Arboricultural impact analysis

TREES

at and adjacent to

23 Rochester Road
London
NW1 9JJ

for

Physon Property Ltd

Skerratt
158 Malden Road
London
NW5 4BT

tel: 01274 566539
fax: 020 7767 4004
email: raphaelskerratt@hotmail.co.uk

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1. Introduction

1.1 This report contains a detailed appraisal of 5 trees within or adjacent to the property boundary of 23 Rochester Road, London NW1 9JJ, in relation to proposed residential development.

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 inspection for the tree survey on which this report is based took place on the morning of Monday 24 March 2014 in dry, sunny conditions.

1.4 This report was commissioned by the client Physon property Ltd in an email dated 25 March 2014.

1.5 I have been provided with the following information in digital format:

- Clive Sall Architects Design and Access Statement A193_DOC_03 (pdf format plus drawings in dwg format)
- Clive Sall Architects Drawings 252/100/P1 and 110/P3 – Existing and proposed layout plans.

1.6 The **Tree survey plan** accompanying the detailed report of inspection in **Appendix a** is based on Clive Sall Architects Drawing No. 252/100/P1 – Existing LGF and Roof Plan and on-site measurements. The **Tree constraints plan** also in **Appendix a** is based on Clive Sall Architects Drawing No. 252/110/P3 – Proposed LGF and Basement.

2. Background information

2.1 Site layout, boundaries and topography

2.1.1 23 Rochester Road is an early Victorian semi-detached villa with 2 storeys above a lower ground floor. On the rear elevation, there is a twentieth century addition to the original dwelling.

2.1.2 The dwelling sits within a long narrow wedge shaped plot, the long axis of which runs roughly north to south. The plot is narrowest at its southern (Rochester Road) end and widens out to the rear boundary.

2.1.3 The plot is enclosed by an approximately 1800mm high brick wall on its eastern, northern and that part of the western boundary that is to the rear of the existing dwelling.

2.2 Geology and soils

2.2.1 According to the British Geological Survey Sheet 256 (North London) the site is located on deep Palaeogene London Clay deposits.

2.2.2 No soil sampling was carried out on site.

2.3 Planning constraints

2.3.1 The property is within the London Borough of Camden Rochester Conservation Area.

2.3.2 It is not known whether any of the trees referred to in this report are currently the subject of a Tree Preservation Order (TPO).

2.4 The trees

2.4.1 The **Tree survey schedule** in **Appendix a** describes the 5 trees referred to in this report, in detail.

2.5 The proposed development

2.5.1 The proposed development is described in the design and access statement referred to in 1.5 above. Its main elements are:

- The construction of a single storey basement extension.
- The opening up of a light well patio to create access to the garden.

3. Discussion

3.1 General

3.1.1 The **Tree constraints plan** in **Appendix a** shows the recommended Root Protection Area (RPA) for each tree, arranged symmetrically around the main stem. 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

3.1.2 The writer of this report considered making adjustments to the configuration of each RPA to allow for known barriers to root activity (in particular the brick boundary wall) but concluded that, in this case, it would not significantly assist in quantifying the possible impacts referred to below.

3.1.3 The proposed development will necessitate the complete removal of one tree T003 (Elderberry).

3.1.4 The footprint of the proposed development will overlap 12% of the Root Protection Area (RPA) of T001, a large Cider Gum (*Eucalyptus gunnii*).

3.1.5 The remaining trees referred to in this report (T002 (Holly), T004 (Ash) and T005 (Leyland Cypress)), two of which stand outside the site boundary, are not likely to suffer significant adverse effects if the development is undertaken.

3.2 Trees to be removed

Tree 003: Elderberry

3.2.1 This small leaning tree is almost certainly of natural seedling origin and makes a very small contribution to public visual amenity. It is not considered that its loss will have a significant adverse impact.

3.3 Trees to be retained

3.3.1 T001 (*Eucalyptus)* is a substantial single stemmed tree with a an open but quite well balanced crown standing close to the eastern brick boundary wall of the rear garden of 23 Rochester Road.

3.3.2 The footprint of the proposed development will overlap just under 12% of this tree's root system (25m^2 out of a total RPA of 215m^2) on its southern edge. The nearest corner of the development, a flight of steps leading up from lower ground floor level to garden level, is just over 4m distant from the outer face of the tree's main stem.

