

**Arboricultural impact
analysis**

Trees


at

**29 Dartmouth Park Road,
London
NW5 1SU**

for

Mark Lutyens Associates

Skerratt

R Skerratt BSc(For) M. Arbor. A.
33 Greenwood Place
London
NW5 1LB
Tel: + 44 (0)7768 398776
Fax: + 44 (0)20 7567 4004
Email: 

job no.: 593

document rev. no. A

date: 29.10.17

1. Introduction

- 1.1 This report contains a detailed appraisal of 3 trees standing within the property boundary of 29 Dartmouth Park Road, London NW5 1SU, in relation to the proposed construction of a single-storey timber outbuilding.
- 1.2 The report considers the health and safety of the trees under their current growing conditions and assesses the likely impact of the proposed development measured against the advice and guidance set out in *BS5837 2012: Trees in relation to design, demolition and construction – Recommendations*.
- 1.3 The site investigation on which this report is based took place on the late afternoon of Tuesday 19 September 2017 in dry, bright conditions.
- 1.4 The report was commissioned by Mark Lutyens Associates on behalf of the client in an email dated 11 September 2017.
- 1.5 I have been provided with the following drawings in digital format (pdf):
Charles Tashima Architecture Drawings
- Drawing No. 1057 001 – Location Plan
 - Drawing No. 1057 003C - Proposed Garden Plan
 - Drawing Nos. 1057 101-105 – Existing Floor Plans
 - Drawing No. 1057 110C - Proposed Lower Ground Floor Plan
 - Drawing No. 1057 111C - Proposed Ground Floor Plan
 - Drawing Nos. 1057 112-114- Proposed First, Second & Attic Floor Plans
 - Drawing No. 1057 115 - Proposed Roof Plan
 - Drawing Nos 1057 200-203 – Existing Elevations and Sections
 - Drawing No. 1057 210 - Proposed Front Elevation
 - Drawing No. 1057 211C - Proposed Rear Elevation
 - Drawing No. 1057 212C - Proposed Side Elevation
 - Drawing No. 1057 213C - Proposed Section AA
 - Drawing No. SK DD 03 - Rear Extension Massing
- Catherine Fitzgerald Landscape Design Drawings*
- Drawing No. ML 160301/15 – Shed Base: Typical Detail
- Mark Lutyens Associates Drawings*
- Drawing Reference 132.0/A – Existing Plans and Elevations
 - Drawing Reference 132.1/A – Proposed Plans and Elevations
- 1.6 The **Tree survey plan** in **Appendix a** is based on Charles Tashima Architecture Drawing No. 1057 101 – Existing Ground Floor Plan and additional on-site measurements. The **Tree constraints plan** in the same appendix is based on Charles Tashima Architecture Drawing No. 003 C – Proposed Garden Plan with the footprint of the existing dwelling and its immediate surrounds, and that of the proposed single storey outbuilding (taken from Mark Lutyens Associates Drawing Reference 132.1/A), overlaid.

2. Background information

2.1 Layout, boundaries and topography

- 2.1.1 29 Dartmouth Park Road is a substantial, semi-detached Victorian villa on 5 levels (lower ground, raised ground, first, second and attic floors), standing in a rectangular plot, the longer axis of which runs north west to south east.
- 2.1.2 To the rear of the dwelling there is a courtyard at lower ground floor level connected by a short flight of steps to a level rear garden approximately 500mm above lower ground floor level.
- 2.1.3 1500mm high brick walls run along the plot boundaries of the rear garden, the location of the proposed outbuilding.
- 2.1.4 The rear garden is approximately 1500mm above the level of Bellgate Mews, a private road running parallel to and abutting the rear plot boundary.
- 2.1.5 The **Tree survey plan** in **Appendix a** shows the existing site layout and the locations of the trees referred to in this analysis.

2.2 Geology and soils

- 2.2.1 According to British Geological Survey (BGS) data, the site is located on deep Palaeogene, London Clay bedrock.
- 2.2.2 Given the difference in levels between Bellgate Mews and the rear garden of 29 Dartmouth Park Road, it is probable that at least part of the proposed development area consists of Made Ground.
- 2.2.3 No soil sampling was carried out on site.

