Cantia Arboricultural Services

Arboricultural Impact Assessment and Method Statement

CAS/2022/167

For
ITJ Development Limited

Proposed Development Site
Carpenters Cottage, St Andrews Road, Uxbridge, Hillingdon, UB10 0FA.

Boyd Saunders
Dip Arb L4- Tech 'Arbor A'

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1.0 Introduction

1.1 Instruction

1.1.1 Cantia Arboricultural Services were instructed to undertake a tree survey and provide arboricultural advice on the site known as Carpenters Cottage, St Andrews Road, Uxbridge, Hillingdon, UB10 0FA. to accompany a planning application.

1.1.2 The site visit was carried out on Tuesday 9th August 2022, between the hours of 1130-1330hrs (120 minutes) and weather conditions were noted as clear with visibility conducive of surveying.

1.2 Aim of Report

1.2.1 To survey in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' to plot and assess the quality of the existing trees located on site and within 15m of proposed development operations.

1.2.2 To assess the impact of the proposed development upon trees located on site and within the immediate vicinity. To provide advice on trees requiring removal and outline protective measures for trees marked for retention.

1.2.3 To provide a work specification as required by retained trees to accommodate the proposed development.

1.2.4 To provide recommendations and guidance on how trees and other vegetation may be successfully retained within the proposed development

1.3 Documentation & Disclosure

1.5.1 The following documentation has been made available

- Existing and Proposed Site Plans - Carpenters Cottage Sent to Boyd 22072022.dwg

2.0 Site & Tree Discussion

2.1 Site Description

2.1.1 The site consists of a small bungalow set in a plot of approx. 422 square metres (0.10 Acre). Access to the site currently exists via a hard surfaced road to the South of the plot.

2.1.2 To the North and West the site abuts an area of housing, whilst to the East are some grassed areas of common land which contain a number of mature trees and creates a buffer between the property and St Andrews Road.

2.1.3 The gradient of the land falls away gently to the North around the site.

2.2 Access

2.2.1 Vehicle and plant access to the site is unencumbered via St Andrews Road and existing hard surfaces areas around the address.

Site Entrance as viewed from South

2.3 Proposal

2.3.1 The proposal involves –

- Refurbishment of existing building
- Extension of building to Northwest
- Removal of vehicle access and hard surfacing to East of existing property to be replaced by soft landscaping
- Creation of entrance to West of property

2.4 Scope of Report / Limitations

2.4.1 This is a preliminary assessment from ground level and observations have been made solely from a visual perspective for the purposes of assessment in terms relevant to planning and development. No invasive or other detailed internal decay detection devices have been used in assessing internal conditions.

2.4.2 All individual trees within a 15m radius of the development that have a stem diameter over 75mm at 1.5m above ground level have been surveyed. Each tree is surveyed and allocated an identifying number. Then data is collected and individual trees measured with regards to their height, stem size, canopy size and potential to pose a material constraint to development. Subject trees are each allocated one of four grade categories (A, B, C or U) indicating their quality. Trees, groups and hedges have been graded upon individual merit in the context of their existing surroundings regardless of any proposed development of the site.

2.4.3 Any conclusions relate to conditions found at the time of inspection. Any alteration to the site that may affect the trees that are present or have a bearing on planning implications (including level changes, hydrological changes, extreme climatic events or other site works) will necessitate a re-assessment of the trees and the site and render any previous advice/ findings invalid.

2.4.4 Trees are living organisms and even apparently healthy trees cannot be considered completely safe due to forces of nature and environmental fluctuations which dictate a natural failure rate of intact and healthy trees.

2.4.5 Where there are access restrictions data has been estimated. This is reflected in the survey schedule with a (#) symbol before measurement.

2.4.6 The survey was carried out with the assistance (where required) of the following inspection equipment-

- Binoculars – Inspection of upper sections of the tree
- Sounding Mallet – Assessment of wood quality, decay extent
- Steel Probe – To test resistance of wood and depth of cavities
- Secateurs – Removal of basal growth & ivy to allow inspection
- DBH (diameter) Tape – Measurement of stem diameter
- Clinometer- To measure height of tree
- Laser measure – Measurement of canopy dimensions & tree location

2.5 Tree Discussion

2.5.1 A total of ten individual trees have been assessed in detail from ground level by visual means only. The Tree Survey Schedule, at Appendix 2, details the trees in respect of dimension and quality in accordance with the methodology set out in the British Standard 5837:2012. The following categories were recorded-

Category	Quantity	Identification Numbers
A	3	T03, T03 & T10
B	3	T01, T06 & T08
C	2	T05 & T09
U	2	T02 & T07

2.5.2 Trees categorised as A or B are viewed as a constraint to development. Should any proposed development require the removal of trees/groups (or parts of groups) within these categories then it is likely that local authorities would require mitigation in the form of a robust soft landscaping/planting plan. Trees classed as category C are generally not viewed as a constraint although plans to remove large numbers of these

would likely still require mitigation. Trees classed as category U are trees in irreversible decline unlikely to be in situ for more than 10 years. These trees are therefore not considered a constraint and also have no RPA (Root Protection Area) plotted.

