12 Park Village West

Arboricultural Impact Assessment

Report for Adam Richards Architects

Job Number	9296		
Author	Matthew Wiclox MArborA		
Version	Checked by	Approved by	Date
V1.0	Henry Bates (Senior)	Jacqueline Waring (Principal)	15/05/2024

Temple Group Ltd, The Clove Building, 4 Maguire Street, London SE1 2NQ
T. 020 7394 3700 **E**. enquiries@templegroup.co.uk **W**. www.templegroup.co.uk

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Executive Summary

Temple Ltd was commissioned (30th November 2022) by Adam Richards Architects to undertake a ground level survey of trees that could be affected by the construction of the underground extension at 12 Park Village West, London, NW1 4AE and to produce an Arboricultural Impact Assessment (AIA) for the construction works. A qualitative assessment of each tree was carried out according to British Standard BS 5837:2012, Trees in Relation to Design, Demolition and Construction – Recommendations, focusing on arboricultural values (categories A1, B1, C1)[1], landscape values (categories A2, B2, C2) and cultural values (A3, B3, C3)[2].

The main findings of the survey are as follows:

- There were 21 individual trees, 6 groups[3] and 1 hedge in and adjacent to the proposed development site each described in Appendix 1 of this report.
- Of the trees surveyed, 4 individual trees were attributed Category A status, 12 individuals were attributed Category B status, 5 individuals, 6 groups and 1 hedgerow were attributed category C status.
- A tree constraints check was carried out with Camden Council and it was confirmed that all trees on site are within the Regents Park Conservation Area and therefore subject to Conservation Area restrictions. There were no Tree Preservation Orders (TPOs) associated with the site.
- Group G5 may require cutting back to clear working space. The trees are located outside the site and are in the ownership of others. It is not permitted therefore for these trees to be removed or in any way damaged to facilitate the development. Whilst property owners are entitled to cut back overhanging trees belonging on neighbouring properties, the location sits within Regents Park Conservation Area and therefore permission in writing to cut back the trees in the direction of the site would need to sought from Camden Council by the owners of the trees.
- Construction access in the south of the site could require selective cutting back of G1 (mixed group containing holly, berberis and cotoneaster) and G2 (mixed group comprising mainly holly and viburnum). These groups comprise established garden

[1] Categorisation grading in accordance with BS 5837 2012. Trees suitable for retention: - Category A. Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category B. Trees of moderate quality with an estimated life expectancy of at least 20 years.
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 150mm.
Category U. Trees of very low quality normally with a life expectancy of less than 10 years or requiring immediate removal due to health and safety concerns.

[2] British Standard BS 5837 2012 recommends that these categories may be further broken down into sub categories A1 A2 A3 pertaining to Arboricultural, Landscape or Cultural values respectively.

shrubs forming part of the landscaping of the property's garden grounds. It is anticipated that any pruning/cutting back will be carefully undertaken in consultation with the property owners. It is understood that, under current proposals, there are no plans to remove these groups entirely.

- Similarly T2 (Mock orange) and T3 (Bay laurel) may require to be cut back to provide adequate construction access down adjacent steps. It is anticipated that any pruning/cutting back will be carefully undertaken in consultation with the property owners. It is understood that, under current proposals, there are no plans to remove these mature shrubs entirely.
- A low-level, hi-viz plastic barrier – for example JSP Navigator 2m Blow Moulded Road Traffic Barrier - [JS-KCB073-300-600] (thesafetysupplycompany.co.uk) is recommended in proximity to T2 and T3, adjacent the steps. This will provide a visual reminder that care must be taken to ensure the location hosting the shrubs is kept fully intact during construction works.
- All other retained garden tree cover will be protected behind a heras-based tree protection fencing solution.
- Under current proposals then, and assuming all the recommendations within this report are fully and carefully implemented, tree impact is considered likely to be very low. It should be noted however, that any design changes, engineering variations, increased access requirements and/or requirements for increased working space post approval of this AIA and associated TPP could give rise to further impacts, not considered within this report.

1 Introduction

BACKGROUND

1.1 Temple Ltd was commissioned on 30th November 2022 by Adam Richards Architects to carry out an arboricultural survey of trees at the proposed underground extension at 12 Park Village West, London, NW1 4AE and to provide a report to inform future design proposals and tree protection. The tree survey was required to assess the condition of trees that could be affected by future development of the site and provide sufficient information for the development of site layouts and construction exclusion zones to enable the protection of existing trees.

SCOPE OF REPORT

1.2 This report has been produced in accordance with British Standard BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (hereafter referred to as BS 5837:2012). It provides information on the current condition of trees at the site, their suitability for retention, and the above and below ground constraints to development. It also evaluates the overall likely impact on the existing tree presence at the site.

1.3 Any clear structural flaws or hazards have been identified in the Schedule of Trees provided in Appendix 1. Preliminary recommendations for the management of retained trees are provided, but a full hazard risk assessment comprising a more comprehensive analysis of tree condition and potential risk to target areas is beyond the scope of this report. Any recommendations relating to the management of potentially hazardous trees should be carried out as soon as possible[3].

SITE CONTEXT AND STATUS

1.4 The site is situated in council district of Camden and is located approximately 150m from Regents Park. The site comprises an existing residential dwelling surrounded by other residential dwellings. The ordnance survey grid reference for the site is TQ28698 83394.

DESCRIPTION OF THE PROPOSALS

1.5 The proposal comprises the construction of a belowground extension to an existing substantial dwelling.

[3] All tree works should be undertaken by a suitably qualified Arboricultural Contractor. No arboricultural works to trees subject to planning constraints shall be carried out without the written consent of the relevant Local Planning Authority (LPA). Any proposed tree works should be undertaken in accordance with British Standard BS 3998:2010 Treework - Recommendations. Works to trees that are the subject of a Tree Preservation Order or within a Conservation Area which are deemed to be dangerous under Regulation 14 of the Town and Country Planning (England) (Regulations) 2012 may under certain circumstances be undertaken without needing to seek the prior written consent of the LPA.