2.3 Planning constraints

- 2.3.1 The dwelling is within the London Borough of Camden Dartmouth Park Conservation Area.
- 2.3.2 None of the trees in this report are covered by a Tree Preservation Order (TPO).

2.4 The trees

- 2.4.1 The trees referred to in this analysis are described in detail in the **Tree survey schedule** in **Appendix a**. Their locations are shown on the **Tree survey plan** in the same appendix.

2.5 The proposed development

- 2.5.1 The development works to which this analysis refers include:
- The construction of a single storey outbuilding in the rear garden
 - Associated minor external works

3. Analysis

3.1 General

- 3.1.1 The **Tree constraints plan** in **Appendix a** shows the recommended Root Protection Area (RPA) for each tree re-configured where appropriate to take into account partial or complete barriers to the lateral spread of roots.
- 3.1.2 In this respect I have assumed that the retaining wall containing the change in level between the rear garden of 29 Dartmouth Park Road and Bellgate Mews is a total barrier to lateral root spread and that the same is true of the retaining wall around the lower ground floor courtyard at the rear of the existing dwelling.
- 3.1.3 Each RPA highlights the primary potential area of conflict between proposed development and retention of existing trees, namely conflicting demands for space at and below ground level.
- 3.1.4 Where appropriate, I have given consideration to above-ground conflicts in the analysis which follows, particularly headroom, lateral and overhead shading and perceived risk.

3.2 Trees to be removed

- 3.2.1 No trees or shrubs are to be removed for development purposes.

3.3 Trees to be retained

Likely impacts on retained trees at and below ground level

- 3.3.1 The footprint of the proposed development is completely within the RPAs of both Copper Beech 001 and Birch 002. Magnolia 003 is unaffected by the proposal.
- 3.3.2 The scheme design addresses potential disruption to Trees 001 and 002 at and below ground level by proposing a lightweight floor comprising recycled plastic joists resting on the existing ground surface and secured (rather than supported) with driven recycled plastic posts at approximately 1000mm centres.
- 3.3.3 Post locations are flexible and can be adjusted to avoid damage to large diameter (25mm diameter or greater) near-surface roots.
- 3.3.4 The Mark Lutyens Associates and Catherine Fitzgerald Landscape Design drawings (see 1.5 above) in **Appendix b** of this report, show the proposed outbuilding construction details.

Likely impacts on retained trees above ground

- 3.3.5 The footprint of the proposed outbuilding wraps around the stem of Copper Beech 001, creating an enclosure 1000mm long and 750mm wide. This will be adequate to accommodate the radial expansion of the tree's stem for at least 20 years.

- 3.3.6 The height of the proposed outbuilding from under-surface of joists to top of roof will be 2750mm, 1115mm above the top of the existing rear garden wall. It is proposed to erect a trellis on the top of the wall to raise its height by 600mm.
- 3.3.7 There is adequate existing headroom to construct the outbuilding without the need for any branch removal, although the Beech's main branch fork will be close to the same level as top-of-roof height. Correct positioning of the 1000 x 750 mm enclosure will be important.
- 3.3.8 There will be no need for any branch removal from Birch 002 as there is already adequate headroom above the footprint of the proposed outbuilding.
- 3.3.9 As the proposed development is an outbuilding for tool storage and occasional recreational use with windows facing to the north, away from Trees 001 and 002, lateral and overhead shading and the perception of risk in extreme weather conditions are unlikely to be significant issues with regard to either tree.
- 3.3.10 It will be important however, to ensure that the main stem of Copper Beech remains easily accessible for routine inspection purposes.

4. Conclusions

- 4.1 The proposed design is refreshingly simple and, as long as unnecessary disturbance is avoided, should cause no significant disruption to any of the trees referred to in this analysis.
- 4.2 As long as the positions of individual hand-driven securing stakes are moved wherever unusually high resistance is experienced in the course of their installation, the impact upon large diameter roots can be minimised without the need for prior investigation.
- 4.3 An inspection hatch should be incorporated into one of the walls of the enclosure round Copper Beech 001, to enable routine inspections of the lower main stem and root collar to be carried out.
- 4.4 The **Arboricultural Method Statement (AMS)** accompanying this analysis sets out tree protection measures and appropriate working practices to ensure successful tree retention.

