CENTRAL LONDON
TREE SURVEYS
ARBORICULTURAL CONSULTANTS
CELEBRATING 25 YRS

12 Sarre Road, London, NW2 3SL

Arboricultural Report, Impact Assessment & Protection Method Statement

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Survey Date: Friday, 28 August 2020

Report Date: Saturday 13 July 2024

Contents

1. Introduction

1.1. Brief

I was instructed to inspect the trees at 12 Sarre Road, London, NW2 3SL and to provide an arboricultural report, impact assessment & protection method statement for the trees located within and adjacent to the site, as shown on the Tree Constraints Plan enclosed.

1.2. Qualifications and experience

I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience and qualifications. RFS Cert Arb.
M. Arbor A

1.3. Documents and information provided

I was provided with site & proposal plans.

1.4. Scope of this report

This report is only concerned with the trees shown on the enclosed plan. Trees with a diameter of less than 75mm and shrub species have not been surveyed in line with BS5837 2012.

1.5. Limitations of use and copyright

2. Site Visit/Observations & Data Collection

2.1. Site visit

The information within this report is formulated from information within the site survey and report compiled on **Friday, 28 August 2020**.

2.2. Site description

The survey site comprises the rear garden/parking area of the house, which contains no trees. Trees within this report are located within adjacent properties and on the street.

2.3 Identification and location of the trees

The trees have been identified and are listed within the Tree Survey Schedule. I have plotted the locations of the trees on the plans included. All the relevant information on it is contained within this report and the provided documents. Only the significant trees are included in this report; trees with a diameter of less than 75mm (BS5837 2012) are not included unless their position was felt to be significant. All trees have been allocated a classification. The classification cascade chart can be found below.

2.4. Tree observation. Each tree has been given a classification relevant to BS5837 2012.

CASCADE CHART FOR TREE QUALITY ASSESSMENT (from British Standard 5837:2012 "Trees in Relation to Design, demolition and Construction")

TREES FOR REMOVAL

Category and Definition	Criteria	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 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 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	DARK RED

TREES TO BE CONSIDERED FOR RETENTION

Category and Definition	Criteria – Subcategories			Identification on Plan
	1. Mainly Arboricultural Qualities	2. Mainly Landscape Qualities	3. Mainly Cultural Values, including Conservation	
Category A Those of high quality with a estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples 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 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).	LIGHT GREEN
Category B Those of moderate quality with a 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 unsympathetic past management and storm damage) such that they are unlikely to be suitable for retention for beyond 40 years; or lacking the merit for Category A	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 clearly identifiable conservation or other cultural benefits.	MID BLUE
Category C Those of low quality with an estimated 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 collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with very limited conservation or other cultural benefits.	GREY

2.4.1. Tree Survey Schedule

Ref	Species	H/T	Stems	Dia	Canopy				First	Crown	Age	Yrs	Cat	Observations	Recommendations	RPA (r)	RPA (a)	TPO/CON
				mm	N	E	S	W	Branch	H/T								
T1	Silver Birch	8	S	275	2.5	2.5	2.5	2.5	4S	2	Early Mature	40	B	Canopy appears thin, athough no deadwood present. Various areas of physical damage to main stem. No decay present	Monitor condition	3.3	34.2	
T2	Lime	6	S	600	2	2	2	2	4W	4	Early Mature	40	B	Pollarded Street tree. Extensive epicormic growth on main stem	Maintain management regime	7.2	162.9	
T3	Elder	5	M	200	1.5	1.5	1.5	1.5	2N	2	Early Mature	40	C	Good overall condition, within neighbouring property	None	2	12.6	
T4	Palm	3	S	150	1	1	1	1	1S	1.5	Early Mature	40	C	Good overall condition, within neighbouring property	None	1.8	10.2	

2.4.2. Glossary of Terms

ID: Identification on position plan

Name: Common species name

H/T: Current tree height

Stems: Single or Multiple stems

Dia: Diameter of stem at 1.5m above ground (mm)

Canopy: Canopy measurements N,E,S & W

Crown Height: Height of lowest part of crown

First Branch: Height and direction of first branch

Age: Current age

Yrs: Approximate years of life remaining

Cat: Category of importance in line with current British Standards

Obs: Observations

Recs: Recommendations

RPA (r): Root protection area (approximate area of roots Radius of circle)

RPA (a): Root protection area (approximate area of roots Area of circle)

2.4.3. Tree Survey Methodology

Trees, tree groups and woodlands have been considered following evaluation into one of four categories (U, A, B, C) based on tree quality as outlined in British Standard 5837 (2012) which has been followed. Categorisation of trees, following the British Standard, gives an indication as to the trees' importance in relation to the site and the local landscape and also, the overall value and quality of the existing tree stock on site. This allows for informed decisions to be made concerning which trees should be removed or retained, should development occur.

