advanced Arboriculture

advanced:

progressive *adj.*
forward-thinking
forward-looking
unconventional
cutting edge
innovative

higher *adj.*
superior
highly developed
sophisticated
complex

27th September 2019

Mr I Smith BA (Hons) MTPL MRTPI
Planning Director
Watkin Jones Group
3 Abbots Park
Preston Brook
Cheshire WA7 3GH

Our Ref: TH/A446/0919

Dear Mr Smith,

Re: Land at Gladstone Road, Exeter – Effect of Proposed New Development on Trees

Introduction

Further to receipt of the finalised proposals for the development at the ambulance station on Gladstone Road in Exeter, I have undertaken a full arboricultural appraisal of the site and its immediate surroundings and considered the effect of the proposals based on the data collected. The purpose of this report is to provide a supporting statement for a planning application to Exeter City Council.

This covering letter provides a full Tree Stock Appraisal and Arboricultural Impact Assessment which has been prepared in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

Document Limitations

This document has been prepared based on information available to Advanced Arboriculture Ltd at the time of writing, however, further technical, topographical, arboricultural, architectural, ecological or engineering information may come to light after the relevant arboricultural conditions have been cleared. It is the responsibility of the project manager to draw any changes in the project scope to our attention at the earliest opportunity.

Tree Stock Appraisal

A total of four individual trees and one group of trees have been surveyed for this report; of these only one individual tree, Ash T1, and the group of trees, G1, are located within the redline boundary of the site. The remaining three individual trees are all located offsite, but within a sufficient proximity that they warrant a detailed evaluation.

The most significant arboricultural feature on the site itself is Ash T1. This is a mature single stemmed specimen located on the south-eastern corner of the ambulance station land on a small grassed area adjacent to the public highway; this grassed area is used for parking and is heavily

compacted. Approximately 1.9m to the south of the tree's main stem is a tarmac-surfaced car park associated with the neighbouring police station, while approximately 5.7m to the north is the ambulances' tarmac-surfaced vehicular access into the ambulance station building. Approximately 2.3m to the east is the pavement for Gladstone Road and approximately 8.0m to the west is the ambulance station building itself. There is evidence of underground services within 3.0m of the centre of the tree's main stem.

The crown of T1 indicates that it is in decline; this is manifesting itself with a combination of deadwood throughout the crown, a lower crown density than would be expected of a healthy specimen, considerable secondary foliage sprouting from major limbs, and chlorotic foliage, particularly on the northern side of the lower crown.

The crown of the tree also sits very low over both the car park to the south and also over the public highway to the east where it does not comply with Highway Regulations which require a clearance of 5.2 metres over a carriageway and 2.5 metres over a footpath.

I could not see any apparent symptoms of Ash Dieback Disease at this point in time, however, based on evidence observed across Devon, it is almost inevitable that this tree will succumb to this endemic disease in the near future. Reference to the Forestry Commission's interactive map (http://chalaramap.fera.defra.gov.uk/) shows that Ash Dieback Disease has been present within the immediate area since 2016.

Having inspected the tree and its immediate surroundings, it is my opinion that its decline is associated with the unsustainable pressures imposed on its rooting environment; these include a combination of direct rooting damage (such as severance for the installation or repair of hard surfacing or underground services), indirect damage (caused by the ongoing compaction of the unsurfaced soil surrounding the tree by parked vehicles), and the lack of available soil volume to sustain a tree of this size. These factors are further exacerbated by the inherent intolerance of Ash to root disturbance.

Notwithstanding the likely highly accelerated demise of this tree due to Ash Dieback Disease (a scenario which I would expect to occur within the next five years), I would expect this tree to have a safe useful life expectancy of no greater than fifteen years, though probably less. Given the tree's location, I do not consider there to be any soil amelioration or other arboricultural solutions such as the application of liquid fertiliser or mycorrhizal supplements which would offer any significant enhancement to the tree's safe useful life expectancy. I do not consider Ash to be an appropriate species for a constrained urban environment such as this.