2.5.3 Also noted on site were numerous small trees / woody shrubs too small to warrant inspection in accordance with BS5837 Trees in Relation to Design, Demolition and Construction 2012:Recommendations.

3.0 Arboricultural Impact Assessment on Retained Trees

3.1 Demolition

3.1.1 Where existing hard surfaced areas are scheduled for removal within the measured RPAs' of trees marked for retention (T03 Oak and T06 Yew) then these operations must be carried out as outlined in section P4.0 of the Arboricultural Method Statement.

3.2 Construction

3.2.1 The foundations of the proposed extension do not conflict with the measured RPAs' of trees marked for retention and therefore in this instance no specialised foundation design or installation techniques are required on arboricultural grounds.

3.2.2 No service run plans have been provided. It is assumed that existing ducts and runs will be utilised and augmented within the design. Adequate space exists on site so that any requirement for fresh runs can be located outside of the measured RPAs' of trees marked for retention.

3.3 Trees Requiring Removal

3.3.1 The proposal does not seek nor require the removal of any existing trees.

3.4 Implications for Retained Trees

3.4.1 Trees marked for retention will require no additional pruning or intervention due to the proposed development.

3.4.2 The removal of existing hard surfaced areas within the measured RPAs' of trees numbered T03 Oak and T06 Yew will likely have a beneficial effect upon the trees. The replacement of hard surfaced areas with lawn will provide a more hospitable area for root growth allowing for increased water / gaseous exchange across the area.

4.0 Conclusions

4.1.1 The proposal does not seek nor require the removal of any existing trees.

4.1.2 Existing wooden fencing and hard surfaced areas will be utilised as tree protective measures.

4.1.3 Precautionary demolition measures will be exercised where existing hard surfaced areas are scheduled for removal as a final stage of development within the measured RPAs' of trees marked for retention.

4.1.4 So long as the precautionary and protective measures outlined within this report are strictly observed and adhered to then the proposed development will have a positive impact upon trees marked for retention. This will be due to the removal of hard surfaced areas currently within root protection areas which will be replaced by lawn, allowing for an increased area hospitable to root growth.

Arboricultural Method Statement

1.0 Summary

1.1 This document outlines the principles that are approved and enforced by the local planning authority, including site specific instructions on the methods required to protect the existing tree stock agreed for retention. These methods are set out in a logical sequence of operations with location of protective measures shown on the accompanying Tree Protection plan CAS/2022/167.

2.0 Important Tree Information

2.1 As the majority of tree roots are found in the upper metre of soil, development works, including for example even shallow excavation, soil compaction and soil contamination, can be harmful to trees in close proximity. Trees differ in their tolerance of root loss or disturbance, according to their age, species and/or condition. All protection works within this document will be in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'

2.2 An assessment of the site's tree stock has been undertaken and those trees to be retained are clearly shown on the Tree Protection Plan (TPP). A calculation has been made of the volume of soil required to ensure the survival of these and this is represented by the Root Protection Area (RPA) indicated by the magenta circles or squares around the retained tree on the plan.

2.3 The RPA has been used to inform the Construction Exclusion Zone (CEZ), the area to be protected during development by the use of barriers, ground protection and specialised construction techniques - outlined below:-

3.0 Sequenced Methods of Construction and Tree Protection

P1.0 Phase 1 - Pre-Contract Meeting

P1.1 If stipulated by the local authority an onsite meeting will be held with all relevant parties including the developer, appointed arboricultural supervisor and Local Planning Authority (LPA) representative.

P2.0 Phase 2 - Tree Protection Barriers and ground protection

P2.1 Existing wooden fencing is in place around the perimeter of the site. This can be used as tree protective measures with the area outside of the fencing viewed as a Construction Exclusion Zone (CEZ). If there is a requirement to remove the fencing for any reason then it must be immediately replaced with protective fencing as outlined below. See Plan for fencing location. Fencing should be of a reasonable standard and suitable for the purpose of preventing machinery entering the protected zones see example given below in appendix 1.

Existing wooden fencing around development site

P2.2 BS5837 Trees in Relation to Design, Demolition and Construction (2012) requires that the root protection area be calculated for each tree marked for retention on the

development. The root protection area is the minimum area in m2 which should be left undisturbed around each retained tree, including the delivery of machinery, materials, plant or equipment to the site or any adjacent land. The protective measures will remain in situ until final completion or a time agreed by the LPA and Contractor.

P2.3 Tree protection fencing will be required to be installed as shown on the Tree Protection Plan CAS/2022/167. Fit for its purpose fencing must be installed after any required tree works and prior to any construction operations on site. Once the barriers have been properly erected in position, they are to be considered as sacrosanct and are not to be removed or altered in any way without prior approval from the LPA.

P2.4 Clear notices as shown below are to be fixed to the outside of the fencing with words such as 'Tree Protection Zone – Do not remove this fencing'. All operatives and other relevant personnel are to be informed of the role of the exclusion barriers and their importance. Protective fencing should remain in situ throughout the entire construction process. The site manager should be aware that it is his responsibility to maintain protective measures adequately and these should be casually inspected at regular intervals with written records of inspection.