For a tree to qualify under any given category it should fall within the scope of that category's definition. In the categories A, B, C which collectively deal with trees that should be a material consideration in the development process, there are three sub-categories which are intended to reflect arboricultural, landscape and cultural values respectively. Category U trees are those which would be lost in the short-term for reasons connected with their poor physiological or structural condition. They are, for this reason, not usually considered in the planning process.

In assigning trees to the A, B or C categories the presence of any serious disease or tree related hazards are taken into account. If the disease is considered fatal and / or irremediable, or likely to require sanitation for the protection of other trees it may be categorised as U, even if they are otherwise of considerable value.

Category (A) – trees whose retention is most desirable and is of high quality and value. These trees are considered to be in such a condition as to be able to make a lasting contribution (a minimum of 40 years) and may comprise:

- Trees which are particularly good examples of their species especially rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue);
- Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups); and
- Trees or groups or woodlands of significant conservation, historical, commemorative or other value (e.g. Veteran or wood-pasture trees).

Category (B) – are trees whose retention is considered desirable and are of moderate quality and value. These trees are considered to be in such a condition as to make a significant contribution (a minimum of 20 years) and may comprise:

- Trees that might be included in the high category but because of their numbers or slightly impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage), are downgraded in favour of the best individuals;
- Trees present in numbers such that they form distinct landscape features and attract a higher collective rating than they would as individuals. Individually these trees are not essential components of formal or semi-formal arboricultural features, or trees situated mainly internally to the site and have little visual impact beyond the site; and
- Trees with clearly identifiable conservation or other cultural benefits.

Category (C) – are trees that could be removed to facilitate the development and are considered to be of low quality and value. These trees are in an adequate condition to

remain until new planting could be established (a minimum of ten years) or are young trees with a stem diameter below 150mm and may comprise:

- Trees not qualifying 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 screening benefit; and
- Trees with very limited conservation or other cultural benefits.

Category (U) – trees for removal are those trees in such a condition that any existing value would be lost within 10 years and which should in the current context be removed for reasons of sound arboricultural management. Trees within this category are:

- 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;
- Trees that are dead or are showing signs of significant, immediate or irreversible overall decline; and
- Trees infected with pathogens of significance to the health and or/safety of other trees nearby trees or very low quality trees suppressing adjacent trees of better quality.

Species has been recorded by common name and recorded as such in the Arboricultural Data schedule. Height has been estimated in meter and stem diameters have been measured at 1.5 metres above ground level and recorded in millimetres. Crown spreads have been measured in half meters and taken to the point of greatest spread unless the crown has presented a pronounced asymmetrical form and therefore measurements have been taken for the four cardinal points. The measurements have always been considered in the following sequence, North, East, South, and West, and therefore appear as such within the Tree Survey Schedule.

In the assessment particular consideration has been given to the following when deciding the most appropriate British Standard Category and Sub-Category allocation:

a. the health, vigour and condition of each tree;
b. the presence of any structural defects in each tree and its life expectancy;
c. the size and form of each tree and its suitability within the context of the proposed scheme; and
d. the location of each tree relative to existing site features, e.g. its value as a screen or as a skyline feature.

Age class is assessed according to the age class categories referred to in BS 5837.

1. Y: Young trees up to five years of age;
2. SM: Semi-mature, trees less than 1/3 life expectancy;
3. EM: Early mature, trees 1/3 – 2/3 life expectancy;
4. M: Mature trees over 2/3 life expectancy;
5. OM: Over mature – declining or moribund trees of low vigour; and

6. V: Veteran - Characteristics have been noted where a tree exhibits certain characteristic features of veteran trees.

Major defects or diseases and relevant observations have also been recorded under Structural Condition. The assessment for structural condition has included inspection of the following defects:

1. The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay;
2. Soil cracks and any heaving of the soil around the base indicating possible root plate movement;
3. Any abrupt bends in branches and limbs resulting from past pruning, as it may be an indication of internal weakness and decay;
4. Tight or weak ‘V’ shaped unions and co-dominant stems;
5. Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994);
6. Cavities as a result of limb losses or previous pruning;
7. Broken branches;
8. Storm damage;
9. Canker formations;
10. Loose bark;
11. Damage to roots;
12. Basal, stem or branch / limb cavities;
13. Crown die-back;
14. Abnormal foliage size and colour;
15. Any changes to the timing of normal leaf flush and leaf fall patterns; and
16. Other pathological diseases affecting any part of the tree.
17. Major defects or diseases and relevant observations have also been recorded. Dead wood has been defined as the following:
18. Twigs and small branch material up to 5cm in diameter;
19. Minor dead wood 5cm to 10cm in diameter; and
20. Major dead wood 10cm in diameter and above.

The survey was completed from ground level only, aerial inspection of trees was not undertaken. Investigations as to the internal condition of a tree have not been undertaken. Further investigations of this type can be made and have been recommended where it has been considered necessary, within the report although these investigations are beyond the scope of this report.

