Arboricultural Report

Marketing Suite 101 Camley Street London, NW1 0PF

For Chalk Farm Developments Ltd c/o Aragorn Properties Corp

May 2017



Ground Control Limited Kingfisher House, Radford Way Billericay, Essex CM12 0EQ

T: 01277 650 697 F: 01277 630 746 E: info@ground-control.co.uk www.ground-control.co.uk

Project Scope	Arboricultural Report			
Project Title/Name	Marketing Suit 101 Camley Street			
Our Reference	GC.199038			
Client			ents Limited c/o Aragon Prop	erties Corp
Issue Status				Revision
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Contents

- 1.0 Introduction Client & Scope
- 2.0 The Site Site Description Statutory Tree Protection/Designations
- 3.0 **Ground Control Tree Survey** Scope of survey Tree Positions Surveyed Trees

4.0 **The Development Proposal**

5.0 **Arboricultural Impact**

Supporting Information Assessment No impact Some Impact Direct Loss

6.0 Summary

Appendices

Appendix A – Tree Survey Key & BS 5837:2012 Cascade Chart – Table 1

Appendix P – Tree Survey Plan & Schedule Appendix C – Site Photos Appendix D – Tree Constraints & Protection Plans

Appendix E – British Standard Tree Protective Barrier Fencing Detail

1.0 Introduction

Client & Scope

- 1.1 The following Arboricultural Report has been prepared for Chalk Farm Developments Limited c/o Aragorn Properties Corp in relation to the proposed marketing suite at 101 Camley Street, London to support the forthcoming planning application.
- 1.2 The purpose of this report is to assess the impact of the proposed works on the existing trees and provide adequate tree protection measures for the retained trees.
- 1.3 The report is based on the tree survey carried out by Ground Control in January 2017 to refine the planning conditions associated with the main development works. As such the tree references are extracted from the wider development survey and run from 17-24 as opposed from 1.
- 1.4 An series of exploratory trial pits under arboricultural supervision are due to be undertaken shortly with the view to establishing as far as we can:
 - 1.4.1 The depth of the existing foundations along the boundary retaining wall.
 - 1.4.2 The depth of the concrete slab and any subbase within site.
 - 1.4.3 The potential root spread from the trees along the Regents Canal boundary based on the assumed root protection areas (RPA).

This report will be updated to suit the findings and include any further associated working methods and protection measures.

1.5 This report has been prepared based on the following current/historic information:

Number/Reference	Comments
T8428_TOP0_2D_	
R1_2	
17001 01 AP 00 10	
001	
17001 REP003	
	T8428_TOPO_2D_ R1_2 17001 01 AP 00 10 001

2.0 The Site

Site Description

- 2.1 The whole development site is known as 101 Camley Street, with the proposed marketing suite is located in the north-west corner of the development site. From the East Granary Street provides access and the primary frontage to the marketing suite. The Regent's Canal bounds the North and North Eastern side of the development whilst the main development site wraps around the remainder of the site.
- 2.2 Existing subject trees are located along Regent's Canal adjacent to the north of the proposed marketing suite development.

Statutory Tree Protection/Designations

2.3 The site and/or trees there in, that are protected by the following statutory designations;

	Yes/No	Source
Tree Preservation Orders	No	Telephone conversation with Tunde at Council/Public Trees department of London Borough of Camden on 15/02/2017.
Conservation Area	Yes	DP9 Ltd – Planning Statement dated July 2014
Details		Regent's Canal Conservation area to the North and the King's Cross Conservation area to the South.

