Proposed mitigation planting

at

40 Arkwright Road
London
NW3 6BH

for

Dr G Madani

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job no.: 485

document rev. no.:

date: 31.08.16

1. Summary

1.1 This brief report sets out mitigation planting proposals for the removal of a middle aged Norway Maple tree standing in the front garden of 40 Arkwright Road, London NW3 6BH.

1.2 It should be read in conjunction with a separate report prepared by ACS Consulting (see Arboricultural Implications Report: ACS Consulting dated 07.04.16 – relevant sections included in **Appendix a**) setting out the reasons for the tree's removal.

1.3 This report contains significantly enhanced mitigation measures compared with those originally proposed.

1.4 The revised proposal is to plant a semi-mature replacement tree of moderate-to-large ultimate size, in a built-for-purpose tree pit incorporating load-bearing soil cells and an integral irrigation system

1.4 The replacement species will be chosen from the following shortlist:

- *Betula pendula* (multi-stemmed)
- *Betula albosinensis* 'Fascination' – (20-35cm girth depending on availability)
- *Acer buergerianum* – (20-35cm girth depending on availability)

1.5 The replacement planting location will be close to the centre of the frontage to the dwelling and because of this change of location, it is envisaged that the replanted tree will be able to reach its full stature without the need for any reduction in height and spread.

1.6 Photographs of proposed replacement tree species are included in **Appendix b**

1.7 The proposed planting location is shown on Mark Laurence Design Ltd Landscape Drawing dated 28.07.16 (see **Appendix c**)

1.8 Drawing No. 485.01.00 in **Appendix d**, a slightly modified version of GreenBlue Urban Drawing No. GBU 1007 – Standard Car Park Tree Pit, shows the proposed size and construction details of the tree pit. Surface coverings may vary from this detail but the size and configuration of the main components will not.

1.9 It is anticipated that, in the grant of permission for the removal and replacement of the existing tree, a condition would be imposed requiring the submission of a detailed maintenance programme

Appendix a

ACS Consulting Arboricultural implications report (excerpts)

ARBORICULTURAL IMPLICATIONS REPORT

for :

40 Arkwright Road
London
NW3

Produced for:

Mr B Chadwick
Dr Gitta Madani

Prepared by:

Hal Appleyard
Dip. Arb. (RFS)., F.Arbor.A. MICFor

Date: 7th April 2016

Reference:

ha/aiams2/40arkwrightrd

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RH2 9BL

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2.0 Tree Appraisal & Implications

2.1 The tree details are presented at **Appendix 1**. These details conform to those recommended by the BS. 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.

Table 1 – Recommended/Proposed Tree Works

Tree Works (Spec.)	Tree Nos	Visual Landscape Impact of Works*	Available Replacement Planting(Y/N)	Comments
Fell and replace	T1	Medium	Y	Weak and deteriorating tree with limited future
Total				

*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:

<u>General</u>

All work is to conform to BS 3998:2010 'Tree work – Recommendations' 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 Planning, Wildlife, Environmental, Conservation and Health and Safety legislation.

SP6. 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. Removing the

stump may be part of the requirements and this will be carried out using a mechanical stump grinder where accessible.

A specification for replanting is included within **Appendix 4**.

2.3 As a consequence of my assessment above, I believe the visual impact of the scheme to be medium in the context of trees and their sustainable contribution to the landscape and local amenity. Proposed tree planting will mitigate for the removal of the tree and provide amenity for the future.

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

2.5.1 The one tree in question is a mature Norway Maple. It has been pollarded, (removal of all stems and branches to a give point above ground level) in the past and decay has developed within the old pruning wounds. The re-growth from the pollarding exercise has become quite elongated and in windy weather, the decayed point of attachment to the original stem is at risk of failing.

2.5.2 The tree's canopy appears to be deteriorating also and the upper parts are showings signs of die-back and sparseness. It seems that the tree is not only structurally weakened by the decay evident within old pruning wounds, but its physiological condition is poor also. In these circumstances, pruning the tree in an attempt to reduce the risk of branch or stem failure, such work is likely to further deplete the tree's energy reserves, which can in turn lead to further branch die-back, root and trunk decay and reduced visual amenity.

