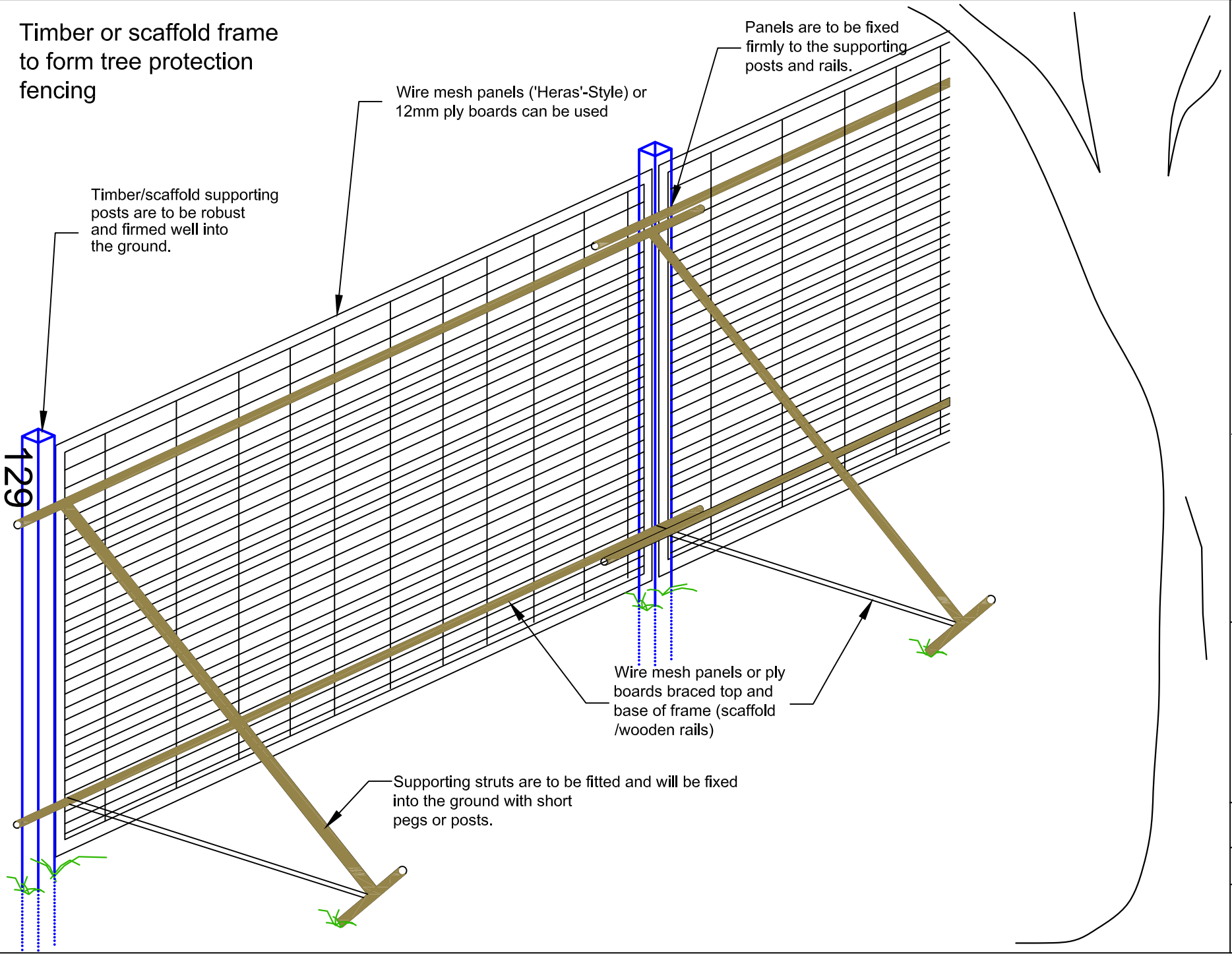
2.4m Hoarding

3.0m 100 X 100mm square wooden posts
3 X 38 X 87mm wooden rails affixed to posts
2.4m X 1200 outside grade ply panels (12mm) affixed to rails.
50 X 100mm angled supporting struts affixed internally (quantity as required).

