Arboricultural Impact Assessment

Location: 2 Templewood, NW3 7XA

Working on behalf of: Karolina and Gian Fazio

Working in Partnership with: Simon Templeton Architects

Prepared by Andy Nicol, September 2022

Part 1 - Instruction

1.1 Nicol Landscapes Ltd were instructed on 15th August 2022 by architect Simon Templeton, agent acting on behalf of their private client, to provide an Arboricultural Impact Assessment.

1.2 To recommend measures that will suitably protect retained trees during the development process.

1.3 To recommend an appropriate level of tree planting in mitigation/compensation of tree loss due to the property construction.

1.4 Following an initial site visit/survey and discussion period, arboricultural information will be provided in this report in support of the application.

1.5 The report is based on the following drawings and documents, which have been supplied by the agent:

- Topographical Survey
- Proposed layout including elevation

Part 2 - Limitations/Methodology

SCOPE OF SURVEY

2.1 The survey is concerned with the arboricultural aspects of the site only.

2.2 The trees on site have been surveyed and classified in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations.

2.3 The baseline survey was undertaken using the Visual Tree Assessment (VTA) methodology to conduct a preliminary assessment of the above ground portion of the tree. Internationally renowned Professor Claus Mattheck introduced a biomechanically based system of VTA and this is widely used within the UK and international arboricultural profession.

2.4 Trees are large dynamic organisms whose health and condition can change rapidly, therefore due to the changing nature of trees and other site considerations, this and any recommendations made are valid for a 12-month period from the date of this report.

SURVEY METHOD

2.5 The visual survey was undertaken from ground level with the aid of binoculars.

2.6 Where a more detailed assessment /inspection of a particular feature is deemed necessary it will be recommended in the survey schedule. No aerial inspection nor invasive probing or drilling has been undertaken.

2.7 The canopy spread of each subject trees was measured on four compass points using a measuring wheel. The height of each subject tree was measured via the smart phone app - Arboreal Tree.

2.8 Trees located outside of the site perimeter have been noted during the site survey where they pose an above or below ground constraint, however, their exact location and measurements may have been visually estimated due to lack of access.

THIRD PARTY LIABILITY

2.9 The limit of Nicol Landscapes Ltd indemnity over any matters arising from this report only extend to the instructing client. Nicol Landscapes Ltd cannot be held liable for any third party claim that arises following this report. No responsibility is assumed by Nicol Landscapes Ltd for legal matters that may arise from this report, and the Consultant shall not be required to give testimony or to attend court unless additional contractual arrangements are made. Any alteration or deletion from this report shall invalidate it as a whole.

TERMINOLOGY

2.10 This report considers the arboricultural Impact and Implication of the proposed development. Discussion and comment of Impact related to the general nature/level of development; whereas Implications refer to specific issues relating to layout and individual trees/groups.

Part 3 – Site Description

3.1The site is located within the Redington and Frognal Conservation Area of The London Borough of Camden. Redington and Frognal was designated a Conservation Area in 1985 and this site is situated within the original boundary of the designation.

3.2 London Borough of Camden planning team confirm there are no Tree Preservation Orders on this property, as of 08:47 09/12/2021.

3.3 The property and garden were originally laid out in the Edwardian Period (1901 – 1910) with at least one tree pre-dating this period. This is a relatively level, urban garden situated within a diverse vernacular which has developed largely in the 20th century. It currently has a mix of broadleaf and coniferous trees, native and non-native which are at differing life stages.

3.4 The property nestles in an area of sylvan character, public and private, with multiple small woodlands and copse running along Templewood Avenue and the surrounding areas.

3.5 The rear garden is well proportioned to the property and dominated by a mature English Oak tree, worthy of note.

3.6 Multiple low-quality trees can be found within the property curtilage and that of the neighbouring properties.

T1 – Basal Defect

Part 4 – Survey Details

4.1 One significant tree is located within the property curtilage, notably a mature Oak (T3)

4.2 A schedule of tree condition and category retention is attached as Appendix 1.

4.3 Notable arboricultural features and issues are as follows:

- Category A trees marked for removal – n/a
- Category B trees marked for removal – n/a
- Category U trees marked for removal – n/a
- Poor specimen/diseased/defective Category C trees marked for removal T2C, T4C, T5C, T6C, T7C, T8C, T14C
- 7C removals
- Total of 7 tree removals
- Hedge removal G1 & G2

4.4 The retention category is a construct of BS5837 which allows an arboriculturalist to place trees in certain bands so that impacts can be appropriately quantified and managed, see Table 1 below.

4.5 It is important to note that BS5837 recommends that C category trees will not usually be retained where they impose a significant constraint on development.

4.6 It is also important to note that conflict can occur with the retention or removal of U category trees if they provide an important wildlife habit. On this site, this conflict should not arise as the wildlife habitat value of the trees on this site is very low.