2.5.3 Bearing in mind the tree's condition and prospects of recovery and regrowth, I have recommended that the tree be removed and replaced. This will be sensible tree management irrespective of the development proposals at the site. This is because the tree leans out over the busy road (Arkwright Road) and its associated public pavement. Were the tree to fail, the likelihood of tree parts falling into the road or the pavement is high, which could lead to much more serious damage.

2.5.4 At Appendix 4, I have set out proposed new replacement tree planting specification, which will ensure that the visual amenity provided by trees in this location is persevered and enhanced.

Fig. 1 Norway Maple leans out over the busy road and pavement

Above – areas of decay in old pruning wounds

Height of previous pollarding

Table 2 Summary of Implications of Construction on Trees*

Tree Ident.	Landscape Contribution	Impact/Potential impact	Mitigation measures	Impact Assessment**
T1	Medium	Remove and replace for safety and development	1. Replacement planting of new tree of approx. 20cm girth	Positive

* Main trees selected for comment included above. Refer to previous notes on other trees.
** Negative – adverse impact upon tree(s) and landscape; Neutral – no material impact (negative or positive); Positive – improvement (potential) to tree quality and landscape

3.0 Tree Management 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 para. 4.6 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 to any trees within the rear of the site, subject to following a logical sequence of events, which **will follow a pre-commencement site meeting** (see para. 6.0). Invitees will include 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 tree protection

S3 Carry out ground works

S4 Carry out construction works

S5 Remove tree protection fencing and complete landscaping works

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

Tree Management Consultants
T: 020 8687 1214

APPENDIX 4

ACS (Trees) Consulting
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Tree Planting

Supply and Planting Specification:

Planting process to be conducted by a professional with appropriate horticultural experience and in accordance with BS 4428:1989 'Code of Practice for general landscape operations' and 8454:2012 Trees: From Nursery to Independence in the Landscape - Recommendations'.

i) Tree species to be: Great White Cherry *Prunus 'Tai Haku'*.

ii) Tree size to be min. 20-25cm girth (advanced nursery stock)

iii) Trees to be delivered containerised or rootballed stock only (not bear root).

iv) Planting pit to be manually excavated (after CAT scan) and following general risk assessment for planting works. Sides and base to be scarified (with fork). Dimensions to be no less than 1500mm X 1500mm X 800mm (or suited to tree rootball*); maximum rooting medium to be available

v) Tree to be placed centrally into the planting pit, which is 15% larger than the rootball*.

vi) Introduce perforated 60mmØ aeration pipe around base with min. I x riser fitted with plastic cap to supplier's recommendations

vii) Tree is to be secured into an upright position with the use of treated timber round stakes (min. 50mm Ø X 1.8m, firmed) and proprietary flexible tree ties (alternatives can be used).

viii) Backfilled with subsoil and graded loam (upper 150mm only) with 30% sharp sand and 15% organic matter and healed-in.

ix) Level soil around tree base (nursery line) and top dress with preferred capping e.g. gravel, steel planting grille, wood mulch, loose blockwork.