2 Methodology

TREE SURVEY

2.1 The tree survey was conducted in accordance with BS 5837:2012. Results are presented in the Schedule of Trees (Appendix 1) and include a sequential numbering of each tree, species listed by common name, tree dimensions including overall height, canopy spreads measured against the cardinal compass points, crown height, age class, physiological condition, structural condition, life expectancy, root protection areas and preliminary management advice.

2.2 Each tree and/or tree group has been assigned a category grade in accordance with BS 5837:2012 categories A, B, C and U ranging from high to low quality. Definitions of tree quality are provided in Table 2 Appendix 1.

2.3 For the purposes of this report, arboricultural as well as landscape sub-categories have been used in the Schedule of Trees. BS 5837:2012 points out that each sub-category should be given equal weighting when grading trees against these criteria.

2.4 A tree constraints plan, based on the original tree survey data and productions, is presented in Appendix 2 showing the RPAs (root protection areas) for all surveyed trees. Each grading category has been highlighted using the colour key system as described in BS 5837:2012.

2.5 The site was visited for survey purposes on 20th December 2022.

2.6 All trees likely to be affected by works inside the red line boundary of the site were visually assessed using the Visual Tree Assessment Method (VTA) (Mattheck and Breloer, 1994).

2.7 Stem diameters were measured using diameter tape. Canopy spreads were estimated by pacing and where possible, verified using a laser range finder. Height measurements were taken using a laser clinometer where possible. Where this was not possible, tree heights have been estimated.

2.8 Formal assessments of topography, drainage, service conduits and soil conditions including specific laboratory investigations of soil properties (i.e. plasticity index, moisture content, suction pressure) were not undertaken and are beyond the scope of this report.

DESK STUDY

2.9 A tree constraints check was undertaken with the London Borough of Camden to check for Tree Preservation Order and Conservation Area restrictions to tree works in and adjacent to the site.

SUPPORTING DOCUMENTS

2.10 *Drawing Reference: Topo: 2311_22_10_01 12 Park Village West Camden London Site Survey Existing (Hampshire and Land Surveys Ltd, 2022)*, and *21-08-500 Rev PO3 LowerGroundFloorPlan-Proposed-Arboricultural Impact (Adam Richards Architects 2024)* were provided for the purposes of compiling this report. They included the layout of existing site features and the proposed general arrangements for the site.

PERSONNEL

2.11 This report was produced by Henry Bates Dip Arb L4 (ABC) MArborA, who holds the Professional Tree Inspector (LANTRA) qualification and is a Quantified Tree Risk Assessment (QTRA) registered user. Henry is an Arboricultural Consultant with 15 years' experience within various sectors of arboriculture, working as a lead climbing contractor, project manager, surveyor and consultant.

LIMITATIONS

2.12 Only preliminary recommendations for tree management are provided. A full hazard risk assessment comprising a more comprehensive analysis of the condition and potential risk to target areas is beyond the scope of this report.

2.13 Of the trees surveyed, a total of four trees and 1 group (T8, T9, T10, T12 and G6) were ivy clad, inhibiting standard VTA inspection methods and stem measurements. As such, assumptions have been made relating to the condition and size of ivy clad trees. Management recommendations for ivy clad trees have been made in this report and should be followed to remove any risk that may be posed by them.

2.14 The trees were inspected at ground level and no decay detection equipment was used. There is therefore a risk that any internal decay that may be present has gone undetected.

2.15 Of the trees surveyed, a total of three trees and 1 group (T1, T16, T17 and G5) were situated in areas where access to the main stem was not possible. As such, assumptions have been made relating to dimensions of the main stem, and the overall condition is based upon the visible parts of the tree only.

2.16 The British Standard states that likely root morphology should be considered when drawing the RPAs of trees. The root morphology is likely to be affected by features and structures currently in place on the site. In this instance, the site is highly complex, with foundations, walls and service runs all likely to have impacted the growth pattern of the roots of the trees. Due to the complexity, and subsequent uncertainty over the location of roots, the RPAs have not been adjusted on the Tree Constraints Plan.

2.17 Trees are living organisms and their health and condition change with time. Therefore, this assessment remains valid for 12 months from the date of inspection, or until a severe storm is experienced, after which time a new inspection is required. For the purpose of this report, a severe storm is defined as a period of violent weather, involving rain, hail, wind, snow, lightning or any combination of these, likely to cause damage to trees.

3 Results

TREE SURVEY

3.1 The results of the tree survey are provided in the Schedule of Trees in Appendix 1. A Tree Constraints Plan illustrating the BS 5837:2012 categories of each tree, their crown spread, and RPA is presented in Appendix 2 and photographs of the site are provided in Appendix 5.

3.2 The survey recorded 21 individual trees, 6 groups and 1 hedge, which could potentially be affected by future development. Species recorded on site included: Japanese maple *Acer palmatum,* Mock orange *Philadelphus,* Bay laurel *Laurus nobilis,* Wayfaring tree *Viburnum lantana*, Field maple *Acer campestre*, Common lime *Tilia x europaea*, Sycamore Acer pseudoplatanus, Leyland cypress Cupressus x leylandii, Japanese privet *lingustrum japonicum*, Silver birch *Betula pendula*, Yew *Taxus baccata*, Monterey cypress *Cupressus macrocarpa*, Kohuhu variegated, *Pittosporum tenuifolium 'vareiegatum'* Wild cherry *Prunus avium*, Irish yew *Taxus baccata 'Fastigiata'*, Elm *Ulmus procera*, Evergreen spindle *Euonymus japonicus*, Chinese holly *Ilex cornuta*, Mahonia, Barberry *Berberis* and Cotoneaster.

3.3 Physiological and structural condition[4] of the surveyed trees was consistent with Category A status (4 individuals), Category B status (12 individuals), Category C status (5 individuals, 6 groups and 1 hedge).

3.4 Of the trees surveyed, 4 individuals were classified to be at a mature life stage[5], 7 individuals 5 groups were classified to be semi mature, 9 trees and 1 group were classified to be early mature1 tree and 1 hedge was classified as young. There were no veteran or ancient trees noted on the site.