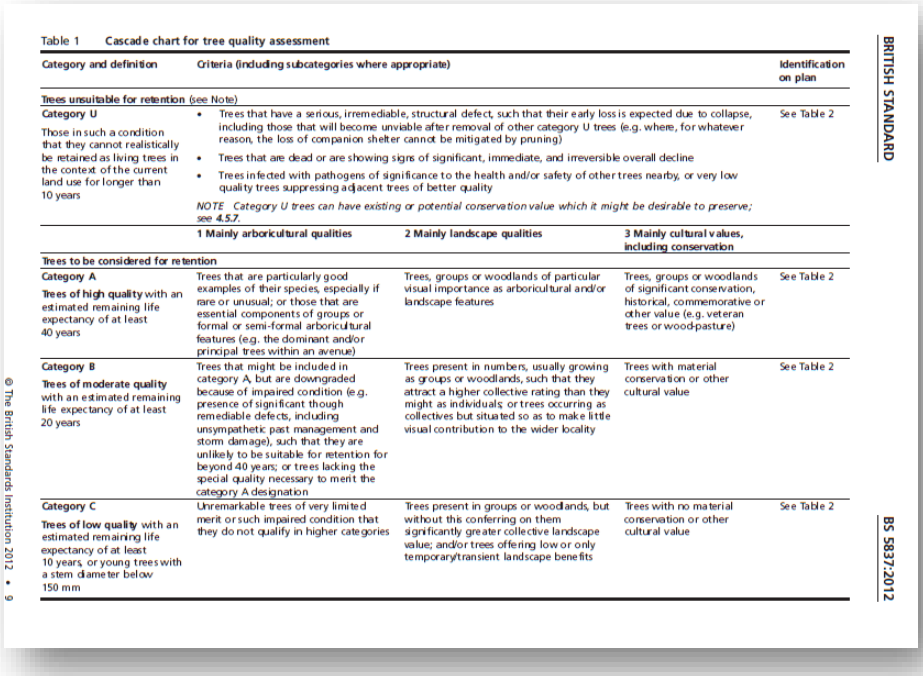


Table 1 Cascade chart for tree quality assessment

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

Part 5 – Project Requirements

5.1 PROPOSED DEVELOPMENT AND CONSTRAINTS

- The proposal is to increase the existing basement area from 275.4 sqm to 379.2 sqm, a 103.8sqm total basement extension, no encroachment into the RPA of T3 will be required.
- Construct a new Plant Room outside the RPA of T3.
- Construct new driveway and garage to the front.
- Retention of appropriate screening trees and hedges, or high-quality trees are to be given consideration, with recommendations to provide continued screening to the property and neighbouring properties.

5.2 PRUNING AND FELLING WORKS TO FACILITATE DEVELOPMENT

- The proposal to reposition the driveway entrance and the construction of a new garage will entail the removal of low-quality garden shrubs, trees, herbaceous borders and category C trees, easily compensated for with new planting and long-term management of the existing native trees. See Appendix 4 for Tree Removal Plan.
- No tree pruning to facilitate the construction is required.

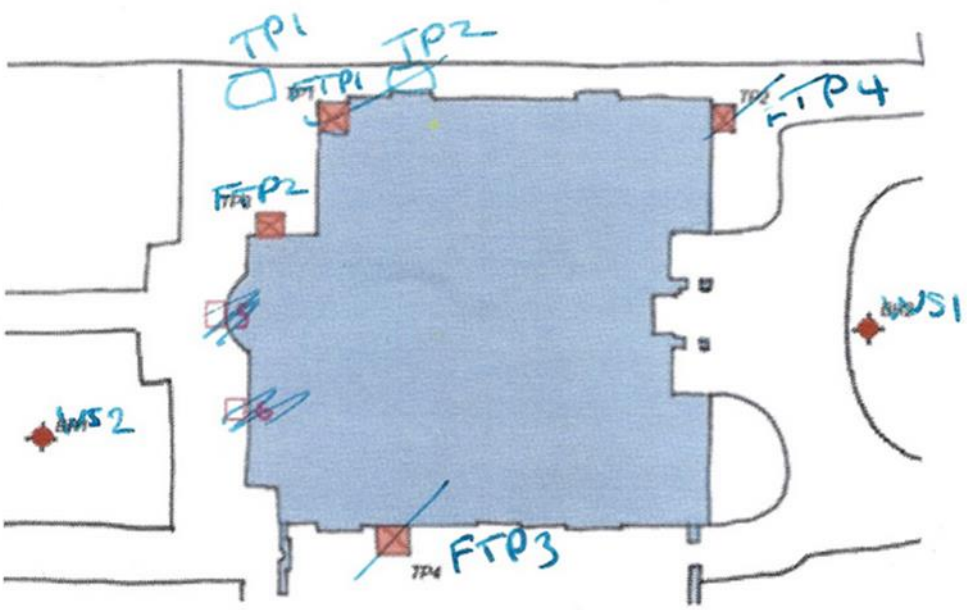
5.3 PROXIMITY OF TREES TO STRUCTURES

- The relationship the rear elevation development and newly constructed Plant Room will have with any retained and newly planted trees must be that of shade acceptance, at all times of the day and year. The design of the building must allow for often lowered natural light levels.
- Cyclical pruning to maintain a reasonable distance from the property of approximately two metres would normally be allowable for the reason of sound arboricultural practice.

