TREE PROJECTS

PROFESSIONAL & TECHNICAL ARBORICULTURE

REPORT ON TREES AT

48 QUEENS GROVE
LONDON
NW8

For

BB Partnership

Summary

This report describes proposals for the development 48 Queens Grove to form basement and garden basement entailing partial demolition of the building but with retention of the existing façade.

From the arboricultural perspective the scheme is a relatively minor amendment of similar proposal granted permission by Camden under ref 2007/6101/P although amendments have been made to boundary stand-off of the garden basement in accordance with developing policy.

Trees were surveyed at in accordance with BS 5837: 2005 Trees in Relation to Construction and this information is presented in a tree schedule and tree schedule plan at Appendix 2.

Four trees are proposed to be removed that have low amenity value. These are to be replaced. The principle of their removal and replacement was established within the previously consented scheme.

Two significant trees are proposed for retention and the means of their safeguarding is established by discharge of Condition 6 under 2007/6101/P.

No significant or adverse effect on trees or tree amenity is expected to arise from the proposal where tree protection measures and replacement planting are attended to.

Table of Contents

Appendices

1 INTRODUCTION

1.1 **Instruction:** I am instructed by BB Partnership on behalf of clients to advise regarding the significant trees at 48 Queens Grove, London, NW8, in context of proposals to re-develop the property.

1.2 **Qualifications and experience:** I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture, and include a summary in Appendix 1.

1.3 **Documents Provided & Background Information:** BB Partnership provided me with scheme drawings EWA_200 to EWA_209 dated 08/11. The proposal is an amendment of a scheme granted planning permission under London Borough of Camden Reference 2007/6101/P. I provided an arboricultural report for that scheme and the contents of this report are near identical.

1.4 **Scope of this report:** This report is based on the architects drawings and is only concerned with trees within the curtilage of the property. It includes provides its assessment based on an earlier consented scheme, a site visit and the documents provided, listed in 1.3 above.

2 SITE VISIT AND OBSERVATIONS / COLLECTION OF DATA

2.1 **Site visit:** I carried out my initial un-accompanied site visit to prepare a tree schedule on 20th June 2007. I surveyed trees and produced the schedule attached at Appendix 2. All my observations were from ground level without detailed investigations and I estimated all dimensions unless otherwise indicated. The weather at the time of inspection was clear and dry with good visibility. I returned to site in May 2009 and observed no substantial alteration to the situation compared to June 2007.

2.2 **Brief site description:** Queen's Grove is located in the residential and leafy suburbs of St John's Wood, London NW8. Number 48 is on the north eastern corner of the junction of Queen's Grove with St John's Wood Park. There is similar surrounding development, with flats to the north east. The property consists of a detached house set centrally within its plot albeit slightly closer to the north western boundary. Within the walled gardens surrounding three sides of the house, are a variety of shrubs and formal boarders amongst which are a number of broadleaved trees.

2.3 **Identification and location of the trees:** The approximate locations of the significant trees are shown on the tree schedule plan included within Appendix 2. This plan is for illustrative purposes only and it should not be used for directly scaling measurements. All the relevant information on it is contained within this report and the provided documents.

2.4 **Collection of basic data:** I inspected trees and for each I assigned a reference number and then collected information on species, height, diameter, maturity and potential for contribution to amenity in a development context. I have recorded this information in the tree schedule included as Appendix 2 which should be cross referenced to the plan also at Appendix 2. My inspection was of a preliminary nature and did not involve use of instruments, climbing or detailed investigation beyond what was visible from accessible points at ground level.

3 ARBORICULTURAL IMPACTS APPRAISAL

The current proposal is for the partial demolition of the existing property with retention of the front façade, and reconstruction over a newly formed basement extending part way into the rear garden. The basement is to be formed by contiguous piles and following the methodology outlined by Sinclair Johnston and Partners report accompanying the application.

3.1 **Relevant references:** This report draws principally from British Standard 5837: 2005 Trees in relation to Construction.

3.2 **Excavations to form swimming pool, N.E. Corner of Plot:** Work to create garden basement will necessitate the removal of all rear garden vegetation including four trees, T1 to T4. The trees are described below but none are considered significant specimens essential for retention given their category grading as set out within BS5837 (see tree schedule) To facilitate landscaping on completion of works soil over the underground element is proposed.