(Supporting posts fixed into position using concrete. All post holes to be hand excavated. Post holes to be no larger than 300 X 300mm.)

Heras Fencing

Heras fencing describes the 2.4m galvanised steel mesh panelled fencing normally supplied with pre-cast concrete bases. **Bases are to be replaced with a fixed frame to which panels are clamped/ firmly fixed.** For extra stability, scaffold poles/4x4 wooden posts are to be firmed into the ground as supporting posts and supporting struts are to be attached at a 45 degree angle on the 'tree-side' of the fencing and fixed into the ground. Supporting posts will be braced at the top and base for added support.



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Title:

Example of Tree Protection Fencing

Note:

Steel scaffold or timber can be used to support boards or wire mesh panels

Date: Jan. 07

Ref:

Note: Sketch Plan Only - Not to Scale

Example 1.
Heras Fencing with supporting by a scaffold framework fixed (tree side) for extra support.

Example 2.
Hoarding-style fencing with robust wooden posts with supports to ensure minimal movement.

Tree Management Consultants
T: 020 8687 1214
www.treebiz.co.uk

APPENDIX 3

GreenTek
GUARANTEED TO DO WHAT IT SAYS -OR YOUR MONEY BACK!
Tel: 0113 267 6000
Fax: 0113 267 2222

Example of ground protection, which is best laid over 50mm of a compressible material such as woodchips or sharp sand for optimum tree root protection.

WALK TOP - Ideal for car parks and walk ways.

Ground plates can be useful for dissipating loads, at sensitive construction locations.

DOUBLE LINK JOINERS - lock Ground-Guards into one large working platform.

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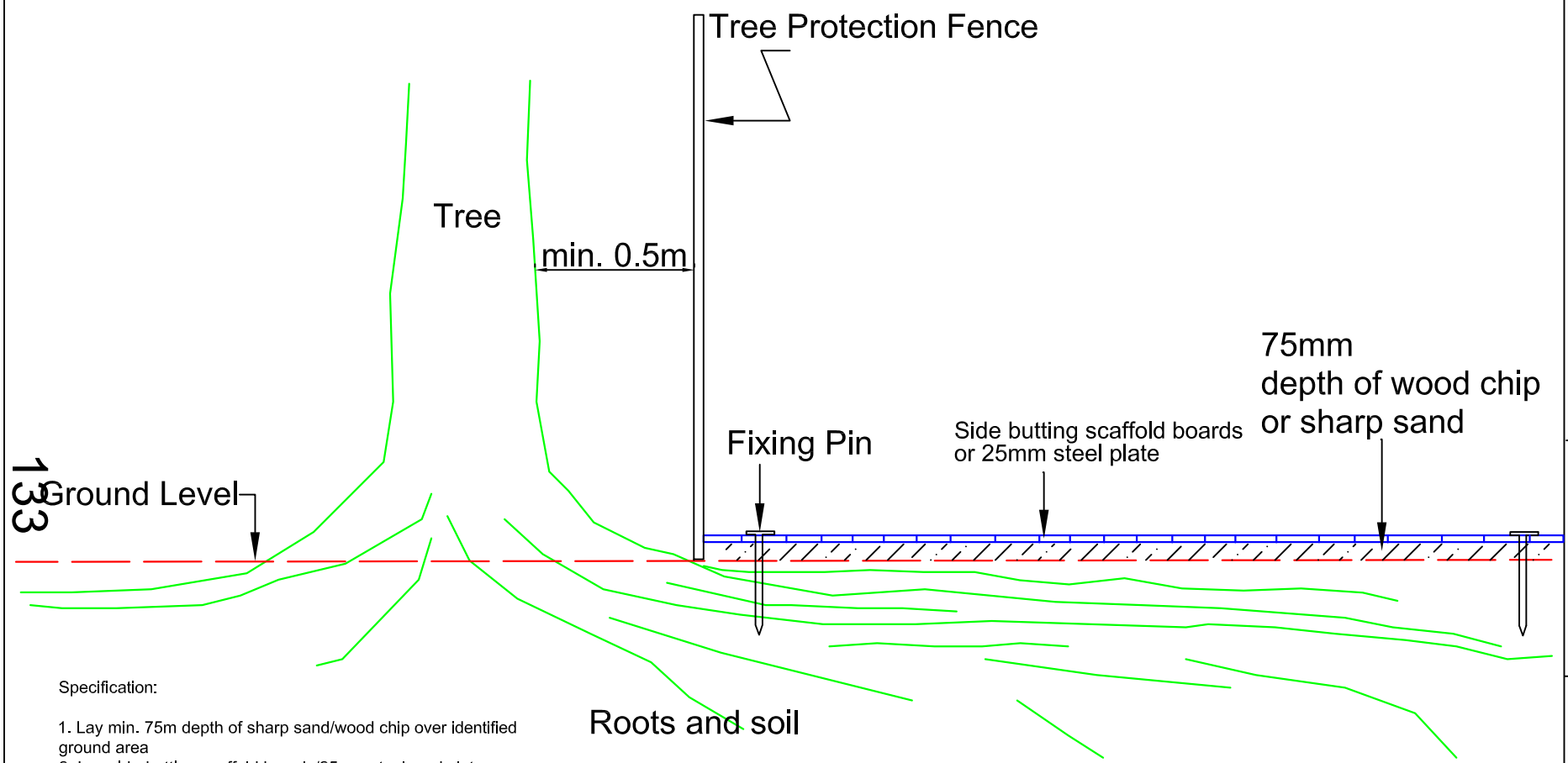
www.treebiz.co.uk