3.0 Ground Control Tree Survey

3.1 Scope of Survey

	Details
Survey Standards	In accordance with BS5837:2012 'Trees in
	relation to design, demolition and construction –
	Recommendations
	 Part 4.4 – Tree Survey
	 Part 4.5 – Tree Categorization Method
	 Part 4.6 – Root Protection Area
	Refer to Appendix A for Tree Survey Key &
	Cascade Chart for tree quality Assessment
Survey Area	No trees are present within the development
	limits.
	Existing trees located to the North along
	Regent's Canal, bounding the development site
	have been included.
Survey Methodology	Visual Assessment from Ground level
Specialist Surveying Equipment	Tablet Computer
(other than tape/camera/plans)	
Survey Date(s)	17/01/2017
Surveyor	Alan Richardson, Arboricultural Consultant
Survey Limitations	No access was available to the existing trees
	beyond the site limits Stem diameter of these
	trees has been estimated and tree no's has
	been marked with "# " on the tree survey
	schedule.
Have the trees been tagged	No

3.2 Tree Positions

Supplied Site Plan	Originator	Engineering land & Building
		Surveys
	Drawing Name	Topographical Survey
	Drawing Ref:	T8428_TOPO_2D_R1
Is the drawing a measured Topographical Survey		Yes
Are all of the trees pl	otted individually	Yes
Additional Trees and/or	-	
landscape Features (General)		

3.3 Surveyed Trees

3.3.1 The trees have been surveyed in accordance with BS 5837:2012 and categorised in accordance with the 'Tree Survey Key & Cascade Chart for tree quality Assessment'. The table below provides an overview summary of the quality assessment breakdown across the site.

Quantity Trees	Quantity Groups	Category	Quality & Val	ue
0	0	Α	High	Trees to be considered for
0	0	В	Moderate	retention
8	0	С	Low	
0	0	U	Those in such a condition that any existing value would be lost within 10years and which should, in the current context be removed for reasons of sound arboricultural management.	Trees <u>unsuitable</u> for retention
8	0			Totals

Summary Table

3.3.2 A full Tree Survey Plan & Schedule can be found in **Appendix B.**

3.3.3 A photographic record of the surveyed trees can be found in **Appendix C.**

4.0 The Development Proposal

- 4.1 The proposal sees the development of a two storey marketing suite to the north-west corner of the mixed use development site. The ground floor incorporates a reception area and facilities with a landscaped garden to the rear, whilst the first floor containing a two bed show apartment. Refer to UNIT Architects Design & Access Statement for further details.
- 4.2 The development proposals within proximity to the surveyed trees include:
 - Removal of the existing boundary wall(s) and palisade fencing
 - Reducing external 'garden area' landscaping levels to +23.557 from current level range of +23.75 +24.41
 - Installing 3500mm high x 328mm thickness brick wall to canal boundary.
 - Installing above ground air source heat pump with enclosure. Details to be confirmed.
 - Installation of 2 storey modular marketing suite building. Foundation details to be confirmed.
 - Installing new soft landscape and hard landscaping. Details to be confirmed.

5.0 Arboricultural Impact

5.1 Supporting Information

- 5.1.1 To assess the Arboricultural Impact of the surveyed trees and offer guidance on associated protection measures for any retained trees a Tree Constraints and Protection Plan has been prepared and can be found in **Appendix D**.
- 5.1.2 The root protection areas (RPA's) have been calculated in accordance with guidelines within BS 5837:2012, as highlighted on the tree survey schedule. Due to the nature and constraints of the existing site, the Root Protection Area (RPA) might have been offset/adapted to suit envisaged root growth area on the Tree Constraints and Protection Area (TCPP).
- 5.1.3 The RPA's of the following trees has been altered /adjusted to suit with the preexisting side conditions in accordance with the section 4.6.2 of BS5837:2012
 - **T17, T20, T21, T22 & T23** RPA's has been adjusted to suit the constraints posed by the Canal.
 - **T21 & T24** RPA's has been adjusted to suit the constraints of the site boundary wall and foundation assuming that root growth would be favouring the soft landscape areas by 10%.

5.2 Assessment

The Impact on the existing trees is outlined below under the following headings;

- 1. No Impact
- 2. Some Impact
- 3. Direct Loss

5.2.1 No Impact

The following surveyed trees will remain unaffected by the development works.

- T17 Goat Willow
- T20 Goat Willow
- T22 Crack Willow

5.2.2 Some Impact

The following trees may experience some impact on either their RPA or canopy as a result of the proposed development works.