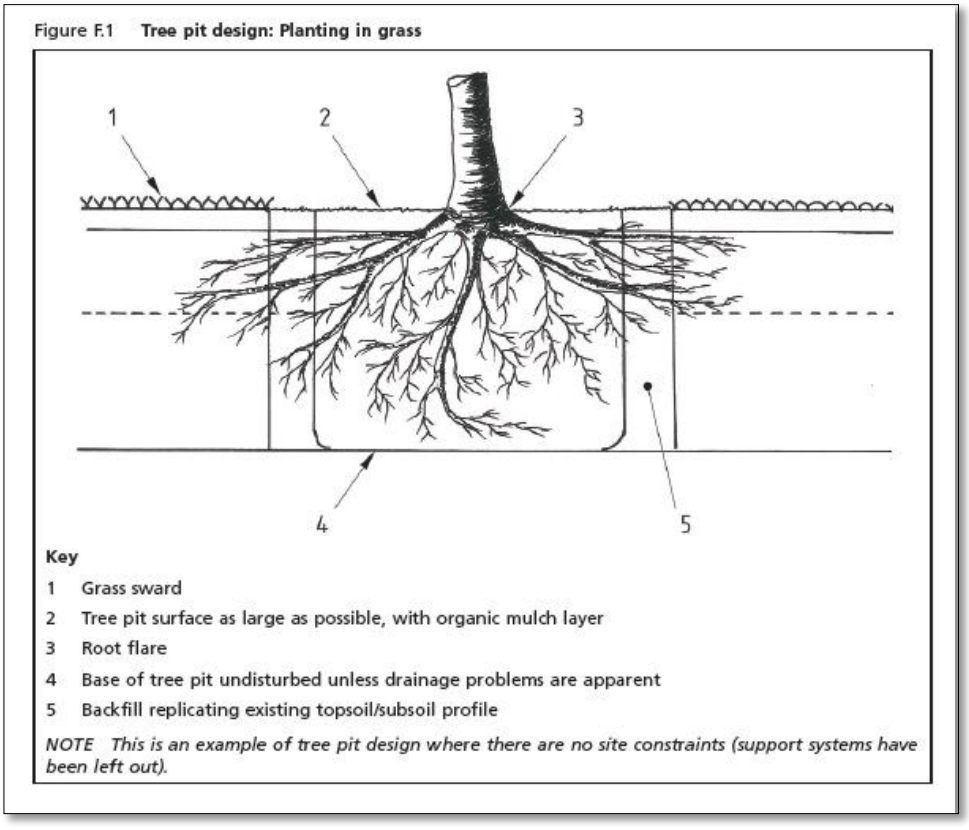


Fig 1. Example of typical tree planting pit (from BS8545:2014)

Selection and Supply of Advanced Nursery Stock (ANS) or Semi-mature (SM) trees

General

1. Individual trees may be pre-selected (reserved) at the nursery.
2. The selection process should be a minimum of 12 months prior to distribution and which should be retained at the nursery (in the UK) for that period (at minimum).
3. The source of the tree stock will be compatible with the host location.
4. Trees are to be checked before distribution for the presence of any pests, diseases or other defects. The trees are to be checked again by a competent person upon delivery. All imported stock is to have the appropriate phyto-sanitary certification, which should be available for scrutiny.
5. ANS and SM trees are to be supplied at minimum rootballed with hessian and wire netting. Plastic containers both rigid and flexible are acceptable.
6. The rootball is to have a diameter minimum 2.5 times that of the tree girth at ground/nursery line level.
7. Trees should be, vigorous, without significant defects such as bark damage, broken shoots or exposed roots. Trees should be supplied as self-supporting trees (tree support to have been removed at least 12month prior to dispatch). Trees should have a well-balanced crown and true to species in terms of shape and size.
8. All trees to be delivered, canopy tied and protected from the risk of root desiccation (covered).
9. Trees to be planted no more than five days following acceptance.

Specification of trees (alterations are to be identified prior to dispatch)

i) Great White Cherry (*Prunus Tai Haku*)
ii) Quantity min. 3
iii) Approx. 10 years (min. 7 years field-grown if containerised)
iv) Height to be no less than 5m (planted), with 2m clear stem and approx. 3m diameter spread.
v) Rootballed (hessian/biodegradable material) or containerised stock, mechanically lifted and undercut up to 6 years.