Specification:

1. Lay min. 75m depth of sharp sand/wood chip over identified ground area
2. Lay side-butting scaffold boards/25mm steel road plates over sand/wood chip
3. Fix ground protection cover into place with pins/pegs
4. Erect protection fence (where feasible).
5. Erected scaffolding can act as protection fencing.
6. Remove ground protection upon completion/landscaping only.

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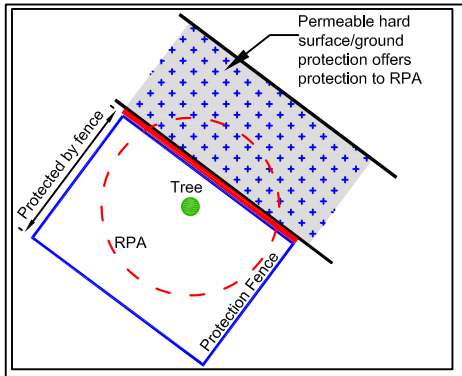
Ground Protection Example

Date:

Ref:

Note: Sketch Plan Only - Not to Scale
Not all site features shown



Protected tree

The red line denotes the position of lateral and verticle protection offered by robust fencing and properly installed low-invasive, permeable hard surfacing or ground protection, respectively.

Protection Fence

Tree tunk centre

Lateral or horizontal protection is offered to the tree by the erection of robust fencing.

The tree's rooting area beneath a low-invavise and porous hard-standing surface (or ground protection), is offered verticle protection by the surface itself.

134

y mtrs

x mtrs

Ground level

Rooting zone in need of protection

Area protected by fence

Area protected by surface

Note:

In this example, the BS RPA radius of the tree is calculated at x mtrs. A proportion (y mtrs), of the RPA, is covered by new permeable hard surface (or ground protection). Provided that hard standing is constructed in accordace with the principles of BS 5837:2005 para 11.8.1 and having been designed with specialist advice from an engineer and arboriculturalist, **the RPA of the tree is not reduced**.