- T18 Sycamore
- T19 Sycamore
- T21 Sycamore
- T23 Sycamore
- T24 Sycamore

The tables below will outline the impact on these existing trees by the proposed works and provide site specific protection measures and working methods.

<u>T18, T19 & T24</u>	
Proposed Works within the RPA	 Removal of the existing boundary wall and railings Installing 3500mm high x 328mm thickness brick wall to canal boundary (TOW height +27.075) from reduced landscape level of +23.557
Potential Impacts	Root Severance Root Disturbance Damage to the canopy
Significance of Impacts	The assumed RPA of both T18 &T19 sit within the soft landscape, although within 100mm of the existing wall. The assumed offset RPA of T24 extends across the existing boundary walls. All of the tree canopies overhang the development site to some small degree (up to 1000mm). It is our opinion that the proposed works will not be detrimental for the long term health of the trees as along as all the below recommendations are adhered, unless it is agreed with the landowner to remove the trees in favor of mitigation tree planting and/or enhancement landscaping works being provided as they are typical semi mature, self- seeded specimens of low value.
Recommended Protection Measures & Method Of Working	All works within the RPA's are to be carried out in accordance with the BS 5837 :2012 Removal of existing boundary wall foundations to be undertaken with arboricultural supervision as a precautionary measure.
	Localised tree works to prevent conflict with boundary wall. Works to be carried out in accordance with BS 3998:2010 and include canopy raising and pruning. Any tree works must have the owners, written permission to be gained by client. The local authority must be notified of any tree works within a conservation area via planning portal unless permission is already obtained as part of planning permission.

T21	
Proposed Works within the RPA	 Removal of the existing boundary wall and railings Installing 3500mm high x 328mm thickness brick wall to canal boundary (TOW height +27.075) Reducing external 'garden area' landscaping levels to +23.557 from current level of circa +23.90 Installing above ground air source heat pump with enclosure. Installation of 2 storey modular marketing suite building Installing new soft landscape and hard landscaping
Potential Impacts	Root Severance
	Root Disturbance
	Damage to the canopy
Significance of Impacts	The assumed offset RPA of this tree extends circa 2m into the development site. As mentioned in section 1.4 trial pits are due to be undertaken within the standard and offset RPA of this tree to establish depth of the wall foundations and the extent of any tree root growth within the development site. The tree sits at an approximate level of 24.29 to which tree roots typically can be found within the top 800-1000mm of soil. The ground levels within the development site beyond the boundary retaining wall are circa 400mm lower at 23.88 At this stage it is unclear on the significance of the proposed development works to the health of the tree. It is our best estimate that limited root growth will be found extending into the site and will be largely concentrated to linear growth along the boundary wall and foundations and the soft landscape buffer. If this is found to be the case, care will be needed and a solution agreed such as retaining a section of the existing wall/foundations so as not to undermine the stability of the tree, unless it is agreed with the landowner to remove the tree in favor of mitigation tree planting and/or enhancement landscaping works being provided. The following provisional recommended protection works are based on the principle that any root growth and required root pruning works will not be detrimental to health of the tree and it can be retained. This will be clarified on the basis of trial pit results. Furthermore, it is unknown as to the impact of the air source heat pump on the long term health of the tree and if there will be enough free flowing air for the system to work efficiently. It is our opinion that the proposed works will not be detrimental for the long term health of the trees as along as all the below recommendations are adhered.
Recommended	All works within the RPA's are to be carried out in
Protection	accordance with the BS 5837 :2012
Measures & Method Of Working	Existing boundary railings and wall to be retained in place during construction works and remain in place until such time as the boundary wall construction works are to be carried out. At such time and subject to how the works are to be delivered and programmed some temporary protection measures such as those outlined in Annex E might be agreed with supervising arboricultural consultant.
	Removal of existing boundary wall foundations and reduced level works to be undertaken with arboricultural supervision.