P2.5 Existing hard surfaced areas can be utilised as ground protection form the period of development. Removal of hard surfacing must be carried out as a final stage to other development operations. Once hard surfacing is removed then where stipulated on the Tree Protection Plan ground protection should be laid. The gross weight of predicted traffic in the area should be calculated and ground protection laid as stipulated below –

- *For pedestrian access, a single thickness of scaffold boards placed on a driven scaffold frame, so as to form a suspended walkway or on a compressive- resistant layer such as, e.g. woodchip 100mm min, laid onto a geotextile membrane will be sufficient.*
- *For pedestrian operated machinery up to a gross weight of 2t inter linked ground protection boards places on top of a compression- resistant layer, as above, will be required.*
- *For machinery greater than 2t and engineered specification will be required.*

P2.6 If there is a requirement to move or carry out operations inside the area of protective fencing then ground protection should be laid over any exposed ground prior to movement or works commencing. This should be laid in accordance with section P3.5 of the Arboricultural Method Statement.

P2.7 When there is a requirement to carry out work in an area covered with ground protection then only the immediate area of work should have the protection rolled/scraped back. Once the task in hand is completed then ground protection should be instantly re-instated.

P2.8 Adequate room is available for the locating of compounds and material storage within the site boundaries and outside of any measured RPA.

P3.0 Phase 3 - Ground works

P3.1 Spoil, including soil and rubble surplus to requirements will be removed from site and not stored against any protective fencing.

P3.2 Service runs to be located outside any indicated RPA.

P4.0 Phase 4 – Removal of Hard Surfacing within Root Protection Areas (RPAs')

P4.1 All plant and vehicles engaged in demolition works should either operate outside the RPA, or run on the ground protection. Where such ground protection is required, it should be installed prior to commencement of operations.

P4.2 Where an existing hard surface is scheduled for removal, care should be taken not to disturb tree roots that might be present beneath it. Hand-held tools or appropriate machinery should be used (under arboricultural supervision) to remove the existing surface, working backwards over the area, so that the machine is not moving over the exposed ground. If a new hard surface is to be laid, it is preferable to leave any existing sub-base in situ, augmenting it where required.

P4.3 The advice of an arboriculturist should be sought where underground structures present within the RPA are, or will become, redundant. In general it is preferable to leave such structures in situ, as their removal could damage adjacent tree roots.

P5.0 Phase 5 - Dismantling Protection Barriers and Landscaping Works

P5.1 A minimum notice period of seven days will be given to the LPA prior to the dismantling of the protection barriers.

P5.2 All landscaping once the barriers have been removed will avoid soil re-grading and disturbance within the CEZ and no soil levels be altered after the protection barriers have been removed. All vehicles are strictly prohibited from entering any RPA once barriers are removed.

4.0 General Principles for Tree Protection

4.1 A copy of this AMS and the attached TPP is to be retained on site at all times and all personnel associated with the construction process will be made familiar with the principles within.

4.2 No fires are to be lit on site at any stage during the construction process.

4.3 A designated storage area is to be created away from retained trees. All materials for construction purposes are to be stored in this compound. Care must be taken to avoid the leakage or leaching of noxious materials into the soil.

4.4 No materials will be stored or left stacked in positions around the site other than within the storage compound area.

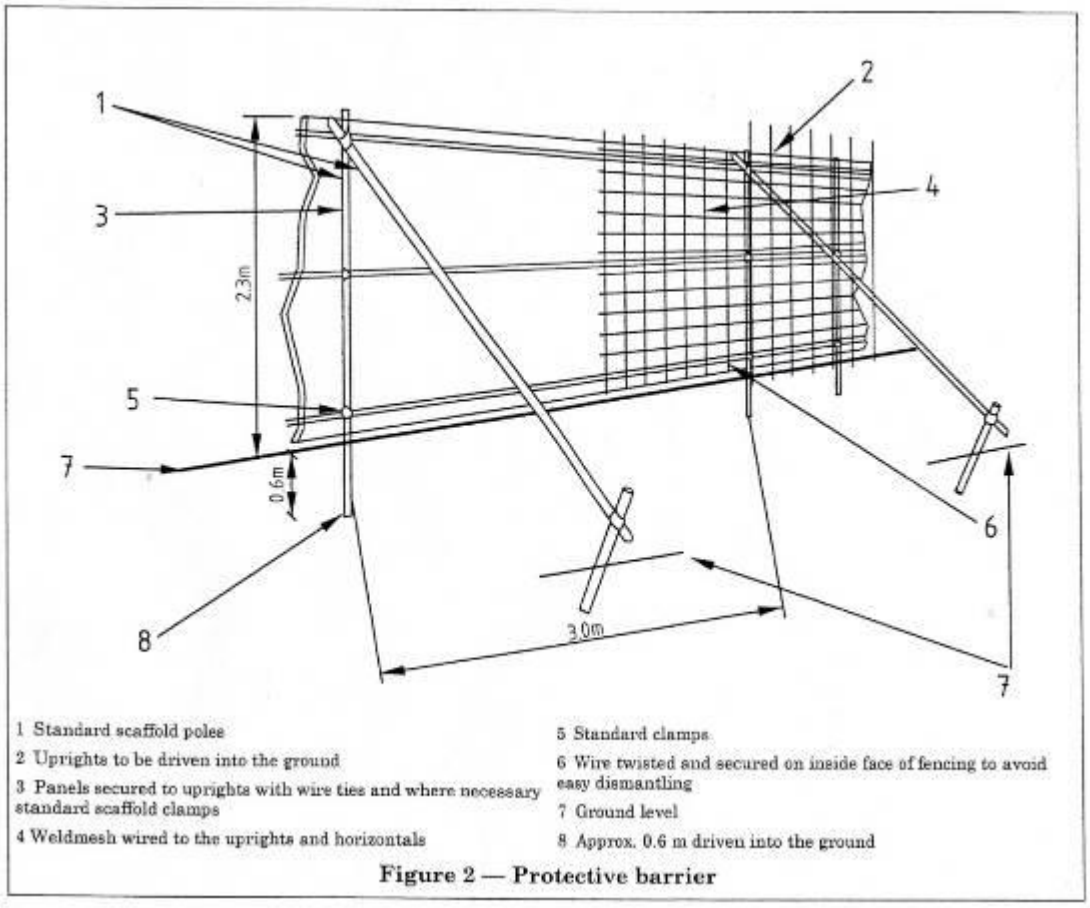
5.0 Communication Details, Monitoring and Compliance