Evaluation of the trees condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

The individual positions of trees and groups of trees recorded in the Tree Survey Schedule. have been shown on the Tree Constraints Plan, in Appendix 2.0. The positions of trees are based on a topographical / land survey supplied by the development and client in dwg. format for the purpose of plotting the trees.

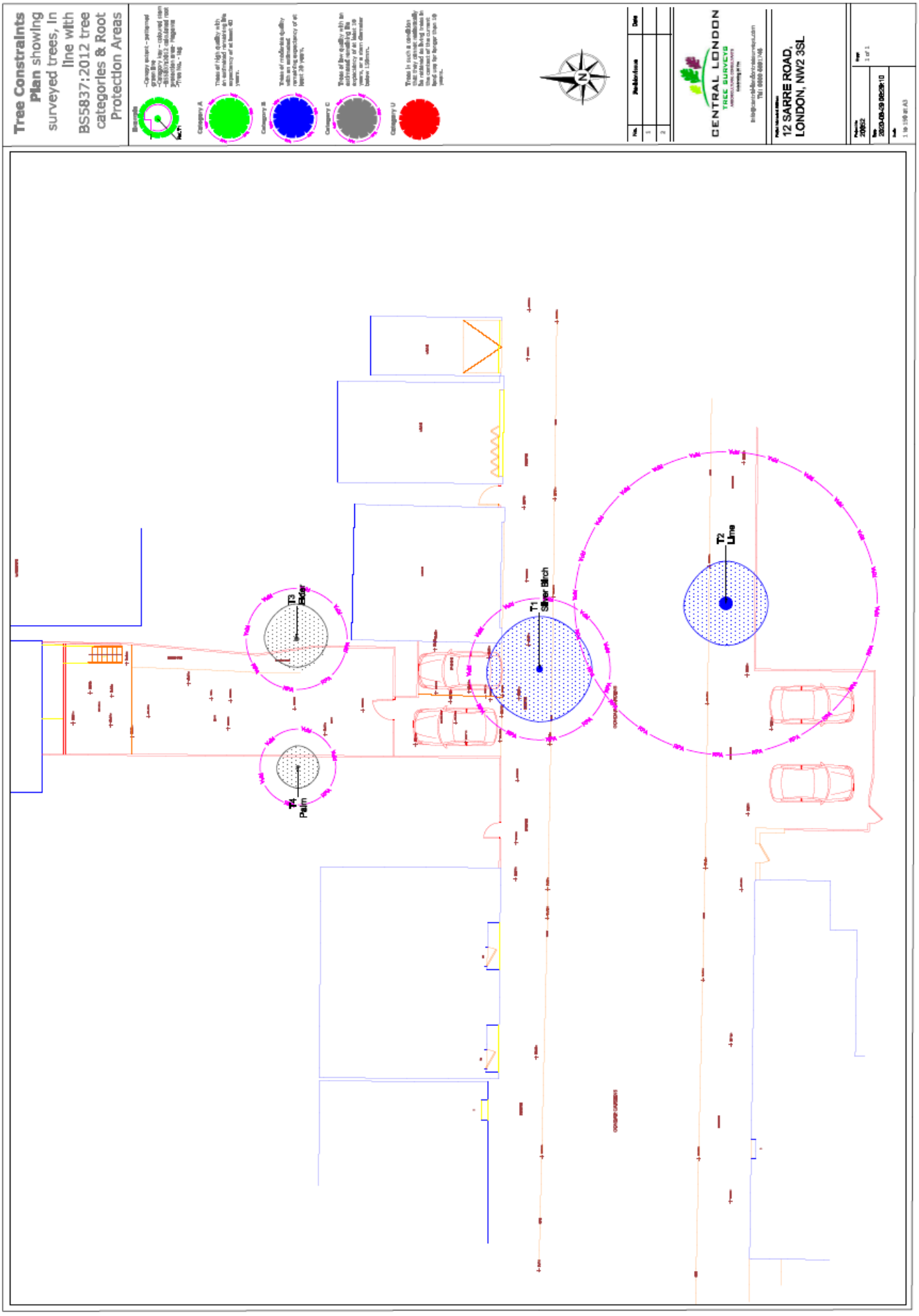
The Root Protection Areas (RPA) to be required by the individual and groups of trees are indicated by the Tree Constraints element of the above plans. The Root Protection Areas are formulated as described below.

Below ground constraints to future development is represented by the area surrounding the tree that contains sufficient rooting volume to ensure survival of the tree, which need protecting in order for the tree to be incorporated into any future scheme, without adverse harm to the tree or structural integrity of buildings. This is referred to as the RPA and is shown as a circle of a given radius.

The circle may be modified in shape to maintain a similar total area depending on the presence of surrounding obstacles. Where groups of trees have been assessed, the RPA has been shown based on the maximum sized tree in any one group and so would automatically exceed the RPA's required for many of the individual specimens within the group. A RPA is equivalent to a circle with a radius 12x the stem diameter for single stem trees and 10x the basal diameter for trees with more than one stem arising less than 1.5 meters above ground level.