3.5 A summary of the number of trees surveyed corresponding to BS 5837:2012 tree quality assessment definitions is provided in Table 1.

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[4] Physiological and structural condition are terms used to differentiate between a trees physiological condition i.e. annual growth, vigour, presence of disease etc. as opposed to structural condition relating to branch formation, mechanical strength and integrity.

[5] Young. Establishing; usually with good vigour, but as of limited significance within the landscape.
Semi-Mature. Established; normally vigorous and increasing in height. Of increasing landscape significance.
Early Mature. Fully established trees around the middle half of their life span retaining good vigour. Not yet achieved full height and retaining apical dominance.
Mature. Fully established trees retaining moderate vigour. Apical dominance lost but crown still spreading.
Over Mature. Fully mature trees in the last quarter of their usual life expectancy; vigour declining.

Table 1: Grade Classifications

BS 5837:2012 Grades A to U	Trees attributed to each grade	Frequency		
		T	G	H
A	T8, T9, T10, T16	4	-	-
B	T1, T3, T4, T6, T7, T12, T13, T14, T15, T17, T20, T21,	12	-	-
C	T2, T5, T11, T18 T19, G1, G2, G3, G4, G5, G6, H1	5	6	1

DESK STUDY

3.6 It was confirmed that all trees on site were situated within the Regents Park Conservation Area, all trees on and adjacent to site are therefore subject to Conservation Area restrictions.

ARBORICULTURAL IMPACT ASSESSMENT

3.7 Based on Drawing Reference: *21-08-500 Rev PO3 LowerGroundFloorPlan-Proposed-Arboricultural Impact (Adam Richards Architects 2024*), the impact of the construction on the existing trees has been assessed and all trees that will potentially be affected by the works are listed in Table 2. Tree numbers in the table correspond to the Schedule of Trees in Appendix 1 and Tree Constraints Plan described in Appendix 2.

3.8 It has been assumed that the height of all construction traffic or goods vehicles accessing the site will be within the standard minimum carriageway clearance of 5m (HSE, 2017).

Table 2: Summary of trees possibly affected by the development

Impact	Reason	BS Cat A	BS Cat B	BS Cat C
Trees to be removed to facilitate construction		-	-	-
Trees which could sustain damage to RPA	Soil compaction through construction traffic	T8, T9, T10, T16	T1, T3, T4, T6, T7, T12, T13, T14, T15, T17, T20, T21	T2, T5, T11, T18 T19, G1, G2, G3, G4, G5, G6, H1

Table 2: Summary of trees possibly affected by the development

Impact	Reason	BS Cat A	BS Cat B	BS Cat C
Trees which could sustain damage to stem or canopy	Impact by construction traffic.	T8, T9, T10, T16	T1, T3, T4, T6, T7, T12, T13, T14, T15, T17, T20, T21	T2, T5, T11, T18 T19, G1, G2, G3, G4, G5, G6, H1

TREE REMOVAL AND PRUNING

3.9 No trees will require removal under the current design and construction proposals.

3.10 G1, G2 and G5 may require a degree of cutting back to facilitate access and working space. T2 and T3 (tree-sized shrubs) may also require cutting back.

TREES WHICH COULD POTENTIALLY SUSTAIN DAMAGE

3.11 The construction process has the potential to indirectly impact the stem, canopy or RPAs of 21 trees, 6 groups and 1 hedge scheduled for retention as displayed in Table 2. In order to ensure that these trees are successfully retained during the proposed works an Arboricultural Method Statement may be required detailing any special engineering measures in line with BS 5837:2012 recommendations.

TREE PROTECTION FENCING

3.12 The Tree Protection Plan shows the location of tree protection fencing to be erected around the RPAs prior to the commencement of works. The erection of robust fencing, fixed into position and braced, will ensure construction impact is avoided in relation to trees, grouped trees, hedges and woodland to be safely retained on the site.

3.13 Protective barriers must remain in place through the entire course of the construction phase of the development and can only be moved in consultation with the appointed arboricultural consultant. The barrier will be a 2m high fence robust enough to withstand impact from plant machinery supported by a system of vertical and horizontal scaffold tubes and supporting back stays as specified in Figure 2 of BS 5837:2012 (see Appendix 6)

3.14 Weatherproof signage will be attached to the fencing in locations clearly visible to contractors and other site operatives. Examples of warning notices are provided in Appendix 6.

3.15 Once the tree protection fencing has been placed and fixed into position, it cannot be removed or altered in any way. Tree protection fencing must remain in place until the conclusion of all site construction works and may not be moved, reconfigured or taken down without the consent of the arboricultural supervisor.

3.16 Prompt action will be taken to replace tree protection fencing that becomes damaged or dysfunctional in any way. Such incidents should be reported to the project's arboricultural supervisor.

FINAL REMOVAL OF PROTECTIVE FENCING AND GROUND PROTECTION MEASURES

3.17 Prior to the final removal of any protective fencing or ground protection, the arboricultural consultant to the project must be consulted. This ensures that tree protection is not removed prematurely, at a time when there may still be risk to trees and tree roots from construction or other activities.

GENERAL PRECAUTIONS TO BE TAKEN ON SITE

3.18 The following precautions will be maintained at all times:

- All retained trees must be protected by the erection of protective barriers and or ground protection prior to the commencement of any works and such barriers will remain in place during the entire course of the development.
- No fires can be lit within 10m of the canopies of trees to be retained.
- Designated Construction Exclusion Zones (CEZ) must be suitably identified and maintained to ensure that trees remain protected. Storage or stockpiling areas, temporary road access, accommodation and other facilities are to be located outside of RPAs, inside designated sites away from retained trees and all care must be taken to prevent the leakage or spilling of harmful materials into the soil.
- No excavations or soil stripping or general disturbance and compaction of the existing soil strata is permitted within the RPA of any tree to be retained.
- All scheduled tree works must be carried out prior to the commencement of any site works and before the erection of tree protection measures.

- A copy of the Tree Protection Plan and any accompanying Arboricultural Method Statement will be made available and retained on site at all times.

