Development Tree Survey
Arboricultural Impact Assessment
& Arboricultural Method Statement

Site Location: 73a Whitehall Road, Gravesend, Kent. DA12 5PF

For Client: T.E.S Construction Ltd.

Surveyor: Paul Hegley, Dip Arb
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Report Ref: AR0368/03-26
Report Date: 30th March 2026
Survey Date: 25th March 20206

Development Tree Survey & Arboricultural Report

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1.0 Client Instruction

1.1 I was instructed by T.E.S Construction Limited to survey all trees growing within and overhanging the property of 73a Whitehall road, Gravesend and to produce an arboricultural report on the trees inspected in accordance with British Standard 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations that is to include an arboricultural impact assessment, method statement and tree protection plan for proposed development on the site.

2.0 Qualifications & Experience

2.1 I have based this report on the information provided to me and my observations made at the time of site inspection. I have come to conclusions in the light of my experience as a qualified arboriculturist.

3.0 Background Information/Purpose of Report

3.1 This arboricultural report is required to give an assessment of the condition of trees growing on and overhanging the development area (as shown on the survey plan at Appendix B) and identify any constraints they pose to potential development of the site (as detailed on the plan at Appendix C) in accordance with the recommendations of British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS5837:2012).

3.2 The main aims of the report are:

- To survey all trees growing in and overhanging the site in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations.
- To assess what impact the proposed development will have on the surveyed trees.
- To advise on any tree works necessary to accommodate the new building proposals.
- To advise on any tree removal and/or retention and provide guidance and recommendations on any tree protection measures necessary to protect trees identified for retention throughout the development of the site.

4.0 Development Proposals

4.1 A small single storey extension is proposed to the rear of the existing property as shown highlighted in light green on the tree protection plan at Appendix C.

5.0 Documents Supplied

5.1 A copy of the following plans/documents were supplied in electronic form and referenced during the compiling of this report:

- Copy of block plan as existing by DAC Architects (Dwg. No D-02) dated 31.01.2026.
- Copy of floor plans & elevations as proposed by DAC Architects (Dwg. No SK-01) dated 09.02.2026.
- OS Site location plan (Dwg. No D-01) dated 30.01.2026
- Floor plans & elevations as existing (Dwg. No D-03) dated 30.01.2026

6.0 Brief Site Description

6.1 73a Whitehall Road is an end of terrace property located to the western side of Whitehall Road (as outlined in yellow on the aerial map below). The property has a long narrow rear garden which is mostly laid to law that has become partly overgrown and in places is rewilding with native Bluebells. The main tree constraints of the site is a row of trees that run/grow along the northern boundary of the property, some of which lie within the neighbouring garden of No.71 Whitehall Road and rear garden of No.3 Woodside Mews. Full details and positions of all trees inspected and recorded can be seen on the survey at Appendix A and survey plan at Appendix B.

Google Earth aerial view of survey site outlined in yellow.

7.0 Soil Assessment/Geology

7.1 No soil samples have been taken from the site. The online geological maps from the British Geological Survey for the area https://geologyviewer.bgs.ac.uk/?_ga=2.139986864.2028361222.1742469247-1445665281.1742469247. show the superficial geology of the site to be located within the Seaford Chalk Formation. This type of geological makeup is generally free draining comprising of mainly carbonate material that is not overly susceptible to excessive swelling or compaction. In any event, advice should always be sought from a qualified structural engineer on the depth and structural loading of the foundations in accordance with NHBC Chapter 4.2, subject to confirmation of the type of subsoil profile as it is not uncommon for it to differ from the geological map.

8.0 Site Inspection

8.1 I made an unaccompanied inspection of the site on Wednesday 25th March 2026. The weather at the time of inspection was cold, overcast with heavy showers and a brisk breeze. A total number of 7 individual trees were inspected and recorded that, in my professional opinion would have the greatest impact on any development proposals.

9.0 Scope of Tree Survey

9.1 The survey is concerned with the arboricultural and planning integration of the site only and is solely in relation to the condition of trees growing within and overhanging the area of land as partly shown on the supplied block plan as existing by DAC Architects (Dwg. No D-02) dated 31.01.2026. Not all the survey trees were shown on the supplied plans, so these have been added/plotted on the plans using the site boundaries as a datum.

9.2 All non arboricultural observations and comments I have made in this report are from a lay person's point of view.

9.3 Trees are living organisms and as such their health and condition are naturally subject to change over time. My recommendations and assessments are based upon the trees' condition on the day of inspection. This report cannot cover unforeseen circumstances such as subsequent neglect or wilful damage to the trees or severe weather conditions.

9.4 There were no discussions between the surveyor and any other party during the survey.

9.5 The survey was conducted in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition & Construction – Recommendations.

9.6 Any recommended pruning works detailed in this report are to be carried out in accordance with British Standard 3998: 2010 Tree Work - Recommendations.

9.7 Although trees can be of great ecological value and grow within archeologically sensitive locations, I have no specialist expertise in these disciplines, so this report does not consider these aspects.

