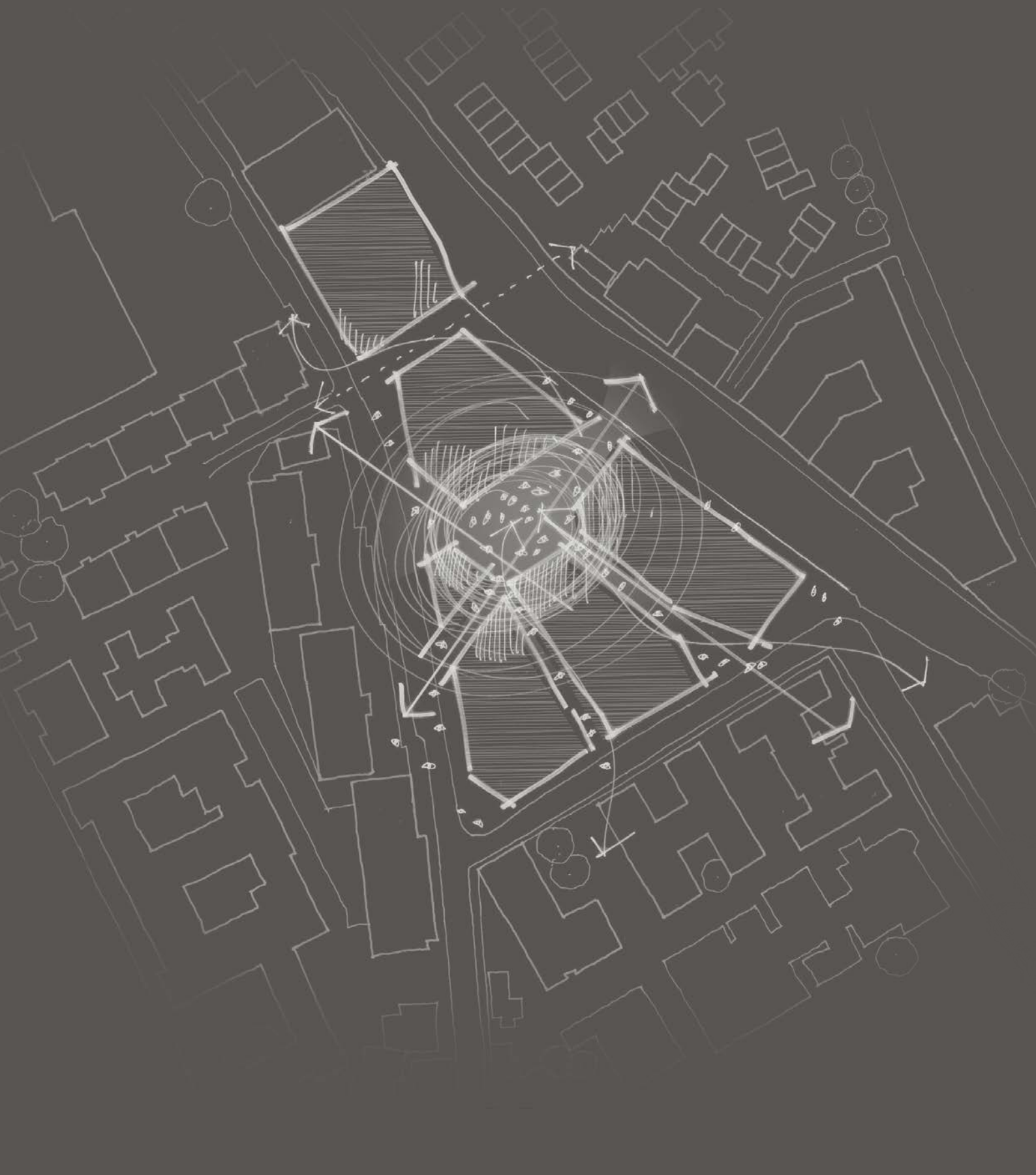
Transformation of the Ugly Brown Building

Aspect Arboriculture

Arboricultural Impact Assessment

September 2017



REEF ESTATES LIMITED

aspect arboriculture

‘TRANSFORMATION OF THE UGLY BROWN BUILDING’
2-6 ST. PANCRAS WAY
LONDON
NW1 0TB

Arboricultural Impact Assessment

September 2017
9298_AIA.001 Rev D

CONTENTS

APPENDICES

1 INTRODUCTION

1.1 Appointment and Scope

1.1.1 Aspect Arboriculture was commissioned by Reef Estates Limited to inform proposals relating to the *"Demolition of the existing building and erection of 6 new buildings ranging in height from 2 storeys to 12 storeys in height above ground and 2 basement levels comprising a mixed-use business floorspace (B1), residential (C3), hotel (C1), gym (D2), flexible retail (A1-A4) and storage space (B8) development with associated landscaping work"*.

1.1.2 British Standard 5837:2012 provides recognised industry guidance concerning trees in relation to demolition and construction and has been used as a benchmark for considering the development proposals. Pursuant to this advice, the scope of Aspect's appointment relates to the preparation of a tree survey undertaken during June 2016, commentary on the emerging design and the preparation of this assessment regarding the arboricultural impact. A copy of the tree survey is provided in Appendix A.