UNDERGROUND SERVICES

3.19 There can be no routing of underground services through the RPAs of retained trees.

4 Conclusion

IMPACT ON VISUAL AMENITY AND LOCAL CHARACTER

4.1 Under current proposals, minimal cutting back of existing tree/shrub cover in proximity to the existing steps and to works proposed at the north boundary of the property could represent a minor loss of overall amenity. Where there is minor impact on visual amenity, it is recommended that a re-landscaping proposal is submitted to compensate.

4.2 The tree protection strategy as set out in this document will ensure protection of the trees to be retained on the site.

CONTACT DETAILS

4.4 This AIA is accompanied by a list of known contact details for all relevant parties, included as Table 3.

Table 3: List of contact details for all relevant parties

Contact	Name	Company or Local Authority name	Contact Number	Report Issued Yes/No
Client	Joe Chilvers	Adam Richards Architects	02076135077	Yes
Arboricultural Consultant	Henry Bates	Temple Ltd	07773993466	Yes
Planning – LPA Tree Officer	-	London Borough of Camden	-	To be issued by Client

References

21-08-500 Rev PO3 LowerGroundFloorPlan-Proposed-Arboricultural Impact (Adam Richards Architects 2024)

British Standard Institute (BSI) (2012). *BS 5837:2012 Trees in Relation to Design Demolition and Construction-Recommendations*. BSI, London.

British Standard Institute (BSI) (2010). *BS 3998:2010 Recommendation for Tree Works*. BSI, London.

British Standard Institute (BSI) (2014). *BS 8545:2014 Trees: from nursery to independence in the landscape - Recommendations*. BSI, London.

Department for Communities and Local Government (2014). *Planning Practice Guidance on Tree Preservation Orders and trees in conservation areas.*

Lonsdale, D. (1999). *Research for Amenity Trees No.7: Principles of Tree Hazard Assessment and Management*. HMSO

Mattheck and Breloer (1994). HMSO London. Research for Amenity Trees No 4; *The Body Language of Trees.*

2311_22_10_01 12 Park Village West Camden London Site Survey Existing (Hampshire and Land Surveys Ltd, 2022)

Town and Country Planning Act 1990 (as amended).

Town and Country Planning (Tree Preservation) (England) Regulations 2012.

Appendix 1: Schedule of Trees

Table 1: Schedule of Trees and Tree Quality Assessment*

* See Table 3 for key to terms
** See Table 2 for definitions of categories

No	Species	Ht.	S	St. 1.5m	Canopy Spread				Cr. Cl	Ls	SC	PC	Comments /Observation	Preliminary Management Advice	LE	Cat **	RPAm ^{2}	RPA *r*
					N	S	E	W										
T1	Japanese maple	7	2	200; 180	2	3	2	3	5	SM	Good	Good	in neighbouring property. Inaccessible, stems estimated.	N/A	20+	B1	32.8	3.2
T2	Mock orange	5	5	80	5	1.5	3	3	2	SM	Fair	Good	Growing into adjacent laurel. Evidence of regular pruning.	N/A	10+	C2	2.9	1.0
T3	Bay laurel	7	3	280 avg.	2	2	3	3	1.5	EM	Good	Good	Stem unions at base, stems fusing at approximately 4m and forming a natural brace.	N/A	20+	B2	70.1	4.7
T4	Bay laurel	7	3	220 avg.	2	2	2	2	2	EM	Good	Good	Stem unions at base.	N/A	20+	B2	65.7	4.6
T5	Viburnum	3	4	80 avg.	1	1	0	4	0	Y	Good	Good	Crow bias west due to adjacent laurel trees to east.	N/A	10+	C2	8.7	1.7
T6	Field maple	7	1	290	2	4	2	4	2	EM	Good	Good	Dominated by offsite lime and bay laurel to northeast. Crown bias southwest. Previously crown reduced.	N/A	20+	B2	38	3.5
T7	Bay laurel	7	1	260	2	4	3	3	1.5	EM	Good	Good	Basal epicormics, crossing stems at 4m, fusing together.	N/A	20+	B2	30.6	3.1
T8	Common lime	15	1	620	4	4	5	5	0	M	Fair	Good	Ivy clad, basal epicormics impeding VTA. Previously pollarded. Stem estimated.	Remove basal epicormics and sever ivy.	40+	A2	173.9	7.4
T9	Sycamore	16	1	640	3	4	4	4	8	M	Fair	Good	Ivy clad, impeding VTA. Stem estimated. Previously reduced.	Sever ivy	40+	A2	185.3	7.7

Table 1: Schedule of Trees and Tree Quality Assessment*

* See Table 3 for key to terms
** See Table 2 for definitions of categories

No	Species	Ht.	S	St. 1.5m	Canopy Spread				Cr. Cl	Ls	SC	PC	Comments /Observation	Preliminary Management Advice	LE	Cat **	RPAm ^{2}	RPA *r*
					N	S	E	W										
T10	Sycamore	16	1	610	5	5S2y4c amore	4	4 16	8	M 1	Fair 610	Good 5	Ivy clad, impeding VTA. Stem estimated. Previously reduced.	Sever ivy 4	8 40+	M A2	168.3 Fair	7.3 Good
T11	Leyland cypress	5	1	130	2	3	2	2	0	SM	Good	Good	Dominated by adjacent privet.	N/A	10+	C2	7.6	1.6
T12	Japanese privet	6	1	220	3	3	4	2	2	EM	Good	Good	Ivy clad, impeding VTA.	Sever ivy.	20+	B2	21.9	2.6
T13	Leyland cypress	9	2	180; 240	3	3	2	3	3	EM	Good	Good	Union at base with sound reaction growth present. Previously crown lifted on South section.	N/A	20+	B2	40.7	3.6
T14	Silver birch	12	1	230	1	3	2	2	6	EM	Fair	Good	Slight lean south. Growing up through canopy of adjacent cypress.	N/A	20+	B2	23.9	2.8
T15	Yew	10	2	180; 80	4	4	4	4	3	SM	Good	Good	Previously crown lifted over steps.	N/A	20+	B2	50.1	4.0
T16	Sycamore	18	1	650	3	5	5	5	6	M	Good	Good	Offsite in neighbouring garden. Stem estimated.	N/A	40+	A1	191.1	7.8
T17	Monterey cypress	15	1	580	5	5	5	3	3	EM	Good	Good	Offsite in neighbouring garden. Stem estimated.	N/A	20+	B1	152.2	7.0
T18	Variegated Kohuhu variegated	6	1	100	1	3	2	1	2	SM	Good	Good	Dominated by adjacent cypress.	N/A	10+	C1	4.5	1.2