5.4 WORKS REQUIRED WITHIN THE ROOT PROTECTION AREAS (RPAS)

- Ground level changes will not be required as the work is outside the RPA's of T1, T2 and T3.
- Trial pit excavations undertaken by Paddock Geo Engineering Ltd reveal that:-
    - A large (60mm diameter) root observed within both TP1 and TP2.
    - Within FTP1 there were occasional roots up to 12mm from surface to a depth of 0.50m and then up to 3mm to 1.00m depth. Below this depth there were no roots. It was not, however, possible to determine for definite which, if any, of these roots were all coming from the neighbor's tree.
    - Within FTP2 roots up to 3mm were observed to 0.30m depth and then up to 2mm to 0.90m.

- This would positively indicate that roots from T1, and indeed T2 are being pushed down and away from the proposed dig/construction areas, seeking more preferential aerobic conditions.



Part 6 – Construction Processes of the Proposed Development

6.1 Development processes that lead to soil compaction in the rooting zones and physical damage to trees can adversely affect long-term tree health. This can lead to unnecessary tree loss if not controlled properly on site during the building and construction phases.

TREE PROTECTION

6.2 No access to the RPA of any retained tree will be permitted before or during construction activity, unless detailed in the Arboricultural Method Statement or otherwise agreed in advance with the LPA following advice from the appointed specialist.

6.3 The processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report are adhered to at all times.

6.4 BS5837 recommends that retained trees (and areas suitable for new planting) are incorporated into a **construction exclusion zone (CEZ)** the area based on the root protection area from which access is prohibited for the duration of a project.

6.5 The development will be carried out in the following order:

- Remedial tree works undertaken, none expected
- Tree protection fence installed
- Development of site
- Removal of tree protection fence

Part 7 – Infrastructure requirements (highway visibility, lighting, CCTV, services etc)

7.1 The installation of services within the rooting zones of the trees can have a large detrimental impact on the long-term survival of retained trees leading to their unnecessary loss or root failure in high winds. The proposal is to install services to the Plant Room will be outside the RPA and above ground where required.

7.2 Driveway upgrades and installation will require dig down and therefore root loss, particular care outside the RPA's is required.

7.3 Undisclosed locating of above ground services, CCTV cameras, electrical sub-stations, refuse stores, lighting and other infrastructure requirements can lead to unnecessary pruning of tree crowns or root loss during or post development. There are no such developments planned to take place adjacent or within the RPA of any retained trees.

7.4 Underground services near to trees will need to be installed in accordance with [N1]National Joint Utilities Group (NJUG). Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Volume 4, issue 2. London: NJUG, 2007.

Part 8 – Mitigating tree loss/new planting

8.1 Some tree loss will take place as a result of this property development and appropriate consideration must be given for ways to maintain and improve the sylvan feel of the area. The trees that have been marked for removal are of low visual amenity value and rather poor in quality due to a lack of maintenance and/or over shadowing. The planting plan has been designed to improve on the existing visual amenity whilst recognising the essential role trees play in the targeted biodiversity, (see Appendix 7 for Tree Planting Plan).

8.2 Recommended species

- **Pleached Hornbeam to form boundary screening (Carpinus betulus)**
  The term 'pleached' refers to trees that are trained to form a screen of branches and foliage a single straight stem. The single stem of pleached trees that are between 1.8 and 2.2m tall and planted in rows at set distances will form an elevated 'green wall' that can be ideal as a green alternative to high fencing.

  Pleached trees are often used to screen unsightly buildings and can be grown above an existing wall or fence. Used in this way pleached trees can extend the height of a privacy screen to 3 metres or more. Mature pleached trees are established trees with full growth development on the cane head structure compared to the fresh pleached versions.

- **English Yew hedge (Taxus baccata)**
  English Yew is a dense, evergreen conifer hedge which boasts vibrant green foliage during spring, with small red fruits appearing in the autumn, which are delightful in appearance and loved by birds. English Yew's compact, needle-like foliage is incredibly easy to trim and maintain.

- **Upright Pillar Crab Apple Tree (Malus tschonoskii)**
  - Identified on planting plan as P1

  A firecracker for autumn colour, this tree has a distinctive upright, flame-like form and is a medium sized tree reaching a height and spread of 5 x 3 metres in 20 years. Young foliage is silvery white in the spring, adopting a lush green colour in the summer before developing its stunning intense orange, yellow, red and purple autumn colours.

  This Flowering Pillar Crab Apple is popular with bees due to the beautiful, white flowers with a hint of pink that open in April-May. Equally popular with wildlife are the red flushed, yellow/green crabs which follow in the autumn and last long past its vibrant autumn display, providing a third season of interest.

- **Upright Flowering Cherry Tree (Prunus 'Amanogawa')**
    - Identified on planting plan as P2 & P3

  A very columnar ornamental cherry tree, ideal as an eye-catching specimen for smaller spaces or for lining avenues. The narrow form will grow to a height and spread of just 6 x 2 metres in 20 years.

  In April, the upright branches are smothered in pale pink cherry blossom. The large, semi-double, flowers have a pleasant and subtle fragrance. Bronze-green spring foliage turns to mid-green in the summer and then bursts into orange and red colours later in the year for an autumnal display. Prunus 'An excellent choice for urban areas, as it is both tolerant of pollution and compact.

