Arboricultural impact analysis

Trees

at and adjacent to

13 Langland Gardens
London
NW3 6QD

For

Mr N Zangwill

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job no.: 458

document rev. no.:

date: 04.05.16

1. Introduction

1.1 This report contains a detailed appraisal of 6 trees standing within or immediately adjacent to the property boundary of 13 Langland Gardens, London NW3 6QD, in relation to a proposed extension of the lower ground floor of the dwelling.

1.2 The proposed development forms part of 13c Langland Gardens, an apartment which takes in the ground and lower ground floors of the dwelling.

1.3 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.*

1.4 The site inspection for the tree survey on which this report is based took place on the morning of Wednesday 04 May 2016 in dry and sunny conditions.

1.5 I have been provided with the following drawings and documents in digital (pdf) format:

- Elinoar Haseen Drawing No. 13CLAN S100 – Existing Lower Ground Floor Plan
- Elinoar Haseen Drawing No. 13CLAN SK100 – Proposed Lower Ground Floor Plan
- Elinoar Haseen Drawing No. 13CLAN S101 – Existing Ground Floor Plan
- Elinoar Haseen Drawing No. 13CLAN SK101 – Proposed Ground Floor Plan (showing rear garden)
- Elinoar Haseen Drawings No. 13CLAN S300-302 - Existing Front and Rear Elevations
- Elinoar Haseen Drawing No. 13CLAN SK300-302 - Proposed Front and Rear Elevations

1.6 The **Tree survey plan** in **Appendix a** of this report is based on Ordnance Survey Mastermap digital data (so that the proposal can be seen in its local context) with the existing lower ground floor footprint taken from Elinoar Haseen Drawing No. 13CLAN S100, overlaid.

1.7 The **Tree constraints plan,** also in **Appendix a,** is based on the **Tree survey plan** with the footprint of the proposed lower ground floor development taken from Elinoar Haseen Drawing No. 13CLAN SK100 overlaid.

2. Background information

2.1 Site layout, boundaries and topography

2.1.1 13 Langland Gardens is a substantial Victorian semi-detached villa on 4 levels (lower ground, ground, first and second floors), divided into apartments.

2.1.2 The general topography of the plot slopes downhill from east to west, but is divided into 2 level terraces with interlinking flights of steps. The eastern side of the plot is at more or less the same level as the pavement of the adjacent public highway, while the western side, to the rear of the dwelling, is at approximately the same level as that of the lower ground floor.

2.1.3 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) open-source data the property is located upon deep Palaeogene London Clay bedrock.

2.2.2 No soil sampling was carried out on site.

2.3 Planning constraints

2.3.1 The proposed development site is within the London Borough of Camden Redington Frognal Conservation Area

2.3.2 The trees considered in this analysis are not subject to a Tree Preservation Order (TPO).

2.4 The trees

2.4.1 The 2 trees 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 proposed development works include:

- Refurbishment of the ground and lower ground floors of the dwelling
- A modest westwards extension of the lower ground floor
- Minor associated 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, arranged symmetrically around its 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 There are no visible significant barriers to the lateral spread of roots within the RPA of any of the trees considered here.

3.1.3 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 are to be removed to enable the development.

3.3 Trees to be retained

Likely impacts above and below ground

3.3.1 The proposed development footprint does not overlap the RPA of any one of the trees referred to in this analysis and, in the case of the largest adjacent trees – Oak 001 and Ash 003 – there is a considerable separation between the footprint of the proposed extension and the nearest edge of each RPA.

3.3.2 It is possible that small trees 004 - 006 on the Langland Gardens side of the dwelling could be affected by construction traffic while works are in progress. There is sufficient space on that side however, to erect tree protection fencing and still leave a construction access of adequate size.

3.3.3 Above ground, light conditions within the extension, which is of modest size will not differ greatly from those to which the existing lower ground floor is subject. No current or future tree-related headroom restrictions will affect the occupants of 13c Langland Gardens.

4. Conclusions

4.1 As long as *unnecessary disturbance* is avoided, the proposed development considered in this analysis can, in my opinion, be achieved without adverse impact upon retained trees.

4.2 The draft **Arboricultural Method Statement (AMS)** accompanying this analysis sets out appropriate working methods and tree protection measures to ensure that retained trees are not adversely affected.