3.2.1 **Trees T1 and T2** are unknown varieties of Pear. Previously reduced to shape and contain, these trees are largely hidden from public view and provide little in the way of amenity. At the previously reduced height of 7m they are readily replaceable by semi-mature trees available from the nursery stock sector. Categorised as C2

3.2.2 **Tree T3** is a young flowering crab apple which appears to be of relatively recent planting. As with T1 and T2 this tree has no significant amenity value. Categorised as C2.

3.2.3 **Tree T4** is an over mature leaning specimen of the purple leaved Myrobalan Plum. The tree is infected with a root and butt decaying fungus of the genus Ganoderma. This infection foreshortens the trees safe useful life and renders it liable to failure at ground level. Categorised as R grade tree, I would recommend removal of this tree on safety grounds without the proposals laid out.

3.2.4 **Provision of soil and landscaping over underground construction.** High quality landscaping is an important element of a scheme of this nature as it provides a sense of enclosure, offers screening, and generally reflects the high quality environment associated with premium housing. The trees proposed to be removed should be replaced within a scheme of landscaping and I would suggest no less than two good semi-mature trees be planted in landscape beds external to the sub-terranean box. Topsoil laid over the roof slab will provide additional rooting potential post construction.

3.3 **Trees within the remaining south-east and south west gardens.** Of the remaining trees one tree growing close to the house is proposed for removal and two prominent trees proposed for retention.

3.3.1 **Tree T5,** an ornamental crab, is proposed for removal. This is a young tree with small stem planted close to the house. It has grown with distinct a-symmetry due to its planting position and removal is required to facilitate access during the course of work. It is not particularly prominent and any loss would be accounted for within later landscaping. This tree is graded as C2

3.3.2 **Tree T6,** a Golden False Acacia is the most prominent tree within the property, clearly visible from the junction of Queen's Grove with St John's Wood Park. Scheduled for retention this tree has been previously crown reduced. The RPA of this tree has been plotted as a square and adjusted to take account of the assumed limitation to rooting caused by the adjacent boundary wall. A scheme of protection is required for its continued retention.

3.3.3 **Tree T7** a specimen of the purple leaved Myrobalan Plum which is clearly visible from the public realm, graded B2. As with T6, the RPA of this tree has been plotted as a square and adjusted to take account of the assumed limitation to rooting caused by the adjacent boundary wall. Proposed for provision is made for its continued retention.

4 TREE PROTECTION METHOD STATEMENT & TREE PROTECTION PLAN

4.1 A tree protection plan has been drafted and is presented at Appendix 5. It shows two forms of protection for each tree:

- Tree Protective Barrier: Comprising heras panels wire fixed to back braced scaffold framework in accordance with BS 5837 Fig 2. (Appendix 2)

- Ground protection by installation of interlocking Durabase panels. (Appendix 3)

4.2 It is considered pragmatic to facilitate construction access and site circulation by use of interlocking Durabase panels. These panels are very heavy (aprox 500kg each) and interlock to provide a monolithic surface capable of protecting ground beneath, bridging level irregularities and can withstand very heavy loading. Full details at Appendix 3.

4.3 Whilst the tree protection measures show a plan and details of what installations are required, this needs to be supplemented by a methodology. Given the bulk of activity linked to the construction is to be accessed from the side via St John's Wood Park there is no foreseeable conflict with the bulk material movements and access by large equipment commensurate with a scheme of this nature. It is desirable to separate pedestrian access from vehicle plant and delivery access and this is shown applied in the tree protection plan, For these reasons the tree protection method statement need only be brief:

4.4 Site Clearance and Site Set Up Arrangements:

- Pre-commencement Site Meeting: A pre-start meeting is to be held on site to review the approved scheme, construction sequence and method and integrating this to tree protection needs.
- Any conflicts identified will need to be resolved with the emphasis being on ensuring tree protection is not compromised.
- Site clearance is to proceed with all shrubberies and trees scheduled for removal being cleared from site to ground level. No machinery is to enter RPA of T6 or T7.
- Durabase ground protection is to be installed and locked into position. (panel arrangement has been prepared at scale in CAD) and levelled as necessary on baulk timbers.
- Site Cabin(s) are to be installed as per the tree protection plan, and levelled as necessary on baulk timbers.
- Tree Protective barrier is to be installed with reference to the tree protection plan and the attached drawing at Appendix 1, integrated to Durabase and Site Cabins previously installed. Barrier should to close off and exclude remaining tree protection areas for the duration of work.