A Tree Preservation Order was served on Ash T1 on 20th August 2019, however, a supporting note on the Tree Preservation Order file states that, "*The tree preservation order is not designed to be a constraint on development but to allow trees to be considered as part of any future development proposal.*" It is therefore reasonable to conclude that the limited safe useful life expectancy of this tree has been recognised by Exeter City Council, with an expectation that the tree's loss be addressed by the provision of new tree plantings which are of a suitable scale and appearance to maintain the long term visual amenity value of the local landscape.

The only other two trees within the site boundary are the Sycamore and Leyland Cypress which comprise group G1. Both of these are small specimens, and whilst the Leyland Cypress would have been planted deliberately, there is a strong likelihood that the Sycamore is naturally regenerated; irrespective of whether or not it is there intentionally, it is an inappropriate species for its location given its proximity to the boundary wall and significant growth potential. I do not, therefore, consider either of these trees to be a constraint to development.

The closest of the off-site trees is Rowan T2, located within a raised bed on St Matthew's Close, immediately adjacent to the north-western corner of the proposed development plot. The foundations of the boundary wall, and the presence of the tarmac surfacing which immediately abuts this to the east, means that rooting is highly unlikely to extend within the redline, and whilst there is some crown encroachment into the site, this is minor and could be addressed by pruning. Whilst the tree is acknowledged to be in a prominent location, it is in poor structural and physiological condition with a limited safe useful life expectancy; I do not therefore consider it to be a constraint to development.

Lime T3 is located on the southern side of the communal car park at the end of St Matthew's Close with its main stem in excess of 10.0m from the nearest part of the site boundary. The tree has an attractive form, although its main stem does lean marginally to the north, probably due to shading early in its life from trees and structures within the police station grounds to the south.

I did note that the ground surrounding Lime T3 is heavily compacted due to the parking of vehicles, and also features extensive tarmac hard surfacing. However, Lime is a robust species well suited to an urban environment and is able to tolerate relatively hostile growing environments. Some girdling roots are present around the tree's lower main stem but do not appear to be causing any harm at present.

The final individual tree is London Plane T4, located on the raised area on the opposite side of Gladstone Road, where it forms one of several London Planes set on the western boundary of the Heavitree Hospital grounds.

This tree is in excellent health, almost certainly due to the generously proportioned and uncompacted ground on which it stands. It is a highly visible feature within the local landscape and I anticipate it having a long safe useful life expectancy.

The British Standard 5837:2012 category split of the surveyed trees is as follows:

Trees - A: 1 (25%), B: 1 (25%), C: 3 (50%), U: 0 (0%)
Groups - A: 0 (0%), B: 0 (0%), C: 1 (100%), U: 0 (0%)

Arboricultural Impact Assessment

The proposals show the demolition of the existing ambulance station and the construction of a new building comprising student accommodation. The proposals include a vehicular service access off Gladstone Road and landscaped grounds around the building.

Following the British Standard 5837:2012 appraisal, it is clear that arboricultural constraints on and immediately adjacent to the site are negligible, with Ash T1 not being considered worthy of long-term retention due to its existing condition and its almost inevitable susceptibility to Ash Dieback Disease. Similarly, the two trees which comprise group G1 are also low-quality specimens not worthy of retention in the context of any development of the site.

Whilst there is no compelling justification for the retention of these trees, it is acknowledged that the removal of Ash T1 will have an inevitable impact on the immediate street scene (a point duly recognised by the Tree Preservation Order documentation). Accordingly, the Gladstone Road frontage has been designed to allow for the incorporation of three new trees, comprising one Small-leafed Lime and two Liquidambars; these species should thrive in this location, noting that Lime T3 is in good health nearby, and another Liquidambar has established well on the lawned area to the front of Waitrose, adjacent to the junction between Gladstone Road and Heavitree Road.