5.1 In order to ensure that the principles of tree protection set out in the statement are adhered to, it is important to set out communication details for key individuals and tasks that require monitoring. These details should be retained by all relevant parties and available on site at all times. Relevant parties will be advised of any changes in personnel or contractor during the development process.

5.2 Before construction begins written confirmation that the developer/contractor or its agents agree to comply in full with the principles set out within this Method Statement will be lodged with the LPA.

Appendix 1: Tree Protection Fencing

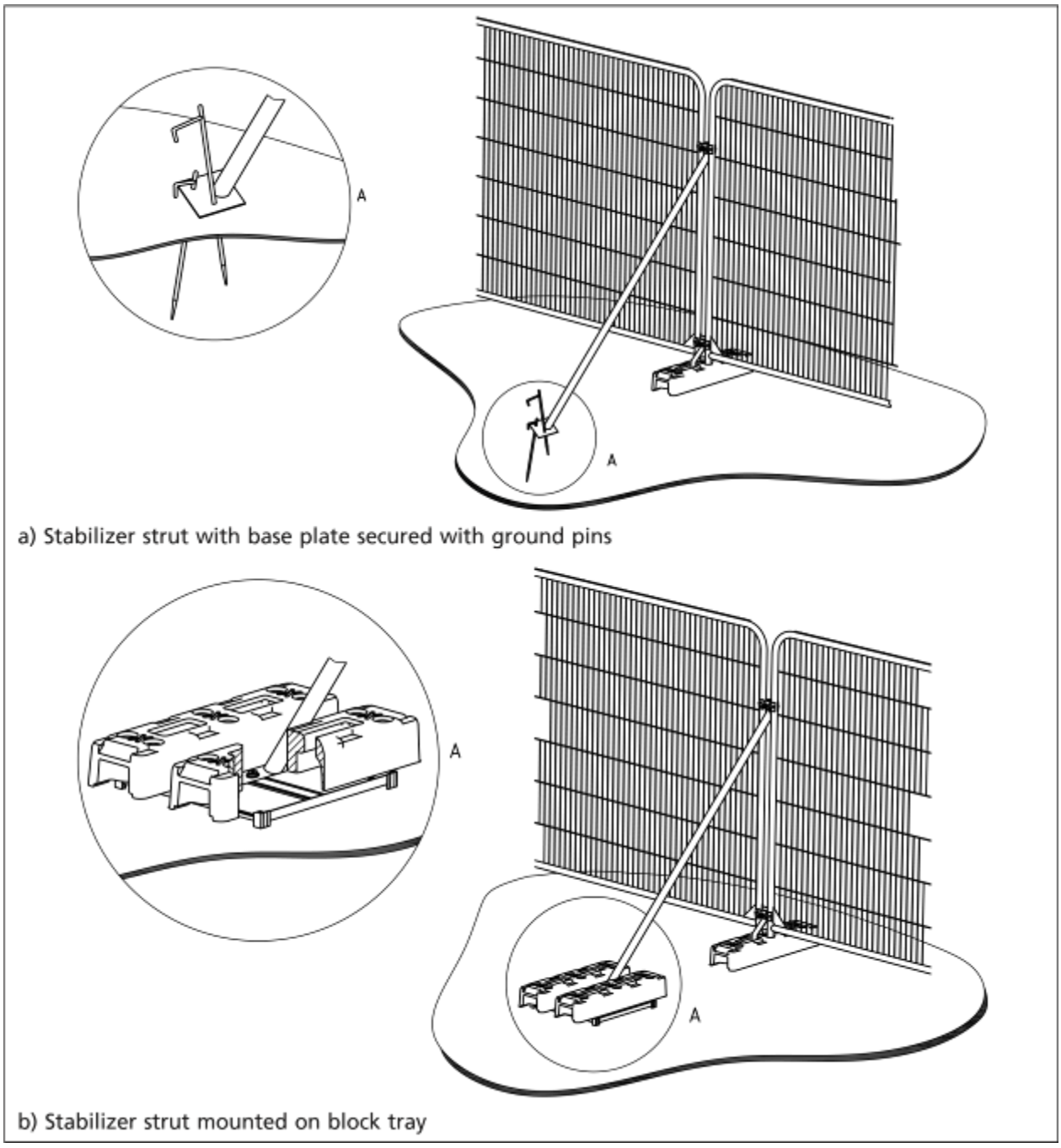
High Traffic Areas



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6 m driven into the ground

Figure 2 — Protective barrier

Low Traffic Areas



Appendix 2 - Tree Schedule Explanatory Notes

Ref.no	Identifies trees, groups and hedges on the accompanying plan.
Species	Common names are provided to aid wider comprehension.
Height	Describes the approximate height of the tree measured in metres from ground level
Canopy Spread	Indicates the crown radius from the base of the tree in four compass directions, recorded to the nearest metre.
Ground Clearance	Height of crown clearance above adjacent ground in metres.
DBH (mm)	DBH is the diameter of the stem measured in cm at 1.5m from ground level for single stemmed trees or just above root flare for multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
RPR (cm)	Root Protection Radius (RPR) is area required to be protected measured radially from the trunk centre.