1.2 Limitations

1.2.1 This assessment has been prepared in respect of proposed development and should not be interpreted as a report on tree health and safety. Reasonable effort has been made to identify visible defects whilst undertaking the tree survey; trees are however, prone to natural failure without warning therefore no guarantee can be made as to the absolute safety of any of the trees surveyed. Aspect's opinion of tree condition and structural potential is therefore valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees' existing context.

1.2.2 This work relates to arboriculture, therefore reliance should not be given to comments made in respect of other disciplines i.e. landscape, ecology or civil engineering without first consulting an appropriate expert.

1.3 Site Description

1.3.1 The application area is located within the London Borough of Camden, to the north of St Pancras Hospital, bound by Regent's Canal to the east and St Pancras Way to the west. The site is comprised of a single commercial building, separated into three tenanted blocks. On the site's frontage with St Pancras Way are areas of soft landscaping set within raised planting beds and tree pits, with further parcels of soft landscaping along the site's eastern

boundary with Regents Canal. The landscaping to both the front and the rear is predominantly comprised of semi mature trees and low-lying shrubs. The site falls under the administration of the London Borough of Camden Council as the local planning authority.

1.3.2 The underlying bedrock is understood to be sedimentary Clay, Silt and Sand based (London Clay Formation)[1], overlain by a lime-rich loam and clay soil associated with impeded drainage[2].

1.4 The Trees

1.4.1 There are 30no. individual trees within influence of the application area. In general terms, the tree assemblage is comprised of ornamental broadleaves, typical on the urban setting.

1.4.2 There is only one high quality (category A) tree onsite; **T1** Silver Maple is located on the site's frontage with St Pancras Way. T1 is a mature and established ornamental component established within close proximity to an existing building, which in response has resulted in an asymmetric canopy forming predominantly to the west and the south.

1.4.3 There are 11no. moderate quality (category B) trees within influence of the application area: divided into 2no. cohorts; T10 Norway Maple 'Crimson King' located on the site's frontage with St. Pancras Way, and T17-T26 Variegated Sycamore forming a parcel of ornamental plantings adjacent to the site's eastern boundary with Regent's Canal.

1.4.4 With exception of category U T29 (see below), all remaining tree cover within influence of the application area is considered to warrant category C only. In summary, representing generally unremarkable examples of their type i.e.: trees that demonstrate compromised structure, signs of stress; trees of indifferent structural and physiological appearance and of limited or transient amenity value which may be readily replaced without significant individual impact on the amenity of the site.

1.4.5 **T29** Ash, is considered to be in a state of overall decline; (category U) demonstrated by an above average amount of deadwood present within the canopy as a result of dieback. The tree falls within the applicant's control, and its removal is recommended on the grounds of sound arboricultural management.

[1] British Geological Survey, cited online September 2017.
[2] Cranfield Soil and Agrifood Institute, cited online September 2017.

1.5 Statutory Designations

1.5.1 Although it is understood that no trees onsite are subject to a Tree Preservation Order, background checks reveal that the site falls within the Regents Canal Conservation Area (LBCC, April 2017). The Council are therefore understood to require notice of an intention to carry out works to trees.

2 POLICY REVIEW

2.1 The National Planning Policy Framework (NPPF)

2.1.1 The NPPF provides planning policy guidance at the national level. With respect to arboriculture, it considers that: 'Planning permission should be refused for development resulting in the loss or deterioration or irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.' (para. 118).

2.1.2 There are no veteran trees or areas of designated ancient woodland, within influence of the application area against which the tests of paragraph 118 can be applied.

2.2 The London Plan 2016

2.2.1 At a regional level, in relation to Planning Decisions, The London Plan (March 2016) Policy 7.21 – Trees and Woodlands, specifies that: *"Existing trees of value should be retained and any loss as a result of development should be replaced following the principle of 'right place, right tree'. Wherever appropriate, the planting of additional trees should be included in new developments, particularly large-canopied species."*

2.3 The London Borough of Camden Council Local Plan (June 2017)

2.3.1 At a local level, the site lies within the administrative boundaries of the London Borough of Camden Council (LBCC). In terms of development control, LBCC has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). It is understood that the Council's primary development control document, which relates to trees, is the adopted Camden Local Plan (June 2017) - the relevant sections of policies are reproduced below:

2.3.2 **Policy A3 – Biodiversity**

Trees and vegetation

The Council will protect, and seek to secure additional, trees and vegetation. We will:

j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value, including proposals which may threaten the continued wellbeing of such trees and vegetation;

k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 ' Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;

l. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;

m. expect developments to incorporate additional trees and vegetation wherever possible.

2.3.3 **Policy D2 – Heritage**

The Council will preserve and, where appropriate, enhance Camden's rich and diverse heritage assets and their settings, including conservation areas, listed buildings, archaeological remains, scheduled ancient monuments and historic parks and gardens and locally listed heritage assets.

Conservation areas

In order to maintain the character of Camden's conservation areas, the Council will take account of conservation area statements, appraisals and management strategies when assessing applications within conservation areas.
The Council will:

h. preserve trees and garden spaces which contribute to the character and appearance of a conservation area or which provide a setting for Camden's architectural heritage.

2.4 Review

2.4.1 In the context of development, it is understood that the Council will require existing trees to be considered, and any unavoidable removals will be mitigated for on the basis of 'right place, right tree'. Our arboricultural survey, and this document has been prepared in direct response to this requirement.

