STEVE HOOPER TREEWORK

DESIGN

LANDSCAPING

GARDENING

TREE SURGERY

www.stevehooperlandscapes.co.uk

6 BARRINGTON ROAD

LONDON N8 8QS

TEL/FAX: 020 8340 6041

VAT No. 165 7727 73

info@stevehooperlandscapes.co.uk

GARDEN AND LANDSCAPE DESIGN

ARBORICULTURAL REPORT

IN ACCORDANCE WITH BS:5837

TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION TO CONSTRUCTION

Client: Golan Losinksy

Site: 4a Frognal Gardens
London
NW3 6UX

Date: 24th January 2023

INTRODUCTION

1.0 Background

1.1 Our client is planning building works including an extension at the rear of the property.

1.2 We assessed the trees on site and put together an arboricultural report dated 29th November 2021. This contained an assessment of the trees on site and details of trees to be felled as part of the building proposal.

1.3 Planning permission for the building work has been granted with conditions, one of which being that our client submit details of how trees to be retained will be protected during the work.

2.0 Scope of Report

2.1 Our survey and report will assess all the trees on site and any trees in the neighbouring gardens large enough to be significant.

2.2 We will assess the implications that the building work may have, the potential threat to the trees and how to avoid any damage.

3.0 The Site

3.1 The property is within the London Borough of Camden and located within the Hampstead conservation area.

3.2 Within the back garden there is access at the rear of the garden and an electrical substation in the far right corner. The front and back garden are on different levels.

TREE SURVEY

4.0 Survey Methodology and Limitations

4.1 Trees are observed, assessed and plotted on the drawing. All locations are approximate although where relevant the distance from buildings or other trees is given.

4.2 The condition is a visual assessment from ground level. No excavation or bore holes were carried out and no trees were climbed.

4.3 As well as the health of the tree the survey takes into account any other issues we observe on site and any concerns that are raised. All observations recorded were true at the time of the survey.

4.4 The trees were assessed for any sign of animal habitation especially bird nests and bat roosts.

4.5 Our recommendation is given to address any concerns that were raised under condition. Where appropriate this is given in priority levels or in phases. On request we can put together an ongoing management plan.

4.6 Where relevant (eg. if there are planned building works) the root protection area (RPA) is calculated. This is an area indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

5.0 General Survey Notes

5.1 The trees are numbered. These numbers refer to numbers on the drawing. Individual trees are marked as T and groups as G.

5.2 Genus and species followed by common or English name in brackets. Where flowers, leaves or fruit are absent and they are required to identify the species, the Genus has been stated followed by sp. (e.g. *Crataegus* sp.)

5.3 The height (HT) is approximate in metres, estimated by eye.

5.4 The diameter at breast height (DBH) is measured at a height of 1.30m from ground level. Multi-stemmed trees are noted, measurements of multi stemmed trees are followed by x and the number of stems. The value is given in centimetres.