9.8 My inspection of the trees for the purposes of assessing their condition and work requirements is made on the assumption that they will be annually inspected in the future to identify any changes in condition and review the recommendations. **Therefore, the tree assessment advice given in this report only remains valid for one year from the date of the site inspection (25th March 2026).**

10.0 Site Survey Method

10.1 All observations were conducted from ground level, using the 'Visual Tree Assessment' system (VTA by Mattheck, C & Breloer, H 1994) and The Body Language of Trees, Research for Amenity Trees No 4 Department of the Environment) with the aid of the following inspection equipment:

- Binoculars — For inspection of upper crown
- Sounding mallet — To give a sound indication of decay/cavity extent
- Steel probe — To test resistance of wood and depth of cavities
- Pair of secateurs — To remove ivy/sucker growth if required
- Diameter Tape — To measure stem diameters
- Digital Clinometer/ Laser Measurer — To measure tree height and canopy extents

10.2 The position and size of each trees canopy spread has been plotted on the topographical survey that was supplied and can be seen detailed in survey plan at Appendix B. No liability is accepted for the accuracy of the drawing.

10.3 No soil samples were taken.

10.4 No internal investigations or tissue samples were taken from the subject trees.

11.0 Tree Constraints/Survey Details

11.1 As mentioned in section 8, a total number of 7 individual trees were surveyed all of which can be seen detailed in the survey data at Appendix A.

11.2 As previously mentioned in section 6.1, not all the trees surveyed were growing within the boundary of the property of No 73a. Leyland Cypress trees T1, T2 & T6 and Holly T3 are growing over the adjoining boundary of the neighbouring property No 71 Whitehall Road to the north. Field Maple T4 & Norway Maple T5 are growing directly on the boundary with no 71 as is Sycamore T7 that partly falls within the adjoining rear garden of No.3 Woodside Mews.

11.3 The approximate position of the trees surveyed can be seen on the tree survey/constraints plan at Appendix B. This plan is principally a design tool which shows the below ground constraints represented by the root protection area (RPA) and the above ground constraints represented by the current and ultimate heights of the trees and the potential effects of shade on any proposed development including species characteristics.

11.4 Below Ground Constraints:

The root protection area (RPA) is the minimal area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is

treated as a priority. The RPA is measured in m² and is shown as a red circle with a solid line on the tree survey/constraints plan at Appendix B.

11.4.1 The root protection areas quoted in this report assume the root systems have formed in a symmetrical manner given the open grown, garden environment in which the trees are currently growing.

11.5 Above Ground Constraints:

The current height and spread of the trees surveyed at Appendix A.

11.5.1 The ultimate height the trees surveyed could attain given their location and information contained within National House Building Council Standards – Chapter 4.2 "Building near trees" and Trees of Britain and Northern Europe by Alan Mitchell, 1974.

11.5.2 The effects of shade which the surveyed trees will cast on the proposed development has been evaluated and is not considered to be a significant constraint in this instance.

12.0 Arboricultural Impact Assessment

12.1 Trees Requiring Removal to Accommodate Proposal:

No trees are required to be removed to accommodate the proposed development. All trees surveyed in this report that are shown to be retained can be adequately protected in accordance with BS5837: 2012.

12.2 Trees Requiring Removal Irrespective of Development:

No trees have been identified for removal irrespective of the development taking place or not.

12.3 Impact of Development on Trees Identified for Retention:

From the plans provided, a summary of those trees affected by the new layout together with suitable mitigation measures to ensure their safe integration within the scheme can be seen detailed in the table below.

Tree No	Type of potential damage to the tree by the development	Mitigation measures recommended to prevent damage
T1, T2 & T3	Construction of new foundations/footings for the new extension partly within the RPA of the trees causing potential root disturbance	Use a specialist pile and beam foundation within RPA laid at or above ground level and cantilevered as necessary to avoid tree roots in accordance with section 7.5 of BS5837:2012 and/or current NHBC Standards Chapter 4.2 Building Near Trees
T1, T2 & T3	Construction access required around the northern side of the new extension (as shown on tree protection plan at Appendix C) within the RPA of the trees causing potential ground compaction and root asphyxiation.	Lay ground protection for pedestrian operated plant and wheeled & tracked construction traffic in accordance with section 6.2.3.3 of BS5837:2012.

12.4 Affects of Proposed Development on Amenity:

Due to the set back location of the property from the road and retention of trees around the site boundaries; it is my opinion that the visual amenity value of the location will not be unduly harmed by the development proposals.

12.5 Construction and Demolition Process:

Development processes that lead to soil compaction in tree rooting zones and physiological 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 construction phases. Access into the RPA of any retained tree is not

normally permitted before or during construction activity unless prior consultation with both the local planning authority (LPA) and the retained arboricultural consultant has taken place.

12.5.1 In this case, a new single storey extension is proposed to the rear of the existing property. Access to the site will be via the existing side entrance to the north of the property.

12.6 Modifications to Proposed Development Layout to Accommodate Trees:

No modifications to the proposed development layout are considered necessary to accommodate trees.

12.7 Site Infrastructure Requirements – Highway Visibility, Lighting, CCTV Services etc:

The installation of services within the rooting zones of 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.

12.7.1 At the time of my site inspection, visibility splays in and out of the site via the existing gravel drive did not appear to be restricted.

12.7.2 I have not been made aware of any new service requirements to the site (e.g. gas electric, water etc) so I have to assume that all existing apparatus that serve the current property are to be used.

12.7.3 Should it become necessary to install new services to the site their routing should be located outside the RPA of any retained trees. If this is not possible, then further advice is to be sought by the retained arboricultural consultant before commencement of any works.