In order to maximise the volume of high-quality soil available for these new trees' rooting systems, the hard surfacing leading to the main entrance of the building is to be constructed on a bespoke

crated structure which will serve to prevent soil compaction and minimise any risk of disruption to the surfacing which roots may otherwise cause.

I have discussed these proposals, including species choice and the use of a crated structure, with Mr Mark Waddams, Exeter City Council's Arboricultural Officer. He is in support of the proposals, subject to all planting stock being containerised and being inspected for quality on delivery (this can be undertaken by Mr Waddams or we can fulfil this duty for you). Mr Waddams is also satisfied that the more columnar form of both the Lime and the Liquidambars are suitable for the space available, allowing for future growth.

Whilst the proposals do not directly demand the removal of Rowan T2, I do not consider this tree worthy of retention, irrespective of development. I therefore recommend that this tree be considered for removal by Exeter City Council as it is understood to be located within their curtilage.

Lime T3 and London Plane T4 remain completely unaffected by the proposals, however, they will continue to contribute to the more mature character of the local landscape in the long term.

In terms of shading or perceived dominance, it is noted that the shade path for Lime T3 does pass across the south-westernmost corner of the proposed development plot, however, this will not have any significant impact on any living spaces, even as this tree grows; furthermore, this tree will provide some screening of the police building to the south.

The new frontage trees will inevitably obscure some natural light to the upper-floor bedrooms as they grow, but this must be balanced against the benefit which they offer residents in terms of screening the Waitrose building and car park. It is also important to consider that any future residents will, by their nature, be transient and only living there for year-long periods while they study. The only reasonably foreseeable issue is likely to be associated with extended laterals making direct contact with adjacent windows as they continue to grow, however, both Lime and Liquidambar will tolerate pruning well and therefore any trimming back can be undertaken on a three- to five-year cycle with a negligible risk of harm. The communal spaces, including kitchens and dining spaces, will not be subject to trees in close proximity.

Any services required for the new building will be taken from Gladstone Road and will therefore not have any arboricultural impact on Lime T3 or London Plane T4.

Overall, whilst the proposals show the removal of Ash T1, Rowan T2 and the Sycamore and Leyland Cypress which comprise group G1, they present no significant risk of harm to Lime T3 and London Plane T4. Furthermore, the loss of Ash T1 is addressed by the provision of new plantings on a 3:1 basis on the Gladstone Road frontage. The site layout is therefore considered to be sustainable from an arboricultural point of view subject to the appropriate care being taken during construction.

Tree Protection Statement

General Considerations

As the proposals do not show the retention of any trees on the site, there is no requirement for any formal tree protection measures in this instance.

Craning Activities

In the event of any craning activities being required from within the car park at the end of St Matthew's Close or from Gladstone Road, care will be required to prevent any direct contact between the crane, its jib, its load and Lime T3 or London Plane T4. I therefore recommend that the requirement for a banksman for all craning operations from these locations be written into the project's CEMP (Construction Environmental Management Plan).

Services

The location of proposed new services has not been made available to Advanced Arboriculture Ltd at the time of this report's preparation. Whilst it is assumed that all services will connect to existing supplies on Gladstone Road, where this is not possible, alternative installation methods must be investigated, including manual digging, directional boring, *etc*.

I recommend that the engineering drawings showing the proposed service routes are forwarded to Advanced Arboriculture Ltd for review prior to the commencement of any ground works or services installation. I am able to forward a PDF or AutoCAD DWG file directly to the project engineers on request showing the accurate locations of the root protection areas.

New Tree Planting

The provision of a crated structure beneath the entrance path is an essential element of the project. I recommend that the unfilled void be inspected by ourselves prior to being filled with soil, and that the soil be inspected for quality prior to being installed. Underground guying and irrigation must be installed as part of the backfilling process, in accordance with the manufacturers' recommendations.

All new trees must be containerised stock, sourced from a reputable nursery and planted in accordance with the recommendations detailed within British Standard 8545:2014. We are able to provide an independent verification of the quality of new trees prior to planting on request if the Arboricultural Officer isn't available.