3.3.3 This will cause some disruption to the root system of T001, but is unlikely that it will be necessary to sever large diameter roots (75mm diameter or greater at point of severance).

3.3.4 Bearing in mind that this *Eucalyptus* is still in late middle age and growing vigorously, I do not consider that its physical stability or its future safe life will be significantly affected by an incursion into the RPA of the extent that is proposed.

3.3.5 However, it would be prudent to reduce the height and spread of the crown of the tree by up to 15% in anticipation of the likely disruption to the root system. In my view a crown reduction of this intensity will be needed before long whether the development goes ahead or not, as the tree has considerable potential for further growth.

Trees 002 (Holly), 003 (Cypress) and 004 (Ash)

3.3.6 There is no overlap between the RPAs of Trees 002 (Holly) and 004 (Ash) and the footprint of the proposed development.

3.3.7 In the case of off-site Cypress T003, it is likely that root spread to the west of the main stem has been limited by the adjacent boundary wall.

3.3.8 Taking this probability into account, it is considered that this tree, which is still relatively young and nowhere near its full stature, will not suffer significant adverse mpacts if the proposed development goes ahead.

4. Conclusions

4.1 Taking the considerations set out above into account and provided that the proposed development area is physically separated from the rest of the site while construction works are in progress, I do not consider that the proposal will have an unacceptable adverse impact upon retained trees.

4.2 If the proposal receives consent, protective measures and appropriate working practices should be set out in an **Arboricultural method statement** forming part of the main construction contract.

4.3 As the site is in a Conservation Area no works should be carried out to any of the trees referred to in this report without the prior written agreement of the local authority.

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 cm 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. 60cm @ 1m = 60cm diameter at 1m height.
Other abbreviations used:

av - average	est - 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 Tree Survey Plan enclosed 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

See also **discussion** and **conclusions** in the accompanying report.

Explanatory notes

Recommendations
Preliminary management recommendations under existing conditions

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 todesign, 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 qulaities (that is individual aesthetic characteristics)
2. Mainly landscape qualities
3. Mainly cultural values, including conservation