Appendix a

Tree survey schedule

Tree survey plan

Tree constraints plan

Explanatory notes

For general information on any entry in the detailed survey text, refer to the notes below which are organised on a column by column basis.

Tree number

All trees have been numbered in the survey text to correspond to the location numbers shown on the accompanying Tree survey plan. No trees have been marked on site.

Species

Common English names have been used wherever possible and Latin names are listed (in brackets in *italics*) in all cases.

Dimensions

Height - are recorded in m.

Stem diameter - recorded in mm at breast height (1.5m) wherever possible. Where measurement at 1.5m is not possible, one of the alternative methods set out in *Annex C of BS5837:2012* has been used.

If the diameter has been measured at a different height, this has been recorded, e.g. 60 @ 1m = 60mm diameter at 1m height.

Other abbreviations used:

av - average	est/e - estimated	
ms - multi-stemmed	max - maximum	gl - ground level

Crown spread - radial crown spreads in metres have been recorded at four points on the circumference of the crown (north, east, south and west). The accompanying Tree survey plan shows approximate crown shapes based on these measurements

Crown height - the height of the first major branch and the height of the lowest point of the crown are recorded in metres eg 3/3

Explanatory notes

Age

Y	Young	SM	Semi-mature
EM	Early mature	M	Mature
OM	Over-mature		

Where the precise age of a tree is known, it has been recorded in brackets adjacent to the general classification i.e. M(7).

Condition

Physiological condition

Gives a measure of biological vigour and of the presence or absence of disease, insect attack or other debilitating factors.

G	Good
F	Fair
P	Poor

Structural condition

Gives a measure of each tree's physical form and mechanical stability.

G	Good
F	Fair
P	Poor

Comments

Descriptive notes on the tree's shape, local environment and condition.

Recommendations

Management recommendations under existing conditions.

Separation distance (existing and proposed)

The distance between centre stem and the nearest point of existing or proposed built structures

Client: Mark Lutyens Associates
Project: Tree survey schedule
Location: 29 Dartmouth Park Road, London NW5 1SU

Date: 19.09.17
Job No. 593
Page No. 2 of 3

Explanatory notes

RPA radius

The radius of each tree's Root Protection Area (RPA) as defined in *BS5837:2012 4 Trees in relation to design, demolition and construction - Recommendations*

Life expectancy

An approximate estimate for each tree's anticipated future safe life in the following ranges:

- <10 years
- 10-20 years
- 20-40 years
- 40+ years

Retention category

This grading is based on the recommendations set out in *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations*. The categories are summarised in the standard as follows:

- A Trees of high quality with an estimated remaining safe life of at least 40 years
- B Trees of moderate quality with an estimated remaining safe life of at least 20 years
- C Trees of low quality with an estimated remaining safe life of at least 10 years, or young trees with a stem diameter below 150mm
- U Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