Demolition of the retaining walls and associated foundations should be undertaken inwards within the footprint of the wall within the site boundaries. Removal should be carried out in sections with care using hand held tools or low impact pneumatic tools under arboricultural supervision.
Localized tree works to T21 to prevent conflict with modular building. Works to be carried out in accordance with BS 3998:2010 and include localized canopy reduction. Some canopy rising might be required however it is assumed that the canopy will be clear of the proposed boundary wall height of +27.075.
Any tree works must have the owners, written permission to be gained by client. The local authority must be notified of any tree works within a conservation area via planning portal unless permission is already obtained as part of planning permission.

<u>T23</u>	
Proposed Works within the RPA	Removal of the existing boundary wall and railings
Potential Impacts	Root Severance
	Root Disturbance
Significance of Impacts	The impact by the proposed works will be minimal if any. The removal works are on the limits of the tree RPA some 4m from the trees trunk with scrub vegetation present as well.
Recommended Protection	All works within the RPA's are to be carried out in accordance with the BS 5837 :2012
Measures & Method Of Working	Removal of existing boundary wall foundations to be undertaken with arboricultural supervision.

5.2.3 Direct Loss

No trees will be directly removed as part of the development proposals.

6.0 Conclusion

The current layout proposals and envisaged installation techniques will see the retention of all the 8 individual surveyed trees on site within this part of the development. The proposed development will only have a minimal impact but requires clarification from trial pit results and resulting appropriate methods of development.

In summary, this development will not see the removal of any trees. It is thought that the impact of the works on the existing site trees is negligible and all existing trees will continue to provide arboricultural and amenity value to the site and surrounding area. Even if T18, T19 and T24 were removed, trees T21 and T23 will continue to provide adequate tree cover and amenity value.

Appendix A Tree Survey Key & BS 5837:2012 Cascade Chart – Table 1

Tree Survey Key

Tree Reference Number:	As recorded on tree survey plan.
Species:	Species listed by common name, key provided to scientific names.
Height:	overall height of the tree from ground level (in meters).
Stem Diameter:	In millimeters at 1.5m above adjacent ground level or immediately above the root flare for multi-stemmed trees.
Branch Spread:	In meters taken at four cardinal points (North, East, South, and West) to derive an accurate representation of the crown as recorded in the Tree Survey Plan.
Existing height (in meters) above ground level of:	1) first significant branch and direction of growth
	2) canopy (crown clearance)
	to inform on ground clearance, crown/stem ratio and shading.
Life Stage:	Young(Y), Middle Aged (MA), Mature(M), Over Mature(OM), Veteran(V)
General observations:	particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations;
Estimated remaining contribution:	in years (<10, 10+, 20+, 40+)
RPA:	Root Protection Area calculated from BS5837:2012 "Trees in Relation to Design, Demolition and Construction – Recommendations" in sqm. Where indicated, dimensions of radius of RPA circle based around centre point of trunk calculated for design purposes.
Category Grading:	Categories U or A to C grading, to be recorded on the tree survey plan in accordance with Cascade Chart for tree quality assessment on following page

BRITISH STANDARD

BS 5837:2012

Category and definition	Criteria (including subcategories where appropriate)			
rees unsuitable for retention (
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current and use for longer than 10 years	 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 context of the current d use for longer than 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 			See Table 2
	see 4.5.7. 1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for rete	ntion			
Category A	Trees that are particularly good	Trees, groups or woodlands of particular	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Trees of high quality with an estimated remaining life expectancy of at least 40 years	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)	visual importance as arboricultural and/or landscape features		
Category B	Trees that might be included in	Trees present in numbers, usually growing	Trees with material	See Table 2
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	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	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	conservation or other cultural value	See Table 2
Category C	Unremarkable trees of very limited	Trees present in groups or woodlands, but without this conferring on them	Trees with no material conservation or other	See Table 2
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		significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	cultural value	