Tree survey schedule

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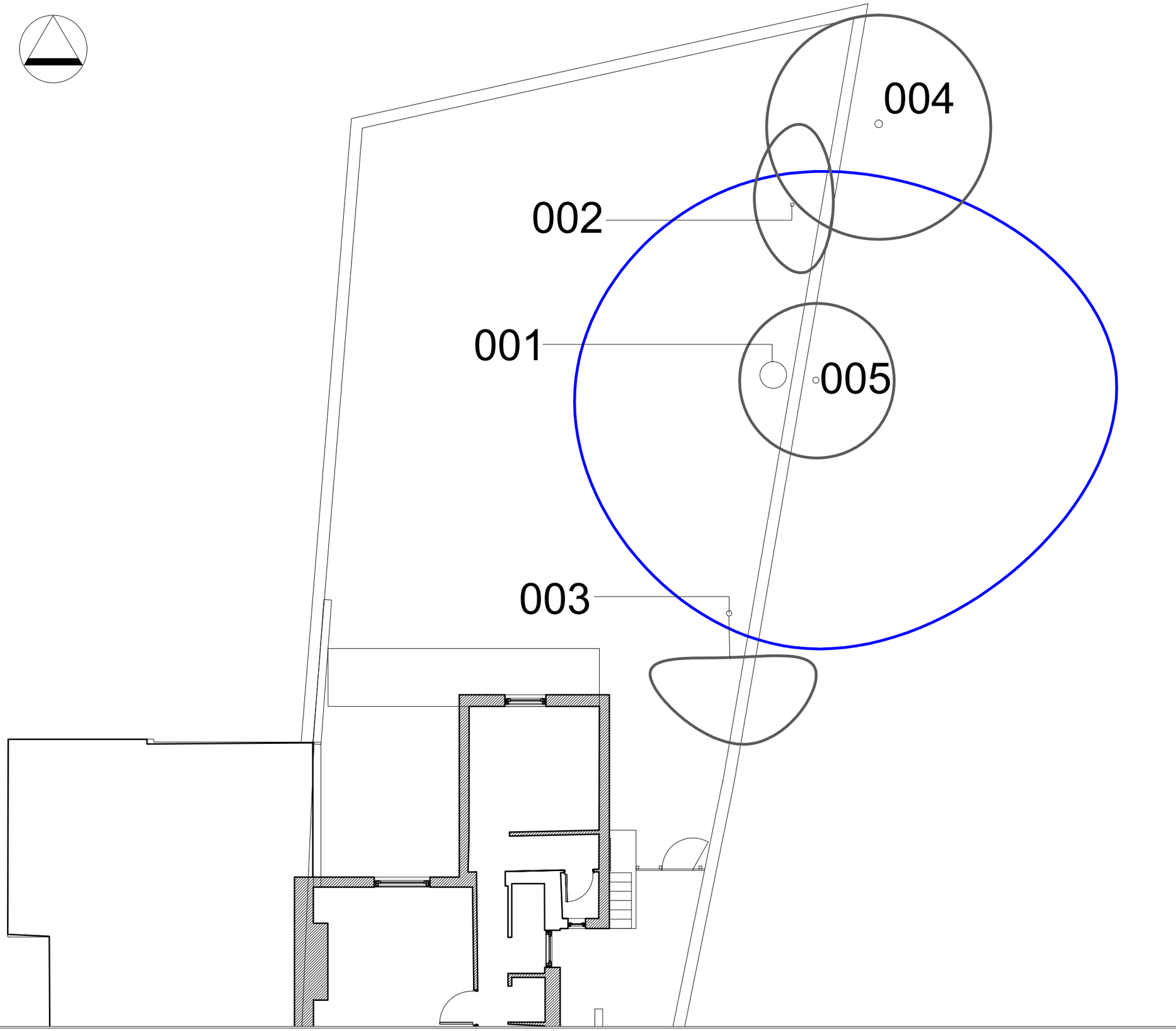
Tree No.	Species	Height (m)	Diam (mm)	Crown Spread (m)				Crown Height (m)	Age	Physiological Condition	Structural Condition	Comments	Recommendations	Life Expectancy	Retention Category	Retention Sub-category
				N	E	S	W									
001	Cider Gum (*Eucalyptus gunnii*)	21	690 @ 0.3m	5	9	7	5	0/3	M	G	G		No action required	20-40	B	1/2
002	Holly (*Ilex aquifolium*)	6	90	2	1	1	2	2/1	SM	G	G	Single slightly leaning stem: first lateral limb at 0.5m has grown up to form a subsidiary stem: quite well balanced crown: very close to brick boundary wall: at 1.5m above ground level stem diameters are 580mm (main stem) and 330mm (subsidiary stem)	No action required	40+	C	2
003	Elderberry (*Sambucus nigra*)	6	140	-1	2	3	2	2/1	M	G	F	Single upright stem: quite well balanced crown:	No action required	10-20	C	2
004	Ash (*Fraxinus excelsior*)	11	160	3	3	3	3		SM	G	G	Single heavily leaning stem (to S): one sided crown	No action required	40+	C	1/2
005	Leyland Cypress (*X Cupressocyoaris leylandii*)	6	150	2	2	2	2		SM	G	F	Single upright stem: well balanced crown: stands off-site	No action required	10-20	C	2
												Single upright stem: rather one sided crown (suppressed by 001): stands off-site				

Client: Physon Property Ltd
Location: 23 Rochester Road, London NW1 9JJ
Date: 24.03.14
Job No.: 260



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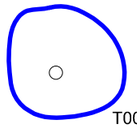

EXISTING TREE

Trees are coloured on plan to correspond to the Retention Categories specified in: *BS5837:20 12 Trees in relation to design, demolition and construction - Recommendations* as follows:

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

REVISION		CHCK'D	APP'D	DATE

Client:

PHYSON PROPERTY LTD

Job Title:

23 ROCHESTER ROAD
LONDON
NW1 9JJ

Drawing Title:

TREE SURVEY PLAN

Drawing Number:	Scale:
260.01.00	1:100 (A3)
Date:	Drawn by:
09.05.14	RS

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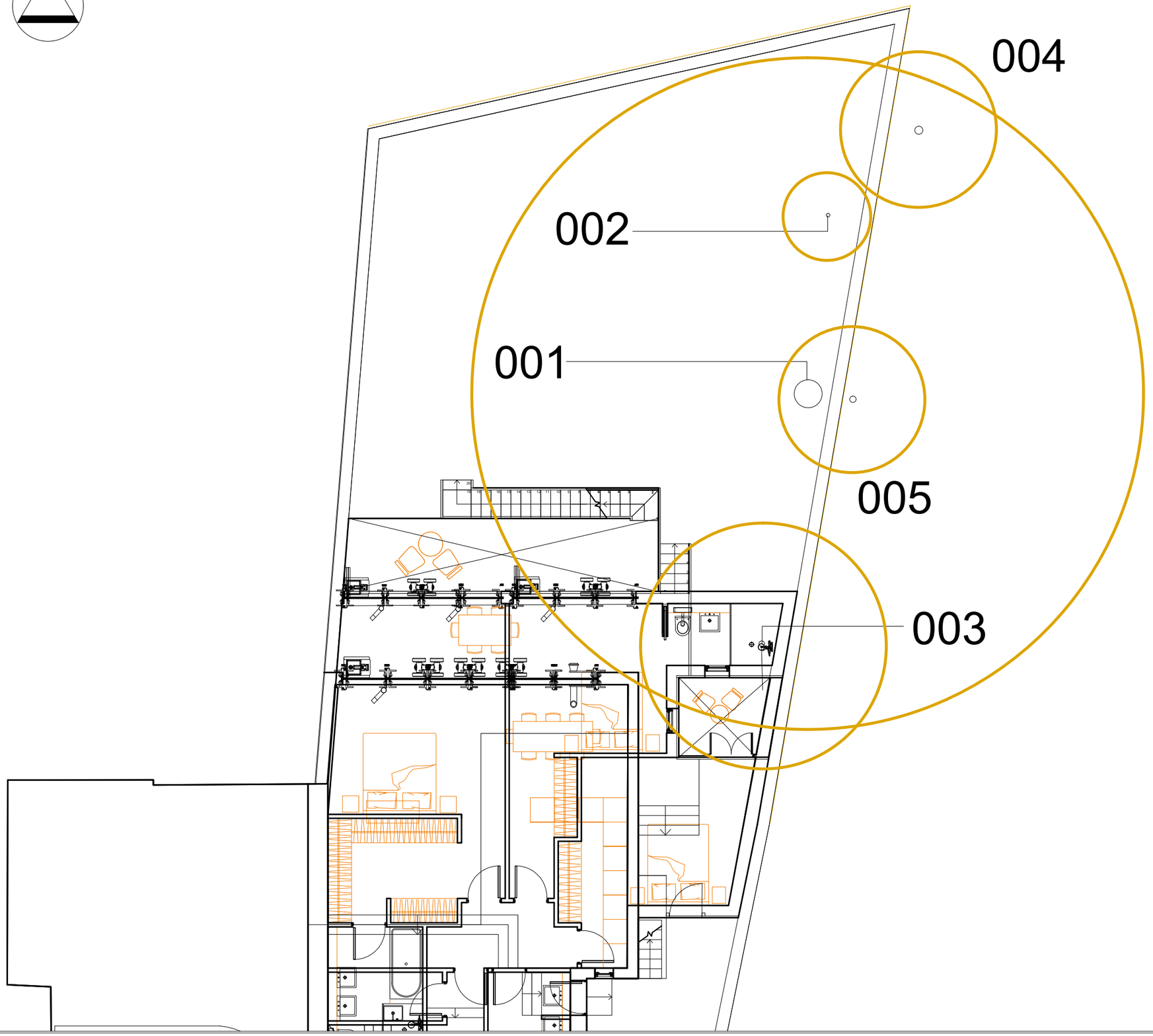
158 MALDEN ROAD, LONDON NW5 4BT
01274 566539



KEY

T005

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

REVISION	CHCK'D	APP'D	DATE

Client:

PHYSON PROPERTY LTD

Job Title:

23 ROCHESTER ROAD
LONDON
NW1 9JJ

Drawing Title:

TREE CONSTRAINTS PLAN

Drawing Number:	Scale:
260.02.01	1:100 (A3)
Date:	Drawn by:
09.07.14	RS

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01274 566539