3 ARBORICULTURAL IMPACT

3.1 Preliminary Tree Protection Plan

3.1.1 In keeping with the recommendations of BS5837:2012, assessment of the proposed arboricultural impact is presented in the format of a preliminary Tree Protection Plan (TPP) - refer to Appendix C.

3.1.2 The purpose of the TPP is to identify: a) trees to be retained and integrated within the proposed setting, b) illustrate safeguarding measures to ensure that retained trees are not harmed, either during the course of construction, or as a result of the development; and lastly, c) identify trees that it is necessary to remove in order to implement the development and mitigate with new tree planting.

3.1.3 The assessment and the TPP are informed by the tree survey and constraints plan balanced with the requirements of the layout and adopted policy. The tolerance of the trees to disturbance based on species, age, condition and the presence of surrounding trees and features of the existing site has been an explicit consideration.

3.2 Tree Removals

3.2.1 It is our professional opinion that trees should only be recommended for removal where: a) it is *necessary and unavoidable* to site development within close proximity to existing trees, such that they cannot be confidently retained as living features, and/or b), where the amenity value of the tree will be significantly reduced as a result of the proposals, particularly if already of a low retention priority. Table 1. overleaf provides a full list of the trees which will need to be removed to accommodate the scheme of development.

Table 1. Tree Removals

Tree No.	Species	BS Category
1	Silver Maple (*Acer saccharinum)*	A2
4	Norway Maple 'Crimson King' *(Acer platanoides)*	C1
5	Silver Maple (*Acer saccharinum)*	C1
6	Silver Maple (*Acer saccharinum)*	C1
7	Common Lime (*Tilia* x *europaea)*	C1
8	Common Lime (*Tilia* x *europaea)*	C1
9	Common Lime (*Tilia* x *europaea)*	C1
10	Cherry Crab Apple *(Malus x robusta)*	B1
11	Common Lime (*Tilia* x *europaea)*	C1
12	Cherry Crab Apple *(Malus x robusta)*	C1
13	Cherry Crab Apple *(Malus x robusta)*	C1
14	Cherry Crab Apple *(Malus x robusta)*	C1
15	Italian Alder *(Alnus cordata)*	C1
16	Cherry Crab Apple *(Malus x robusta)*	C1
17-26	Variegated Sycamore *(Acer pseudoplatanus)*	B2
27	Ash *(Fraxinus excelsior)*	C12
28	Ash *(Fraxinus excelsior)*	C12
29	Ash *(Fraxinus excelsior)*	U
30	Ash *(Fraxinus excelsior)*	C12

3.2.2 There is one high quality and 12no. moderate quality trees which must be removed within the proposed development. Significant tree cover has been identified early on at the design stage of the project and has not been overlooked. In the absence of a design response that allows for their sustainable integration Aspect have accepted that their unavoidable loss is a matter of planning balance, i.e. the benefits of the development must demonstrably outweigh the benefits that the trees currently provide. It is considered essential that their loss is mitigated with replacement plantings, as part of a comprehensive scheme of soft landscaping. The replacement plantings should be both appropriate for inclusion within the proposed setting, and, once established, provide betterment to the amenity of the street and conservation area.

3.2.3 The extent of tree removal is illustrated in Appendix C and is distinguishable from retained trees through the absence of an RPA or a hatched canopy; identification numbers are shown coloured red and canopy edges are both dashed and coloured red. As a precaution against erroneous felling, it is recommended that the project arboriculturist spray-marks the trees to be removed with a red flash in the presence of an appointed arboricultural contractor.

3.2.4 Clearance works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

3.3 Mitigation Replanting

3.3.1 It is our strong recommendation that the proposed loss of the trees is accompanied by robust landscape mitigation proposals which should seek to negate any perceived harm to the amenity of the site, and the conservation area – detailed planting plans could be requested by condition.

3.3.2 To accompany the application, it is Aspect's understanding that a Tree Strategy (produced by others) will be submitted, which sets out the framework of the mitigation proposals. The Strategy takes the opportunity to replace the street frontage trees with a number of London Planes, and improves the Regents Canal frontage with replacement semi-mature Field Maples, and introduces a selection of ornamental specimens within the central Plaza area. In Aspect's view, the proposed plantings are capable of mitigating for the necessary removals.

4 CONCLUSIONS

4.1 Pursuant to national, regional and local level policy tests and current best practice in the context of proposed development, a BS5837:2012 survey and assessment has been prepared to inform consideration for the site's existing trees and their contribution to amenity.

4.2 The proposals necessitate clearance of the site's existing trees, including good quality and protected trees. The loss of the site's extant tree stock is considered unavoidable, and generates a requirement for robust mitigation proposals (submitted separately) as per the council's policy requirements, and the site's Conservation Area status.