4. Tree Constraints Plan

Plan below not to scale as PDF. Please refer to original drawing for scaling.



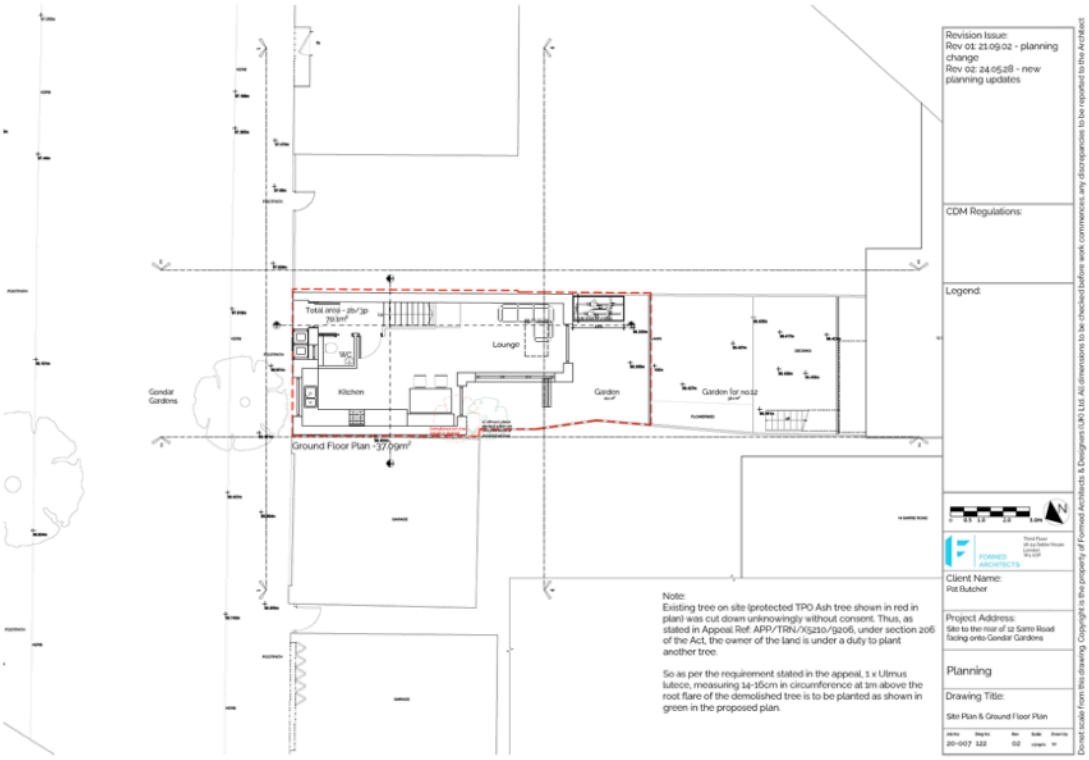
5. Tree Impact Plan

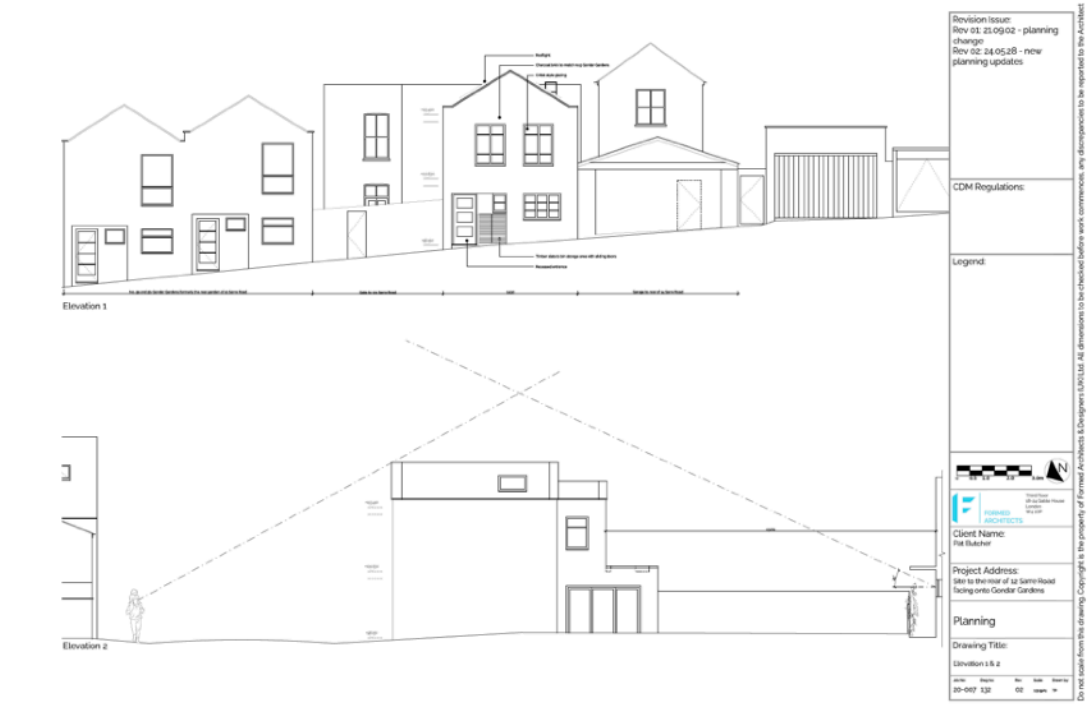
Plan below not to scale as PDF. Please refer to original drawing for scaling