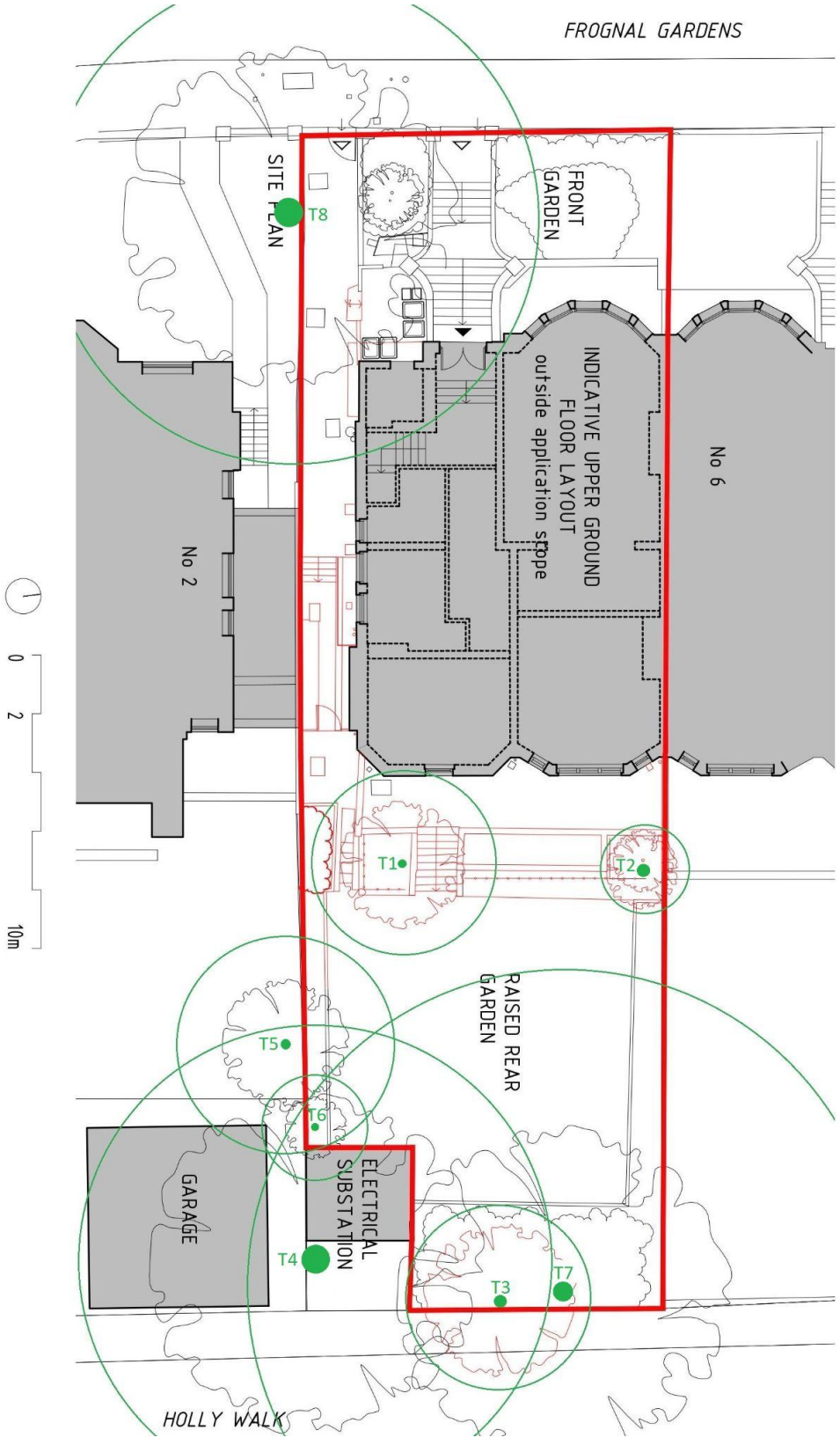
5.5 Where appropriate the distance (DIS) from the building (or other point of interest) is given. The value is given in metres. On this occasion the distance is the distance of the tree to the boundary along the rear fence.

5.6 The approximate root protection area (RPA) is calculated as an area equivalent to a circle with a radius twelve times the stem diameter at breast height. It is shown as the radius from the tree's stem and is indicated in metres. For example a tree with a DBH of 50cm would have an RPA with a radius of 6m.

5.7 For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \ldots + (\text{stem diameter } 5)^2}$$

6.0 Site Plan



* Original produced by de Unit

7.0 Tree Survey

T	TREE SPECIES	HT	DBH	RPA	CONDITION	RECOMMENDATION
T1	Myrtus communis (Myrtle)	6m	15cm x 3	3.1m	Poor: Almost dead, close to house (3.5m), limited life	Fell and treat stump, plant replacement tree
T2	Ilex aquifolium (Holly)	7m	10cm x 2, 5cm x 1	1.45m	Fair: Obstructs work	Fell and treat stump, plant replacement tree
T3	Sorbus tormnialis (Wild Service Tree)	11m	20cm, 17cm	3.15m	Fair/Poor: Damaging fence, fungal fruiting body at base	Fell and treat stump, plant replacement tree
T4	Plantanus x acerifolia (London Plane)	25m	60cm, 30cm	8.05m	Fair	No action
T5	Ilex aquifolium (Holly)	13m	30cm	3.6m	Fair/Poor: Ivy in crown	No action
T6	Crataegus monogyna (Hawthorn)	11m	2 x 9cm, 2 x 5cm	1.75m	Fair	No action
T7	Plantanus x acerifolia (London Plane)	25m	90cm	10.8m	Good	No action
T8	Acer pseudoplatanus (Sycamore)	20m	70cm	8.4m	Fair	No action