RPA (m2)	Root Protection Area (RPA) is the minimum rooting area in m2 which should remain undisturbed around each tree.
Age Class	Age of the tree expressed as Y- Young, MA- Middle-Aged, EM- Early Mature, M- Mature or OM- Over-Mature
General Condition	Overall condition of tree expressed as :Good, Fair, Poor, Dead
Physioloical and structural condition	May include general comments about growth characteristics, how it is affected by other trees and any previous surgery works. Also specific problems such as dead wood, pests, diseases, broken limbs. Etc
Estimated Remaining Years	Categorised in year bands of less than 10, 10+, 20+, 40+
BS Category	B.S. Cat refers to (BS 5837:2005 Table 1) and refers to tree/overall group quality and value; 'A' - High; ‘B’ - Moderate; 'C' - Low; 'U' - Remove.
Sub Category	Sub Cat refers to the retention criteria values where 1 is arboricultural, 2 is landscape and 3 is cultural including conservational, historic and commemorative

Appendix 3 – Tree Retention Category (as per cascade chart, Table 1, B.S. 5837:2012)

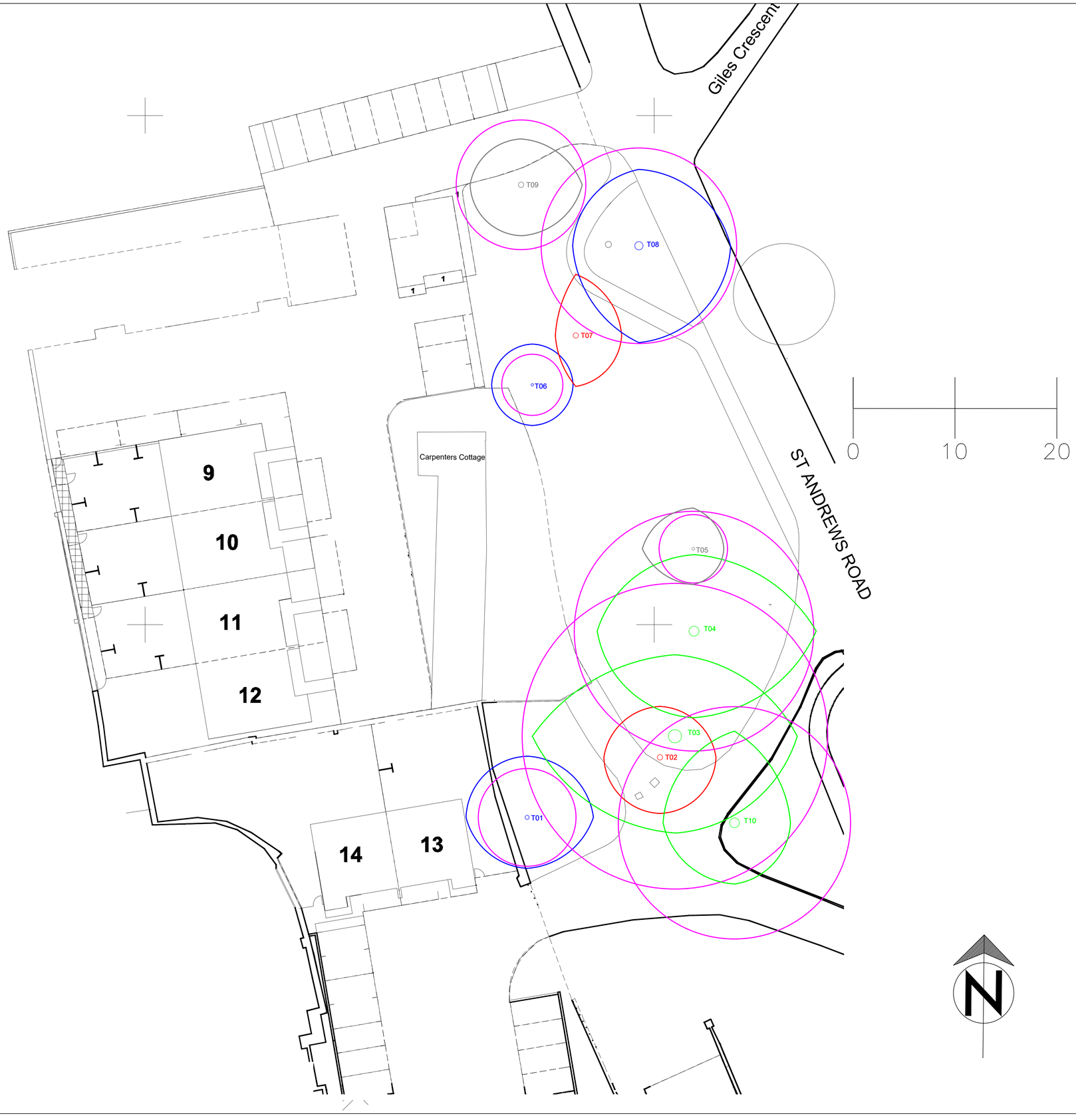
Tree Category	Description
A	Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years. Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features. Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).
B	Category B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. 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.
C	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. 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.
U	Category U – Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.