- **Ornamental Pear Tree (Pyrus calleryana 'Chanticleer')**
    - Identified on planting plan as P4

  A fantastic small tree that has glossy, dark-green foliage that creates a wonderful foil for the mass of white flowers in April-May. The flowers are popular with wildlife such as bees. 'Chanticleer' is one of the best ornamental pears for autumn colour, with the foliage turning vivid red before falling.

  Pyrus 'Chanticleer' is an upright, conical, flame shaped small ornamental pear tree that will grow to just 5 x 3 metres in 20 years. Worthy of being a feature tree, it is also perfect for avenue planting due to its slender form or for small urban gardens.

- **Coral Bark Japanese Maple Tree (Acer palmatum 'Sango-kaku')**
    - Identified on planting plan as P5 & P6

  The most well-known Coral Bark Maple tree, renowned for its striking coral pink-red stems. Producing pink young growth and yellow/orange, deeply lobed new foliage in the spring, the leaves turn a lush green in summer and then a pretty soft yellow in autumn.

  After the foliage display is over, the bare branches make a stunning focal point in winter. Triggered by a cold spell, the stems and bark turn vibrant coral pink-red. Thus, known as a Coral or Red Barked Maple, it makes the perfect feature tree with year-round interest.

  With the RHS Award of Garden Merit, it grows to approximately 4 x 2 metres in 20 years. After the foliage display is over, the bare branches make a stunning focal point in winter. Triggered by a cold spell, the stems and bark turn vibrant coral pink-red, it makes the perfect feature tree with year-round interest.

Part 9 – Conclusions

9.1 The construction of the extended basement will not encroach into the RPA of T3 so no detrimental effect is expected. Tree protection measures must be adhered to and enforced with build back construction methods being required.

9.2 Beech tree (T1), being situated on an elevated position should not impose specific restrictions to the construction process as there will be no encroachment into neighbouring land, nor will crown pruning be required.

9.3 Combining above ground utilities and no digging within the RPA of T3 will remove any conflict within its RPA. Service ducting on the eastern boundary will be set within the existing raised area.

9.4 The use of traditional strip footings can result in extensive root loss and should be avoided. No strip foundations are being proposed within RPA's.

9.5 Root damage – it is advised that if roots are to be pruned, roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist, as such roots might be essential to the tree's health and stability.

9.6 Post-development management: existing trees. A programme of inspections to advise on any necessary work to retained trees should be drawn up in conjunction with an arboriculturist. This programme might include recommendations for frequency of inspection and/or proposals for tree work, and should take the form of a management plan.

9.7 Site supervision during the build process is a key element to the overall project success.

9.8 Mitigating replacement tree planting will impact positively on the areas sylvan character, see Appendix 7 for proposed locations and 8.2 above for recommended species.

Appendix One

Tree Schedule

Site: 2 Templewood Avenue, NW3 7XA Surveyor: A Nicol Date: 23/11/2021

Tree No.	Tree species	Tree height (m)	Stem diameter (mm)		Branch spread (m)		1st sign branch (m/dir)	Life Stage	General Observations	Recommendations	Priority	Remaining contribution	BS5837 Cat.
			D1	D4	N	E							
			D2	D5									
					S	W	Canopy height (m)					RPA diameter (m)	
			D3	D Ave.									
T1	Common Beech	18	760		4	3	10E	M	Poor crown form and shape with no screening function. Large wound at base, east side 300mm wide x 600mm high (estimated). Included branch union main fork at 6m. Etiolated. Growing on an elevated position	Neighbours tree, ideally remove		20+	C
					2	3	10					9.3	
T2	English Yew	9.5	390	250	2	2	2.5S	SM	Misshapen and leggy shape, poor crown form. Causing damage to retaining wall. Minor screening to neighbouring property with very limited public visual amenity	Remove		20+	C
			150	180	5	5	3					4.2	
T3	English Oak	18	1160		10	9	3 main union	M	A good example of the species, dominant in the local landscape and provides screening to neighbouring properties. Excellent wildlife value. Protected status			40+	A3
					10	12.5	3.5					13.92	
T4	Japanese Maple	4	150		3	2	1.5	SM	Poor crown form	Remove		20+	C
					1.5	2	3					1.8	
T5	Japanese Maple	3	70		1	1	1.5	Y	Poor crown form	Remove		20+	C
					1	1	1.5					0.9	
T6	Japanese Maple	3	50		2	0	3	Y	Poor crown form	Remove		10+	C
					4	2.5	3					0.6	