ASSESSMENT

8.0 Arboricultural Report

8.1 We have recommended T1, T2 and T3 are felled based on their health and their location in relation to the proposed building work (please see arboricultural report dated 29th November 2021 for further explanation). Replacement trees will be planted for each tree felled so minimal crown cover will be lost and biodiversity will be sustained.

8.2 There are five other trees that could be relevant to the building work. The root protection areas that lie within 4a Frognal Gardens are shown

8.2.1 T4 is a plane tree in the neighbouring rear garden (2 Frognal Gardens). It is a large tree with two major stems. The root protection area extends into the garden so precautions will need to be taken to protect these roots. The substation and its foundations may have restricted some root growth (especially roots close to the surface) which should reduce risk.

8.2.2 T5 is a medium sized holly tree also within 2 Frognal Gardens. The RPA extends some way into the garden of 4a.

8.2.3 T6 is a small hawthorn tree in the far right hand corner of the rear garden. The RPA is small and overlaps with other RPAs.

8.2.4 T7 is a large plane tree close to the rear garden boundary. This is the most significant tree to protect as the RPA covers approximately half the rear garden.

8.2.5 T8 is a large sycamore tree in the neighbouring front garden (2 Frognal Gardens). The RPA extends into the front garden of 4a and part way along the side passageway between the two buildings. Given there is not any major work taking place in the front garden we do not consider any of the work to pose much risk to T8.

8.3 The only trees with RPAs that overlap any of the area requiring excavation or foundation work are T1 and T2 which are due to be felled as part of the work. None of the other trees should be directly affected by the construction work. However, given their RPAs cover a significant area, they may be at risk indirectly due to the building work taking place on site. Other aspects of building work will need to be mindful towards the trees to avoid compaction or contamination.

9.0 Conclusion and Recommendations

9.1 We draw your attention to section 13 of this report (Hazards) which details some of the things to avoid. This should be followed for all retained trees and no materials or machinery should be stored within the marked RPAs.

9.2 We recommend that the root protection areas are marked out as shown on the drawing (ref 10965) using the RPA diameters shown in the tree survey to map out the correct distance from trees. Given the overlap of the RPAs it would be sufficient to map out the diameters of T5, T7 and T8 and mark off these areas. If no construction work or storage of materials is taking place in the front garden then mapping out T8 will not be necessary as long as everyone on site is aware of this.

9.3 Tree protection materials should be installed prior to any work commencing and should remain in place until the work is complete. Photos should be taken and submitted to an arboricultural consultant and the council's arboricultural officer.

9.4 We recommend that protective fencing (see Appendix 13.5) is erected around these boundaries to ensure these areas are protected from excavation, contamination, compaction and level changes. All roots and soil within this area should be treated as a priority.

9.4 We understand a route will be needed through the garden to the rear access as machinery and materials will be brought through this way. We would therefore recommend leaving a fenced walkway through these areas and ground protection should be used to alleviate compaction. Boards can be used for light pedestrian traffic but for heavier uses or machinery we would recommend a ground protection syste (see Appendix 13.4). A route of 1.2m in width should be sufficient but fences could be moved temporarily to allow for any larger materials as long as the ground protection is extended. Any machinery brought through should be lightweight and traffic should be kept to a minimum.

9.3 Everyone working on site should be made aware of the root protection areas and it is essential they are marked out to make these areas clear throughout the project. Staff on site should be made aware of potential hazards (as listed in section 13) at the beginning of the project.