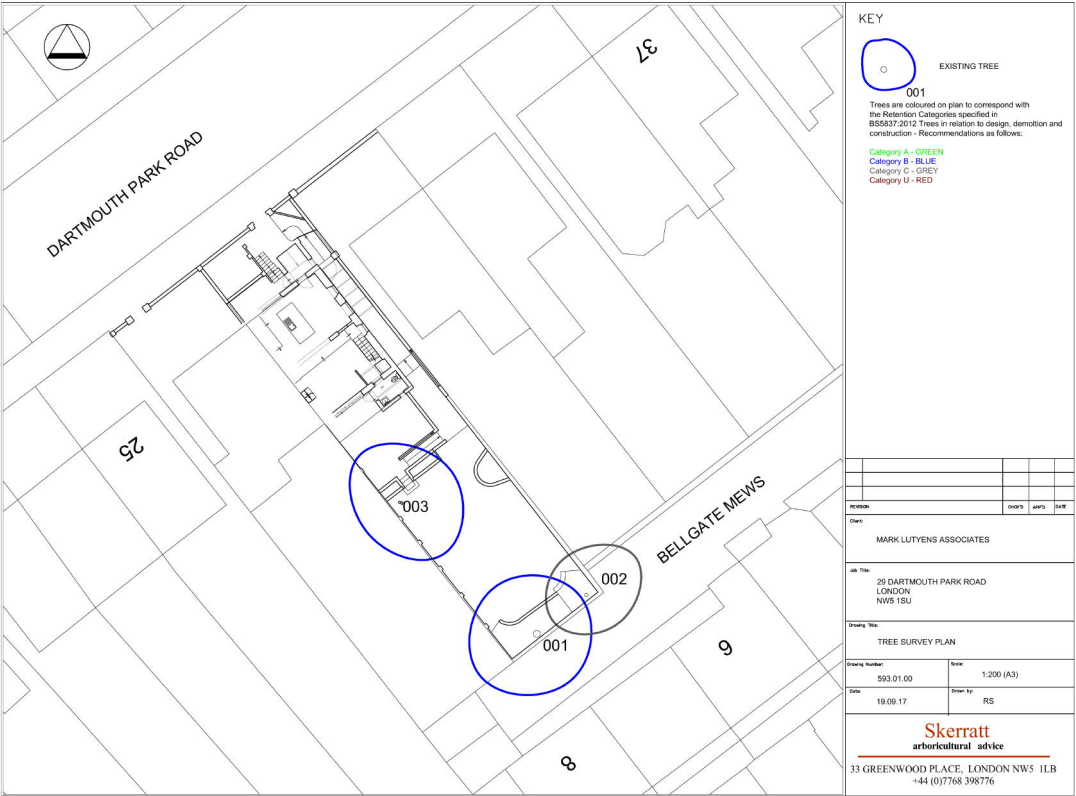
In addition the British Standard requires one or more subcategories to be applied to the main Retention Category. In summary these are as follows:

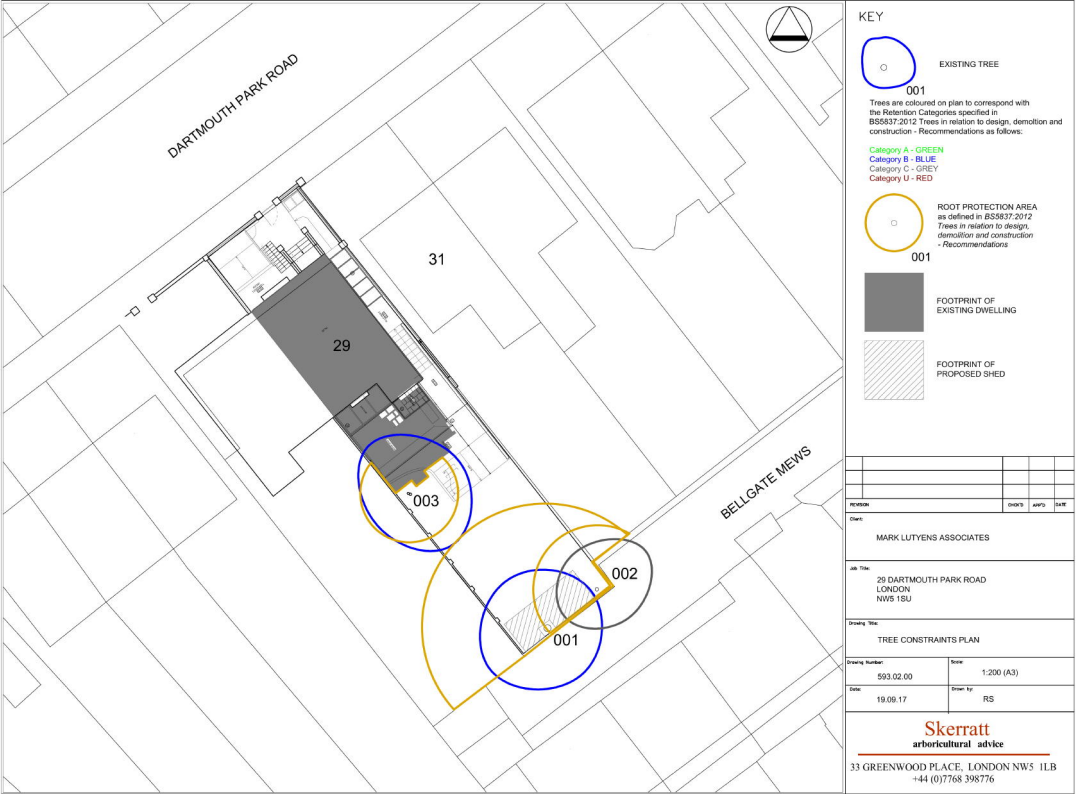
- 1 Mainly arboricultural qualities (that is individual aesthetic characteristics)
- 2 Mainly landscape qualities
- 3 Mainly cultural values, including conservation