Appendix B

Tree Survey Plan & Schedule

Reference Number	Common Species Name (Scientific name abreviation)	Height (m)	Stem Diameter (mm)			Branch Spread (m)				Existing height above ground level			General Observations	Estimated		Root
			Multistem (MS)	Comb MS	Single stem (SS)	(N)	E)	(S)	(W)	Branch & Direction	Canopy	Life Stage (Age)	Structural / Physiological condition	Remaining Contribution (Yrs)	Category Grading	Protection Area (m2)
T17#	Goat willow	6			140	3	2	2	2		1.5	EM	Fair.No access to base.	10+	C2	9
T18#	Sycamore	8			120	1	1	1	1		2	SM	Fair.No access to base.	20+	C2	7
T19#	Sycamore	8	160 130 130 0	244		2	2	2	2	2mW	2	SM	Fair.lvy No access to base.	20+	C2	27
T20#	Goat Willow	8	120 120 95 0	194		2	3	3	3	2mE	2.5	М	Fair.lw No access to base.	10+	C2	17
T21#	Sycamore	12	300 240 160 140	439		3	3	3	3	3mW	4	EM	Fair.lw No access to base.	40+	C2	87
T22#	Crack Willow	5	240 240 220 0	404		2	2	2	2	2	2	EM	Co-dominant stem. Pollarded ar 2.5m.Fair.lvy. No access to base.	20+	C2	74
T23#	Sycamore	11	360 360 0 0	509		5	5	5	5	3mS	4	EM	Co-dominant stem. Fair.lvy. No access to base.	40+	C2	117
T24#	Sycamore	7	110 110 90 75	195		0	2	1	2	3	2	SM	Fair.lvy No access to base.	20+	C2	17

- Estimated stem diameters due to access restrictions

Tree survey was carried out as part of a wider development and the above schedule only includes the existing trees related to the marketing suite development hence the tree reference number starts from T17.

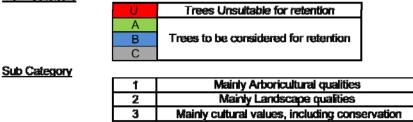
Tree Survey Schedule

Notes

Tree survey & Schedule carried out in accordance with BS 5837:2012 section 4.4 (tree survey), 4.5 (tree categorisation method) & 4.6 (root protection area)

- Species (Scientific Name Reference) Refer to separate schedule for list of scientific/common names
 Stem Diameter measured in accomdace with Annex C (MS Multiple Stems / SS single stem)
- Branch Spread N (north) E (east) S (south) W (west)
- Existing Height above ground Level Branch (first significant branch and direction of growth) / Canopy
- Life Stage Y=Young / SM = Semi-Mature / EM = Early Mature / M = Mature / OM= Over Mature
- General Observations Structural / physiological condition & preliminary management recomendations
- Estimated Remaining Contribution (yrs) <10, 10+, 20+, 40+
- Category Grading in accordance with Cascade Chart for tree quality assessment)

Main Category



- Root Protection Area (m2) - Determined from Annex D

Reference Number	Common Species Name (Scientific name abreviation)	Height (m)	Stem Dia	Branch Spread (m)				Existing height above ground level			General Observations	Estimated		Dest		
			Multistem (MS)	Comb MS	Single stem (SS)	(N)	E)	(S)	(W)	Branch & Direction	Canony	Life Stage (Age)	Structural / Physiological condition	Remaining Contribution (Yrs)	Category Grading	Root Protection Area (m2)
T17#	Goat willow	6	1		140	3	2	2	2		1. 5	EM	Fair.No access to base.	10+	C2	9
T18#	Sycamore	8			120	1	1	1	1		2	SM	Fair. No access to base.	20+	C2	7
T19#	Sycamore	8	160 130 130 0	244		2	2	2	2	2mW	2	SM	Fair.lvy No access to base.	20+	C2	27
T20#	Goat Willow	8	120 120 95 0	194		2	3	3	3	2mE	2.5	м	Fair.lvy No access to base.	10+	C2	17
T21#	Sycamore	12	300 240 160 140	439		ŝ	3	3	S	3mW	4	EM	Fair.lvy No access to base.	40+	C2	87
T22#	Crack Willow	5	240 240 220 0	404		2	2	2	2	2	2	EM	Co-dominant stem. Pollarded ar 2.5m.Fair.lvy. No access to base.	20+	C2	74
T23#	Sycamore	11	360 360 0 0	509		5	5	5	5	3mS	4	EM	Co-dominant stem. Fair.lvy. No access to base.	40+	C2	117
T24#	Sycamore	7	110 110 90 75	195		0	2	1	2	3	2	SM	Fair.Ivy No access to base.	20+	C2	17