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APPENDICES

APPENDIX A

TREE SURVEY SCHEDULE (9298 TS 01)

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BS 5837:2012 Tree Schedule: 'Transformation of the Ugly Brown Building'
2-6 St Pancras Way,
London

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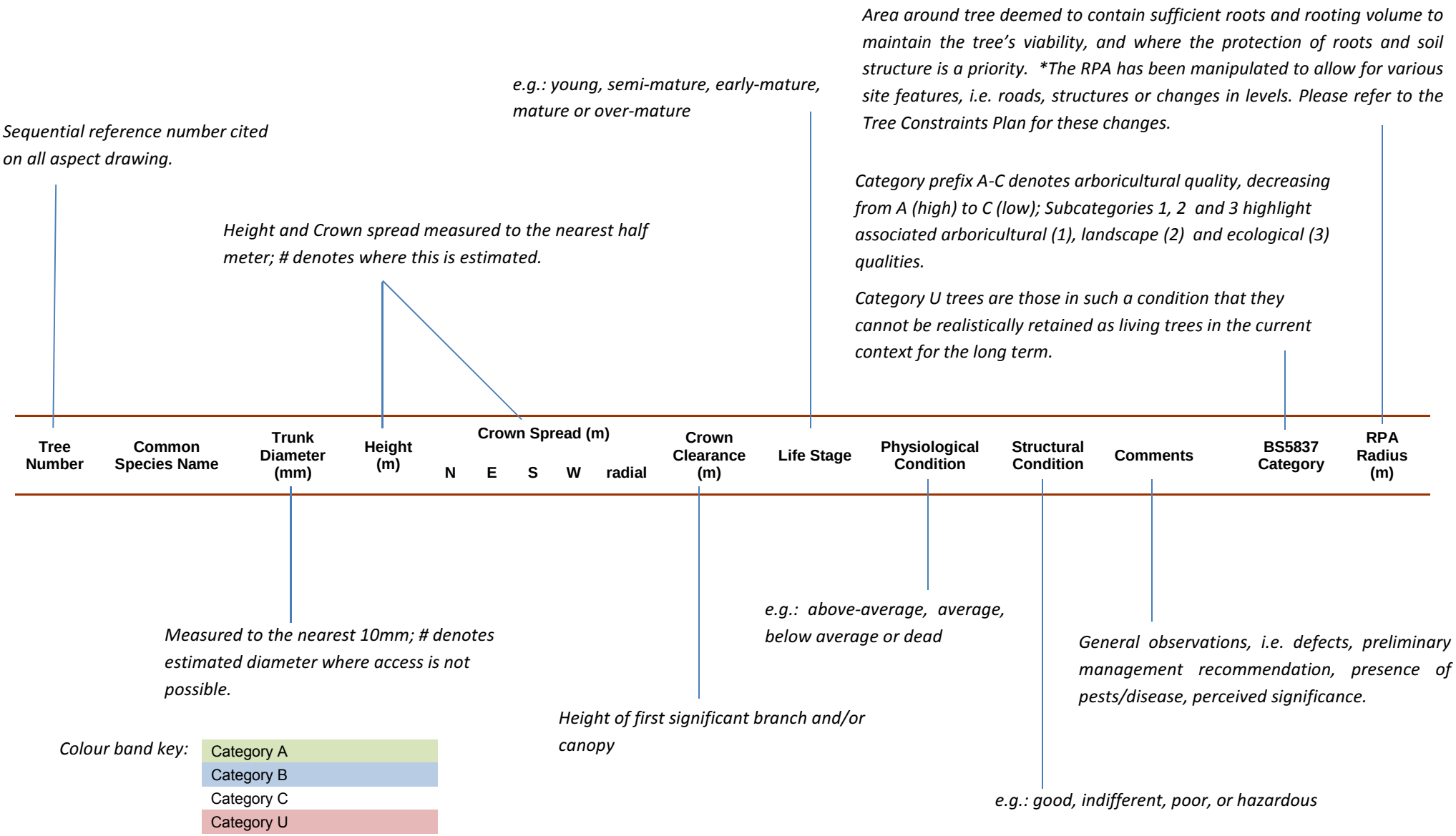
BS5837:2012 Tree Survey: Explanation of Survey Criteria



The following survey should not be interpreted as a report on tree health and safety. Aspect's opinion of tree condition and structural potential is valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing setting.

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
1	Silver Maple	655	19m	7.25	3.5	9.5	9.25		2.25	1.75	Mature	Average	Indifferent	Ornamental feature planted within a slightly raised planting bed Single stem, forking at c. 2m into 2no. co dominant stems and a sub dominant stem to the west with a low lateral bough to the southwest Structure appears typical for the species Canopy slightly suppressed to the north and east by adjacent building Considered to be high quality within its current context as a significant feature contributing to the street scene	A2	7.8*
2	Ginko	55	4m					1	2	2	Young	Average	Indifferent	Recently planted ornamental feature Structure typical for the species Located on the west side of St Pancras Way Readily replaced	C12	0.9
3	Ginko	60	5m					1.25	2	2	Young	Average	Indifferent	Recently planted ornamental feature Structure typical for the species Located on the west side of St Pancras Way Readily replaced	C12	0.9
4	Norway Maple 'Crimson King'	175	6m	3.25	3.25	3.75	3.5		1.75	1.75	Semi Mature	Average	Indifferent	Ornamental feature planted within a slightly raised planting bed Single stem, forks at c. 1.75m into 2no. co dominant stems Average internal deadwood Collectively contributes to the street scene with adjacent companions Readily replaced at current age and size	C1	2.1
5	Silver Maple	275	12m	5	2.5	2.75	7.25		1.5	2	Semi Mature	Average	Poor	Ornamental feature planted within a slightly raised planting bed Single stem, forks at c. 1.75m into 2no. leaders Scaffold structure appears etiolated Suppressed by adjacent building and T6 Low arboricultural quality	C1	3.3
6	Silver Maple	465	12m	5.5	2.25	7	7		1.5	2.25	Early Mature	Average	Poor	Ornamental feature planted within a slightly raised planting bed Lower canopy is cohesive with T5 Eastern canopy is suppressed by adjacent building, previously target pruned to achieve clearance Single stem, forking at c. 2.25m into 2no. co dominant stems, with multiple subdominant lateral limbs	C1	5.7*
7	Common Lime	185	8.5m	3.25	2.5	3	4		2	2	Semi Mature	Average	Indifferent	Ornamental feature planted within a slightly raised planting bed Single stem Structure typical for the species Previously crown lifted Readily replaced at current age Collectively contributes to the street scene with companions	C1	2.1
8	Common Lime	135	6m	2.75	2.5	2.25	2.5		2	1.5	Semi Mature	Average	Indifferent	Ornamental feature planted within a slightly raised planting bed Single stem Structure typical for the species Previously crown lifted Readily replaced at current age Collectively contributes to the street scene with companions	C1	1.5