Table 1: Schedule of Trees and Tree Quality Assessment*

* See Table 3 for key to terms
** See Table 2 for definitions of categories

No	Species	Ht.	S	St. 1.5m	Canopy Spread				Cr. Cl	Ls	SC	PC	Comments /Observation	Preliminary Management Advice	LE	Cat **	RPAm ^{2}	RPA *r*
					N	S	E	W										
T19	Wild cherry	1	1	200	5	5	5	2	1	EM	Fair	Good	Graft point at 1.5m. Dominated by adjacent cypress causing crown bias South East.	N/A	10+	C2	18.1	2.4
T20	Irish yew	5	6	120	2	2	2	2	0	SM	Good	Good	Growing well in raised bed by steps.	N/A	20+	B2	6.5	1.4
T21	Irish yew	5	6	120	2	2	2	2	0	SM	Good	Good	Growing well in raised bed by steps.	N/A	20+	B2	6.5	1.4
G1	Mixed	5		100	1	1	1	1	0	SM	Good	Good	Mixed group comprising mainly holly, berberis and cotoneaster.	N/A	10+	C2	4.5	1.2
G2	Mixed	4		100	1	1	1	1	0	SM	Good	Good	Mixed group comprising mainly holly, viburnum	N/A	10+	C2	4.5	1.2
G3	Viburnum, ligustrum	6		80	1	3	0	4	0	EM	Fair	Fair	Entwined stems, prominent lean southwest.	N/A	10+	C2	2.9	1.0
G4	mixed	5		100	1	1	1	1	0	null	Good	Good	Mixed group of shrubs comprising Chinese holly and mahonia.	N/A	10+	C2	4.5	1.2
G5	Elm, Sycamore	10		250	2	5	3	3	3	SM	Fair	Fair	Small group leaning into garden from neighbouring land. Stems estimated.	N/A	10+	C2	28.3	3.0
G6	Evergreen spindle	6		120	3	2	2	2	1	SM	Good	Good	Small group growing in raised bed. Ivy clad at base.	N/A	10+	C2	6.5	1.4

Table 1: Schedule of Trees and Tree Quality Assessment*

* See Table 3 for key to terms
** See Table 2 for definitions of categories

No	Species	Ht.	S	St. 1.5m	Canopy Spread				Cr. Cl	Ls	SC	PC	Comments /Observation	Preliminary Management Advice	LE	Cat **	RPAm ^{2}	RPA *r*
					N	S	E	W										
H1	Yew	3		75	0.5	0.5	0.5	0.5	0	Y	Good	Good	Small, maintained yew hedge.	N/A	10+	C2	2.5	0.9

Table 2: BS: 5837 2012 Tree Quality Assessment Definitions

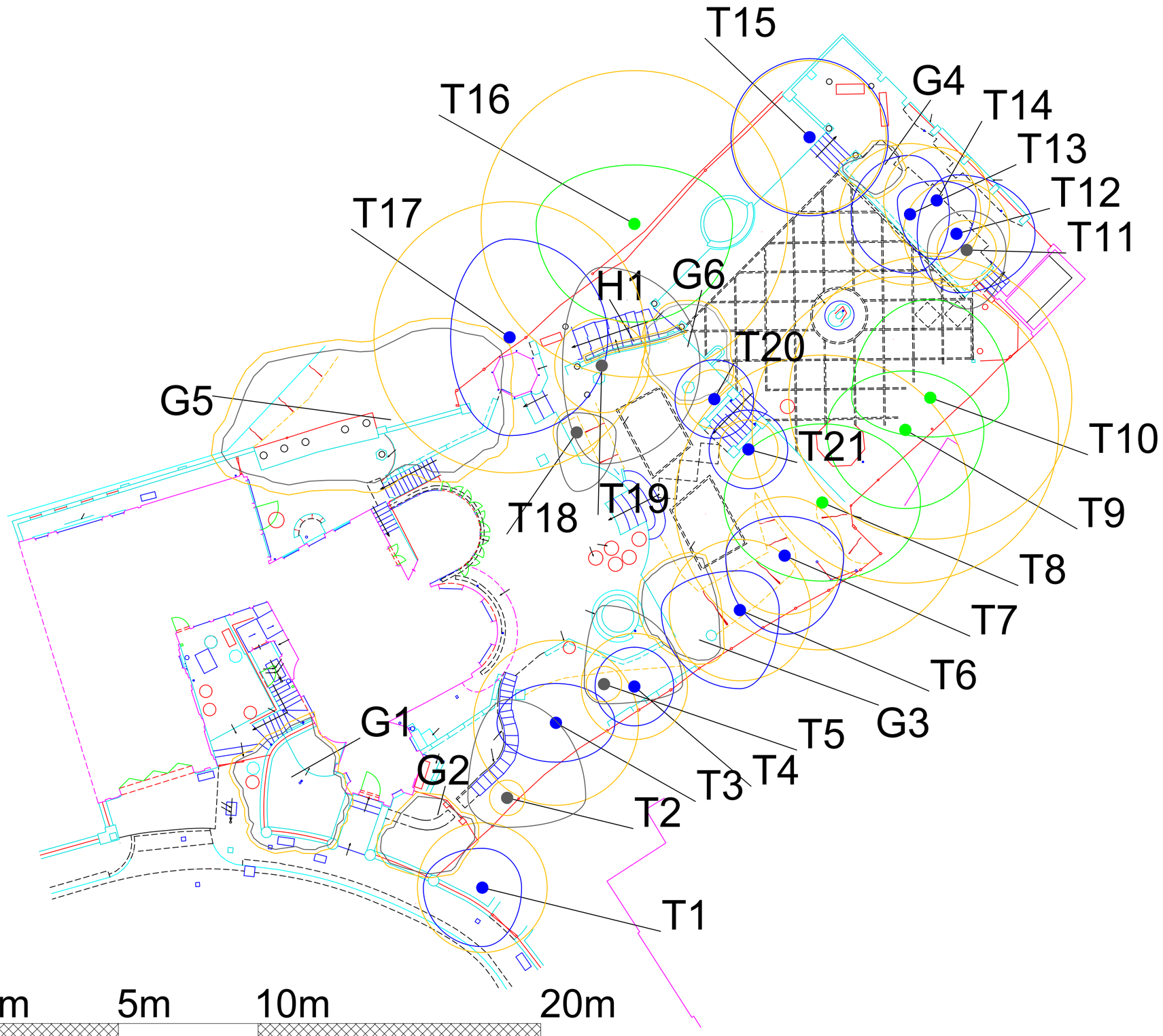
TREES FOR REMOVAL		
Category & Definition	**Criteria**	**Identification on Plan**
Category U Those in such a condition that they cannot realistically be retained as a living tree in the context of the current land use for longer than 10 years.	• Trees that have a serious, irremediable structural defect such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. 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 or irreversible overall decline. • Trees infected with pathogens of significance to the health and or safety of other trees nearby by or very low quality trees suppressing adjacent trees of better quality.	RED