Appendix b

Photographs
Proposed replacement trees

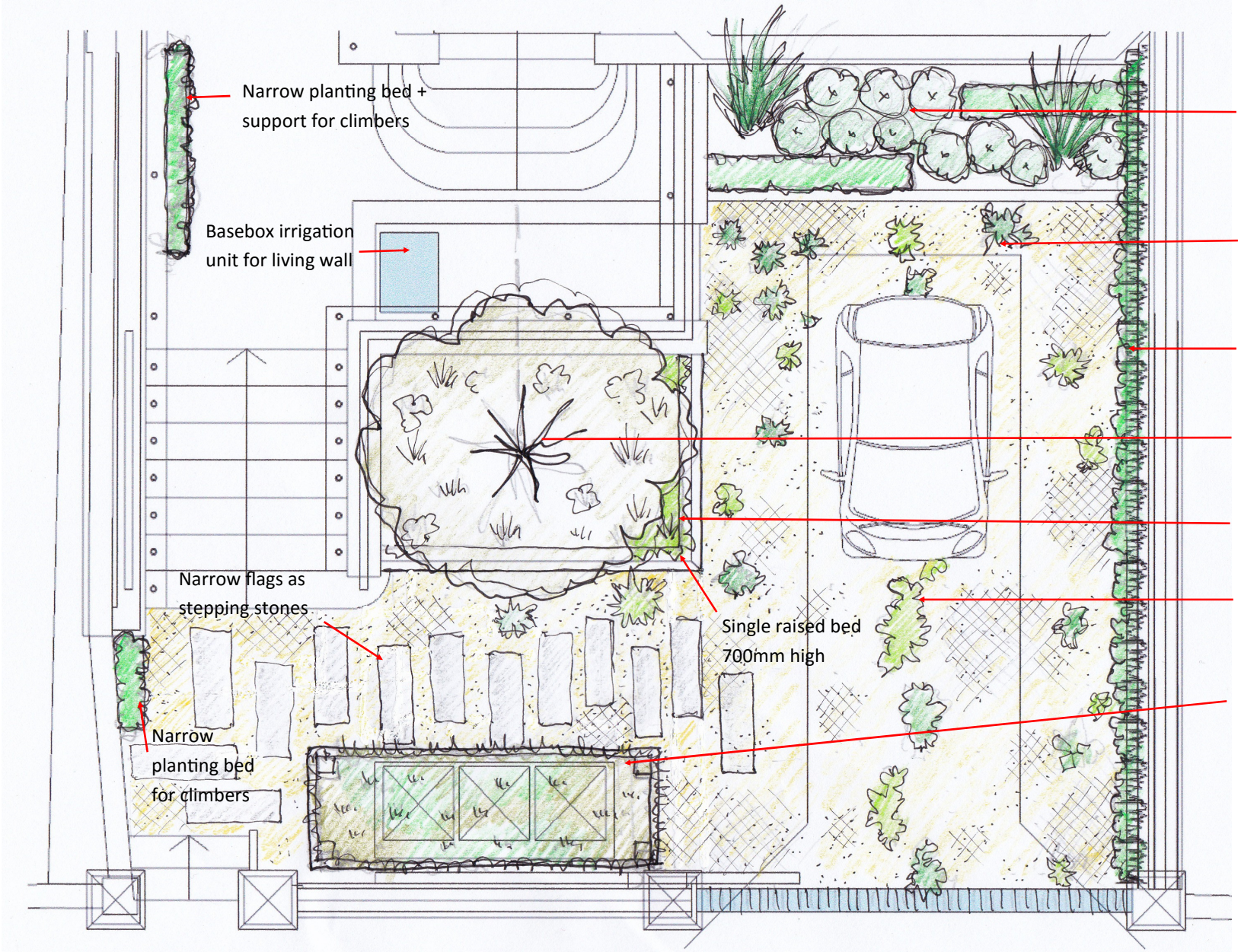
Photograph 1 Multi-stemmed *Betula pendula*

Photograph 2 *Betula albosinensis* 'Fascination' (30-35cm girth)

Photograph 3 *Acer buergerianum* (20-25cm girth)

Appendix c

Landscape concept plan



Rear border planting: formal clipped box hedge with informal grasses and perennials

Recycled plastic Geogrid over permeable subbase, filled with 10mm gravel and planting mix for small plants

Viridiwall hydroponic Living Wall and Tobbox units with evergreen bee/ insect friendly planting

Silver birch tree. Native, light shade canopy, preferably multi-stemmed

Woodland planting style of native primula, viola etc.

Low spreading, drought tolerant plants such as sedum, thyme, cotula etc to grow through gravel.

Green roof with 150mm depth substrate to accommodate wider range of plants, including some bulbs, grasses and succulents