6. Arboricultural Impact Assessment

6.1 Proposals

The proposals are to construct a new dwelling as shown on the plans below.





6.2 Impact Assessment

In light of the tree constraints set against the proposals, below are the conclusions of the impact assessment upon the trees within this survey.

The proposals (to the dimensions given) have been positioned on the Tree Impact Plan to give an indication of impact to the trees.

T2

T2 Lime, will be unaffected by the proposals. The adjacent parking area and hard-standing will protect the tree roots.

T1

T's 1, 3 & 4 will see minor incursions into their RPA's. Excavation within the RPA's is not likely to gain planning approval and the use of piled foundations should be considered.

Existing hard-standing and boundary walls will act as protection during construction.

Ground Levels

No changes in ground levels is envisaged to the rear of the property and therefor no impact upon the retained trees.

Utilities

Utility runs will be located to the existing property and outside the RPA's.

Deliveries/Contractors Access

Access for contractors will be from the rear of the property upon the existing hard-standing. Deliveries can be unloaded within the existing entrance. Unloading will be close to T1. Unloading should be located away from the trees canopy and protective hoarding should be positioned around the main stem.

New surfaces

All waste material should be removed by conveyor to awaiting vehicles and disposed of accordingly.

Any proposed new hard-standing upon the RPA's should be of permeable construction.