Tree survey schedule

Skerratt

Tree No.	Species	Height (m)	Diam (mm)	Crown Spread (m)				Crown Height (m)	Age	Physiological Condition	Structural Condition	Comments	Separation distance (m)		RPA Radius (m)	Recommendations	Life Expectancy	Retention Category	Retention Sub- category
				N	E	S	W						Existing	Proposed					
001	Copper Beech (<i>Fagus sylvatica</i> 'Purpurea')	13	500	4.5	4	4	5	2/2	M	G	G	Single upright stem forks into 2 at 2m and again immediately above: quite well balanced crown has been reduced in height and spread in the recent past: main stem is close to the rear garden boundary wall	>10.00	0.50	6.00	No immediate action required	20-40	B	1
002	Silver Birch (<i>Betula pendula</i>)	9	250	3	4.5	3	3	3/3	EM	F	G	Single ivy covered stem growing close to the rear garden boundary wall: suppressed (competition from adjacent trees) rather narrow, one sided crown	>10.00	0.50	3.00	No immediate action required	20-40	C	1
003	Magnolia (<i>Magnolia species</i>)	5	170/ 190	4.5	4.5	5	3	2/2	SM	G	G	2 leaning stems, attractive spreading rather one sided crown (away from W)	>10.00	>10.00	3.06	No immediate action required	40+	B	1





KEY

EXISTING TREE
001

Trees are coloured on plan to correspond with the Retention Categories specified in BS5837:2012 Trees in relation to design, demolition and construction - Recommendations as follows:

Category A - GREEN
Category B - BLUE
Category C - GREY
Category U - RED

ROOT PROTECTION AREA as defined in BS5837:2012 Trees in relation to design, demolition and construction - Recommendations
001