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

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	Oak (*Quercus petraea/robur*)	22	580	4.5	6	8	6.5	3/5	M	G	G	Single upright stem forks at 3m into 2: spreading, well proportioned crown: stands outside the property boundary of 13 Langland Gardens in an area of communal space with a footpath running in between	No action required	40+	A	1
002	Apple (*Malus domestica variety*)	8	350 @ 1m	3.5	4.5	3.5	3.5	1/5	M	G	F	Single upright stem forks at 0.5m into 2: heavily pruned (on a regular basis for fruit production): low spreading quite well balanced crown: stands outside the property boundary of 13 Langland Gardens in an area of communal space with a footpath running in between	No action required	20-40	C	1/2
003	Ash (*Fraxinus excelsior*)	20	550	4.5	4	4	5	3/5	M	G	G	Single leaning stem forks at 3m into 2: well proportioned crown: stands outside the property boundary of 13 Langland Gardens in an area of communal space with a footpath running in between	No action required	40+	B	1/2
004	Crab Apple (*Malus species*)	4	50	1	1	1	1	2/2	Y	G	G	Single upright stem: well-proportioned branch system: still staked and tied: a recently planted street tree standing outside the property boundary of 13 Langland Gardens	No action required	40+	B	1
005	Hawthorn (*Crataegus monogyna cv*)	3	50	1	1	1	1	1/1	Y	G	G	Single upright stem: with an ascending well proportioned crown originating at just under 2m: still staked and tied	Young tree maintenance	40+	c	1
006	Evergreen Oak (*Quercus ilex*)	2	80	1	1	1	1	1/1	SM	G	F	Short single upright stem forks at just under 1m into 2: squat but quite well balanced crown	No action required	40+	C	1

Client: Mr N Zangwill
Location: 13 Langland Gardens, London NW3 6QD
Date: 04.05.16
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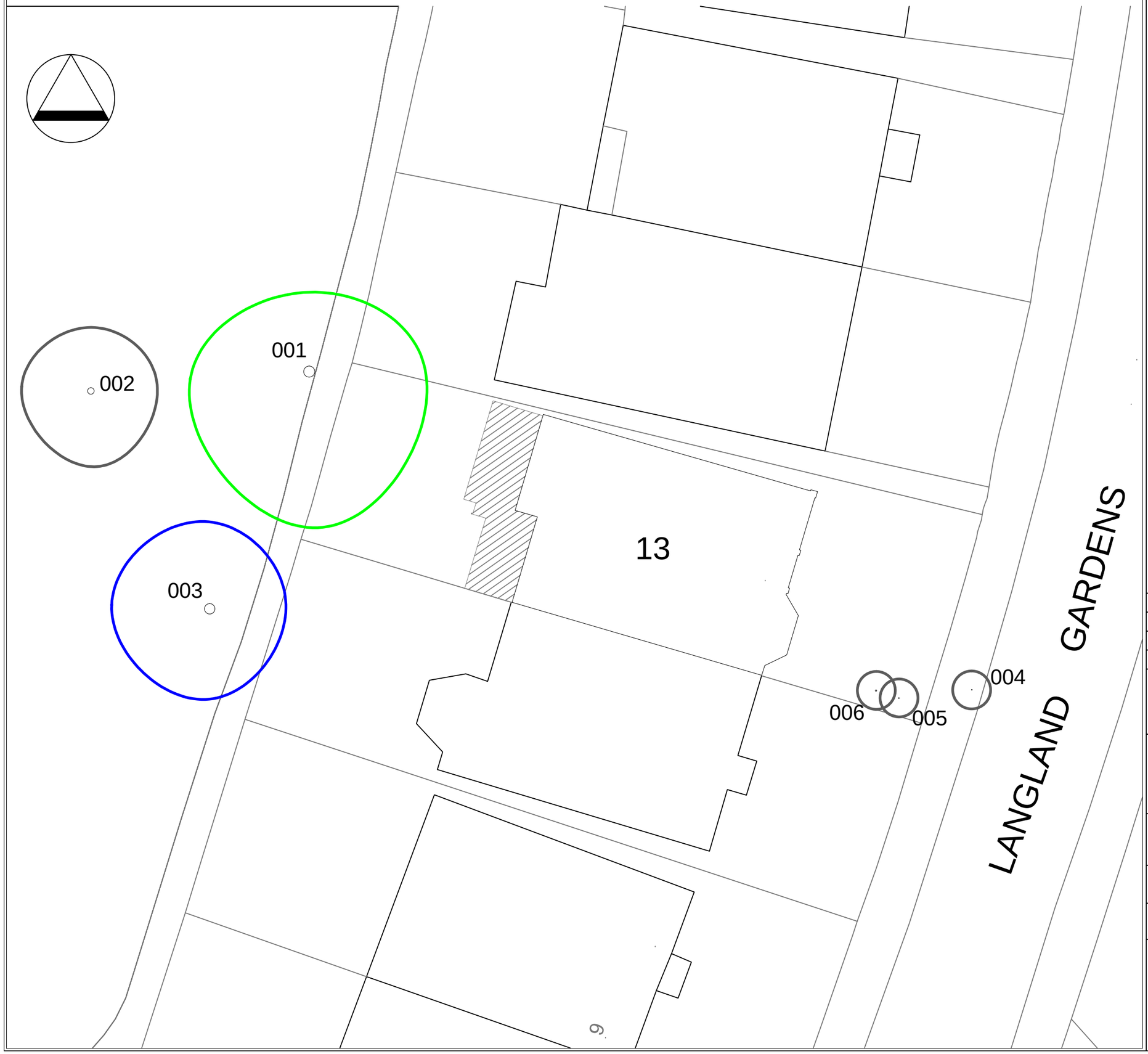
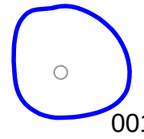