4.5 Maintaining Tree Protection for Duration of Work:

- All tree protection measures will be maintained for the full duration of work and only removed just prior to commencement of prior approved landscaping details.
- In event of tree related emergencies Tree Projects must be contacted in the first instance to advise of appropriate steps.
- The site manager will assume responsibility for maintaining tree protection measures including overseeing activity of sub-contractors.

5 CONCLUSIONS

5.1 Trees T1, T2, T3, T4 and T5 variously contribute little to amenity and should not be considered and impediment to an otherwise well designed scheme. T4 is infected with a fungal decay organism that in consequence requires removal of the tree.

5.2 Allowance should be made for provision of at least 750mm of topsoil to BS 3882 over the underground element of the proposal.

5.3 A scheme of re-landscaping post construction should allow for two semi-mature trees to the north east garden and replacement tree along the St John's Wood Park frontage to replace previously removed trees.

5.4 Tree protective barrier to BS 5837 2005 and tree root ground protection should be provided for trees T6 and T7 prior to the commencement of works on site.

6 OTHER CONSIDERATIONS

6.1 **Trees subject to statutory controls:** T 6 and T7 are protected by Tree Preservation Order and the remainder of trees by the St John's Wood Conservation Area Designation. It will be necessary to consult the council before any pruning works other than certain exemptions which include implementing works as a part of acting on a planning permission. The works specified for trees to be retained within the tree schedule are necessary for reasonable management and should be acceptable to the council. However, tree owners should appreciate that they may take an alternative point of view and have the option to refuse consent.

5.2 **Implementation of works:** Any tree works should be carried out to BS 3998 *Recommendations for Tree Work* as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from Ampfield House, Romsey, Hants, SO51 9PA - Telephone 01794 368717; website www.trees.org.uk/contractors.htm.

5.3 **Statutory wildlife obligations:** The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provides statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.

Nick Bentley
HNDH, RFS Cert Arb
October 2011

Appendix 1

Brief qualifications and experience of Nick Bentley

1. **Qualifications:** HNDH Landscape Design & Horticultural Technology, Credit, Askham Bryan College, York, 1989. RFS Cert Arb 1991 Credit. Professional Tree Inspection, 2006.

2. **Practical experience:** As gardener, arborist and arboriculturist. Royal Botanic Gardens Kew (Wakehurst Place) as climbing tree surgeon. 15 years experience Local Government as an Arboricultural Officer: Leicester City Council, Wycombe District Council and latterly 8 years at the Royal Borough of Kensington and Chelsea handling all aspects of pubic sector tree management and procedures relating to the Town and Country Planning Act 1990 i.e. Development Control, public inquiries and informal hearings, tree preservation procedures and all aspects of control and enforcement thereof. Following a brief spell of 18 months as contracts manager of Arboricultural Association tree surgery contracting company I have been self employed from 2004 as a specialist tree planting contractor and, consulting arboriculturist for public and private clients and now continue to trade as Tree Projects Ltd.

3. **Continuing professional development:** Member of the Arboricultural Association and Royal Forestry Society and Associate of the London Tree Officers Association. Seminars/ Workshops: 2009: Veteran Tree Management, ISA; Trees and Climate Change, EtaLog, 2008: The Underground Movement, Barcham/ Bartlett seminar; CAVAT in practice training seminar with Chris Neilan/ Tim Moya Assoc; 2007: the Business of Arboricultural Consultancy, Arb Association; Through the Trees to Development, AAIS; 2006; Introducing BS 5837: 2005, Arb Association; Report Writing, Arb Association; Elite Bio-Mechanics, Mattheck/ Symbiosis Consulting; The Future of Tree Risk Management,

4. **Commissions undertaken:**

    - Planning consultancy to British Standard 5837 Trees in Relation to Construction; tree surveys and design advice for new builds, underground and above ground extensions, including method statements and tree protection plans.
    - Tree condition surveys and recommendations including data handling through Ezytreev and Confirm.
    - Providing advice on tree preservation matters, tree work applications and sub-contracting tree surgery operations.
    - Tree supply and planting.
    - Tree root investigations by trench formation and pile spotting by use of non percussive air spade and air vacuum excavation techniques