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Title:

Tree/Root Protected Area

Date: Jan 08

Ref:

Note: Sketch Plan Only - Not to Scale
Not all site features shown

APPENDIX 4

ACS Consulting
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Arboricultural Site Supervision

ACS CONSULTING

Site: 1 Hyde Park, London
Inspected By: H .Applevard
Client: RPC
Site Agent: Shaun Clark

Date of Inspection: 15/02/2007
Time of Inspection: 3:30pm

Tree Protective Fencing

Tree protection in correct location

Comments/Action
No action at this time

Effective fencing in position

Agreed Construction Exclusion Zone

No debris within construction exclusion zone

Comments/Action
No action at this time

Amendments to Documentation Required

No amendments required

Comments/Action
Building works outside scope of Method Statement

Fencing with signs

Remedial Works

General Comments

Tree protection and on-site supervsion effective and understood.

APPENDIX 5

Hand Digging In the Vicinity of Trees

Method Statement

1.0 Introduction

1.1 Within and adjacent to areas of construction, trees valued as important landscape assets may exist. It is possible such trees are protected by legislation in the form of a Tree Preservation Order, conservation area or by planning conditions. In either case, disregard of the tree's well being by causing damage to the roots, trunk or branches may be an offence. Consent from the Local Planning Authority may be required to undertake works that may have an impact on the tree prior to commencement.

1.2 Whilst the trunk and branches of a tree can be seen and therefore more easily avoided, tree roots are concealed beneath the ground. Their hidden nature can lead to inadvertent damage from construction processes. Dependant upon the extent of any root damage, the whole tree can be adversely affected. It is for this reason that it is necessary to ensure adequate precautions are adopted when considering construction in the vicinity of trees.

1.3 Hand digging rather than excavation by mechanical means has proved to be an effective way of limiting the effects of construction on nearby trees. It is often considered impractical, time consuming and costly to excavate by hand when machinery exists specifically for the purpose of digging. However, avoidance of unsustainable damage being caused to important trees through hand digging may far out weigh subsequent costs associated with legal penalties and loss of amenity.

1.4 Below are detailed the basic principles to acknowledge in respect of tree roots and the practical steps that can be taken to effectively avoid causing unsustainable damage to trees.

1.5 It is assumed that all operations are commenced only AFTER having undertaken and recorded appropriate risk assessments in line with current and relevant Health & Safety legislation, common industry practice and guidance.

2.0 Tree/Root Damage – How it can occur

2.1 The majority of tree roots exist in the upper **600mm to 1000mm** of soil. Excavations of the soil in the vicinity of trees, to this depth, can be harmful to tree roots and consequently the tree.

2.2 Tree root systems comprise two main root types, those that **anchor** the tree in the ground and those that **supply** the tree with water and elements. Roots that support the tree are woody and those that are involved with the **conduction** of water and nutrients are non-woody or fibrous. Both types of roots can be damaged directly by severing or crushing. Fibrous roots can die from asphyxiation by **soil compaction** and/or soil contamination. Trees differ in their tolerance of root loss or disturbance, according to their species and condition or both.

2.3 The larger the root damaged, the greater the impact on the tree.

3.0 Hand Digging in the Vicinity of Trees – The Process

3.1 First it is necessary to consider all available options to construct beyond the likely range of influence on the tree's condition – normally beyond 1m from the tree's trunk and within an area below the tree's canopy or by referring to Table 1 of BS 5837:2005 'Trees in Relation to Construction. Recommendations'. This area is called the Precautionary Zone or Root Protection Area. **When it is established that no options are available other than to construct within this zone, hand digging will be needed.** When considering hand digging, an appointed specialist supervisor/consultant will be able to advise during construction and must be on site at the commencement of works.