Site: 2 Templewood Avenue, NW3 7XA Surveyor: A Nicol Date: 23/11/2021

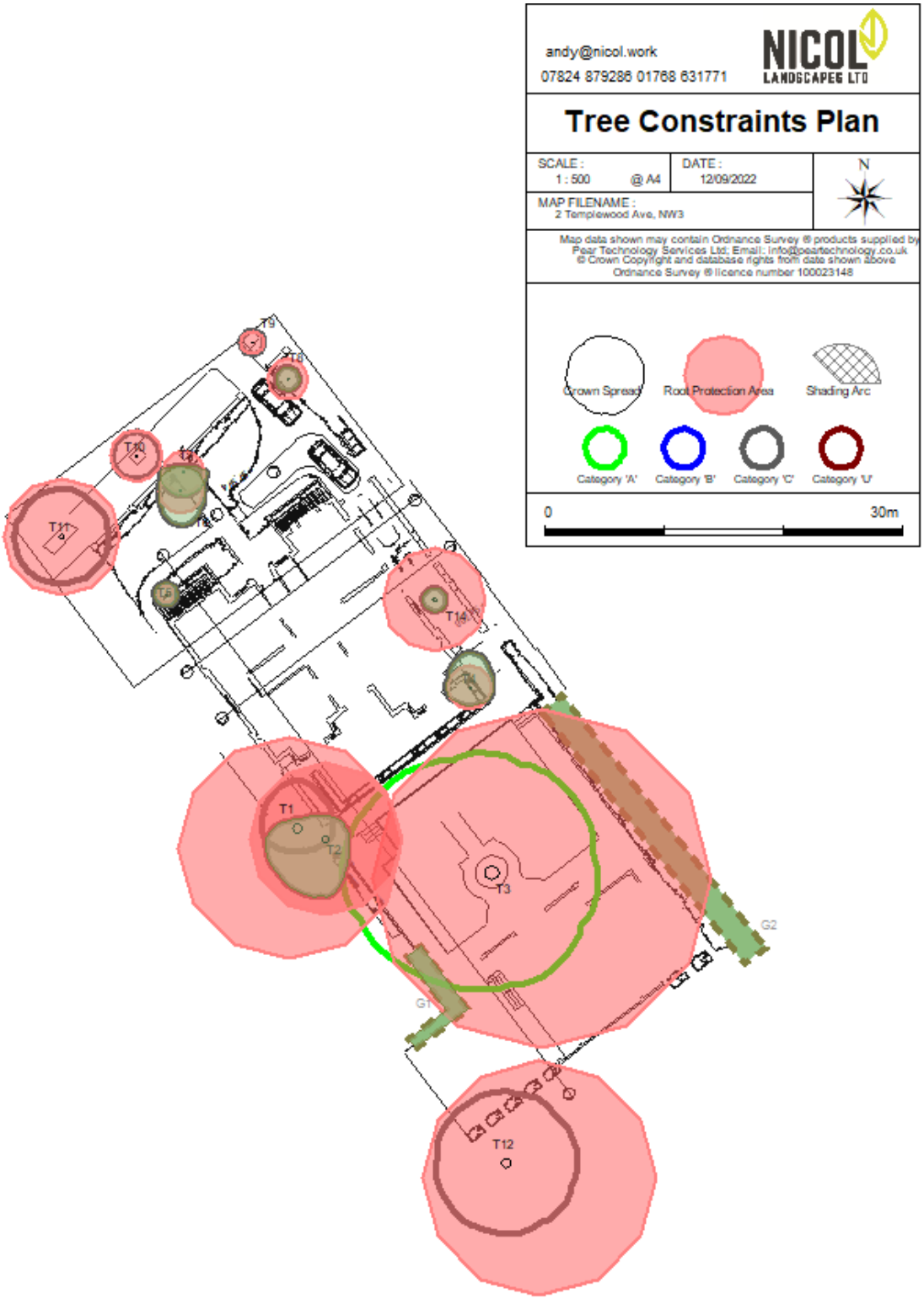
Tree No.	Tree species	Tree height (m)	Stem diameter (mm)		Branch spread (m)		1st sign branch (m/dir)	Life Stage	General Observations	Recommendations	Priority	Remaining contribution	BS5837 Cat.
			D1	D4	N	E							
			D2	D5									
					S	**W**	**Canopy height (m)**					**RPA diameter (m)**	
			D3	D Ave.									
T7	Japanese Maple	3.5	145		0.5	2	1.5S	SM	Poor crown form	Remove		10+	C
					2	2	3					1.8	
T8	Holly	3	140		1	1	2	Y	Low amenity value			10+	C
					1	1						1.7	
T9	Horse Chestnut	14	400		2.5	2.5	3	SM	Street Tree			40+	C
					2.5	2.5	4.5					4.8	
T10	Silver Birch	12	175		1	1	3	SM	Street Tree			20+	C
					1	1	4					2.10	
T11	Silver Birch	8	80		0.5	0.5	2	Y	Street Tree			40+	C
					0.5	0.5	3					1	
T12	Oak	12	#950		#3	#3	5S	SM	Neighbouring tree, rather over pruned and poor crown form			40+	C
					#3	#4						11.40	

Site: 2 Templewood Avenue, NW3 7XA Surveyor: A Nicol Date: 23/11/2021

Tree No.	Tree species	Tree height (m)	Stem diameter (mm)		Branch spread (m)		1st sign branch (m/dir)	Life Stage	General Observations	Recommendations	Priority	Remaining contribution	BS5837 Cat.
			D1	D4	N	E							
			D2	D5	S	W	Canopy height (m)					RPA diameter (m)	
			D3	D Ave.									
T13	N/a											n/a	
T14	Laurel	4	160		1	1	0.3	M	Large laurel managed as a shrub. Crown lifted to 2 metres	Remove		<10	C
					1	1	2						

Appendix Two

Tree Constraints Plan


andy@nicol.work
07824 879286 01768 631771
NICOL LANDSCAPES LTD
Tree Constraints Plan
SCALE : 1 : 500 @ A4
DATE : 12/09/2022
N
MAP FILENAME : 2 Templewood Ave, NW3
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Crown Spread
Root Protection Area
Shading Arc
Category 'A'
Category 'B'
Category 'C'
Category 'U'
0
30m
T1
T2
T3
T5
T6
T9
T10
T11
T12
T14
G1
G2