Tree Works Schedule

The following tree works are required prior to the commencement of any development on site:

Tree No	Species	Preliminary Management Recommendations
T1	Ash	• Dismantle to near ground level to facilitate development
T2	Rowan	• Dismantle to near ground level irrespective of development
G1	Sycamore Leyland Cypress	• Dismantle to near ground level to facilitate development

The appointed tree work contractor must ensure that all tree works comply with British Standard 3998:2010 (*Tree Works – Recommendations*) and it is strongly advised that the appointed tree contractor is Arboricultural Association Approved to ensure high standards and a consistency of work.

Under the Wildlife & Countryside Act 1981 & Countryside & Rights of Way Act 2000 it is an offence to recklessly damage or destroy the nest of a wild bird whilst in use or being built; planning consent does not provide a defence against prosecution under these Acts. Trees, shrubs and hedgerows on this site may contain nesting birds between 1st March and 31st August and it is advisable to undertake a survey of the site before commencing any vegetation removal between these dates, to ensure that no nesting birds are present. Advanced Arboriculture are able to undertake a survey to identify the presence of bats or nesting birds if required at the request of the client.

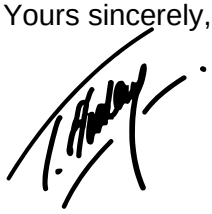
Recommendations and Conclusions

The proposals are considered to be sustainable from an arboricultural point of view subject to the planting of the three new trees on the Gladstone Road frontage as shown on the proposed landscaping scheme.

A copy of this report, plus the attached drawings, must be submitted to Exeter City Council as a supporting document to the planning application. If the council's officers have any queries, they are welcome to contact us directly.

If you have any further queries, please do not hesitate to contact me.

Yours sincerely,



Tom Hurley, BSc(For)Hons, M Arbor A
Senior Consultant.

Attachments: Arboricultural Data Tables
Tree Location Plan
Tree Constraints Plan

Data Table Key

Site Ref: **TH/A446/0919**

Site Location: **Land at Gladstone Road, Exeter**

The following section shows the results of the tree inspection. Abbreviations used in the survey are as follows:

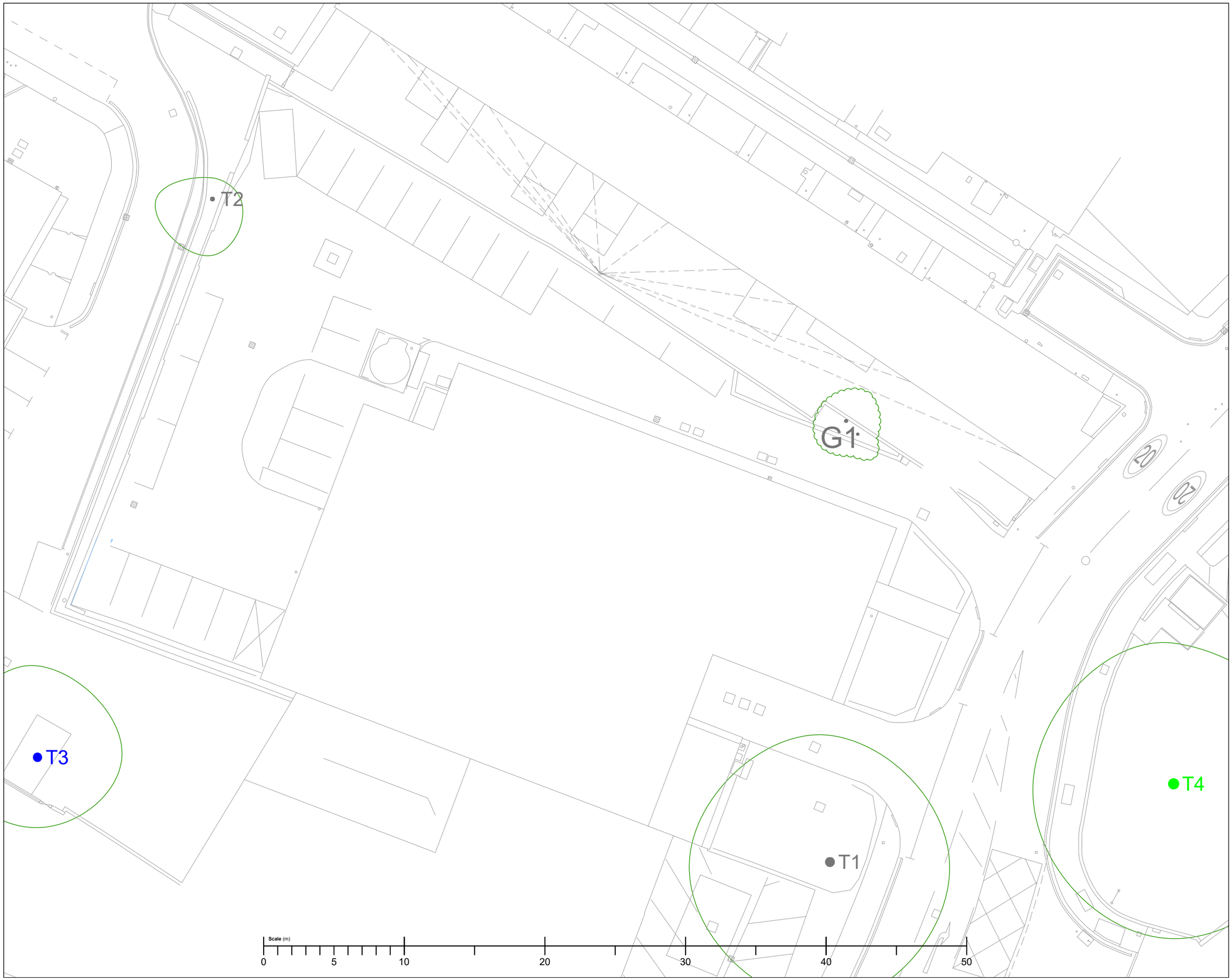
Tree No	Corresponding to plan	
Species	Common name	
Ht	Height in metres	
Crown Spread	Crown spread in metres as measured at the four cardinal points of the compass	
Stem Dia	Diameter at breast height in mm (1.5 metres above ground level), or measured in accordance with the prescribed British Standard protocol in the case of multi-stemmed specimens (see Annex C in British Standard 5837:2012 for full details)	
RPA	Root Protection Area radius in metres (derived from the British Standard 5837:2012 formulae)	
Ht to L/B	Crown height in metres as measured to the height of the lowest branch	
Dir	Direction from which the lowest branch arises	
Cr Ht	Height of crown in metres above ground level	
Age Class	Y	Young (grown to less than one third of life expectancy)
	MA	Middle Aged (grown to between one to two-thirds of life expectancy)
	M	Mature (grown to over two thirds of normal life expectancy)
	OM	Over Mature
	V	Veteran
SULE	Safe useful life expectancy range in years	
Cond	Condition, both physiological and structural:	
	G	Good (trees with no significant defects)
	F	Fair (trees with some defects amenable to surgery)
	P	Poor (trees with significant defects)
BS Cat	British Standard 5837:2012 Category (see Table 1 in British Standard 5837:2012 for full details)	
m/s	Denotes multistem tree along with the individual stem diameters	
#	Denotes estimated value where access was not possible	

Data Type: Trees and Groups **Site Reference: TH/A446/0919** **Location: Land at Gladstone Road, Exeter** **Inspection Date: 9th September 2019** **Lead Surveyor: Tom Hurley**