9.4 None of the trees are at direct risk from any of the construction work proposed on site. If root protection areas are mapped and respected throughout the project we see no reason why any of the trees would suffer as a result of the work.

GENERAL ARBORICULTURAL ADVICE

10.0 Arboricultural Practice

10.1 Any tree surgery should be carried out in accordance with British Standard BS3998: 2010. This ensures the work is carried out properly with the ongoing health of the tree in mind and safely with minimal risk.

10.2 We recommend trees are inspected every three years for potential risks (deadwood, decay etc) and to maintain the tree at a good size if space is limited or the tree is close to the house.

11.0 Tree Protection

11.1 Under Section 3.0 The Site we will have stated whether any trees are covered by Tree Preservation Orders (TPOs) or if the site is within a conservation area. This information will have been sourced from the local council. An application must be made for both options.

11.2 A TPO application should be decided within eight weeks (although it can take longer). After this time an appeal can be lodged but we would recommend working with the council's tree officer to come up with a compromise.

11.3 If within a conservation are the council are notified and are given six weeks to object or issue a TPO. Consent can be granted sooner or consent is automatically granted after six weeks.

11.4 Emergency work to dead or dangerous trees (exception work) can be granted via a five day notice.

12.0 Protection of Wildlife

12.1 Birds, their nests and eggs are protected by law and it is an offence to destroy a nest when it is in use or being built, doing so would be an infringement of the Wildlife and Countryside Act 1981 and in breach of The European Habitats Directive 1992/Nesting Birds Directive.

12.2 The bird nesting season is from March to July (inclusive) for most species although some nest building will begin before this and this varies with different species. Where appropriate we advise work is avoided between this period although this is not always possible.

12.3 Care must also be taken to avoid ground nesting birds in ground vegetation that may not be obvious.

12.4 Bats and their roosts are protected by law meaning that it is illegal to damage, destroy or disturb bats or their roost sites. A roost is defined as any place that a wild bat uses for shelter or protection. The relevant legislation in England & Wales is the Wildlife and Countryside Act 1981 and Conservation of Habitats & Species Regulations 2017.

12.5 As part of the survey trees and hedges will be observed for any signs of birds or bats. Work should not take place if there is any evidence of a bat roost or active bird nest. Once the work has started the tree and hedges will be assessed again by our climber and if any new evidence is discovered while the work is in progress the work should be paused.

12.6 If a tree is being felled we recommend a replacement tree is planted to minimise the effect the loss will have on the local environment.

13.0 Hazards

13.1 SOIL COMPACTION Cars, people and building work are some of the things that can contribute to soil compaction and care should be taken to ensure this doesn't happen within the root protection area. Compaction can damage soil

structure starving the tree of air, nutrients and water upsetting the balance between crown and roots established over many years. Sites should be planned to avoid heavy pedestrian traffic, car parking or building work below trees. Heavy machinery or temporary buildings should not be used within root protection areas and during building work these should be fenced off.

13.2 LEVEL CHANGES: Changing the soil level around the base of the tree can cause serious problems. Lowering the level risks removing roots, exposing the root system to the air and reduces the supply of moisture and nutrients available. Raising the soil level can cause compaction, affect bark and root function and moisture build up can cause rot and decay. Allowances to retain existing levels should be made to ensure this doesn't happen.