May 2009

Appendix 2 TREE SCHEDULE. EXPLANATORY NOTES AND PLAN

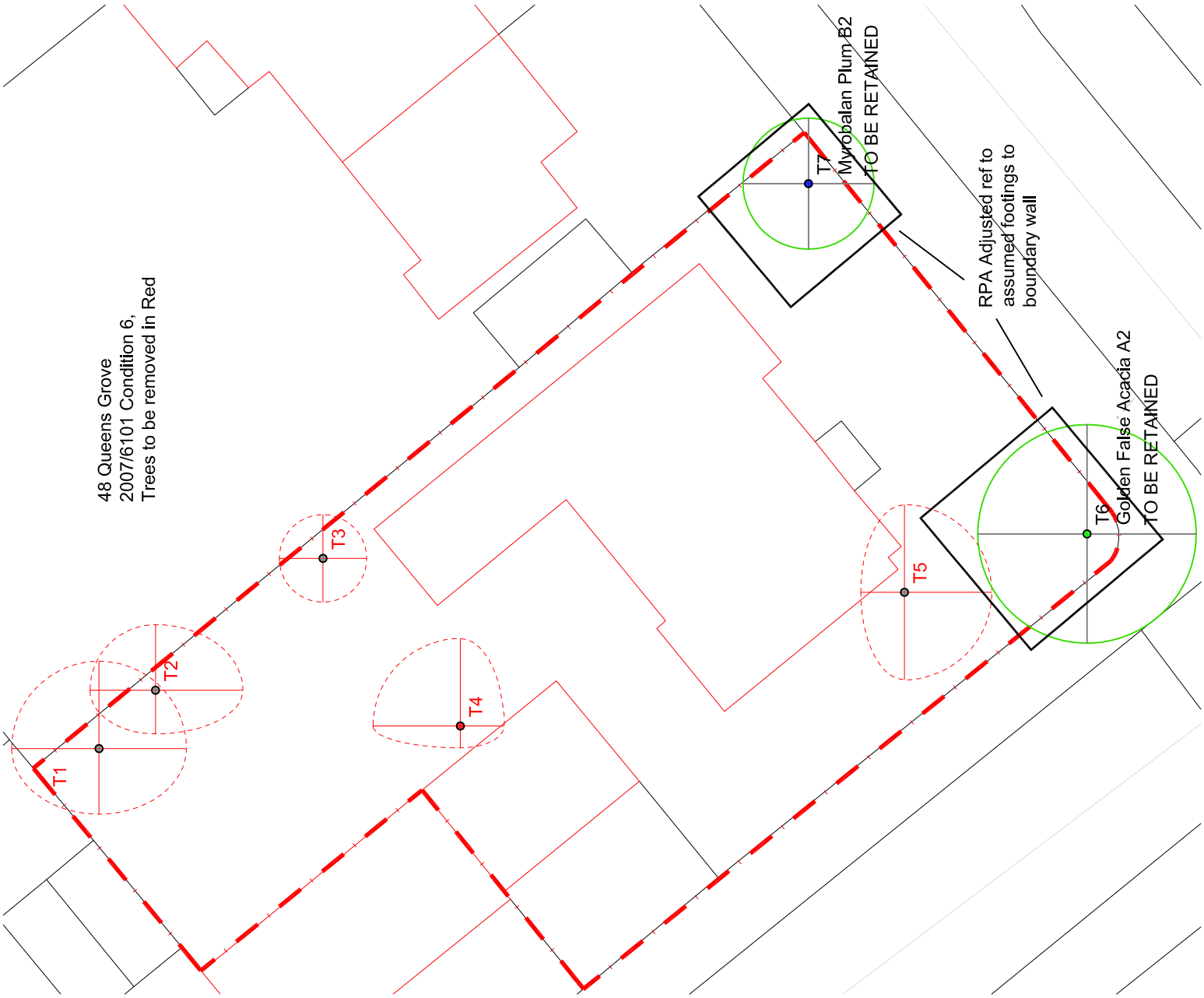
Tag	Name	Latin	DBH	Stem Cnt	Height	Low C/Hgt	Nth	East	Sth	West	Age	Life Exp	Phys. Cond	Struct. Cond	BS Cat.	Comments	Work Required: * Routine work ** With Planning. Approval	RPA m2	RPA square
1	Pear	Pyrus domestica	270	1	7	3	4	4	4	3	M	20-40	Good	Good	C2	Minor dead wood	* Crown Clean ** Fell and replant	33.0	5.7
2	Pear	Pyrus domestica	300	1	10	3	3	3	4	2	M	20-40	Good	Good	C2	Previous reduction at 7m	* Crown clean and reduce to previous. ** Fell and replant	40.7	6.4
3	Flowering Crab Apple	MaLus cv.	220	1	6	3	2	2	2	2	Y	20-40	Good	Good	C2	DBH measured at 200mm agl	* Formative Prune ** Fell and replant	21.9	4.7
4	Myrobalan Plum	Prunus ceracifera Pissardii	340	1	9	2	4	4	2	1	OM	5~10	Fair	Poor	R	Pronouinced easterly lean and Ganoderma infection	* Fell and replant	52.3	7.2
5	Flowering Crab Apple	MaLus cv.	180	1	6	1.8	2	4	4	4	YM	20-40	Good	Good	C2	Trim to clear house by 1m	* Formative Prune ** Fell and replant	14.7	3.8
6	Golden False Acacia	Robinia pseudoacacia Frisia	370	1	13	2.5	5	5	5	5	Y	20-40	Good	Good	A2	Previously reduced. Dead wood within crown	*Crown clean and crown reduce by 20% ** Install Scheme of protection.	61.9	7.9
7	Myrobalan Plum	Prunus ceracifera Pissardii	310	1	7	2	3	3	3	3	M	10~20	Fair	Fair	B2	Thin crown	*Crown clean and crown reduce by 20% ** Install Scheme of protection.	43.5	6.6