BS5837 Survey Data

Ref.	Species	Measurements	General Observations	Category	Recommendations
T01	Sycamore (Acer pseudoplatanus)	Height (m): 18 Stem Diam (mm): 400 Spread (m): 6N, 6.5E, 5S, 6W Crown Clearance (m): 1.5 Life Stage: Mature Rem. Contrib.: 30+ Years	Prolific ivy cover throughout canopy	B2 RPA Radius: 4.8m. Area: 72 sq m.	
T02	Yew (Taxus sp.)	Height (m): 12 2 stems, diam(mm): 410, 340 Spread (m): 5N, 5.5E, 5.5S, 5.5W Crown Clearance (m): 3 Life Stage: Over Mature Rem. Contrib.: 10+ Years	Significant die back noted throughout canopy. Cavity noted on larger stem @ 2m above ground level to NE. Investigation with metal probe revealed cavity depth to 350mm	U RPA None - due to Retention Category of U.	
T03	Oak (Quercus sp.)	Height (m): 25 Stem Diam (mm): 1290 Spread (m): 8N, 12E, 9.5S, 14W Crown Clearance (m): 10 Life Stage: Over Mature Rem. Contrib.: 30+ Years	Tree under retrenchment pruning regime.	A1,2 RPA Radius: 15.0m. Area: 707 sq m.	
T04	Turkey Oak (Quercus cerris)	Height (m): 25 Stem Diam (mm): 980 Spread (m): 7.5N, 12E, 8.5S, 9.5W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 40+ Years		A1,2 RPA Radius: 11.8m. Area: 437 sq m.	

Ref.	Species	Measurements	General Observations	Category	Recommendations
T05	Holly (Ilex sp.)	Height (m): 6 Stem Diam (mm): 280 Spread (m): 4N, 3E, 3.5S, 5W Life Stage: Mature Rem. Contrib.: 20+ Years	Tree leans to NW	C1 RPA Radius: 3.4m. Area: 36 sq m.	
T06	Yew (Taxus sp.)	Height (m): 6 2 stems, diam(mm): 200, 150 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 0 Life Stage: Early Mature Rem. Contrib.: 30+ Years		B2 RPA Radius: 3.0m. Area: 28 sq m.	
T07	Yew (Taxus sp.)	Height (m): 8 Stem Diam (mm): 520 Spread (m): 6N, 4.5E, 5S, 2W Crown Clearance (m): 1.5 Life Stage: Over Mature Rem. Contrib.: 10+ Years	One stem of tree has previously collapsed and lays next to remaining tree. Fungal brackets visible around basal areas.	U RPA None - due to Retention Category of U.	
T08	Turkey Oak (Quercus cerris)	Height (m): 23 Stem Diam (mm): 800 Spread (m): 7.5N, 9E, 9.5S, 6.5W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 30+ Years		B1,2 RPA Radius: 9.6m. Area: 290 sq m.	
T09	Yew (Taxus sp.)	Height (m): 11 Stem Diam (mm): 530 Spread (m): 4.5N, 6E, 5S, 5W Life Stage: Mature Rem. Contrib.: 20+ Years	Sparse foliage cover noted at tips	C1 RPA Radius: 6.4m. Area: 129 sq m.	
T10	Oak (Quercus sp.)	Height (m): 23 Stem Diam (mm): 950 Spread (m): 9N, 5.5E, 6S, 7W Life Stage: Mature Rem. Contrib.: 30+ Years		A1,2 RPA Radius: 11.4m. Area: 408 sq m.	