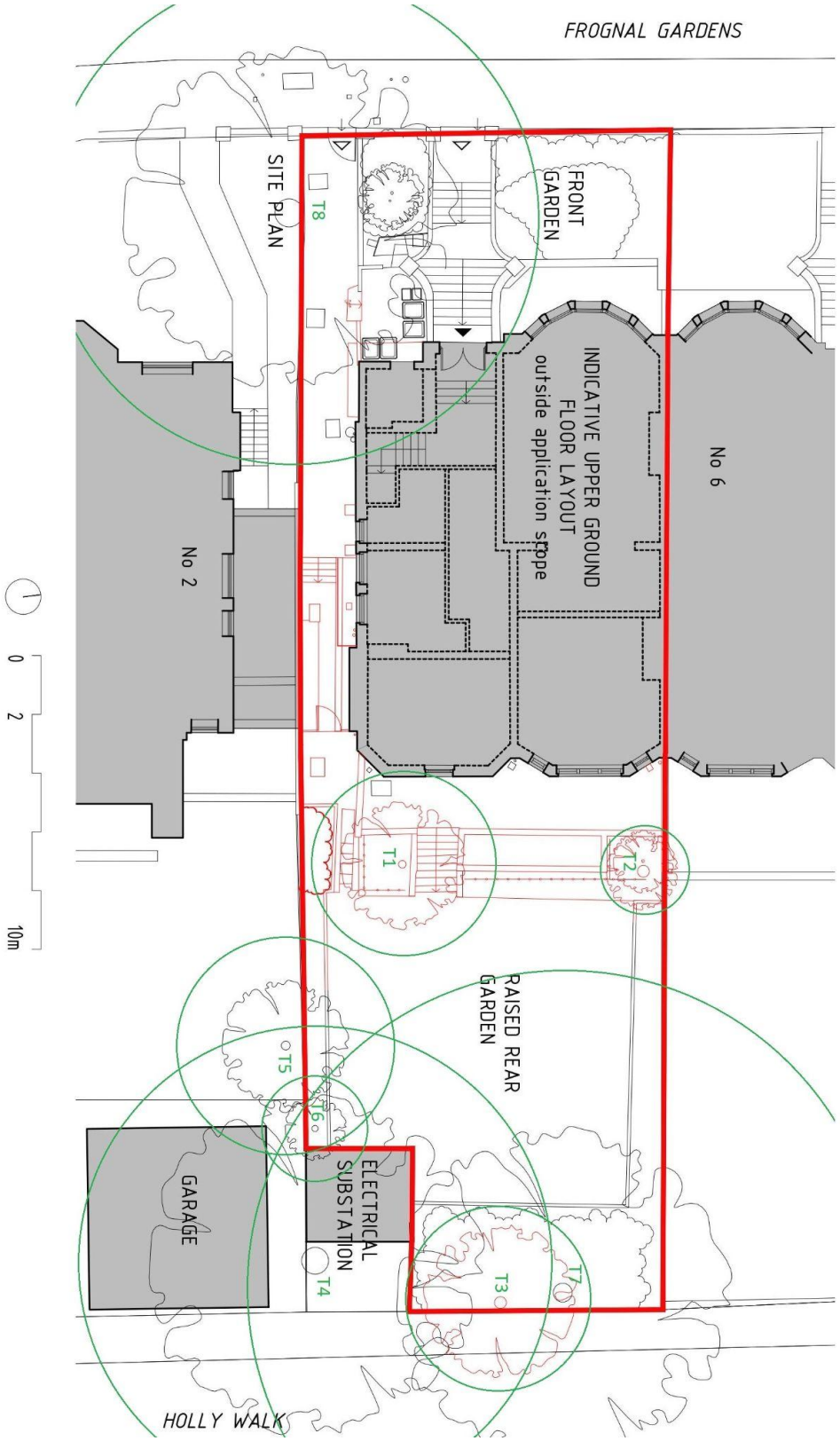
13.3 FIRES: Fires should be avoided near trees at all times or where necessary should be done safely with proximity to the tree's canopy and wind direction taken into account.

13.4 EXCAVATION: Digging down close to trees can severely impact the tree's health. Losing space for roots to spread can be a problem but the most likely outcome will be the loss of roots which will be detrimental to the health status or may compromise the stability and structural integrity of the tree. The closer to the trunk that roots are cut the more significant and severe the damage will be. A root protection area should be calculated and protected from any excavation.