3.2 Before beginning to dig, mark out the precautionary area with ground marker paint, clearly on the ground. This will identify the area within which hand digging must take place. **For safety, ensure there are no underground services that may cause injury if damaged**. Any existing protection fencing is to be located to the nearest position of construction and fixed in place, between the tree and area of construction. It will be clearly visible to operators thereafter where hand digging will need to be undertaken. The use of mechanical digging equipment to remove the top surface layer (50-100mm) is to be avoided and hand tools are required for this exercise too.

3.3 When hand digging, using typical hand tools, carefully work around roots, retaining as many as possible. Using a brush will expose roots cleanly before deciding whether it will be necessary to prune. Care must be taken not to damage roots including the roots' bark.

3.4 Retain all roots with a diameter greater than 25mm. Where such roots must be removed, after consulting a trained arboriculturalist (e.g. Local Authority Tree Officer or the appointed Consultant), these roots must be pruned with sharp cutting tools such as a handsaw, secateurs or pruners. The cut must leave the smallest wound possible and the root must be left as long as practicably possible. Roots in excess of 50mm diameter are to be retained and protected by surrounding the root with uncompacted sharp sand, void-formers or other compressible materials.

3.5 Where roots do not exist, e.g. beyond the depth of the rooting area, mechanical excavation should not be considered without specialist supervision.

3.6 All spoil is to be deposited beyond the precautionary zone. Soil build-up can cause roots to die.

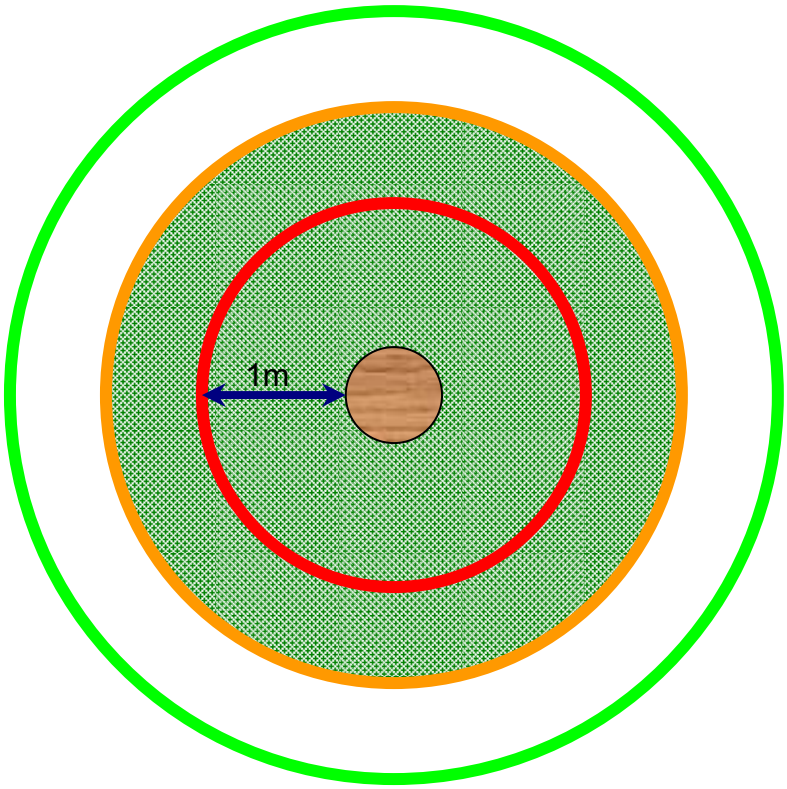
3.7 As soon as practicable, exposed roots are to be covered with loose backfill material such as soil/sand mix to offer immediate protection. When excavating for the introduction of posts, pads or piles, the sides of the pits should be lined with a geotextile material to prevent the potential for lime scorching of small diameter roots.

3.8 Where it is impossible to avoid completing the construction in one day for example, any exposed roots or their cut ends are to be covered with sacking material over night to prevent drying out and to add protection. This is particularly important in winter months, where frost can cause further damage to roots.

3.9 Upon completion of the hand digging, where appropriate protection fences are to be re-located and fixed in their original position.