- **Tree reference (tag) number:** Individual trees are referred to by a 'T' prefix to a number, i.e. T1, T2 etc. Collections or distinct groups of trees may be assigned a G prefix to denote presence of a 'group'. Prefixes 'K' (young trees) and 'S' (shrubs) and 'H' (Hedge) show further arboricultural features
- **Name/ Latin:** Species identification is based on visual observations and the common English name of what the tree appeared to be is listed first, with the botanical name after. The botanical name is followed by the abbreviation spp if only the genus is known.
- **Measurements/estimates:** Stem DBH and Height dimensions are taken by tape or laser unless indicated. .
- **Stem Diameter:** This figure is taken at 1.5m above adjacent higher ground level using a specially calibrated 'diameter tape' and is recorded in millimetres. Multi-stemmed trees are measured below where the trunk forks. If two or more stems are present breaking from ground level, each stem is measured and relative locations described where possible using cardinal points. If taken lower than 1.5m for practical purposes the reading height is given.
- **Height:** Height given approximately to the nearest metre, May be derived from compensating lines of sight.
- **Stem Cnt:** number of stems observed (calculations to establish RPA difference between single and multi-stemmed trees)
- **Low crown Height:** the generalised height of the crown above ground level, usually used to indicate access limitations, considering where branches arise from the trunk and the height of branch ends.
- **Branch Spread:** Crown spread is measured and given to the nearest metre or half metre from the face of the trunk to the tips of the live lateral branches, measured towards the cardinal points. Often measured by pacing.
- **Age Class:** Y=young, EM=Early Mature, MM=Middle Mature, M=Mature, OM=Over Mature, V=Veteran. Age is estimated from visual indicators and experience and it should only be taken as a provisional guide. Age estimates often need to be modified based on further information such as historical records or local knowledge.
- **Life Expectancy:** the anticipated safe useful life expectancy of the tree in years. (< 5, 5-10, 10-20, 20-40, more than 40) a tree with less than 5 years safe useful life will ordinarily need to be felled unless retained for habitat purposes within an excluded area.
- **Physiological condition:** An assessment of the general health of a tree considering vigour, extension growth, crown density and presence of pathogens.
- **Structural condition:** An assessment of the rooting integrity (as judged by visual indicators) and physical condition of the above ground parts of a tree and presence of decay and pathogens. Notes of past pruning history.
- **Category Grading:** the grade of the tree utilising the cascade chart for tree assessment within BS 5837:2005 Trees in Relation to Construction. Trees are graded on arboricultural, landscape and cultural/ conservation values and in simplified definition are described:

    - **Category R; 'Those in such a condition that any existing value would be lost within 10 years and which, in the current context be removed for reasons of sound arboricultural management'.**
    - 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.'
    - **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.'**
    - 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 150mm'.
    - Further sub categorisation by numbering 1, 2 or 3 assign general values vis: 1; mainly arboricultural, 2: Mainly landscape, 3; mainly cultural/ conservation

- **Comments:** observations that may supplement assessments of condition or otherwise be significant.
- **Preliminary Management Recommendation:** Advice regarding tree surgery.
- **RPA m2:** The Root Protection Area in square metres required by BS 5837.
- **RPA square:** the length of sides of a square equivalent to the RPA m2. the centre of the trunk of the tree to be positioned in the centre of the square