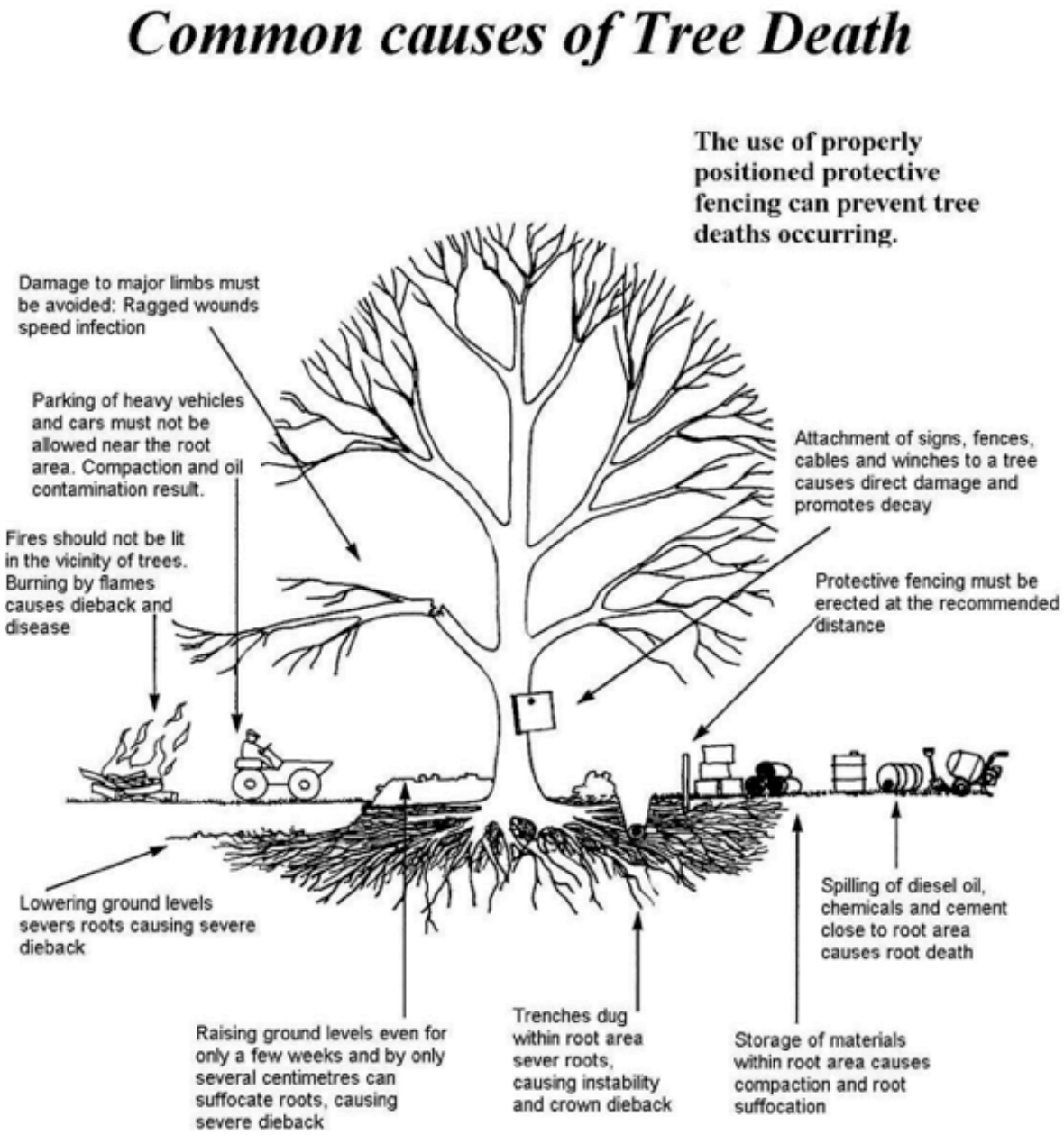
7. Arboricultural Method Statement

7.1 Overview

- No trees to be removed
- All trees to be retained and protected
- Replacement tree as shown on the TPP to replace TPO tree.
- Existing boundary Walling will act a tree protection for neighbouring trees
- Wooden hoarding to protect stems of T's 1 & 2
- Existing hard surfaces to act as ground protection into the site
- Temporary ground protection matting to allow access to RPA's of T's 3 & 4 without the requirement for protective fencing, which would be unworkable in such a confined space.
- Materials storage away from RPA's
- Site office/welfare/within rear garden
- Unloading of materials away from retained trees onto existing hard-standing
- No materials, mixing or washing out of tools within the RPA’s
- Mini piled & floating beam footings to minimise root impact

7.2 Tree Protection

With reference to the Arboricultural Report and Tree Protection Plan (TPP), particular attention should be given to the trees that are to be retained. The TPP clearly identifies the Root Protection Areas (RPA's) for the tree, which will be retained. Protection of the retained trees are paramount to the granting of planning permission, the design of the development and the future health and success of the tree.



7.3 Construction Works

Ground protection of RPA's

Extreme care should be taken as not to damage the roots, trunks and branches of any retained trees. It is anticipated that the works will be very close to some trees and care should be taken to maintain the protection measures contained within this report.

The existing hard surfaces will act as ground protection into the site. The use of temporary ground protection matting as shown below will be used to allow access for plant and materials storage onto the RPA's of T's 3 & 4.

The rubber matting will be laid upon a 50mm layer of wood chipping and secured in place for the duration of the build. It will be positioned before any plant/machinery or vehicles enter the site to protect the roots of T's 3 & 4

The existing boundary walls and site hoarding around the parameter of the site will act as protection for trees within neighbouring properties.

Wooden hoarding will be positioned around the pavement trees as shown below and on on the Tree Protection Plan TPP.

Hoarding for T's 1 & 2

Foundations

Some of the proposed footings will be in or very close to the RPA's of T'1, 3 & 4. The use of mini piled footings with floating beam will minimise damage to roots. Please refer to Structural Engineers drawings. Piles will also be used to form the bike storage facility.

Ground Levels

There will be no requirement for soil level changes within RPA's.

Utilities

Utility runs will be outside any RPA's and linked back to the main house.

Deliveries/Contractors Access

Access for contractors will be from the rear of the property. The protective hoarding around each tree, will afford adequate protection for the stems and unloading will be carried out, outside the canopy area of T1 at the roadside and materials handled into site. Hoarding will be placed around the main stems of T'1 & 2 to allow passage on the pavement.

The upper canopy of T1 (which protrudes outermost into the road) will be above vehicle height.

Concrete & Materials

Pouring of concrete, concrete mixings, concrete washings and mortar which should not be discharged within 10m of the Root Protection Area or under or within 10m of any other tree or shrub.

Accordingly the materials should not be mixed within the Root Protection Area or on an area sloping towards the tree.

On completion of the works all surplus materials are to be collected and disposed of offsite.

Site Office/Welfare

The site office and welfare will be situated within the rear garden.

7.4 Tree Surgery/Pruning

Crown lifting of trailing smaller limbs to 3m is envisaged on T1 to minimise damage and allow access.

7.5 Tree Planting

All new planting will be undertaken in the dormant season, November – March. The tree should be mulched using chipped wood to retain moisture and suppress weeds. Watering should be undertaken in prolonged dry spells, taking care not to water-log. The tree will be staked and supported using a double stake support system similar to the specification below.

All trees should be sourced from a reputable supplier with relevant bio security systems for disease and quality.

Planting Conditions

Deciduous trees and shrubs: Plant during the season November - March. Container grown material may be planted outside the planting season and when the soil is in a friable

condition, but only with provision for supplementary watering. Conifers and evergreens may be planted September/October or April/May. Carry out preparation and planting while soil and weather conditions are suitable. Do not plant in periods of wet weather when working the soil would result in a loss of structure, or during periods of heavy frost or strong winds.