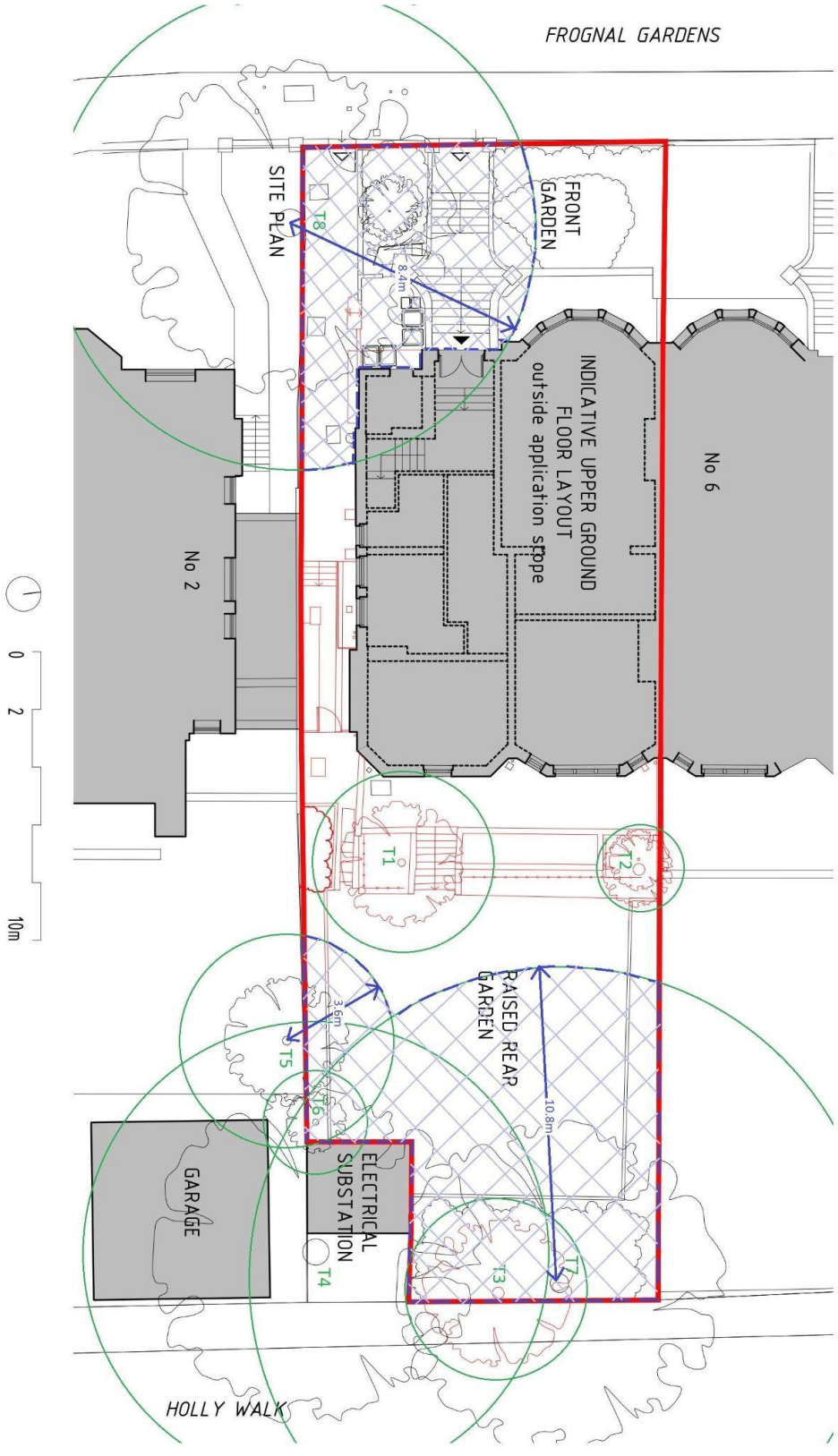
13.5 CONTAMINATION: Hazardous materials should not be used within the tree's root protection area. If building work is taking place on site allowances should be made to ensure no cement or other contaminants run off into these areas. Protective barriers can be installed to mark these boundaries.