48 Queens Grove Facade Retention Scheme
Tree Schedule Plan



48 QUEENS GROVE, LONDON NW8 6HH
FAÇADE RETENTION SCHEME

APPENDIX 3: This Page plus: 2

Durabase as Ground Protection:
Product Data Sheet and Images

For further details contact Terra Firma 01235 868835
www.terrafirma.gb.com

August 2011. Supplied and installed at £42pw each (min £900) (includes removal) Then £11pw ea hire

DURA-BASE®

Composite Mat System

Performance Data Sheet

In an effort to establish performance standards and to explore feasibility for new applications, Composite Mat Solutions has designed and conducted numerous tests with the DURA-BASE® Composite Mat System. The results viewed by Composite Mat Solutions as most significant are presented in abbreviated form in this document. Anyone having questions regarding the data presented, or issues not addressed here, may contact Composite Mat Solutions at 1-877-MAT ROAD (1-877-628-7623).

General Specifications

Overall Dimensions *(Large Mat)*: 8' x 14' x 4 1/4" (2.44m x 4.27m x 10.8cm)
Surface Dimensions *(Large Mat)*: 7' x 13' (2.13m x 3.96m)
Weight *(Large Mat)*: 1050 lbs. (477 kg)

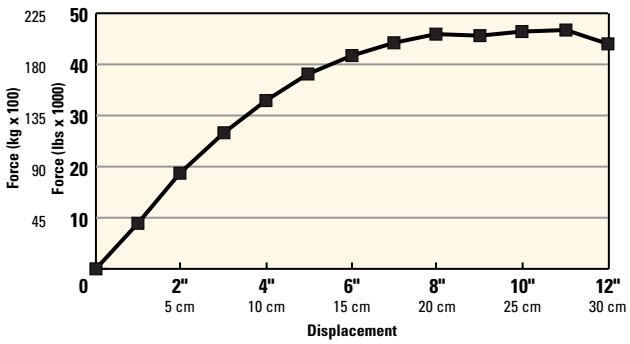
Overall Dimensions *(Small Mat)*: 8' x 7'6" x 4 1/4" (2.44m x 2.29m x 10.8cm)
Surface Dimensions *(Small Mat)*: 7' x 6'6" (2.13m x 1.98m)
Weight *(Small Mat)*: 550 lbs. (250 kg)

Material (primary): High Density Polyethylene
Coefficient of Friction (neoprene on wet mat): 0.6

All published dimensions are nominal.

Strength

Test apparatus demonstrates mat tolerance to extreme deflection while maintaining high load bearing capacity in pure bending [span = 4 feet (1.2m)]. Pure compressive load capacity is approximately 600 psi (40 kg/cm²). Compressive loads in excess of 1000 psi (70 kg/cm²) have been observed in laboratory tests.



Composite Mat Solutions routinely utilizes the mats for unpermitted loads over subgrades of 2 CBR and above.

Traffic

Traffic tests on differing soil conditions have shown the mats to be suitable for an average expected life in excess of 15 years. Fatigue tests have shown no appreciable damage at 60,000 cycles [6 inch (15cm) deflection of 8 foot (2.5m) span].

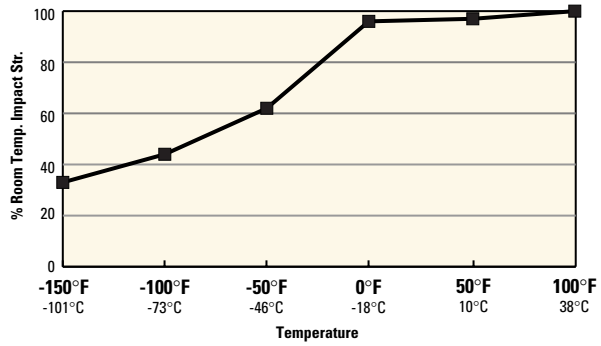
Static Dissipation

Plastics, left untreated, exhibit poor electrical conductivity. This condition, when present in mat material, can lead to a buildup of static charge on the plastic or personnel and result in arcing (mild shock). The DURA-BASE® Composite Mats contain an additive that combines with the plastic and increases the conductivity so a charge may rapidly dissipate, virtually eliminating the potential for static buildup.

Tests have shown the mat surface conductivity to be approximately 10e8 Ohms. The upper limit for a dissipative material is 10e10 Ohms. Field tests have shown the dissipative properties of the composite mat to be equivalent to those of wooden mats.