Tree No.	Species	Tree Height	Crown Spread	Stem Dia (mm)	RPA Radius	RPA Area	LB Ht / Dir	Cr Ht	Age Cl	SULE	Cond Phys/Str	Observations	Recommendations	BS Cat
T1	Ash	16.0	N: 9.0 E: 8.5 S: 10.0 W: 10.0	650	7.80	191	2.5/S	1.0	M	10-20	F/F	• Mature single stemmed specimen on small grassed area • Canopy very low over car park to the south and ambulance station access to the north • Tree overhangs adjacent ambulance station building • Tree does not comply with Highway Regulations which require a clearance of 5.2m over a carriageway and 2.5m over a footpath • Extensive secondary foliage and deadwood throughout the crown • Foliage has chlorotic appearance • Grassed area surrounding tree is heavily compacted • Tree is in clear decline probably accelerated by poor rooting environment and inherent intolerance of Ash to compaction • Tree not worthy of retention in the context of development	• Dismantle to near ground level to facilitate provision of new landscaping	C1
T2	Rowan	8.0	N: 1.5 E: 2.0 S: 4.0 W: 4.0	290	3.60	41	2.5/W	2.0	MA	10-20	F/P	• Tree located in raised bed • Limited rooting expected to extend beneath wall into proposed development plot • Extensive dieback throughout crown • Structurally compromised point of main crown break	• Dismantle to near ground level irrespective of development	C1
T3	Lime	16.0	N: 6.5 E: 6.0 S: 5.0 W: 6.0	610	7.20	163	2.5/N	2.0	MA	>40	G/F	• Tree located in neighbouring car park • Heavily compacted rooting environment • Some girdling roots noted • Some inherently structurally compromised unions noted throughout crown • Main stem forks into two co-dominant stems at ~2.5m • Early epicormic growth developing • Tree leans slightly to north	• No works required at the present time	B2
T4	London Plane	18.0	N: 10.0 E: 11.0 S: 11.0 W: 10.0	740	9.00	254	2.5/S	1.5	MA	>40	G/G	• Tree located on raised bed on opposite side of Gladstone Road • Tree has excellent future potential • Several more good London Planes located on roadside to the north	• No works required at the present time	A2

Data Type: Trees and Groups **Site Reference: TH/A446/0919** **Location: Land at Gladstone Road, Exeter** **Inspection Date: 9th September 2019** **Lead Surveyor: Tom Hurley**

Tree No.	Species	Tree Height	Crown Spread	Stem Dia (mm)	RPA Radius	RPA Area	LB Ht / Dir	Cr Ht	Age Cl	SULE	Cond Phys/Str	Observations	Recommendations	BS Cat
G1	Sycamore / Leyland Cypress	8.5	N: 2.5 E: 2.0 S: 2.5 W: 2.5	230 (m/s: 200, 80, 80)	2.70	23	0.0/-	0.0	Y	10-20	F/P	• One naturally regenerated Sycamore and one Leyland Cypress located in small shrub bed adjacent to rear access • No individually or collectively outstanding stems present • Trees have potential to cause damage to boundary wall	• Dismantle to near ground level to facilitate development	C1



Key

- Tn Category A tree
- Tn Category B tree
- Tn Category C tree
- Tn Category U tree
- Crown spread
- Root protection area
- BS5837:2012 shade path
- Trees to remove to enable development
- Proposed development footprint

N

Notes

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Drawing Title:

Tree Location Plan

Location:

Land at Gladstone Road
Exeter

Date:	Project Reference:	Revision:
27.09.2019	TH/A446/0919	1.0
Scale:	**Paper Size:**	**Drawn By:**
1:250	A3	TH