Hedge Removals
Tree Removals

Appendix Three

Tree Protection Plan

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Tree Protection Plan

SCALE :	DATE :	N
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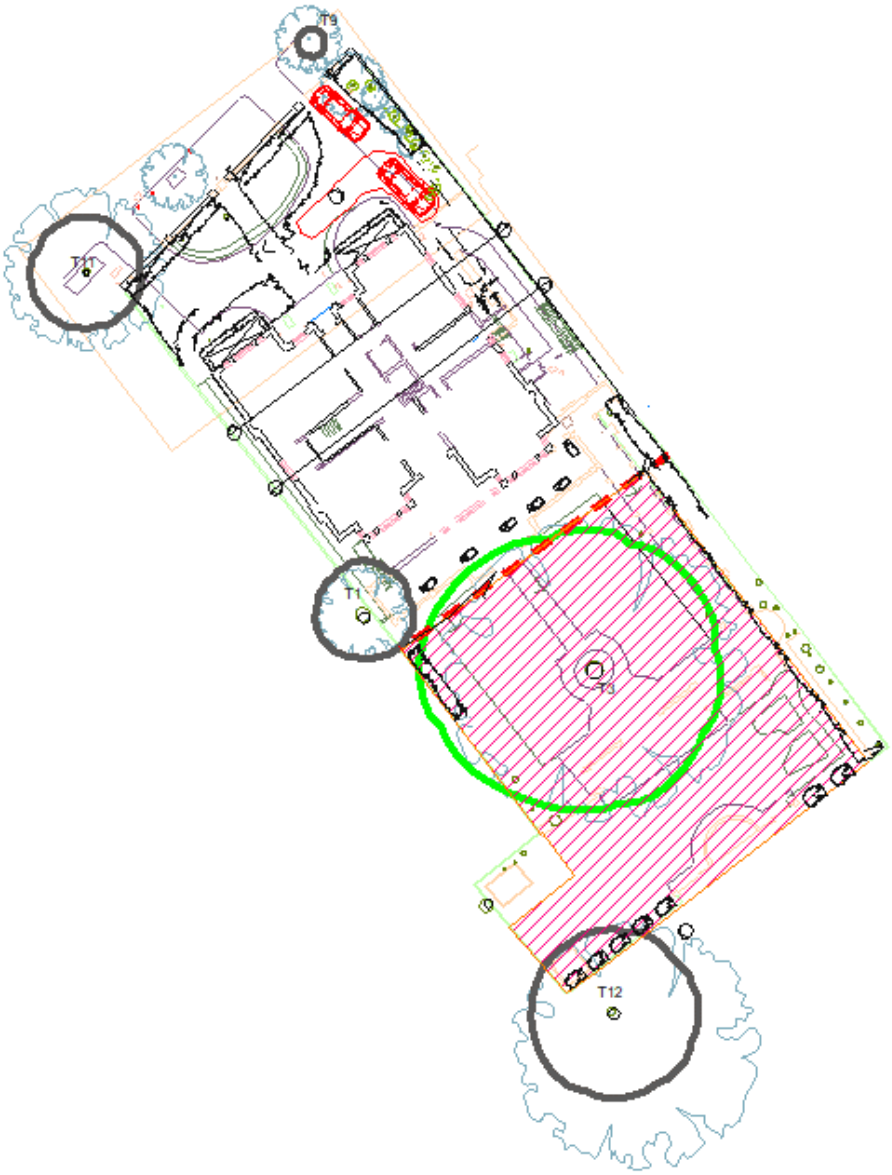