FOOTPRINT OF EXISTING DWELLING

FOOTPRINT OF PROPOSED SHED

NO.	DATE	BY	CHKD	APPD	DATE

Client: MARK LUTYENS ASSOCIATES

Job Title: 29 DARTMOUTH PARK ROAD
LONDON
NWS 1SU

Drawing Title: TREE CONSTRAINTS PLAN

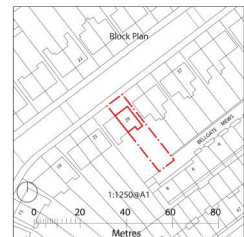
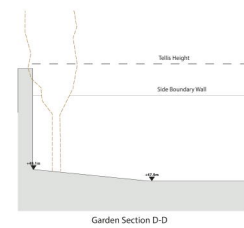
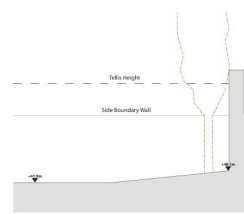
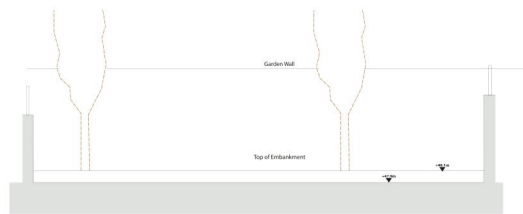
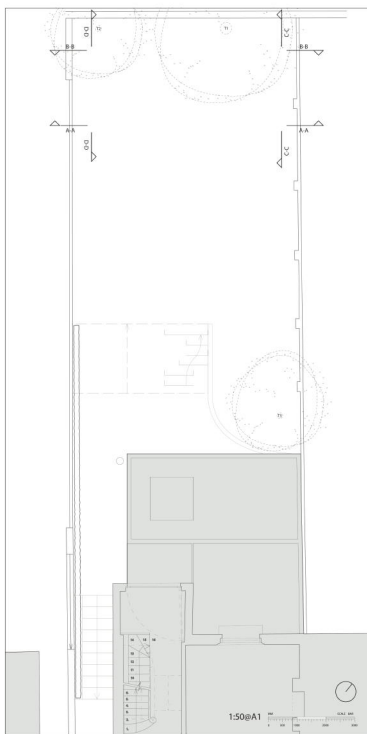
Drawing Number: 593.02.00	Scale: 1:200 (A3)
Date: 19.06.17	Drawn By: RS

Skerratt
arboricultural advice

33 GREENWOOD PLACE, LONDON NWS 1LB
+44 (0)7768 398776

Appendix b

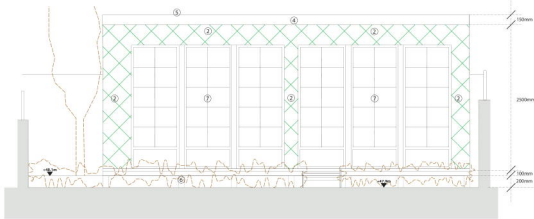
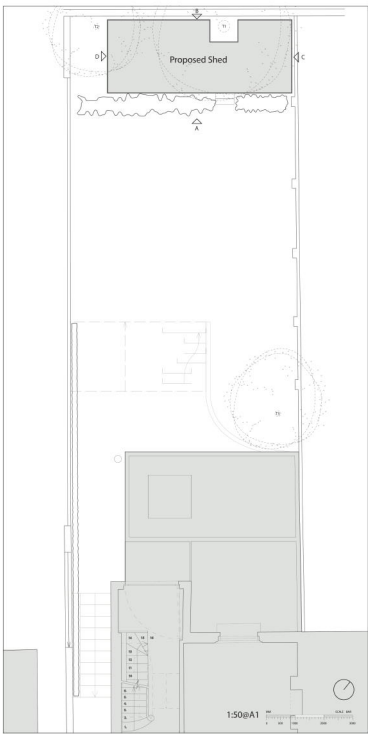
**Catherine Fitzgerald Landscape Design
Drawings**



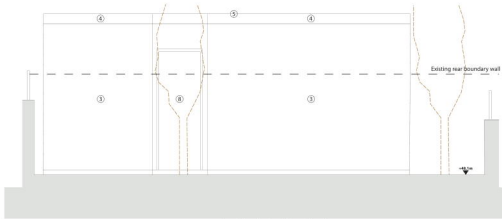
Notes
 For planning application purposes only.
 Drawings based upon the following drawings:
 Detail Drawing Ref. ML6001/7 REV A 11 3 2017 (Katherine Fitzgerald Landscape Design)
 and
 Masterplan ML6001/13 1 50 Feb 2017 (Mark Lupton Associates)

29 Dartmouth Park Road Existing Plans and Elevations

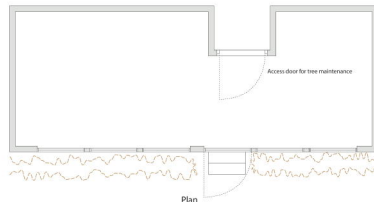
Date: October 2017
 Drawing Reference: 133.0/A
 Scales: 1:25@A1, 1:50@A1, and 1:1250@A1