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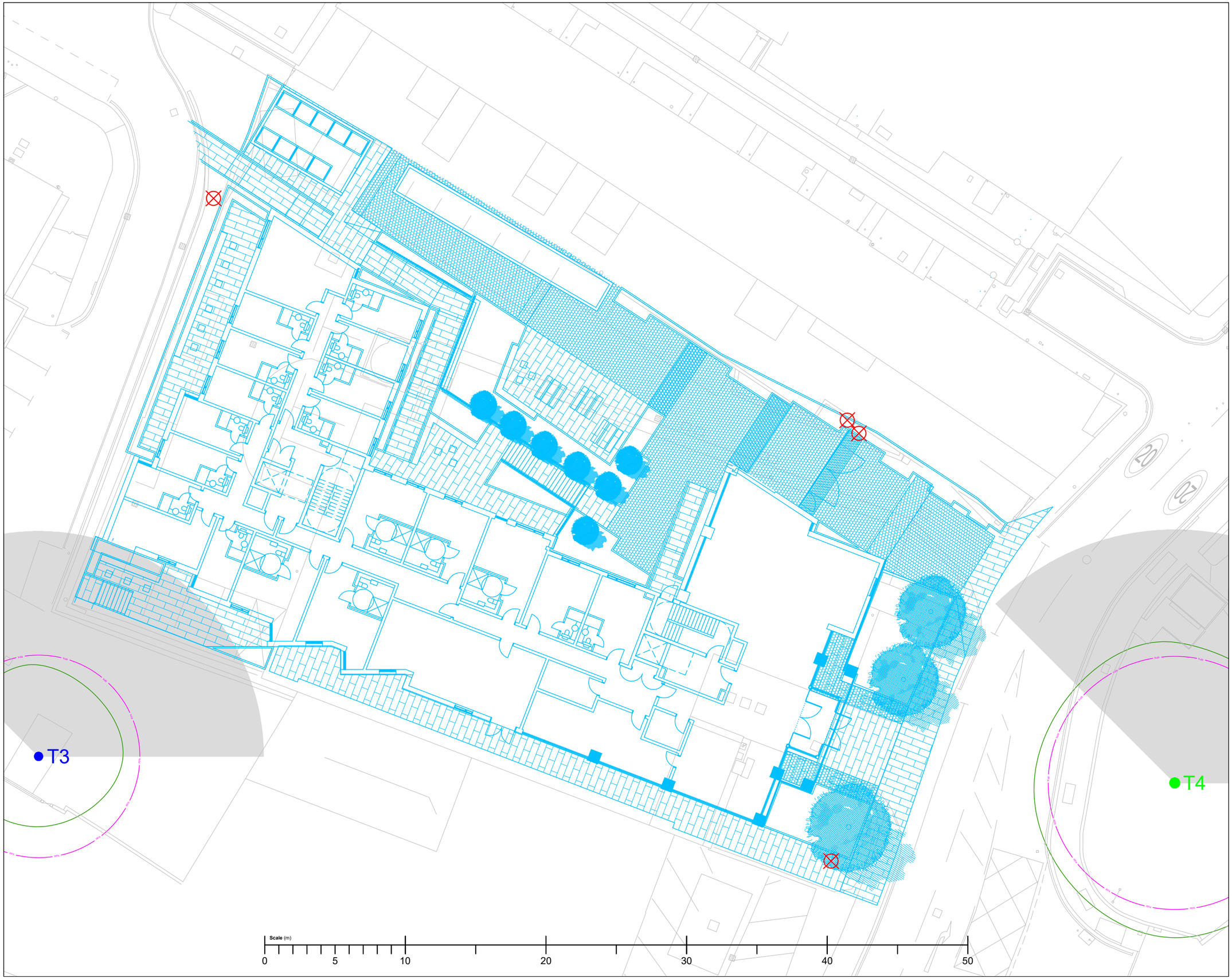

Key

- Tn Category A tree
- Tn Category B tree
- Tn Category C tree
- Tn Category U tree
- Crown spread
- Root protection area
- BS5837:2012 shade path
- Trees to remove to enable development
- Proposed development footprint

N

Notes

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Drawing Title:
Full Tree Constraints Plan

Location:
Land at Gladstone Road Exeter

Date:	Project Reference:	Revision:
27.09.2019	TH/A446/0919	1.0
Scale:	**Paper Size:**	**Drawn By:**
1:250	A3	TH

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