No Dig Area

Tree Protection Fence

Appendix Four

Tree Removal Plan

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Tree Removal Plan

SCALE : 1 : 500 @ A4

DATE : 12/09/2022

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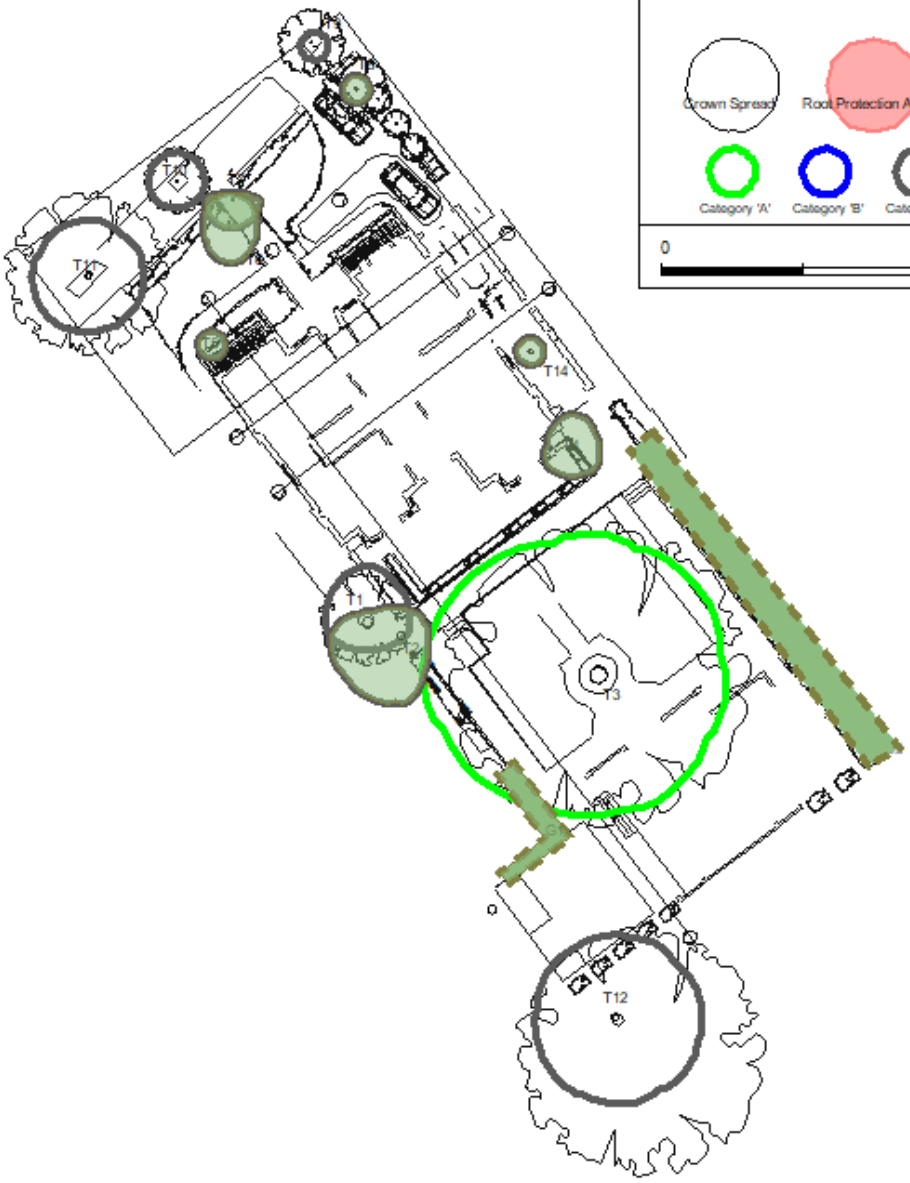
MAP FILENAME : 2 Templewood Ave, NW3

Crown Spread | Root Protection Area | Shading Arc

Category 'A' | Category 'B' | Category 'C' | Category 'U'