12.8 Mitigating Tree Loss/New Landscaping:

At this point in time, I have not been made aware of any compensatory planting. However, such matters can be dealt with at a later date by a landscaping condition should the LPA be mindful to grant consent.

12.9 Veteran Trees:

After consulting Woodland Trusts online Ancient Tree Inventory maps, there are no recorded veteran trees on or adjacent to the site which could be affected by the proposals.
https://ati.woodlandtrust.org.uk/tree-search/?v=2743383&ml=map&z=17&nwLat=51.17487859030496&nwLng=0.36900350287864647&seLat=51.170297687783886&seLng=0.38960286811302147

12.10 Impact of Trees on Buildings and Vice Versa and Allowance of Future Growth:

The impact of the retained trees adjacent to the proposed development and vice versa and allowance for future growth are not considered to be significant issues on this site.

12.11 Impact of Development on TPO Trees:

At the time of compiling this report, having contacted Gravesham Borough Councils planning technical team, I was advised by email that the trees surveyed in this report are not subject to a tree preservation order (TPO) or located within a conservation area (CA).

13.0 Tree Protection

13.1 Tree Protection Plan:

The Tree Protection Plan at Appendix C aims to identify the following:

- Trees to be retained – identified on the plan by a continuous outline
- Trees to be removed – identified by a dashed outline
- The position of protective fencing outlining the construction exclusion Zone (CEZ)
- Site access & parking
- Space for storing and mixing of materials (e.g. bricks & cement)
- Space and location of any temporary site huts, toilets etc
- Working space for cranes, plant, scaffolding and access during the development

13.2 Construction Exclusion Zone:

The construction exclusion zone (CEZ) required by 2012 BS5837 relates to the root protection area (RPA) calculated in accordance with paragraph 4.6 of the BS and replicated in this report in section 12 and Appendix D. The CEZ of each tree is to be afforded protection at all times and will be protected by fencing. No works will be undertaken within the CEZ that causes compaction to the soil or severance of roots.

13.3 Protective Fencing:

A protective fence as per figure 2 & 3 of BS5837:2012 (shown below) is recommended to be placed around all retained trees on the development site.

Figure 2 Default specification for protective barrier

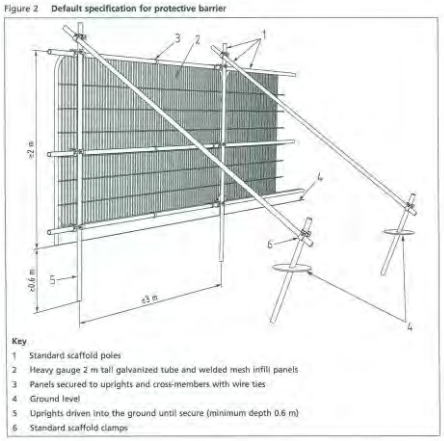
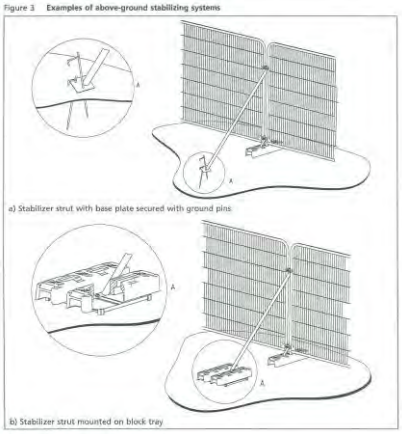


Figure 3 Examples of above-ground stabilizing systems



13.4 Precautions in Respect of Temporary Works:

No precautions in respect of temporary works are required on this site.

13.5 Site Access Details/Requirements:

There are no requirements for any special measures relating to access as all traffic will have full use of the current side access.

13.6 Contractors Car Parking:

There is adequate room along the surrounding main roads the parking of contractors' vehicles.

13.7 Site Huts and Toilets:

There is adequate space available within the site for site huts and toilets should they be required.

13.8 Storage Space:

There is adequate space available away from the surveyed trees for the storage of plant and materials as shown on the tree protection plan at Appendix C.

13.9 Site Gradients:

I have not been made aware of the need to change any site gradients.

13.10 Demolition:

No demolition is proposed to take place.

13.11 Hard Surfaces:

No new hard surfacing is proposed at this time and all existing hard surfacing within the root protection area of the trees (as shown on the tree protection plan at Appendix C) is to be retained to act as ground protection.

14.0 Conclusions

14.1 At the time of my inspection, from an arboricultural point of view; the only works required are those detailed in the tree survey at Appendix A of this report.

14.2 Tree removal to aid development can often be controversial. It is important that comprehensive tree surveys such as this are undertaken to identify those trees worthy of retention and removal. In this case, no trees will need to be removed in order to implement the proposed development, and no trees have been identified for removal in the intertest of safety regardless of the development taking place or not.

14.3 Based on the plans provided, only a small proportion of the new foundations for the proposed rear extension will fall within the root protection area (RPA) of Cypress trees T1 & T2 and Holly T3 (as seen in the tree protection plan at Appendix C). Overall, the incursion within the RPA of these three trees is minimal and within the parameters of the guidance given in BS5837:2012. Therefore, provided the excavation of the new extension footings strictly follow the guidance given in the arb method statement detailed in this report at section 15 below, I am satisfied that the trees will not be unduly harmed. The remainder of the trees surveyed in this report can be adequately protected in accordance with the recommendations of BS5837:2012.