LEGEND:

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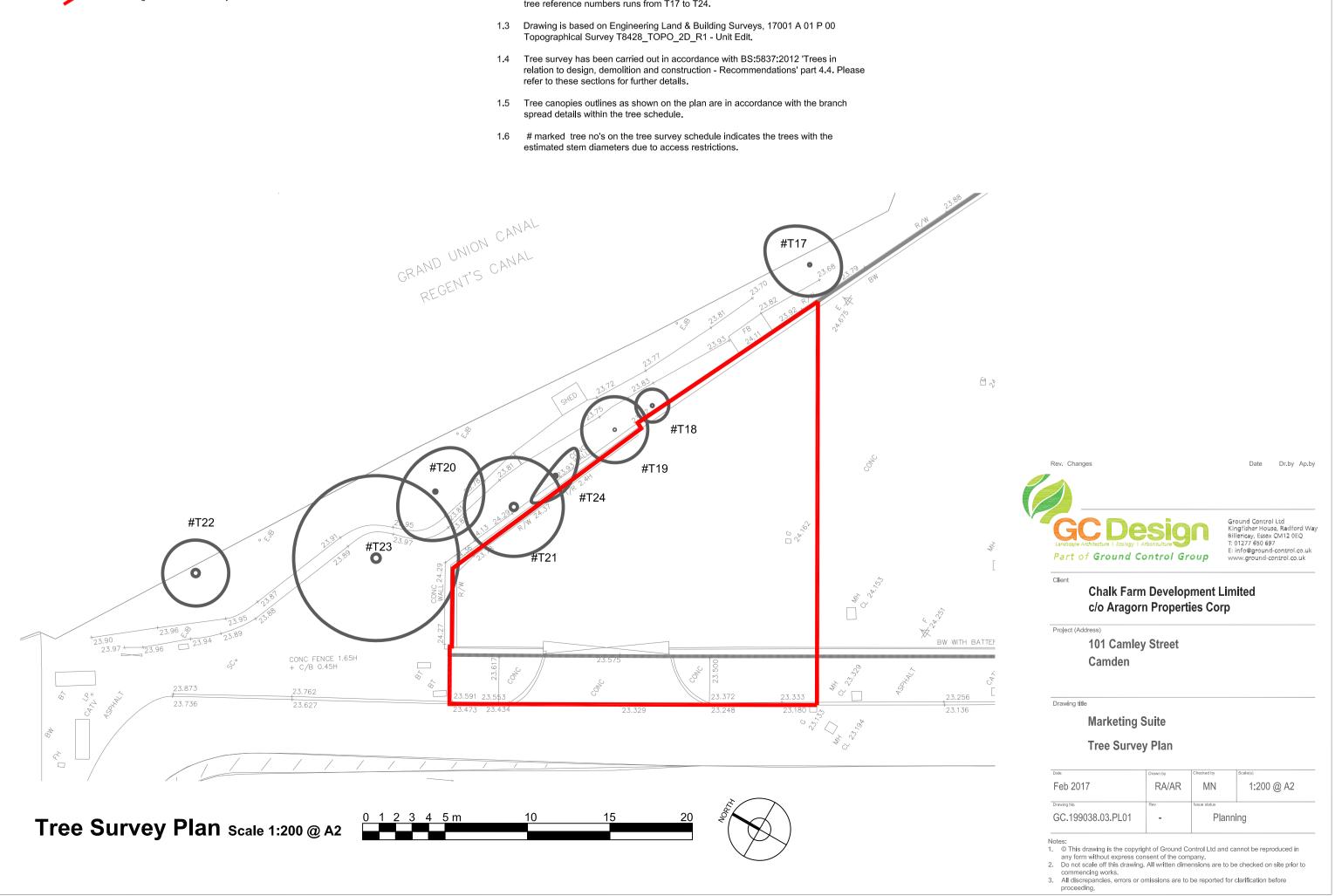
EXISTING CATEGORY 'C' TREES: Those of low quality and value; currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm

Marketing Suite Site Boundary

NOTES

1.0 TREE SURVEY INFORMATION

- 1.1 Tree survey was carried out on 17th January 2017 by Mr A. Richardson Ground Control's Arboricultural Manager on behalf of Stanley Sidings Limited.
- 1.2 Tree survey was carried out as part of a wider development as such the existing tree reference numbers runs from T17 to T24



Appendix C Site/Tree Photos



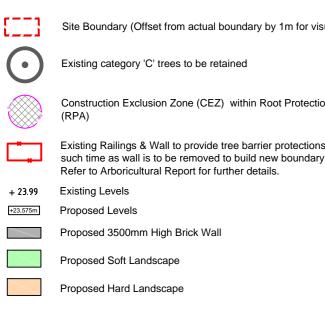
T17



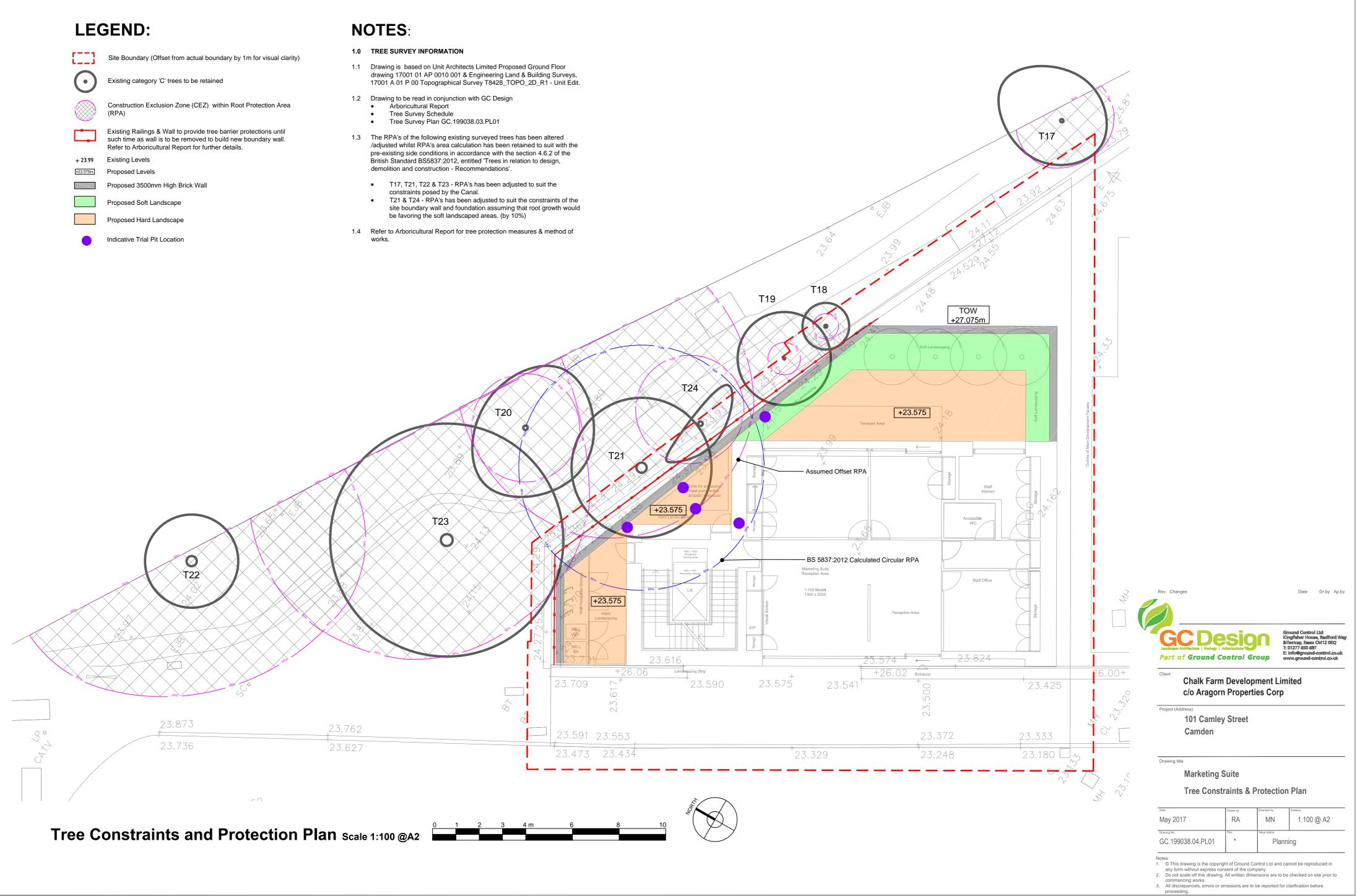
T18-T23



Appendix D Tree Constraints and Protection Plan GC.199038.04.PL01