Attached is an extract from the National Joint Utilities Group publication V4 2007, 'Guidelines for the planning installation and maintenance of utility services in proximity to trees'. In addition Table 2 from BS 5837:2005 'Trees in Relation to Construction. Recommendations' is provided.

Before considering hand digging and determining precautionary zones or root protection areas, specialist arboricultural advice should be sought.



TREE PROTECTION ZONE

Key to Diagram

Trunk of Tree

Spread of canopy or branches

PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with Local Authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.

PRECAUTIONARY ZONE – beneath canopy or branch spread. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with Local Authority Tree Officer if in any doubt.

PERMITTED ZONE – outside of precautionary zone. Excavation works may be undertaken within this zone however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

DAMAGE TO TREES

Tree roots keep a tree healthy and upright. Most roots are found in the top 600mm of soil and often grow out further than the tree's height. The majority of these roots are very fine; even close to a tree few will be thicker than a pencil. Most street tree roots grow under the footway but may also extend under the carriageway. If roots are damaged the tree may suffer irreversible harm and eventually die.

PROTECTING ROOTS - DO'S and DON'TS

There are three designated zones around a tree each of which has its own criteria for working practices.

THE PROHIBITED ZONE

Don't excavate within this zone.

Don't use any form of mechanical plant within this zone

Don't store materials, plant or equipment within this zone.

Don't move plant or vehicles within this zone.

Don't lean materials against, or chain plant to, the trunk.

Do contact the local authority tree officer or owner of the tree if excavation within this zone is unavoidable.

Do protect any exposed roots uncovered within this zone with dry sacking.

Do backfill with a suitable inert granular and top soil material mix as soon as possible on completion of works.

Do notify the local authority tree officer or the tree's owner of any damage.

THE PRECAUTIONARY ZONE

Don't excavate with machinery. Where excavation is unavoidable within this zone excavate only by hand or use trenchless techniques.

Don't cut roots over 25mm in diameter, unless advice has been sought from the local authority tree officer.

Don't repeatedly move / use heavy mechanical plant except on hard standing.

Don't store spoil or building material, including chemicals and fuels, within this zone.

Do prune roots which have to be removed using a sharp tool (e.g. secateurs or handsaw). Make a clean cut and leave as small a wound as possible.

Do backfill the trench with an inert granular material and top soil mix. Compact the backfill with care around the retained roots. On non highway sites backfill only with excavated soil.

Do protect any exposed roots with dry sacking ensuring this is removed before backfilling.

Do notify the local authority tree officer or the tree's owner of any damage.

THE PERMITTED ZONE

Don't cut roots over 25mm in diameter, unless advice has been sought from the local authority tree officer.

Do use caution if it is absolutely necessary to operate mechanical plant within this zone.

Do prune roots which have to be removed using a sharp tool (e.g. secateurs or handsaw). Make a clean cut and leave as small a wound as possible.

Do protect any exposed roots with dry sacking ensuring this is removed before backfilling.

Do notify the local authority tree officer or the tree's owner of any damage.

Table 2 after BS 5837:2005 'Trees in relation to construction-Recommendations'

5.2.2 The RPA should be calculated using Table 2 as an area equivalent to a circle with a radius 12 times the stem diameter for single stem trees and 10 times the basal diameter for trees with more than one stem arising below 1.5m above ground level.

Number of Stems	Calculation
Single stem tree	RPA (m^2)= $\frac{\text{(Stem diameter(mm) @1.5m X 12)}}{1000}$ X 12
Tree with one or more stem arising below 1.5m above ground level	RPA (m^2)= $\frac{\text{(Basal diameter above root flare (mm) X 10)}}{1000}$ X 10
Note: The 12 X multiplier is based on NJUG 10 [9] and published work by Matheny Clark [10]	

5.2.3 The calculated RPA should be capped to 707m^2 e.g. which is equivalent to a circle with a radius of 15m or a square with approximately 26m sides.

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