14.4 Having taken account of the information given to me and my own observations on site, I am satisfied that any potential development proposed on this site will be arboriculturally sound. The long-term wellbeing of the retained trees detailed in this report will be safeguarded in a sustainable manner as long as the tree protection measures shown on the tree protection plan at Appendix C and recommendations as detailed in the site specific method statement detailed in this report are adhered to.

15.0 Recommendations & Site Specific Arboricultural Method Statement (AMS)

15.1 General Comments:

This Arboricultural Method Statement (AMS) is prepared in accordance with the detail of British Standard 5837:2012. This AMS sets out the methodology for proposed works with the potential to affect trees on and adjacent to the site. Failure to comply with this AMS may result in a temporary stop notice being issued by the Local Planning Authority. It is therefore advised that a qualified and experienced Arboricultural Consultant should be appointed to monitor the AMS for this site before any development works commence.

15.2 General Conditions:

This AMS is to be complied with by all contractors and subcontractors involved with the proposed permitted works.

15.3 Phasing of Operations:

Arboricultural management of the site during construction, should be undertaken through a set series of phases which are monitored and adhered to as set out below.

15.4 Phase 1 - Supervision & Monitoring:

The appointed site manager is to be aware of the arboricultural requirements on the site and is to be responsible and held accountable for the monitoring and enforcement of the tree protection measures.

15.5 Phase 2 - Bat and Bird Inspections:

Trees proposed for pruning/felling should be inspected for roosting bats and nesting birds. In the event of bats and nesting birds being present, no works are to commence until all nests and roosts have become vacant to the satisfaction of a licensed bat handler. The disturbance or destruction of nesting sites is an offence under the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000. Further advice on bats can be advised from the Bat Conservation Trust (tel: 0845 1300 2280 / www.bats.org.uk) and nesting birds advice can be obtained from Natural England (tel: 0845 600 3078 www.naturalengland.org.uk) or Royal Society for the Protection of Birds (tel: 01767 693690 www.rspb.org.uk).

15.6 Phase 3 - Carry Out Preliminary Tree Surgery Works:

In accordance with the recommendations detailed in Appendix A; all works are to be undertaken in accordance with British Standard 3998: 2010 Tree Works by a suitably qualified person as replicated in table 1 below.

Tree No	Species	Work requirements
T1 & T2	Leyland Cypress	Reduce canopies overhanging boundary to the south by 2m to live green growth to give a clearance of 3m from the existing property.
T3	Holly	Reduce canopy towards the south overhanging the boundary by 2m

15.6.1 As previously mentioned in this report, when checking with Gravesham Borough Council, no trees on the or adjacent to the site were shown to be subject to a TPO or located within a conservation area. However, prior to the commencement of any tree works, confirmation of the trees' status must be sought again from the local planning authority, as the planning status of the trees can change at any time.

15.6.2 When appointing an Arboricultural Contractor to carry out tree surgery works, it is important to use only suitably qualified and experienced tree surgeons. The LPA Tree Officer may be able to provide a select list of suitable contractors within the area. It is always essential to check that they carry public and products liability to a minimum of £5 million cover and the relevant Employers Liability Insurance.

15.6.3 All works must conform to industry good practice guidance such as British Standard 3998: 2010 Tree works – Recommendations.

15.7 Phase 4 - Installation of Tree Barriers and Ground Protection Measures:

Before the commencement of any works on site, including demolition, the retained trees will be protected by fencing in accordance with British Standard 5837:2012 as per the plan in Appendix C marked with a solid PURPLE line. Fencing is to be in accordance with section 15 of this report. The exact position and setting out of all fencing is to be overseen by the retained arboricultural consultant and in agreement with the LPA Tree Officer.

15.7.1 The barriers should be fit for purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. All barriers are to remain rigid and complete before and during the construction of the site.

15.7.2 Adequate sized signage will be secured to all the fencing advising of its function - for example: 'Tree Protection Area – no access permitted' as replicated below.

15.7.3 Within the fenced zone of protection there will be no access for pedestrians or plant; no depositing or storage of materials; no disposing of fluids or burning of any material.

15.7.4 Site storage for materials, temporary structures and for the mixing of cement based products will be based outside the fenced areas. No materials that are likely to have an adverse affect on tree health such as cement, oil or bitumen will be stored or discharged within 15 metres of any trees or shrubs that are to be retained (except those in the course of reasonable and considered construction of the approved development), including paving.

15.7.5 Ground protection in accordance with paragraph 6.2.3.3 b) as replicated below, is to be placed in the areas shaded in **ORANGE** to the north of the new extension as shown on the tree protection plan ref: AR0369/03-26/TPP at Appendix C.

b) for pedestrian-operated plant up to a gross weight of 2 tonnes, proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane.

15.8 Phase 5 - Construction of New Dwellings and Road Infrastructure:

Construction is to be undertaken in accordance with the approved plans and conditions including any main hard landscaping works.