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
9	Common Lime	135	7m	2.5	2.5	2	2.25		2.5	1.75	Semi Mature	Average	Indifferent	Ornamental feature planted within a slightly raised planting bed Single stem Structure typical for the species Previously crown lifted Readily replaced at current age Collectively contributes to the street scene with companions	C1	1.5
10	Norway Maple 'Crimson King'	315	10m	4.75	4.25	4.25	4.75		2.5	2.5	Semi Mature	Average	Indifferent	Ornamental feature within a slightly raised planting bed Single stem, bifurcates at c. 2.25m into multiple lower lateral branches, maintains a single leader Balanced radial canopy Average internal deadwood Moderate example of the species whilst maturing	B1	3.9
11	Common Lime	120	4.5m					2	2	1.5	Young	Average	Indifferent	Recently planted ornamental feature within a slightly raised planting bed Structure typical for the species Unremarkable example of the species Readily replaced	C1	1.5
12	Cherry Crab Apple	105	4m	1.25	1.5	2.25	2.5		1.75	2	Young	Average	Indifferent	Recently planted ornamental feature within a slightly raised planting bed Structure typical for the species Unremarkable example of the species Readily replaced	C1	1.2
13	Cherry Crab Apple	75	3m	1.75	1	1.25	2.25		2	2	Young	Average	Indifferent	Recently planted ornamental feature within a slightly raised planting bed Structure typical for the species Unremarkable example of the species Readily replaced	C1	0.9
14	Cherry Crab Apple	75	3m					1.75	2	2	Young	Average	Indifferent	Recently planted ornamental feature within a slightly raised planting bed Structure typical for the species Unremarkable example of the species Readily replaced	C1	0.9
15	Italian Alder	80	5m					2	2	2	Young	Average	Indifferent	Recently planted ornamental feature within a slightly raised planting bed Structure typical for the species Unremarkable example of the species Readily replaced	C1	0.9
16	Cherry Crab Apple	90	3m					2	2	2	Young	Average	Indifferent	Recently planted ornamental feature within a slightly raised planting bed Structure typical for the species Unremarkable example of the species Readily replaced	C1	0.9
17	Variegated Sycamore	275	15m	4.75	4.5	3.5	4		3	2	Semi Mature	Average	Poor		B2	3.3
18	Variegated Sycamore	205	15m	2.25	4.25	3	2		4	3	Semi Mature	Average	Poor		B2	2.4
19	Variegated Sycamore	305	15m	4.75	5	4.5	2.25		2	1.5	Semi Mature	Average	Poor		B2	3.6*
20	Variegated Sycamore	200	15m	2.75	2.75	3	3.75		3	3	Semi Mature	Average	Poor		B2	2.4

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
21	Variegated Sycamore	225	15m	2.25	3	2.75	1.5		3	3	Semi Mature	Average	Poor	T17 to T26: 10no. Variegated Sycamore forming a cohesive ornamental feature along the sites boundary with the canal Internal specimens have etiolated scaffold structures due to mutual suppression Considered to collectively be of moderate quality Visible from canal towpath and adjacent residential properties	B2	2.7
22	Variegated Sycamore	240	15m	3	2.25	2.75	4		2	3	Semi Mature	Average	Poor		B2	3
23	Variegated Sycamore	215	15m	2.25	3	3.75	2.5		2.5	3	Semi Mature	Average	Poor		B2	2.7
24	Variegated Sycamore	220	15m	3	2	3	3.5		2.5	3	Semi Mature	Average	Poor		B2	2.7
25	Variegated Sycamore	210	15m	2.75	2.75	2.75	3		2.5	3	Semi Mature	Average	Poor		B2	2.4
26	Variegated Sycamore	200	15m	3.75	3.5	2.75	4		3	3	Semi Mature	Average	Poor		B2	2.4
27	Ash	160	8	2.5	2.75	4	3		3	2	Young	Average	Poor	Ornamental planting Single stem, maintains a single leader Partially suppressed by adjacent building to the west Unremarkable example of the species Low arboricultural quality	C12	1.8
28	Ash	230	10m	4	5.5	4	3		2.5	2.5	Semi Mature	Below Average	Poor	Ornamental planting Single stem, maintains a single leader Partially suppressed by adjacent building to the west Dieback and deadwood throughout the canopy Unremarkable example of the species Low arboricultural quality	C12	2.7*
29	Ash	125	7m	2.75	2.75	2.75	2		1.75	2	Young	Below Average	Poor	Ornamental planting Single stem, forking at c. 1.75m, union appears poor Dieback within the upper canopy, resulting in above average deadwood Considered to be in a state of terminal decline	U	N/A
30	Ash	160 oi	6m	2.75	2.75	1.5	2		1.75	2	Young	Below Average	Poor	Ornamental planting Single stem, forking at c. 1.75m, union appears poor Dieback within the upper canopy, resulting in above average deadwood	C12	1.8