TREES TO BE CONSIDERED FOR RETENTION				
Category & Identification	**1 Mainly arboricultural values**	**2 Mainly landscape values**	**3 Mainly cultural values including conservation**	**Identification on plan**
Category A Trees of High Quality with an estimated remaining life expectancy of at least 40 years	Trees that are a particularly good example of their species, especially if rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features e.g. the dominant and/or principal trees in an avenue)	Tree groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Tree groups or woodlands of significant conservation historical, commemorative or other value (e.g. veteran trees or wood pasture)	GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that might be included in the high category but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage).	Trees present in numbers, usually 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 benefits.	BLUE
Category C Trees of a low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm	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 landscape value and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural benefits.	GREY

Table 3: Key Schedule of Trees

Column Heading	Explanation
Tree No	Sequential number corresponding to number on plan.
Species	English names.
Ht.	Height in metres.
S	Number of main stems.
St. 1.5 (Stem Diameter)	Stem diameter when measured in accordance with Annex C of BS 5837:2012.
NSEW	Crown radius in metres to cardinal points of the compass.
Cr. Cl. (Crown Clearance)	Height in metres between the ground and underside of canopy.
Ls.	Life stage definitions. Y= Young. SM = Semi-mature. EM = Early mature. M = Mature. OM = Over mature.
SC	Brief description of structural condition.
PC	Brief description of physiological condition.
Preliminary Advice	Preliminary tree works advice and recommendations.
LE	Estimated remaining useful life contribution in years. <10, 10+, 20+ and 40+ yr.
Cat. (Category)	Categorisation grading in accordance with BS 5837 2012. Trees suitable for retention: - Category A trees of high quality and amenity value. Category B trees of moderate quality and amenity value. Category C trees of low quality or amenity value. British Standards BS 5837:2012 recommends that these categories may be further broken down into sub-categories A1 A2 A3 pertaining to Arboricultural, Landscape or Cultural values respectively.
RPA m^2	Root Protection Area (RPA). Indicative area around a tree measured in m^2 and calculated in accordance with Annex C of BS 5837:2012 deemed to contain sufficient rooting volume to maintain the viability of a tree and where the protection of roots and soil structure is treated as a priority.
RPA *r*	Root Protection Area (RPA) radius calculation centred on the base of the tree and calculated in accordance with Annex C of BS 5837:2012

Appendix 2: Tree Constraints Plan



temple

Creating sustainable futures

Job title	Park Village West Job no. T9296
Client	Adam Richards Architects
Map title	Tree Constraints Plan
Section: N/A	Scale (at A2) 1:150
Date of survey	20/12/2022
Surveyor	Henry Bates

Drawn	Approved	Date
HB	JW	22/12/2022

Legend

- Crown spread of category C - Trees with low quality and value
- Crown spread of category B - Trees with moderate quality and value
- Crown spread of category A - Trees with high quality and value
- Root Protection Area (RPA)
- Crown spread of Category C groups

N

This plan is provided solely for the purpose of supporting the description of the arboricultural features of the site as contained in the accompanying report

Appendix 3: Tree Protection Plan

temple

Creating sustainable futures

Job title	Park Village West Job no. T9296
Client	Adam Richards Architects
Map title	Tree Protection Plan
Scale (at A2)	1:150
Date of survey	20/12/2022
Surveyor	Henry Bates

Drawn	Approved	Date
HB	JW	14/05/2024

Legend

- Crown spread of category C - Trees with low quality and value
- Crown spread of category B - Trees with moderate quality and value
- Crown spread of category A - Trees with high quality and value
- Root Protection Area (RPA)
- Crown spread of Category C groups
- BS5837:2012 Tree Protection Fencing
- Lightweight Barrier

N

0m 5m 10m 20m

This plan is provided solely for the purpose of supporting the description of the arboricultural features of the site as contained in the accompanying report