Arboricultural Constraints Plan



KEY

T1 — Existing Tree colour referenced in accordance with BS 5837 2012 as shown below

Green – Cat A Trees of high quality and value

Blue – Cat B Trees of moderate quality and value

Grey – Cat C Trees of low quality and value

Red – Cat U Trees that are dead or showing signs of irreversible decline

Root Protection Area as calculated in accordance with BS 5837 2012

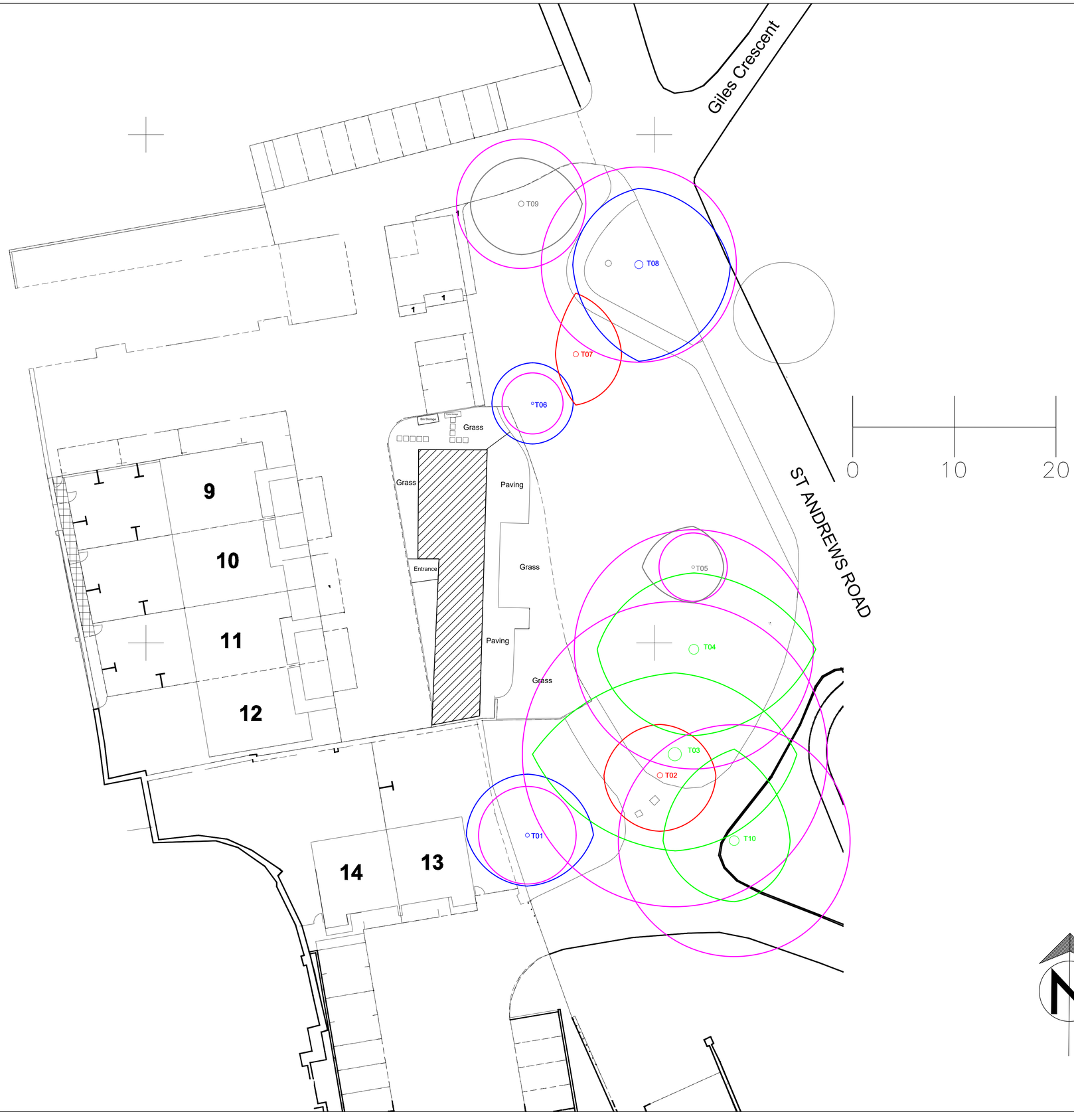
REV.	DATE	INITIALS	DETAILS

CLIENT Jamie Tye	DWG. TITLE Arboricultural Constraints Plan
SITE Carpenters Cottage, St Andrews Road, Uxbridge, Hillingdon, UB10 0FA	

DRAWN BY	CHECKED BY	SCALE	DATE	DWG NO.	REV.
BJS	BJS	1:200 @ A1	September 2022	CAS/2022/167	

Please do not scale off this drawing. Tree locations not plotted to a topographical survey so locations cannot be confirmed, Dwg is to scale as indicated above.

Proposed Development Plan



KEY

T1 — Existing Tree colour referenced in accordance with BS 5837 2012 as shown below

Green – Cat A Trees of high quality and value

Blue – Cat B Trees of moderate quality and value

Grey – Cat C Trees of low quality and value

Red – Cat U Trees that are dead or showing signs of irreversible decline

Root Protection Area as calculated in accordance with BS 5837 2012

Area of building to be extended / renovated.