APPENDIX

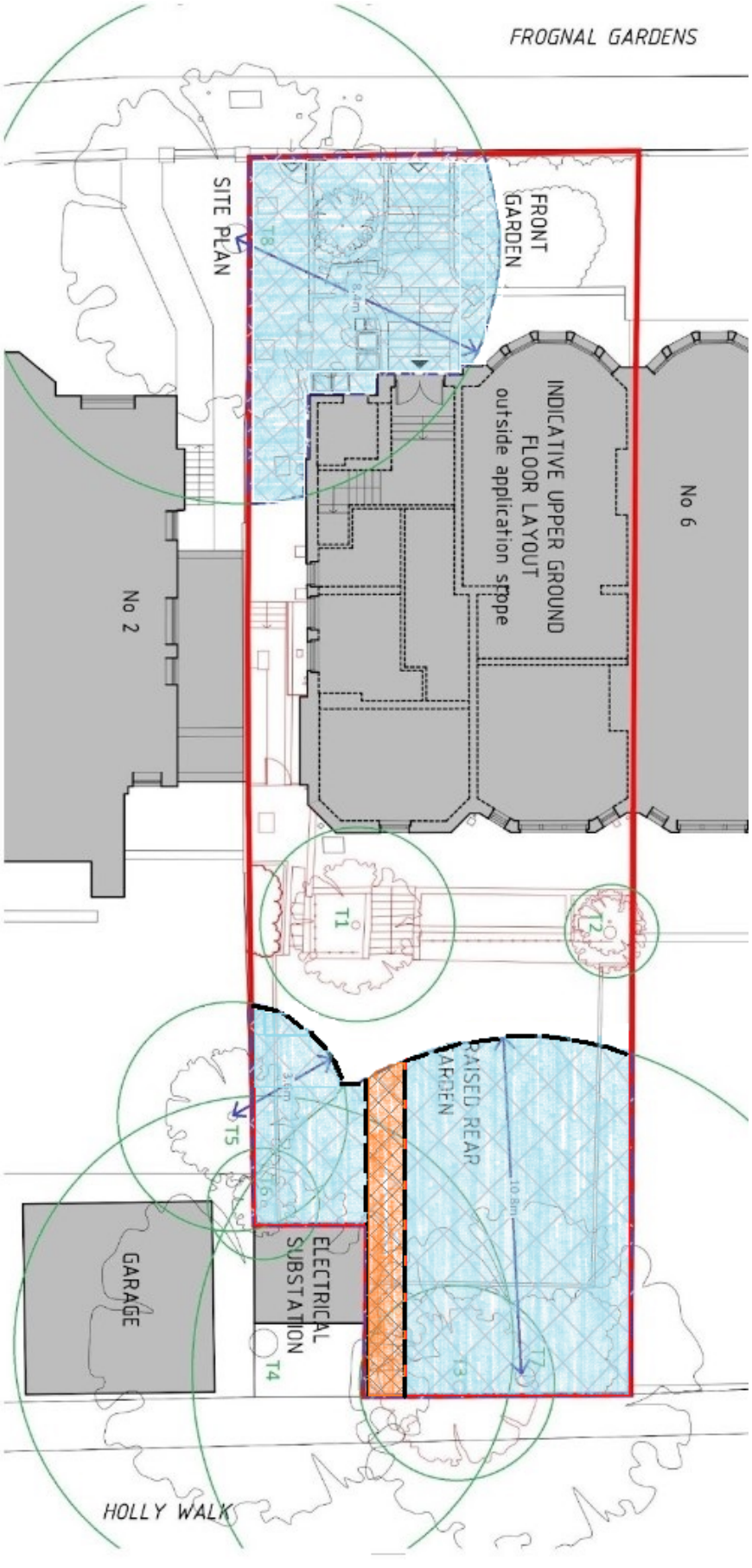
13.1 Drawing ref 10964 (original produced by de Unit) showing RPAs of all trees



13.2 Drawing ref 10965 (original produced by de Unit) showing RPA to plot on site



13.3 Drawing ref 10965 (original produced by de Unit) showing Tree Protection Plan



KEY

Protective Fencing

RPA - No excavation or storage in this area

RPA - 1.2m path to rear gate to allow access, ground to be protected with root protection system to avoid compaction