15.9.1 Foundations within the RPA of the trees as shown highlighted in yellow on the tree protection plan at Appendix C need to be in accordance with section 7.5 of BS5837:2012 with the use of pile and beam footings designed by a suitably qualified structural engineer or follow the current guidance detailed within NHBC Practice Note Chapter 4.2 Building Near Trees.

15.9 Phase 6 - Removal of Tree Barriers and Ground Protection Measures:

Fencing and ground protection is only to be removed following practical completion of the development and the removal of all machinery and surplus materials from the site. Removal of the fencing is to be overseen by the retained arboricultural consultant with the permission from the LPA Tree Officer.

16.0 References

The following resources have been referred to whilst writing this report:

Title	Author
“The Body Language of Trees”	Claus Mattheck & Helge Breloer
“Principles of Tree Hazard Assessment and Management”	David Lonsdale
National House Building Council (NHBC) Standards Chapter 4.2 “Building near Trees”	NHBC
BS 5837: 2012 Trees in Relation to Design, Demolition and Construction - Recommendations	British Standard
BS 3998: 2010 Tree Work - Recommendations	British Standard
National Joint Utilities Group (NJUG) – 2007 Volume 4 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees	NJUG
Online Ancient Tree Inventory Maps	Woodland Trust
Online Interactive planning maps	Gravesham Borough Council.

Appendix A

Tree Survey Details

73a Whitehall Road, Gravesend, Kent

Key to Tree Survey Details

Tree Number
Subject trees detailed in this report have been allocated identification numbers prefixed with 'T' for individuals, 'G' for groups or 'H' for Hedges

Tree Species
Tree species identification was based on a visual observation. In the tree survey at Appendix A, the common English name of what the tree appeared to be was detailed first with the botanical name, if appropriate in brackets.

Tree Heights
The height(s) of the subject tree(s) were estimated to the nearest metre using a digital clinometer.

Stem Diameters
The stem diameters (DBH) were taken using a rounded down diameter tape in millimetres at 1.5m above ground level in accordance with annex C of BS5837:2012.

Crown Spreads
The maximum crown spread(s) of the subject tree(s) were measured from the centre of the trunk to the tips of the live lateral branches taken at four compass points N-E-S-W or Ø with average diameters in metres.

Crown Clearances
The height of the tree(s) crown clearance was measured from ground level to the tip of the lowest lateral branches.

Tree Age
Tree age has been estimated from visual indicators and should only be taken as a provisional guide. Age estimates often need to be modified based on further information such as historical records or local knowledge.

N = A new or recently planted tree established for no more than 5 years in its present location.
Y = A young tree planted/established for no more than 10 years in its present location.
SM = A semi-mature tree which is well established but with some growth to make before reaching its potential maximum size.
EM = A early mature tree approaching its ultimate height and whose growth is slowing, however it will still increase considerably in stem diameter and crown spread.
Mat = A mature tree at or near its potential maximum size which is has limited potential for further significant increase in size, although is still considered to have a safe useful life expectancy.
O = An over mature tree in decline.

Physiological Condition
The tree(s) physiological condition has been categorised either: good / fair / poor / moribund or dead.

G = Good – Showing no adverse risk of failure/defects
F = Fair – showing minor signs of deterioration
P = Poor – Unlikely to be returned to a good condition
MB = Moribund – Nearly dead
D = Dead

Structural Condition
An assessment of the trees structure (i.e. trunk & scaffold branches) based on a visual ground inspection made at the time of the survey.

Preliminary Management Recommendations
Recommended remedial works to bring the trees to an acceptable and safe standard in context with the current site use/conditions.

Estimated Remaining Contribution
The estimated remaining contribution of the tree(s) in years has been calculated taking into account the tree(s) age and physiological condition at the time of inspection and categorised into one of the following groups:

D = (Declining) less than 10 years.
S = (Short Term) 10 to 20 Years
M = (Medium Term) 20 to 40 Years
L = (Long Term) More than 40 years

BS Grade/Tree Categorization Method
In compliance with tables 1 & 2 of British Standard 5837: 2012; all the trees surveyed in this report have been categorised into one of four groups according to their quality and value. An extract of table 1 can be seen at Appendix A. Table 2 gives reference to the identification of tree categories by colour coding, a copy of which is reproduced below.

Category/Grade (from Table 1 – Appendix A)	Colour	Identification on the Survey Plan	
U – Tree unsuitable for retention	Dark Red	Individual	Group
A – Tree of high quality	Light Green		
B – Tree of moderate quality	Mid Blue		
C – Tree of low quality	Grey		

Root Protection Area (RPA) Calculations

The Root Protection Area (RPA) for each tree has been calculated in accordance with paragraph 4.6 of BS 5837: 2012 as an area equivalent to a circle with a radius 12 times the stem diameter for single stem trees. For trees with more than one stem, one of the two calculation methods shown below has been used:

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

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

For trees with more than 5 stems, the combined stem diameter should be calculated as follows:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

See Appendix D for RPA calculation figures based on the formulae above.