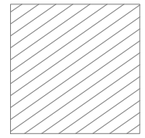
KEY



EXISTING TREE

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

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



FOOTPRINT OF PROPOSED LGF EXTENSION

REVISION		CHCK'D	APP'D	DATE

Client:

MR N ZANGWILL

Job Title:

13 LANGLAND GARDENS
LONDON
NW3

Drawing Title:

TREE SURVEY PLAN

Drawing Number:	Scale:
458.01.00	1:200 (A3)
Date:	Drawn by:
04.05.16	RS

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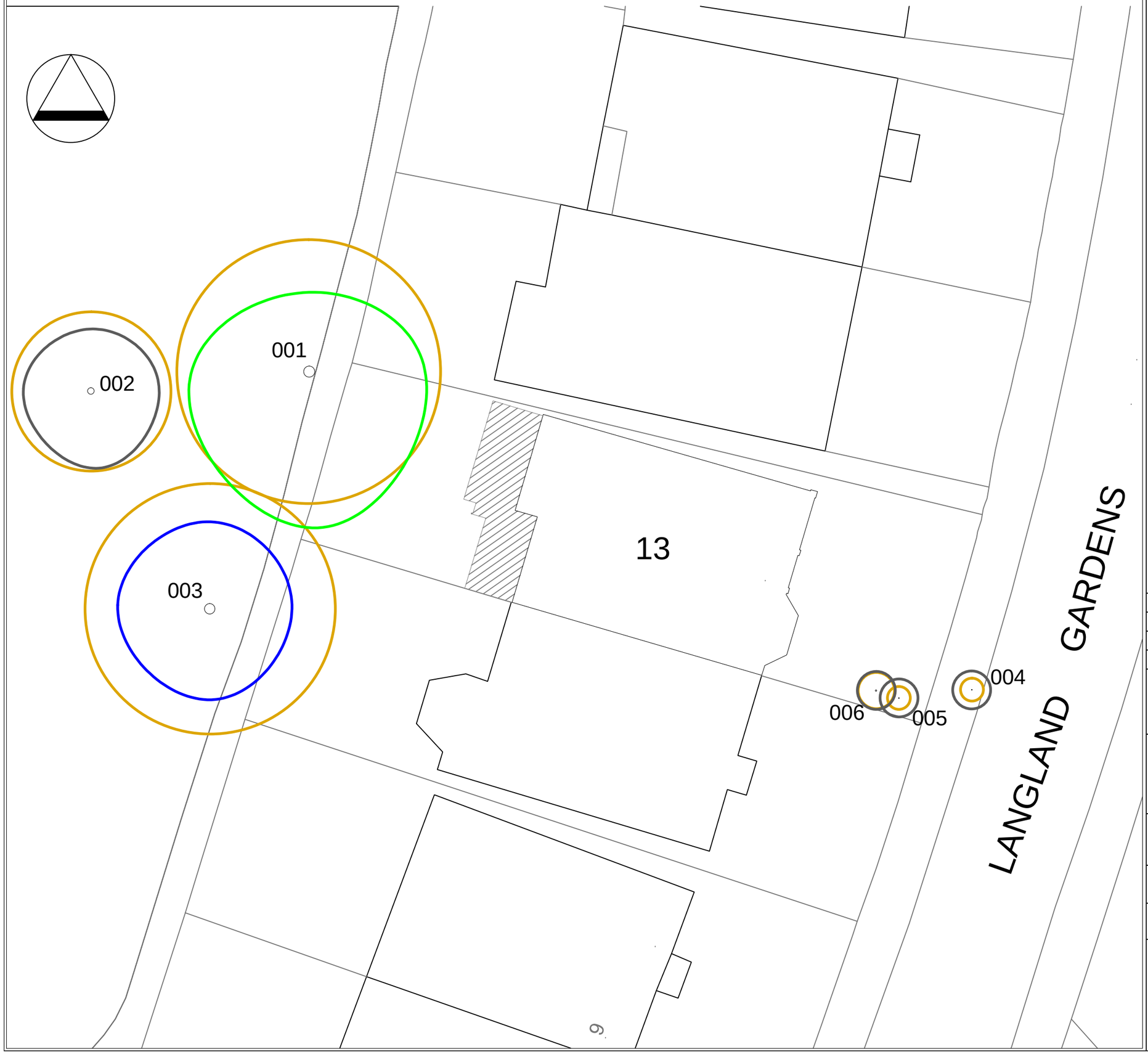

KEY

001

EXISTING TREE

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001

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

FOOTPRINT OF PROPOSED LGF EXTENSION

REVISION	CHCK'D	APP'D	DATE

Client:

MR N ZANGWILL

Job Title:

13 LANGLAND GARDENS
LONDON
NW3

Drawing Title:

TREE CONSTRAINTS PLAN

Drawing Number:	Scale:
458.02.00	1:200 (A3)
Date: 04.05.16	Drawn by: RS

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