Watering

Trees should be watered prior to planting and backfilled planting pits watered to full depth of topsoil after planting. Apply evenly and without damaging or displacing plants or soil. Water as necessary to ensure establishment and continued thriving of planting.

Materials

The backfill medium should be as close as possible in texture and structure to the soil excavated from the tree pit. By preference soils excavated from the tree pit should be used as backfill, replaced to replicate the natural soil profile. If soil analysis indicated that modifications to the soil are necessary, soil ameliorants may be used sparingly. Tree planting compost should be entirely free of peat; proprietary products based on composted straw, manure or coir are acceptable, but products based on wood chips or bark should not be used. Recycled compost material must comply with BS PAS100.

Mulch

A 50mm - 100mm depth layer of Medium Grade bark mulch is to be applied to the surface of the weed free tree pit after planting and watering. Bark mulch to be free of pests, disease, fungus and weeds.

Tree Shelters

Where there is a risk of rabbit, hare or deer damage trees should be provided with an individual guard or tree shelter to a height appropriate for the

protection required.

Planting Pits

Tree pit sizes should be at least 150mm wider and approximately the same depth as the tree root system when fully spread. Where space permits the

planting pit should splay out towards the top to maximise potential development of the rooting zone in the top 200-300mm of the tree pit. The base of the tree pit should be left undisturbed unless drainage problems are apparent or soil smearing or pans are evident. Break up pans if present, loosen base of pit if required. Tree pit sizes may need to be increased if poor conditions are encountered.

Roughen any smooth sides to pits. Soils excavated from planting pits separated as subsoil and topsoil should be used for backfill, unless unsuitable

due to contaminants. Backfill should as far as practicable replicate the existing soil profile, though topsoil depth should be increased to 200mm - 300mm if existing topsoil is shallower. Where soils have high clay or silt content addition of sand in the lower layers of the backfill will help to improve drainage.

Slight mounding of the base of the tree pit under bare root trees provides support against shrinkage and ensures correct planting depth, but soils at the base of the pit should not be compacted or impede drainage. Spread friable mixed topsoil/compost

backfill over the roots in successive layers, working plant up and down between each layer to ensure a distribution of soil between all roots and an intimate contact between roots and soil particles. Firm the soil by treading with the heel and add more soil if necessary to bring the surface level to that of adjacent areas and also to the mark on the plant stem which indicates the nursery planted level. Water, and apply mulch after planting.

Container grown and root balled stock

Excavate topsoil to a sufficient depth to accommodate the container/root ball and a minimum of 300mm wider. Install a proprietary irrigation pipe system such as RootRain or similar, to facilitate watering where soil resource and natural water availability is limited.

Tree Support

Use softwood timber stakes unless underground methods are desirable due to the nature of the environment. Stakes are to be hammered into the ground before the tree is positioned in the pit.

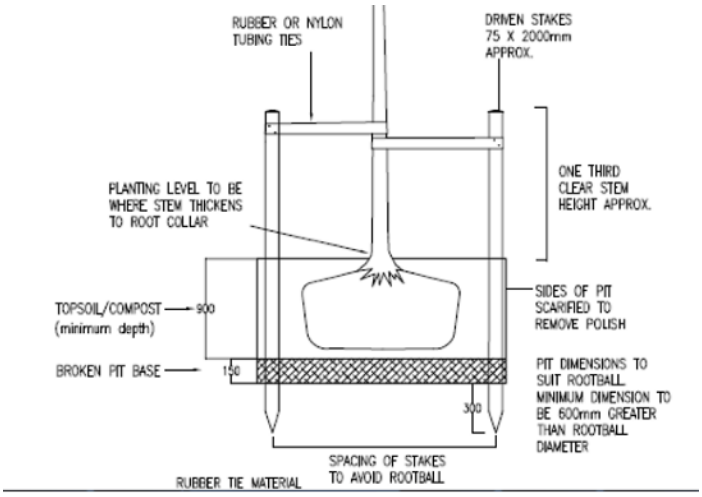
Support with one tree stake. The overall length of the stake shall be sufficient to ensure that they are firm when driven into the soil and that the top of the stake extends above ground level to approximately one third of the tree's

height. Stakes should be whole sections of softwood timber 50 mm. to 75 mm. top diameter, peeled and pressure treated in accordance with BS 4072.

Use ties with a spacer and of a type that can be adjusted as the tree grows.

Position one tree tie approximately 50mm from the top of the stake to hold the tree, ensuring that tree and stake do not touch in any place. Container grown and rootballed stock (Selected Standard Heavy standard trees)

Support with two tree stakes and a cross spar. The overall length of the stakes shall be sufficient to ensure that they are firm when driven into the soil and that the top of the stake extends above ground level to approximately one third of the tree's height. Stakes shall be whole sections of softwood timber of 75 mm top diameter. Drive stakes into the tree pit before positioning the tree. Fix a 100mm x 30mm section cross to the posts with galvanised nails. The tree tie should utilise a rubber collar to ensure that tree and stake do not touch in any place. All timber shall be peeled and pressure treated in accordance with BS 4072.