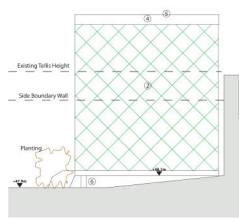
Front (North West) Elevation A



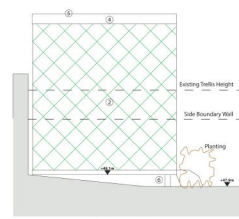
Rear (South East) Elevation B



Plan



Side Elevation C



Side Elevation D



- Materials**
1. Timber trellis
 2. Timber shed with timber trellis cladding and climbing plants
 3. Timber Street
 4. Timber walls
 5. Flat roof with shallow growing medium
 6. Recycled plastic lumber posts and beams (positions shown inductively refer to Arboricultural Report)
 7. Timber glazed windows
 8. Solid timber access door

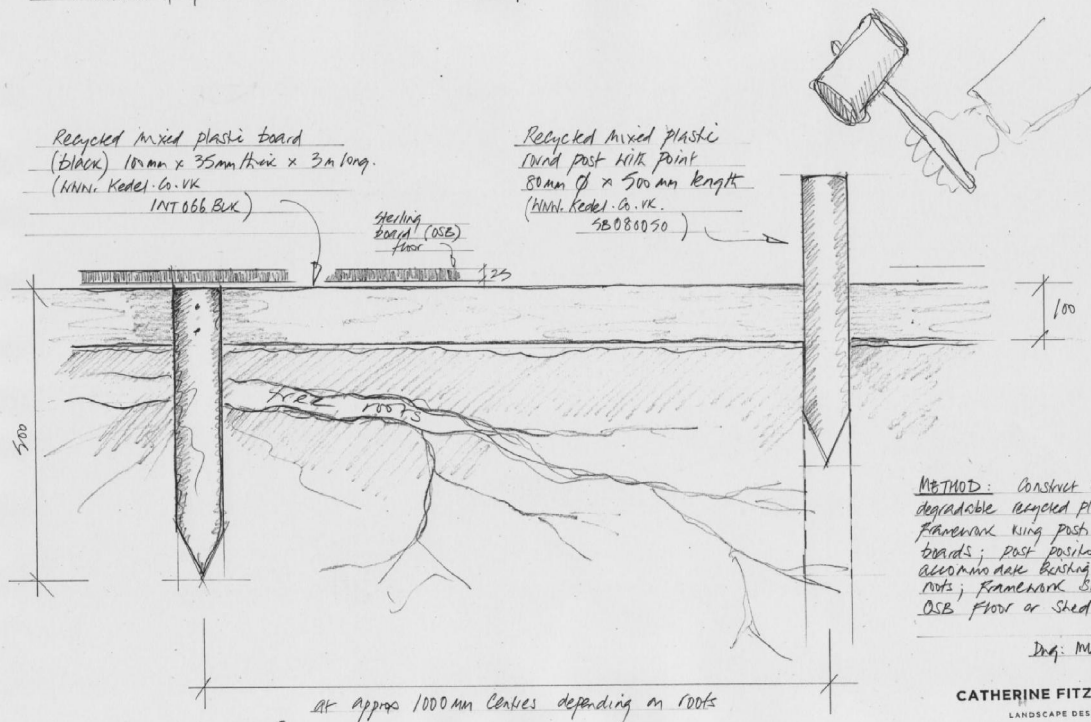
Notes

For planning application purposes only.
Elevations based upon the following drawings:
Detail Drawing Ref. ML60501/7 REV A 11 3 2017 (Katherine Fitzgerald Landscape Design)
and
Masterplan ML60501/13 1 50 Feb 2017 (Mark Luptons Associates).

29 Dartmouth Park Road Proposed Plans and Elevations

Date: October 2017
Drawing Reference: 102.1/A
Scales: 1:250@A1, 1:500@A1, and 1:1250@A1

29 DARTMOUTH PARK ROAD ~ SHED BASE ~ TYPICAL DETAIL



METHOD: Construct a non-degradable recycled plastic framework using posts and boards; post positions to accommodate bushing tree roots; framework supports OSB floor or shed base

Dwg: M160301/KS

CATHERINE FITZGERALD
LANDSCAPE DESIGN

1/3/17