Appendix 4: Glossary of Terms

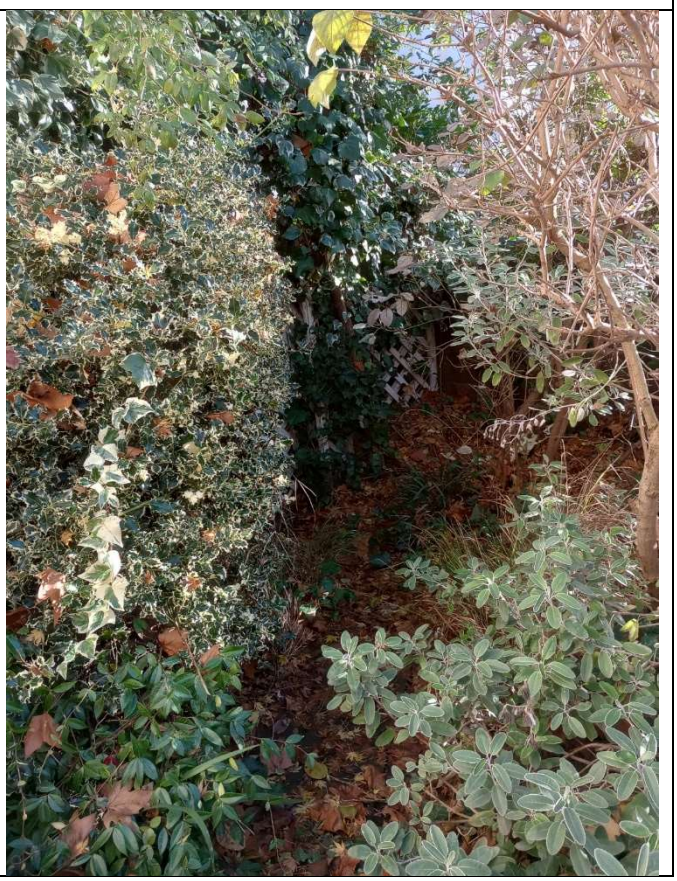
Glossary of Terms

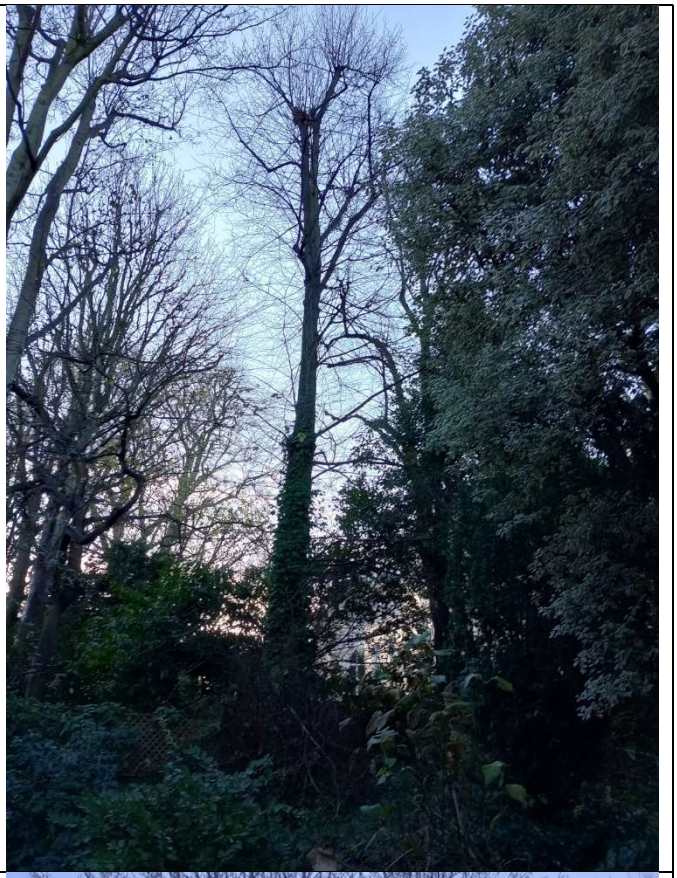
Term	Explanation
Arboricultural impact assessment and method statement (AIA)	Evaluation of direct and indirect effects of a proposed design and/or construction.
Arboricultural Method Statement (AMS)	Methodology for the implementation of any aspect of development that is in the root protection area or has the potential to result in the loss of or damage to a tree to be retained.
Branch structure	Qualitative description of formation of main framework of limbs and branches.
Canopy face	Orientation of canopy relative to cardinal points of the compass
Canopy radius	A measurement taken from the centre of a tree to the furthest radial extension of tree canopy relative to the cardinal points of the compass.
Competent Person	Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.
Conservation Area	Local Planning Authority special designation generally prohibiting tree works without 6 weeks prior written notification.
Construction Exclusion Zone (CEZ)	Area based upon the calculated root protection area prohibiting access.
Cavity	Open and exposed aperture where wood tissue has internally degraded.
Constraints check	Formal search of local authority records to determine legal and statutory constraints on tree works.
Crown lifting	Removal of lower branches to achieve a stated vertical clearance above ground level or other surface.
Crown reduction	Pruning of a trees canopy in both height and width.
Decay	Deterioration and breakdown of tree wood fibres resulting in structural and/or physiological dysfunction of a tree.
Dieback	Continual decline and death of wood tissue including twigs and branches.
Epicormic growth	Growth that emerges from dormant buds along the trunk and branches of a tree.
Failure	Description of structural failure or wood fibres including fracture of branches, limbs and main stems.
Fork	Area or point of union between one or more limbs or branches.
Hazard Risk Assessment	Qualitative and quantitative appraisal of the potential for tree failure and the possible risk of harm or damage to persons or property.
Local Planning Authority	Body responsible for the administration of Statutory duties relating to Development Management.
Multi-stem	A single tree formed from 2 or more codominant main stems
Occlusion	Wood development enclosing an extant wound or pruning cut.

Glossary of Terms

Term	Explanation
Pruning	The targeted removal of branches or limbs using saws or other tools.
Physiological Condition	Observation relating to a trees physiology for example vigour, leaf area, growth rate, the presence of pests or disease.
Root Protection Area	Root Protection Area (RPA). Indicative area around a tree deemed to contain sufficient rooting volume to maintain the viability of a tree.
Shelter belt	A wind break normally made up of one or more trees planted in such a way to provide cover from the wind.
Structural Condition	Observation relating to a trees structural integrity and the presence of any physical defects.
Suppressed	Where a trees development has been influenced or effected by the presence of competing vegetation.
Tree Constraints Plan	A scaled plan indicating above and below ground constraints relating to the protection of trees
Tree Preservation Order	A legal order made by the local planning authority protecting specific trees in the interests of amenity.
Visual Tree Assessment (VTA)	A method of assessment based upon the research developed to recognise dynamic responses of a tree to its surroundings.
'V' Shaped Branch Union	The union point between two branches that have grown at a tight angle, forming the 'V' shape. This structure is inherently weaker than the 'U' shaped union.
'U' Shaped Branch Union	The union point between two branches that have grown at a wider angle, forming the 'U' shape. This structure is considered to be the strongest and most optimised shape that a union can form.