Temperature Effects

Izod impact tests were conducted to determine the effect of low temperature on material toughness. The results show a transition between -40°F and -4°F (-40°C and -20°C) where the material toughness begins to drop off. All specimens tested above -99°F (-72°C) exhibited signs of ductile failure. The graph presented here shows the impact results relative to room temperature. The impact strength at room temperature of 72°F (22°C) is 2,509 ft-lb/in (134 J/m). DURA-BASE® mats have been successfully employed in environments where -30°F (-34.4°C) temperatures were observed for an extended period of time.



Composite Mat Solutions
A NEWPARK COMPANY

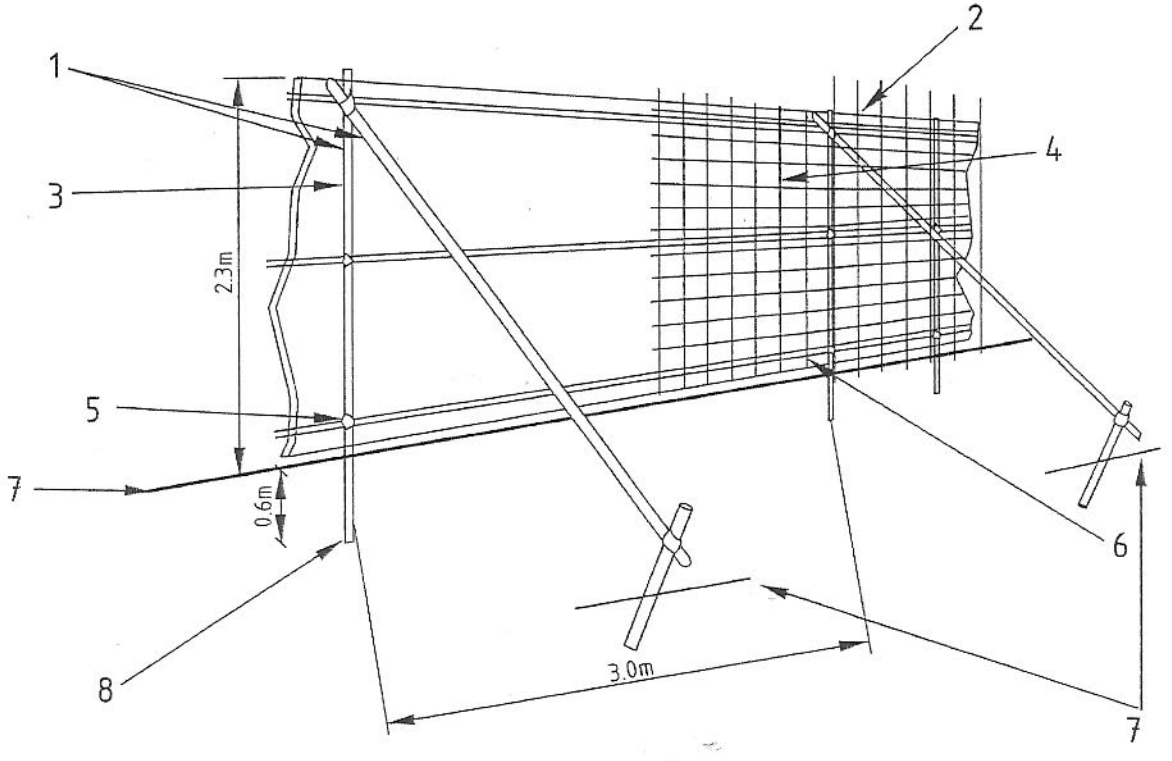
2900 Hwy. 93 • Carencro, Louisiana 70520 • Fax: (337) 896-1971 • www.compositematsolutions.com
1-877-MAT-ROAD ***(1-877-628-7623) or*** **(337) 896-8976**

Image Samples of Durabase: as tree root protection area ground protection www.terrafirma.gb.com 01235 868 835