APPENDIX B

TREE CONSTRAINTS PLAN (9298 TCP 01)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KEY:
15 Tree Numbers
Tree Canopies
[8] Category 'U' Trees
Category 'A' RPA
Category 'B' RPA
Category 'C' RPA
Note: Trees 12-16 are not on the topographical survey and their locations have been approximated with measurements taken on site.
North
South
Cited from Google Earth
REV DATE NOTE Drawn Chk'd
REVISIONS
aspect arboriculture
TITLE
Transformation of the Ugly Brown Building
Tree Constraints Plan
CLIENT
Reef Estates Limited
SCALE 1:500 @ A3
DATE JUN 2016
DRAWN GW
DRAWING NUMBER 9298 TCP 01 (North)
REVISION
Based on topographical survey ref: 3948_10_2D.dwg
8 to 14
A5202 ST PANCRAS WAY
Plot A
Jubilee Waterside Centre
REAPERS
Towing Path
CANAL
Plot B
Plot C
Sorting Office
1 to 10
15 to 23
COLLEGE GROVE
1
2
3
4
5
6
[29]
27
28
20
21
22
23
24
25
26

1:500 @ A3

0m 5m 10m 20m

KEY:

- 15 — Tree Numbers
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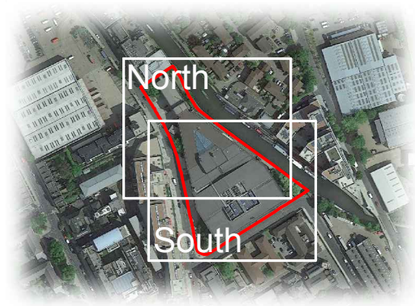
- [8] — Category 'U' Trees
- Category 'A' RPA
- Category 'B' RPA
- Category 'C' RPA

Note: Trees 12-16 are not on the topographical survey and their locations have been approximated with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