REV.	DATE	INITIALS	DETAILS

CLIENT Jamie Tye	DWG. TITLE Proposed Development Plan
SITE Carpenters Cottage, St Andrews Road, Uxbridge, Hillingdon, UB10 0FA	

DRAWN BY	CHECKED BY	SCALE	DATE	DWG NO.	REV.
BJS	BJS	1:200 @ A1	September 2022	CAS/2022/167	

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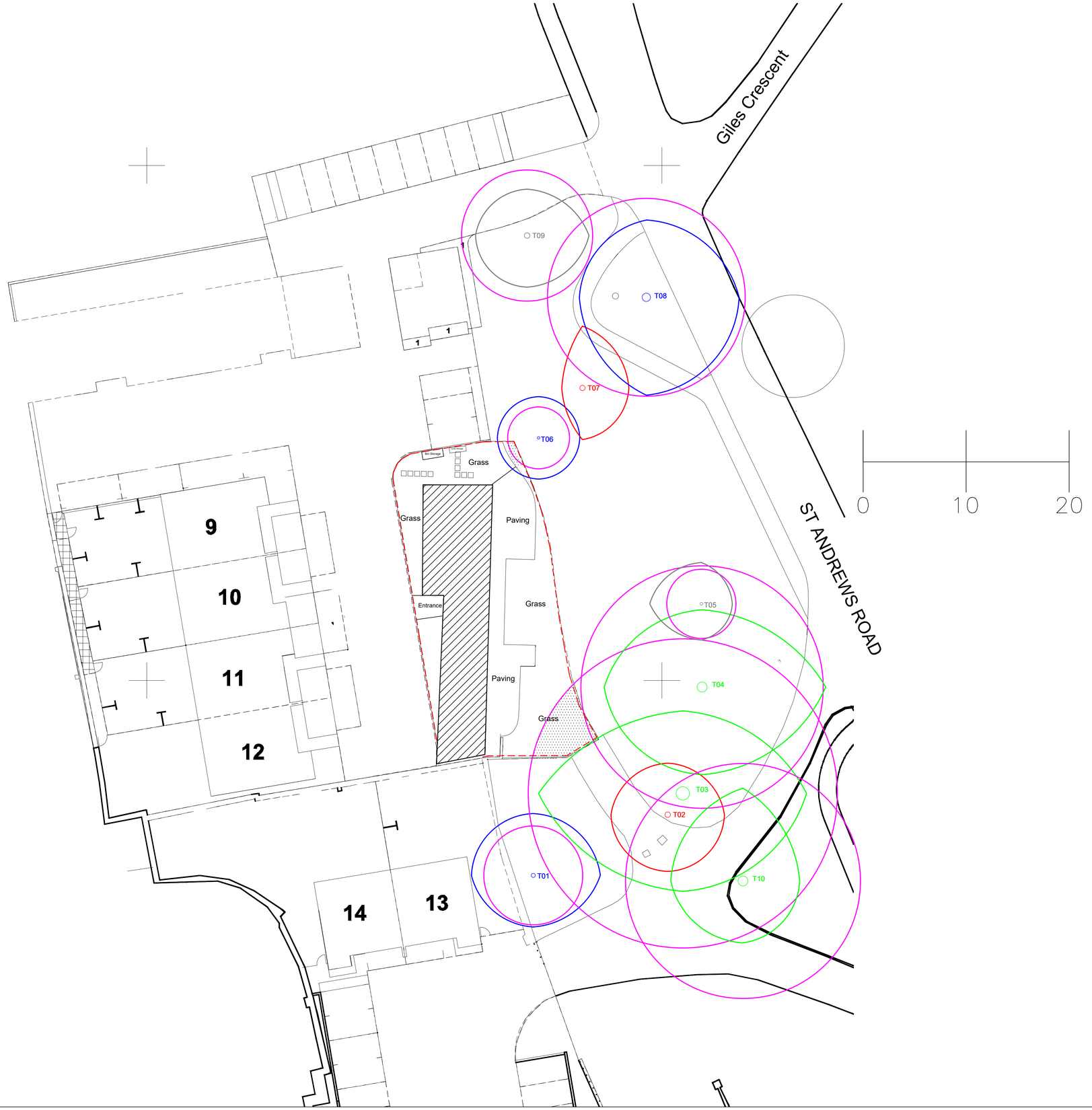
Tree Protection Plan



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Green – Cat A Trees of high quality and value

Blue – Cat B Trees of moderate quality and value

Grey – Cat C Trees of low quality and value

Red – Cat U Trees that are dead or showing signs of irreversible decline

Root Protection Area as calculated in accordance with BS 5837 2012

Area designated for ground protection once hard surfacing is removed.

Approximate line of protective fencing to be erected in accordance with BS5837 should existing fencing be removed.

REV.	DATE	INITIALS	DETAILS

CLIENT Jamie Tye			DWG. TITLE Tree Protection Plan
SITE Carpenters Cottage, St Andrews Road, Uxbridge, Hillingdon, UB10 0FA			
DRAWN BY BJS	CHECKED BY BJS	SCALE 1:200 @ A1	DATE September 2022
			DWG NO. CAS/2022/167
			REV.

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