48 QUEENS GROVE, LONDON NW8 6HH
FAÇADE RETENTION SCHEME

APPENDIX 4: This Page plus: 1

Tree Protective Barrier
To BS 5837 Fig 2



1 Standard scaffold poles

2 Uprights to be driven into the ground

3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps

4 Weldmesh wired to the uprights and horizontals

5 Standard clamps

6 Wire twisted and secured on inside face of fencing to avoid easy dismantling

7 Ground level

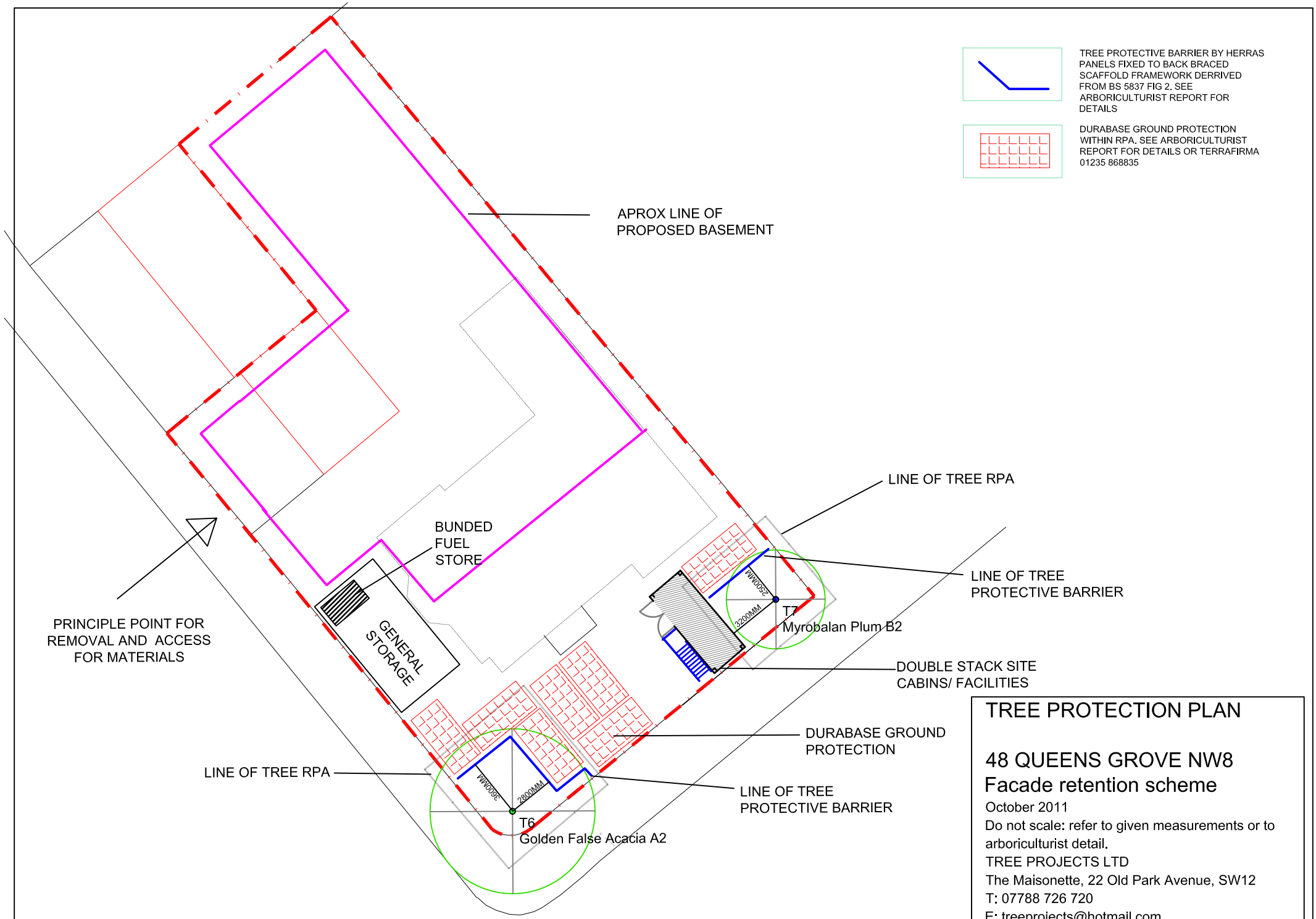
8 Approx. 0.6 m driven into the ground

Figure 2 — Protective barrier

48 QUEENS GROVE, LONDON NW8 6HH
FAÇADE RETENTION SCHEME

APPENDIX 5: This Page plus: 1

Tree Protection Plan



ALL TREE PROTECTION TO BE FULLY INSTALED PRIOR TO COMENCEMENT OF WORK

TREE PROTECTION PLAN

48 QUEENS GROVE NW8
Facade retention scheme

October 2011

Do not scale: refer to given measurements or to arboriculturist detail.

TREE PROJECTS LTD
The Maisonette, 22 Old Park Avenue, SW12
T: 07788 726 720
E: treeprojects@hotmail.com