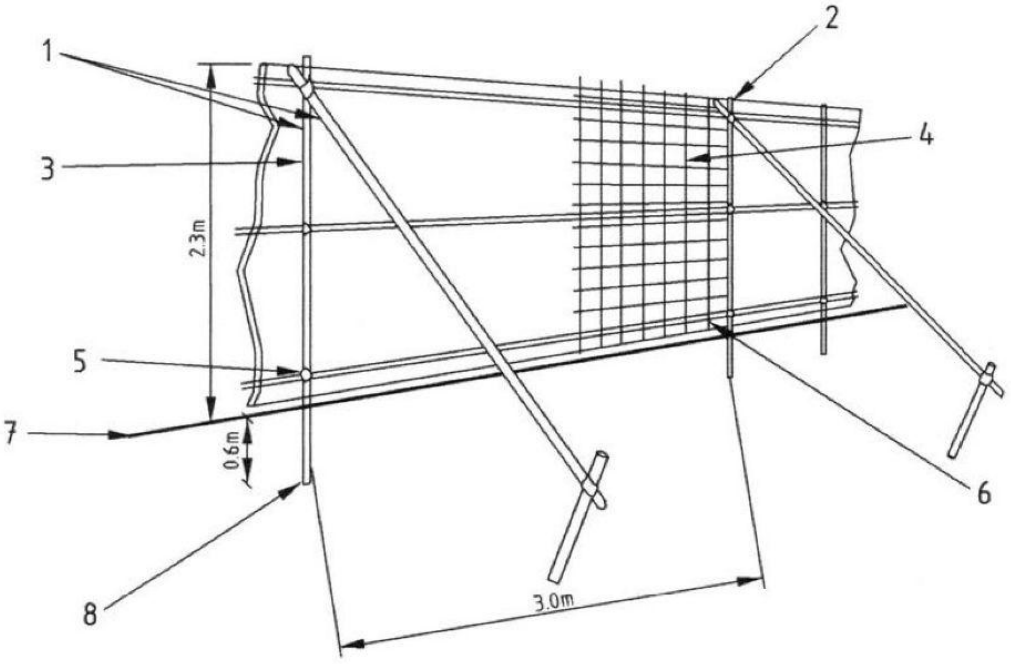
13.4 Recommended ground protection

Geoweb® Tree Root Protection System PRODUCT CODE: 150WW3020-PRO - or similar

Geoweb® Tree Root Protection System Critical Root Zone/ Tree Protection Zone is the minimum area beneath a tree that must remain undisturbed to preserve a sufficient amount of root mass in order to give a tree a chance of survival. The Geoweb® system is a three dimensional structure that: Provides strength to confined soils Distributes loads laterally, not vertically Reduces point loads Reduces compaction of the subsoil Protects tree roots The Geoweb® Tree Root Protection system reduces construction vehicle impact to the tree root zone. Slope, Channel and Shoreline Protection The Geoweb® confines, reinforces and restrains the upper soil layer and infill controlling down-slope movement and slippage due to hydrodynamic and gravitational forces.

13.5 Recommended tree protection fencing

Scaffolding Supplies TREE PROTECTION - BS 5837 - or similar



1 Scaffold poles	5 Clamp
2 Uprights, to be driven into ground	6 Wire, twisted and secured
3 Panels, secured to uprights with wire tires and where necessary scaffold clamps	7 Ground level
4 Weldmesh, wired to the uprights and horizontals	8 Approx 0.6 m driven into the ground

Tree Protection including a mid-rail.

Length of run in meters equals " a "

Formula:

" a " x 5.13m of Tube (16.83ft)
" a " x 0.66 Swivel Couplers
" a " x 1.00 Double Couplers
" a " x 0.45 Sleeve Couplers

You will also require some form of mesh panel, this can be either standard site panels, each panel being approx 3.6m long, or the use of reinforced mesh or chicken wire etc which is then wired into place. You will need to cut the tube to size on site, usually with a Stihl saw. Extra Double Couplers are included to enable going around tree groups etc.