REVISIONS

aspect arboriculture

TITLE

Transformation of the Ugly Brown Building
Tree Constraints Plan

CLIENT

Reef Estates Limited

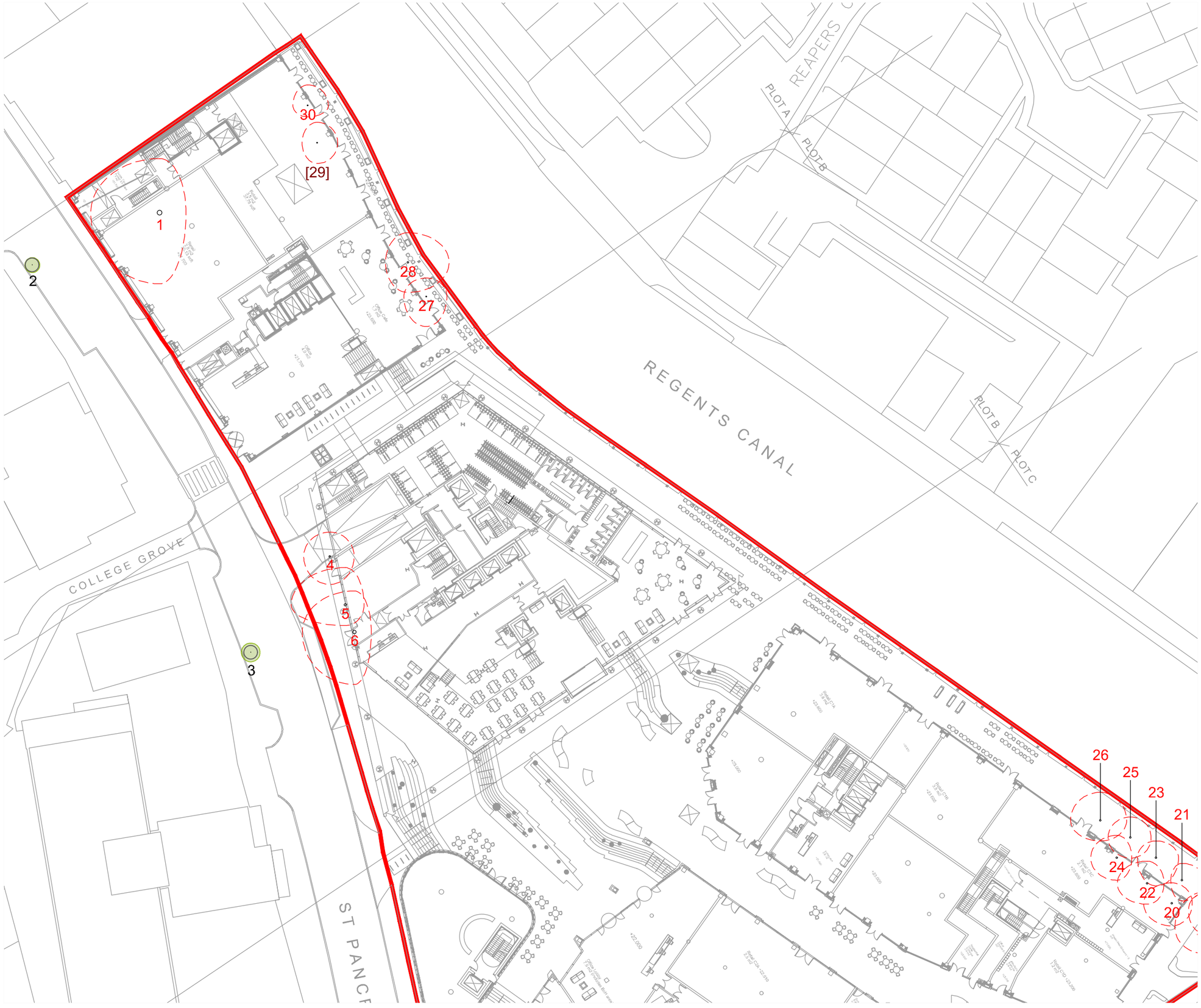
SCALE	DATE	DRAWN
1:500 @ A3	JUN 2016	GW

DRAWING NUMBER	REVISION
9298 TCP 01 (South)	

Based on topographical survey ref: 3948_10_2D.dwg

APPENDIX C

TREE PROTECTION PLAN (9298 TPP 01 Rev A)



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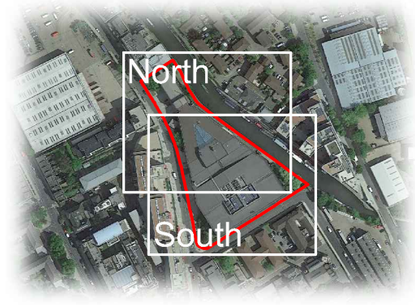
KEY:

- 15 — Tree Numbers
- Tree Canopies
- [8] — Category 'U' Tree Removed
- Category 'C' RPA
- 7 — Trees to be Removed

Note: Trees 12-16 are not on the topographical survey and their locations have been approximated with measurements taken on site.



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REV	DATE	NOTE	Drawn	Chk'd

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TITLE

Transformation of the Ugly Brown Building
Tree Protection Plan

CLIENT

Reef Estates Limited

SCALE	DATE	DRAWN
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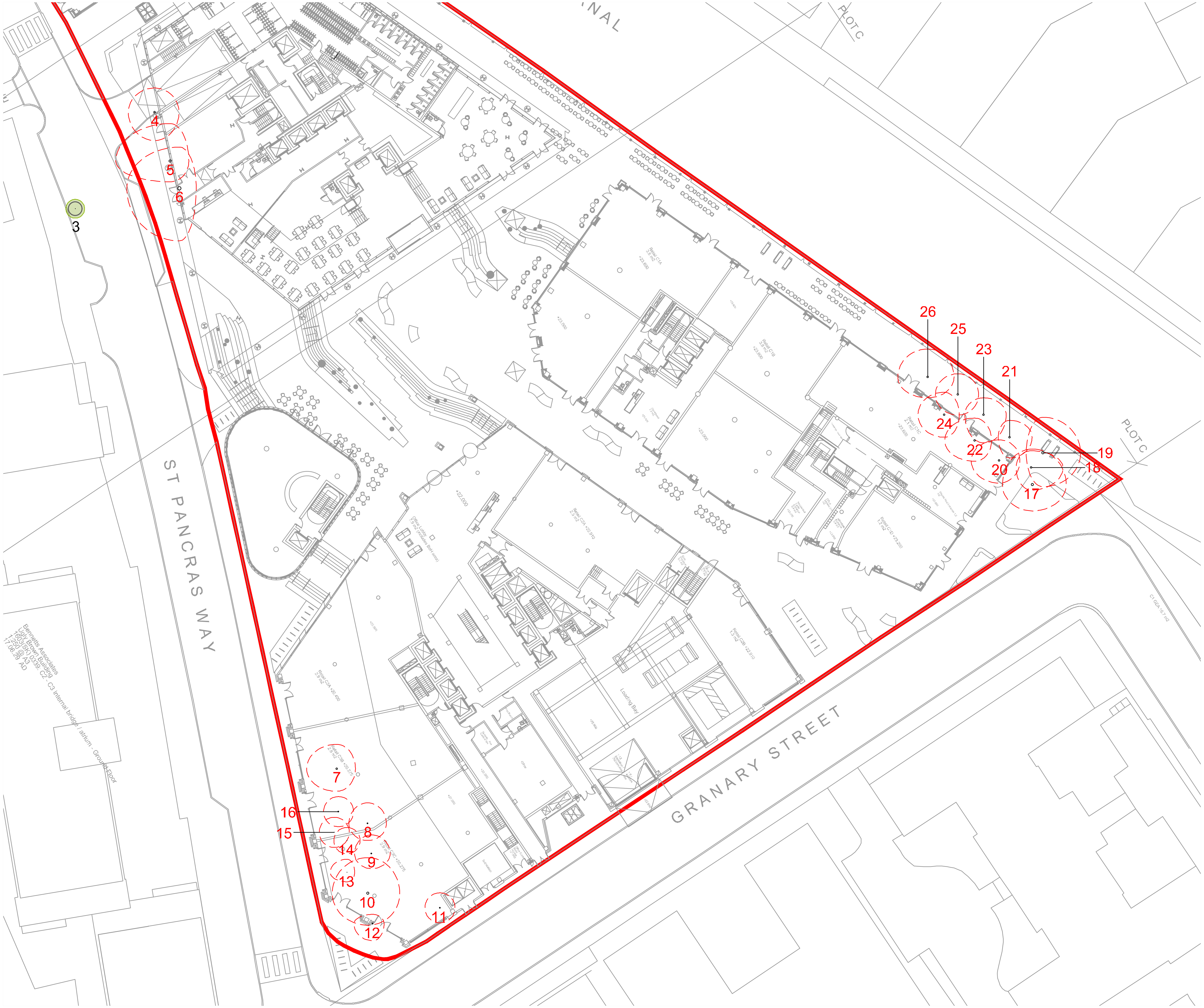
Based on proposed layout ref: 1603_P_100_H.dwg