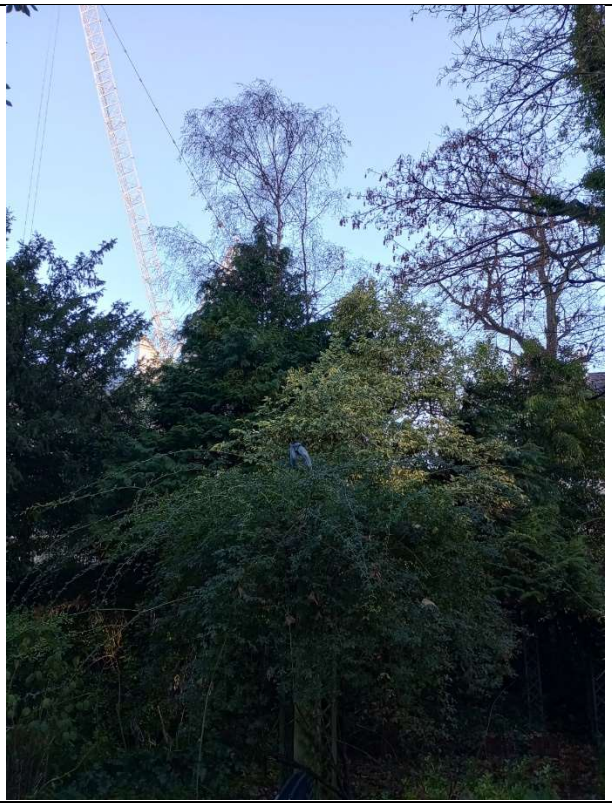
Appendix 5: Photographs

Photograph 1 View looking east towards T1 and G1		
Photograph 2 View looking east towards mixed group G2		

Photograph 3 View looking east towards lime tree T8		
Photograph 4 View looking southeast towards sycamore trees T9 and T10		

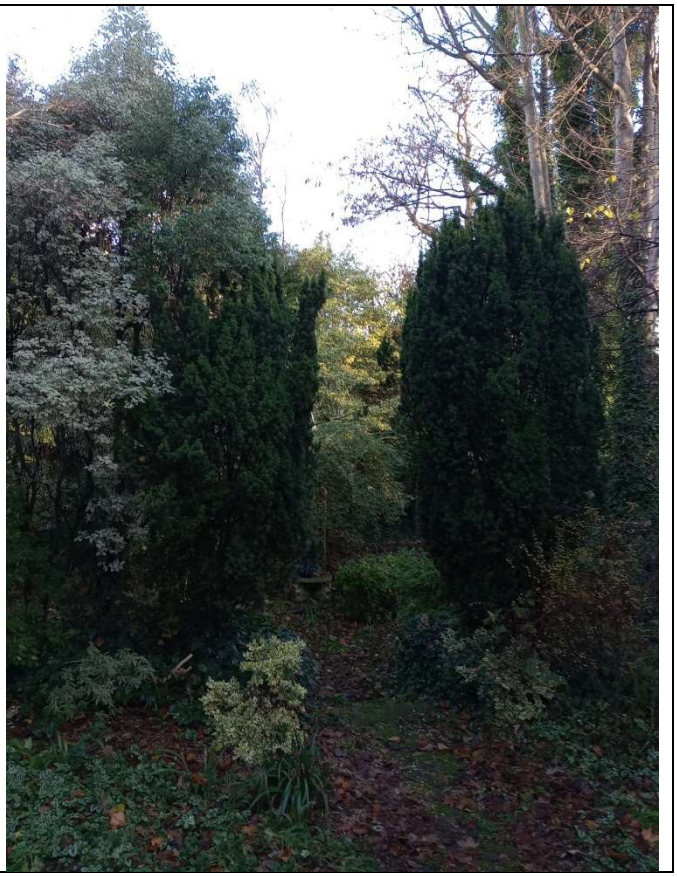
Photograph 5

View looking northeast towards T11 and T14



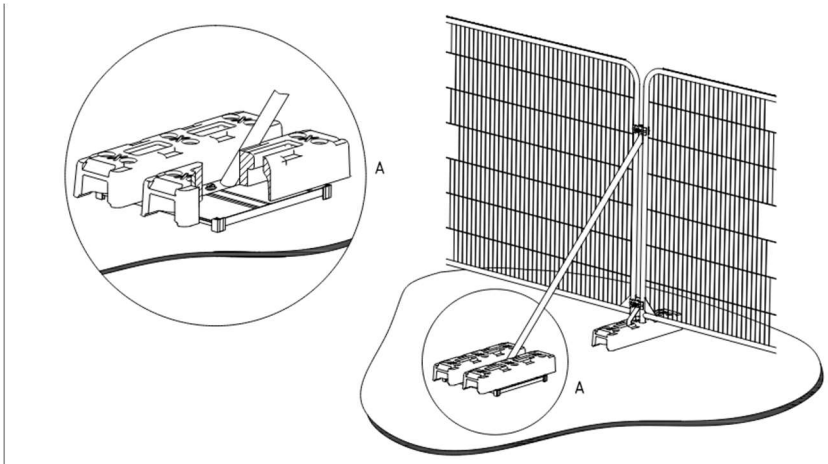
Photograph 6

View looking northeast towards the stems of Irish yew T20 and T21



Appendix 6: Tree Protection Fencing Specification and Examples of Warning Signage

Example of BS 5837 specification fencing



b) Stabilizer strut mounted on block tray

Example of appropriate warning signage

Example of temporary plastic barrier