Front Garden Soft Landscape

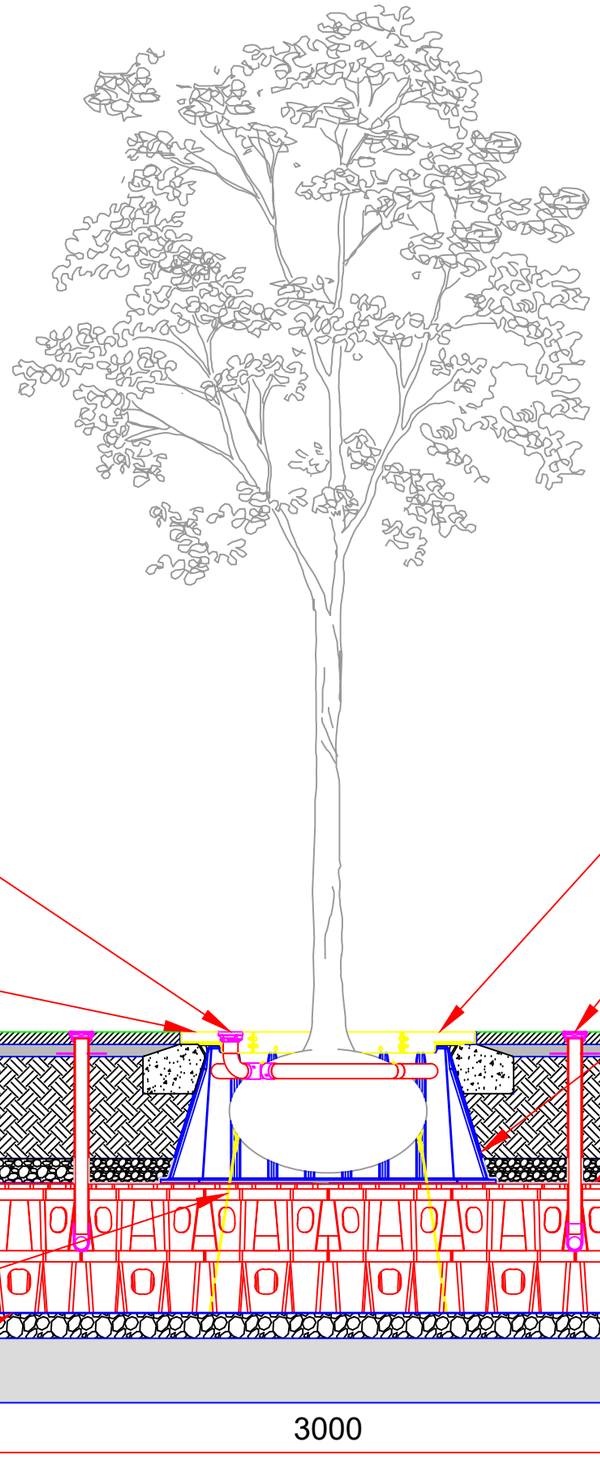
40 Arkwright Road, London

28/07/2016

mark laurence design ltd
vertical urban greening
living walls - vertical ecosystems
natural landscapes - garden design

Appendix d

Tree pit details



RRARBV1D Arborvent irrigation system installed around the guyed root ball Inlet should be embedded in the cast Arboresin slab and finished flush with top surface

SPFR12A Arboresin 1200-600 galvanised steel support frame 1200mm x 1200mm set on concrete haunch

SASLCB Arborguy strapped anchor system c/w ground anchors

GLTWGNA twinwall geonet laid below StrataCell structure to structural engineer's requirement

GLARBBB Brittany Bronze Arboresin porous bound stone surfacing

RRARBVDI3D Arborvent double inlet aeration/irrigation system with cast inlets

Footpath/road construction

RD1050A RootDirector, medium, modular root barrier system

GLTWGNA twinwall geonet laid over StrataCell structure

Clean stone layer surrounding aeration/irrigation pipe

GLSCM30A StrataCell structure - 2 modules deep x 6 modules square (2 x 2 x 2 void below RootDirector) loaded with topsoil - sandy loam to BS3882

Drainage layer - 100mm depth of clean angular stone

Sub-base and drainage installed below StrataCells to structural engineer's/ engineer's detail/requirement

Client: DR G MADANI

Drawing Title: TREE PIT DETAIL

Job Title: 40 ARKWRIGHT ROAD LONDON NW3 6BH

Date: 19.08.16

Scale: 1:25 (A3)

Drawing Number: 485.01.00

Drawn by: RS

DETAILS FROM GREENBLUE URBAN DRAWING GBU 1007
STANDARD TREE PIT SYSTEM INSTALLATION - STANDARD CAR PARK TREE PIT
(TREE GUARD OMITTED)

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