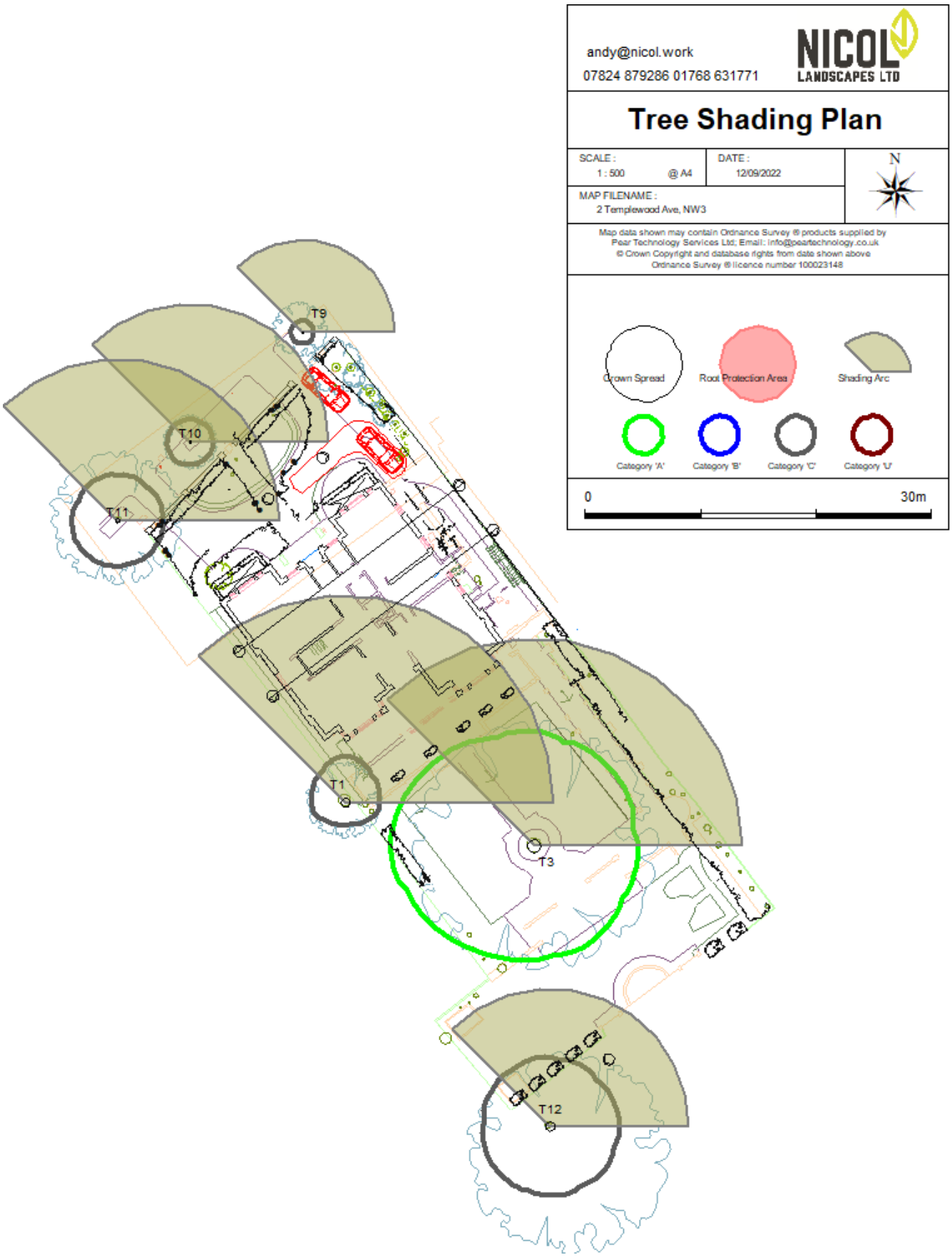
0 30m



Hedge Removals | Tree Removals

Appendix Six

Tree Shading Plan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NICOL LANDSCAPES LTD
Tree Shading Plan
SCALE : 1 : 500 @ A4
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MAP FILENAME : 2 Templewood Ave, NW3
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Crown Spread
Root Protection Area
Shading Arc
Category 'A'
Category 'B'
Category 'C'
Category 'U'
0
30m
T9
T10
T11
T1
T3
T12

Appendix Seven

Tree Planting Plan

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NICOL LANDSCAPES LTD

Tree Planting Plan

SCALE : 1 : 500 @ A4

DATE : 12/09/2022

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MAP FILENAME : 2 Templewood Ave, NW3

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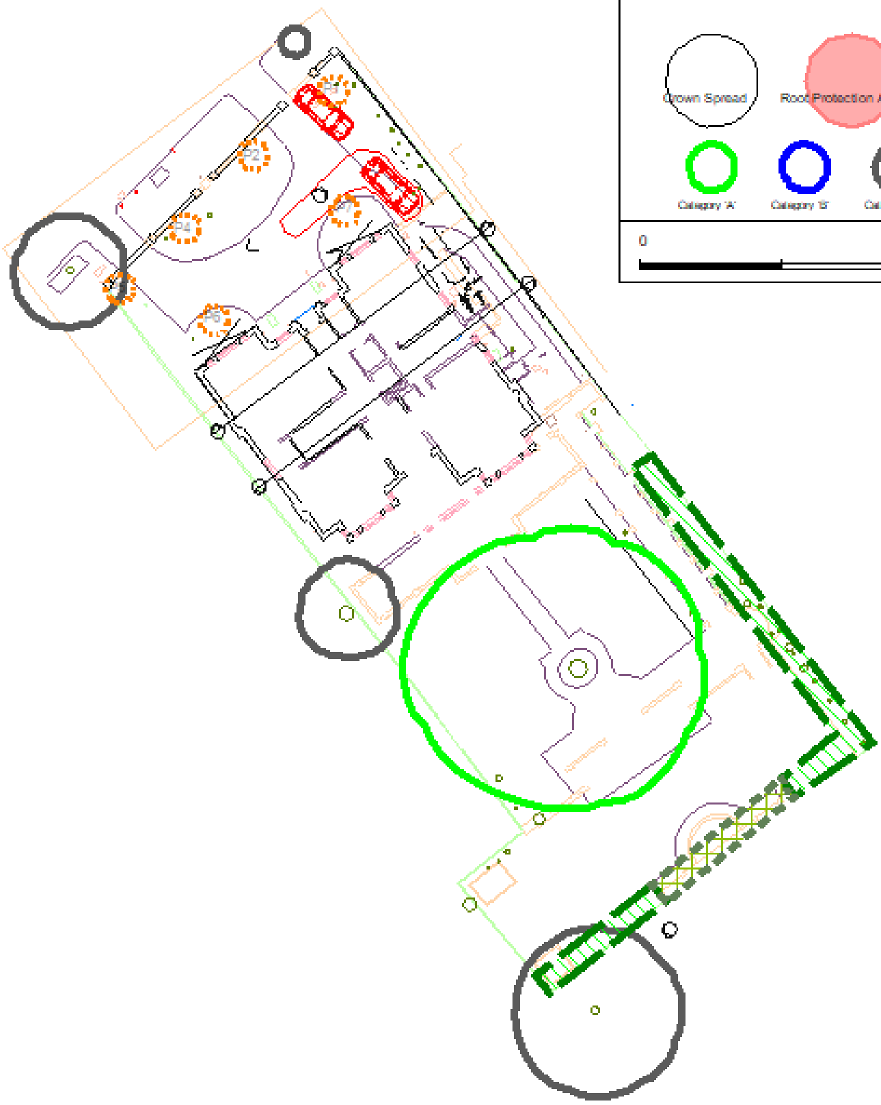
Crown Spread
Root Protection Area
Shading Arc

Category 'A'
Category 'B'
Category 'C'
Category 'U'

0 30m



Yew
Pleached Hornbeam
New Tree Planting