Appendix A – Tree Survey Details

Survey Date: 9th October 2024

Tree No	Species	Ht. (m)	Stem diam. (mm)	Crown Spread (M)		Ht of Crown Clear.	Age	Phys Cond.	Structural Condition	Preliminary Management Recom	Est. Remain Contr.	BS Grade	RPA Radius / RPA M²
T1	Leyland Cypress (Cupressus x leylandii)	8	270	N	4	2.5	SM	G	No visual defects noted. Outer crown to south physically obstructing property.	Cut back crown overhanging the boundary of no 73 by 2m to give at least 3m clearance	S	C1/2	3.30m / 34
				E	5								
				S	4								
				W	1								
T2	Leyland Cypress (Cupressus x leylandii)	8	375	N	4	3	SM	G	No visual defects noted. Outer crown to close to property facade.	Cut back crown overhanging the boundary of no 73 by 2m to give at least 3m clearance	S	C1/2	4.50m / 64
				E	1								
				S	4								
				W	2								
T3	Common Holly (Ilex aquifolium)	7	265	N	4	3	EM	G	Large Elder stem established within crown.	Cut back crown overhanging the boundary of no 73 by 2m.	S	C1/2	3.30m / 34
				E	2								
				S	3.5								
				W	3								
T4	Field Maple (Acer campestre)	10	450	N	5	3	EM	G	Suppressed leaning habit to east due to growth of adjacent Maple T5. Heavy Ivy growth.	None	M	C1	5.40m / 92
				E	5								
				S	3								
				W	1								
T5	Norway Maple (Acer platanoides)	14	600	N	6	3	EM	G	Multi-stemmed from near ground level with heavy Ivy growth. Dominant tree.	None	M	B1	7.20m / 163
				E	7								
				S	6								
				W	5								
T6	Leyland Cypress (Cupressus x leylandii)	14	350	N	4	2	EM	F	Light browning of outer foliage.	None	S	C1	4.20m / 55
				E	3								
				S	3								
				W	3								

Continued……..

Tree Survey Details Continued……

Tree No	Species	Ht. (m)	Stem diam. (mm)	Crown Spread (M)		Ht of Crown Clear.	Age	Phys Cond.	Structural Condition	Preliminary Management Recom	Est. Remain Contr.	BS Grade	RPA Radius / RPA M²
T7	Sycamore (Acer pseudoplatanus)	14	580	N	5	3	EM	F	Multi-stemmed from around 0.5m from ground level with heavy Ivy growth. Central dead/declining stems	None	S	C1	6.90m
				E	5								
				S	7								150
				W	6								

Survey End

Cascade chart for tree quality assessment

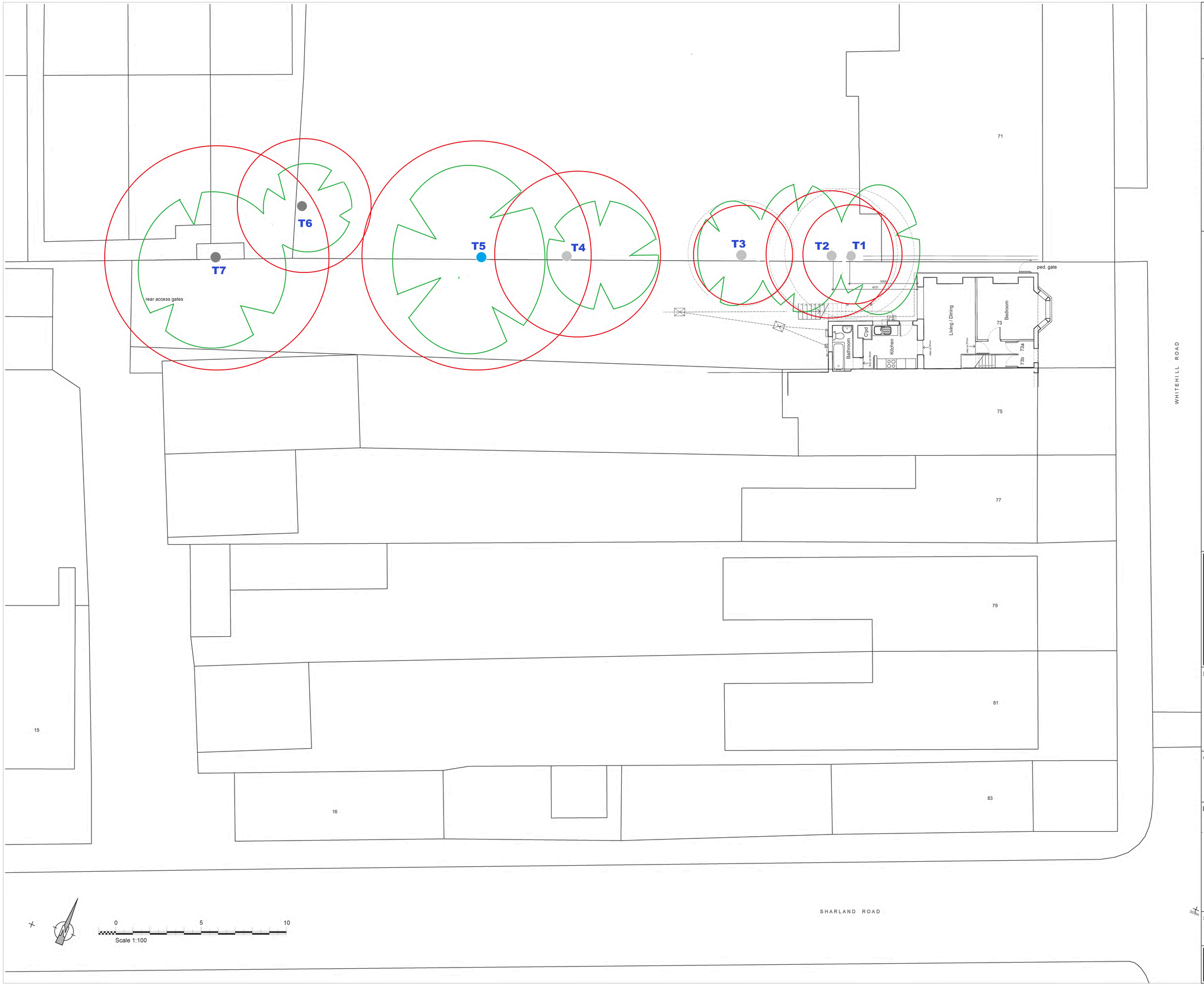
Trees unsuitable for retention (See Note)				
Category and definition	**Criteria (including subcategories where appropriate**			**Identification on plan**
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer 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***.			Red
Trees to be considered for retention				
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including**	
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 See Table 2 of significant conservation, historical, commemorative or	Green
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	Blue
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	Grey

From BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations

Appendix B

Tree Survey/Constraints Plan

(Reproduced from block plan as existing Ref: D-02, dated 30.01.2026 by DAC Architects)
(Approximate scale 1:100 @ A1)



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NOTES

Do not scale

Verify all dimensions on site before commencing any work or preparing any shop drawings

All building materials, components and workmanship to comply with the appropriate Public Health Acts, Building Regulations, British & European Standards and Codes of Practice and to the appropriate manufacturers recommendations.

For all specialist work see relevant drawings

All schemes to be set out completely including buildings, roads, drainage and levels prior to the commencement of works

Sites to be checked against Land Registry plans and any necessary Easements to be established

Any discrepancies, errors or omissions to be reported to the architect for further instructions before commencement of works

TREE SURVEY LEGEND

T1 - Individual tree prefix/number

G1 - Group prefix/number

British Standard 5837:2012 category grade =

= Grade A (tree of high quality)

= Grade B (tree of medium quality)

= Grade C (tree of low quality)

= Grade U (tree unsuitable for retention

= Crown spread

= Root protection radius

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Client

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Drawing Title

Block Plan As Existing

Tree Survey Plan

Ref: AR0368/03-26/TSP

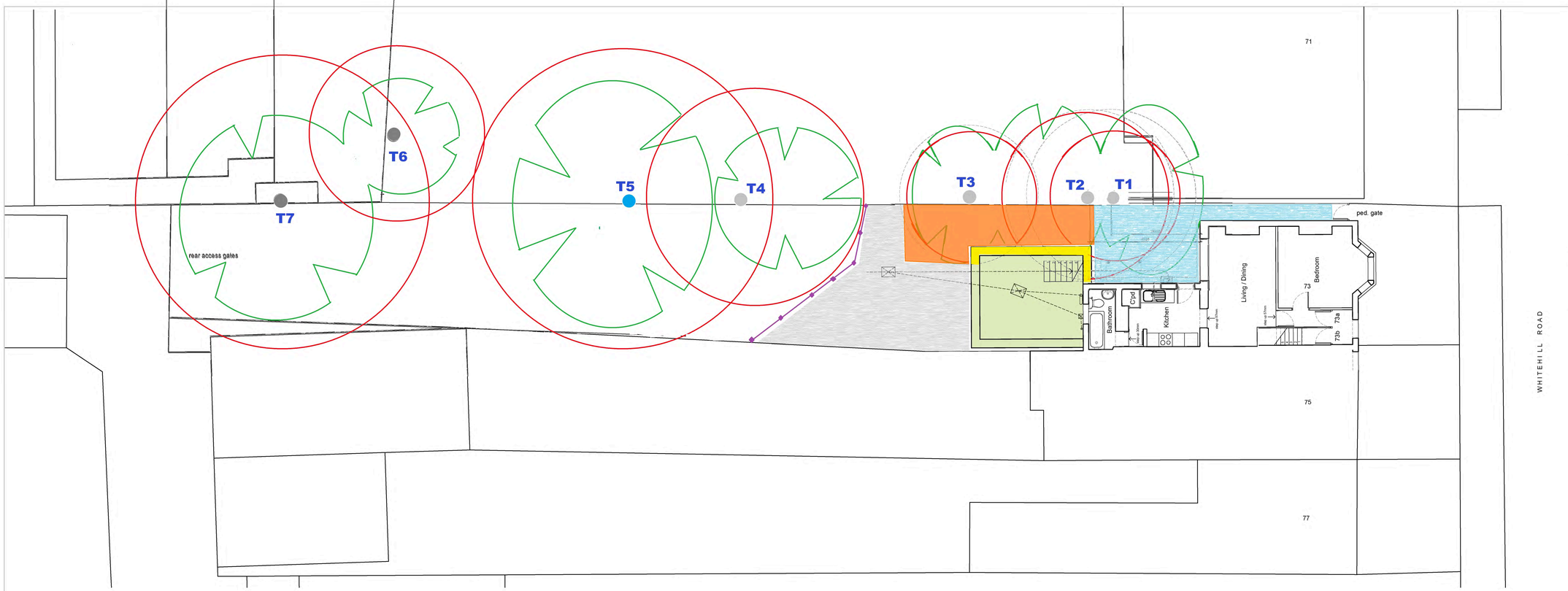
Scale	Date	Drawn By
1:100 @ A1	30.01.2026	LW