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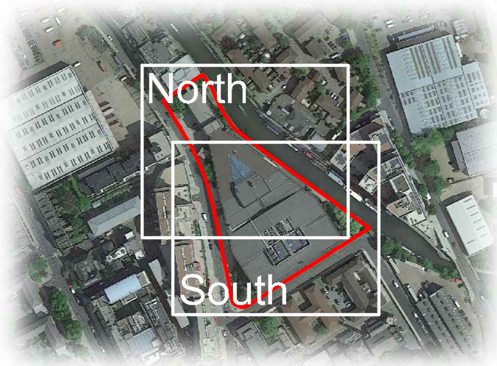
KEY:

- 15 Tree Numbers
- Tree Canopies
- [8] Category 'U' Tree Removed
- Category 'C' RPA
- 7 Trees to be Removed

Note: Trees 12-16 are not on the topographical survey and their locations have been approximated with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

REVISIONS

aspect arboriculture

TITLE

Transformation of the Ugly Brown Building
Tree Protection Plan

CLIENT

Reef Estates Limited

SCALE	DATE	DRAWN
1:500 @ A3	AUG 2017	GW

DRAWING NUMBER	REVISION
9298 TPP 01 Rev A (South)	A

Based on proposed layout ref: 1603_P_100_H.dwg

APPENDIX D

TREE SURVEY METHODOLOGY (9298 TSM 01)

Tree Survey Methodology

The tree survey is a form of Visual Tree Assessment undertaken during June 2016. Tree locations are identified via a topographical survey; locations of any trees excluded from the topographical survey were plotted on site. The purpose of the survey is to record information about trees on or adjacent to the site to inform design options. In keeping with clause 4.4 of BS5837: 2012 'Trees in Relation to Design, Construction and Demolition', the survey provides a record of the following parameters:

Tree Numbers: all individual trees are sequentially numbered. Groups of trees, woodlands and hedgerow are also sequentially numbered with a corresponding prefix relevant to their type e.g. G, W or H respectively; the identification of trees as woodland, groups of trees or within hedgerows is undertaken where appropriate. The identification of trees as individuals within collections has been made where it is considered sensible to make such a differentiation.

Species: listed by common name

Stem Diameter: given in millimetres and obtained by measuring single/multiple stems at 1.5m using a diameter tape in accordance with Annex C within BS5837:2012. Diameters of inaccessible trunks are estimated and provided with the suffix '#'.

Tree Heights: determined using a clinometer and measured to the nearest 500mm. Heights are estimated where specific triangulation is not achievable and by reference to measured trees nearby (provided with the suffix '#').

Crown Spreads: measured at cardinal points using a Leica Disto™ laser distance measurer. Measurements were recorded to the nearest 250mm. Inaccessible crown spreads are estimated based on measured canopies nearby and provided with the suffix '#'

Crown Clearance: The height of the first significant living branch and/or canopy (as appropriate) is recorded using a Leica Disto™ laser distance measurer to inform vertical ground clearance. Crown clearance may be higher or lower than the first significant branch. Estimated clearances are provided with the suffix '#'. Height of first significant branch will be provided where considered advantageous to make the distinction.

Life Stage – The age of trees, groups of trees, hedges and woodlands are defined as follows:

- Young (within the first 1/4th of life expectancy)
- Semi-mature (within the second 1/4th of life expectancy)
- Early Mature (within the third 1/4th of life expectancy)
- Mature (within the fourth 1/4th of life expectancy)
- Over Mature and Veteran (exceeding normal life expectancy)
- Veteran (significantly exceeding normal life expectancy)

Physiological and structural condition: physiological condition defined as follows; good, above average, average, below average, poor or dead. Structural condition is defined as: good, moderate, indifferent, poor or hazardous

Comments: further observations were recorded where necessary i.e. details regarding defects, preliminary management recommendations, presence of pest/disease and perceived significance.

BS5837 Category: pursuant to BS5837:2012 section 4.5 and cascade chart for tree quality assessment (refer to reproduced Table 1 overleaf). Trees qualifying under a given category (A-C and U) and any appropriate subheading (1-3) are considered to fall within the scope of that category's definition.

Estimated Remaining Contribution. Described` as a guideline only and in terms of years: <10, 10+, 20+ and 40+ relevant to category U, C, B and A respectively. This information is not provided on the tree schedule to avoid conclusions based upon 'life expectancy'.

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those 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	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*		
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**
Trees to be considered for retention			
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

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