- pre-existing side conditions in accordance with the section 4.6.2 of the British Standard BS5837:2012, entitled 'Trees in relation to design,
- works.



Appendix E British Standard's Protective Barrier Fencing Detail

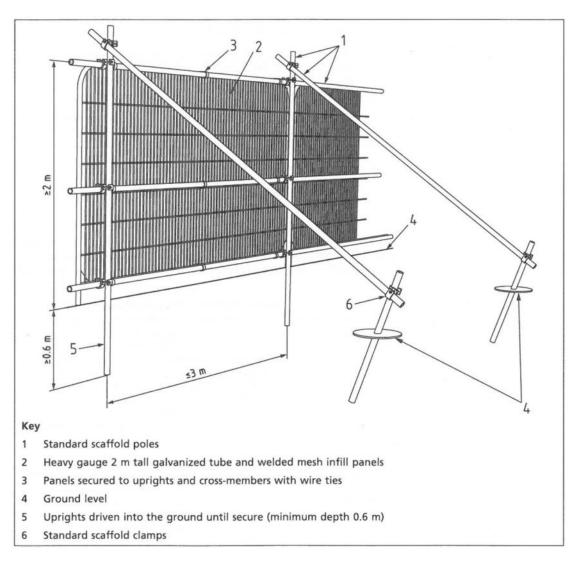


Figure 2 – Default specification for protective barrier

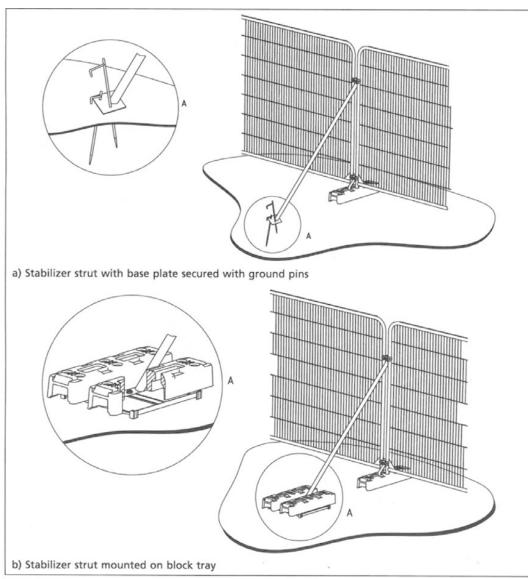


Figure 3 – Examples of above ground stabilizing systems



Grounds Maintenance Landscape Construction Landscape Design Fencing Tree Surveys and Surgery Gritting and Snow Clearance