Project No.	Dwg. No.	Rev.
5517	D-02	-

Appendix C

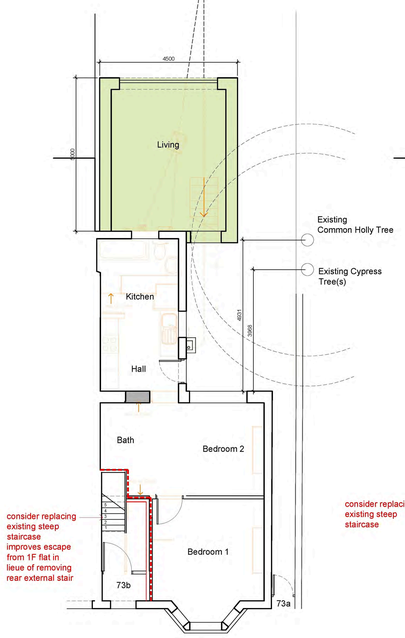
Tree Protection Plan

(Reproduced from floor plans & elevations as proposed Ref: SK-01, dated 09.02.2026 by DAC Architects)
(Approximate scale 1:100 @ A1)

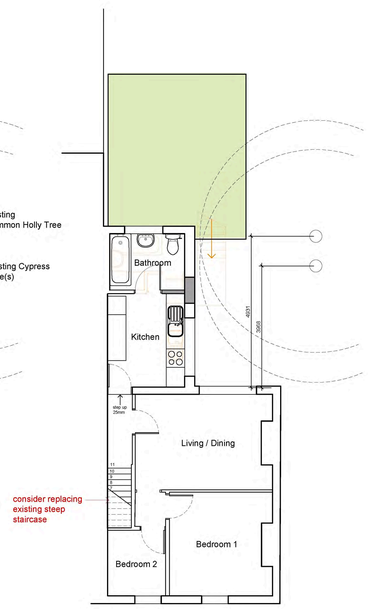


Proposed Single Storey Rear Extension

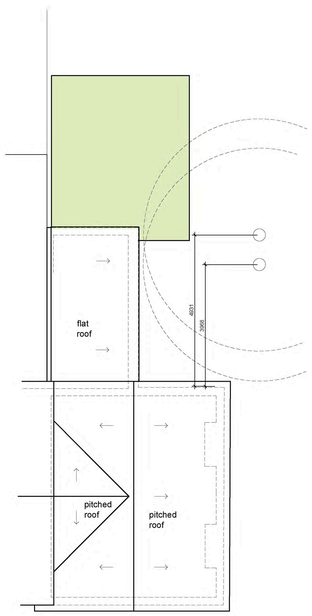
0 5 10
Scale 1:100



Ground Floor Plan
As Proposed



First Floor Plan
As Proposed



Roof Plan
As Proposed

0 5 10
Scale 1:100

0 10 20 30 40 50 60 70 80 90 100
Scale 1:1250

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TREE SURVEY LEGEND

T1 - Individual tree prefix/number

G1 - Group prefix/number

British Standard 5837:2012 category grade =

= Grade B (tree of medium quality)

= Grade C (tree of low quality)

= Crown spread

= Root protection radius

Position of tree protection fencing in accordance with BS5837:2012

Area for storage and mixing of materials

Existing hardstanding to be retained for ground protection

Area of ground protection in accordance with section 6.2.3 of British Standard 5837:2012

Excavation of foundations to be in accordance with 7.5 of British Standard 5837:2012 and National House Building Council (NHBC) Practice Note 4.2 Building Near trees

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Floor Plans & Elevations
As Proposed SKETCH

Tree Protection Plan
Ref: AR0368/03-26/TPP

Scale	Date	Drawn By
1:100 @ A1	09.02.2026	LW

Project No.	Dwg. No.	Rev.
5517	SK-01	-

Appendix D

Root Protection Areas (RPA)

Reproduced from table D1 in annex D of BS5837:2012

Root Protection Areas - (RPA) shown in this grid should be used for single stem trees. For multi-stemmed trees, the equivalent result for combined stem diameter should be used based on the findings below.

Single Stem Diameter (mm)	Radius of Nominal Circle (m)	RPA m²
75	0.90	3
100	1.20	5
125	1.50	7
150	1.80	10
175	2.10	14
200	2.40	18
225	2.70	23
250	3.00	28
275	3.30	34
300	3.60	41
325	3.90	48
350	4.20	55
375	4.50	64
400	4.80	72
425	5.10	81
450	5.40	92
475	5.70	102
500	6.00	113
525	6.30	124
550	6.60	137
575	6.90	150
600	7.20	163
625	7.50	177
650	7.80	191
675	8.10	206
700	8.40	222
725	8.70	238
750	9.00	255
775	9.30	272
800	9.60	290
825	9.90	308
850	10.20	327
875	10.50	346
900	10.80	366
925	11.10	387
950	11.40	408
975	11.70	430
1000	12.00	452
1025	12.30	475
1050	12.60	499
1075	12.90	519
1100	13.20	547
1125	13.50	573
1150	13.80	598
1175	14.10	625
1200	14.40	652
1225	14.70	679
1250+	15.00	707