Tree maintenance

A formal assessment of young tree health and development will be carried out annually. This assessment will include foliar appearance (i.e. lack of leaf chlorosis and/or necrosis), leaf size and leaf canopy density, extension growth and incremental girth development. Continual assessment on an ad hoc basis will be carried out throughout the year, to inform maintenance requirements.

A 3-year aftercare period is required, during which time plants shall be maintained regularly to ensure establishment. Plant condition shall be assessed annually and any plants that die or are badly misshapen by dieback, disease or damage shall be replaced at the end of each growing season (during the planting season) in the year the fault was identified. Replacement stock shall be of the same size and species as that originally specified.

Monthly maintenance visits through the growing season will include:

(a) WEEDING
Maintain an area of clean ground 1 metre diameter around each tree.

(b) STAKES, TREES AND TIES
All stakes and ties should be checked at least annually to ensure that the root system remains stable and firm in the ground, and that ties are still effective and not causing any damage to the tree. Any stakes and ties that are found to be not fit for purpose, should be adjusted, replaced or removed.

All stakes and ties should be removed as soon as the developing root system is strong enough to support the tree.

NOTE Two full growing seasons are usually long enough for this to occur.

(c) PRUNING
Remove all dead wood and diseased tissue from all planted material at the end of each growing season, and all stem growths from standard trees immediately before the completion of the maintenance period. Prune tree crowns if necessary to encourage development of good shape.

(d) MULCH

Mulch should be maintained at a depth of 50mm and kept weed free for a five year period.

(e) WATERING

At times of prolonged dry spells (less than 30mm rain within any 4 week period) the trees should be watered. Sufficient water should be used to soak the soil but not flood or create puddling. This operation should continue twice per week if conditions persist.

If within a period of 5 years from the date of planting of any tree that tree, or any tree planted in replacement for it, is removed, uprooted, destroyed or dies, another tree of the same species and size originally planted will be planted at the same place in the next planting season/within one year of the original tree's demise unless the local planning authority gives its written consent to any variations.

8. Time Table & Supervision & Reporting

The Client, Site manager and Arboriculturalist will meet on site before any development activity begins to confirm the protection measures agreed and employed are functional and achieving their purpose.

The Arboriculturalist is to make site visits of not more that 28 days. This may be more frequent at times when operations are more specifically tree related, such as ground preparation, foundation works and close proximity working to stems and limbs.

Time Table
Pre-commencement meeting prior to construction works to discuss the tree protection measures.
Installation of tree protection measures (barriers / ground protection / special surfaces
Tree protection measures to be signed off by either the LPA Arboricultural Officer and Arboriculturalist.
Installation of access routes, compounds and site office
Main construction and hard landscaping works
Inspection by the LPA Arboriculturalist or appointed Arboriculturalist to agree any issues raised if necessary
Aftercare & Monitoring

The Arboriculturalist has responsibility to liaise with the LPA's Arboriculturalist and agree any changes or revisions that may be necessary, before they are implemented. Any changes to the agreed protection measures or procedures are to be agreed in writing by the LPA, recorded and circulated to all parties as an addendum to this method statement.

All site visits, including spot checks will be recorded in writing, noting position and condition of protection measures, any potentially damaging work practices and damage to the trees above and below ground. Photos should be included with the notes and passed to the client and the LPA within 5 working days of the visit.

Below is the supervision and monitoring schedule. Written logs will be sent to the LPA recording each visit within 5 days of each visit.

Description	Stage	Frequency	Reporting	Action
Pre-commencement meeting with relevant parties	Prior to any construction phase	1 visit	Visit Log (written)	Amendments to tree protection if required in consultation with LPA
Implementation of tree protection measures	Prior to any construction phase	1 visit	Visit Log (written)	Ensure standards against Tree Protection Plan
Main construction phase	Post hole excavation	1 visit	Visit Log (written)	Ensure protection measures and report any damage
Emergency call out	All phases	As required	Visit Log (written) & report to LPA	Deal with emergency tree damage/ contravention of Arboricultural Method Statement
Site 'sign off' removal of protection measures	Construction completion	1 visit	Visit Log (written)	Sign off Tree protection measures
Soft landscaping	Soft landscaping	1 visit during planting	Visit Log (written)	Ensure standards, report issues

9. Contingency Plans

In the event of unforeseen incidents occurring, that may adversely affect or threaten the welfare or security of the tree, the resident Site Agent/Manager shall inform the Arboricultural Consultant at the earliest opportunity and not more than one working day following the incident.

The Arboricultural Consultant will visit the site to inspect and assess the circumstances and make any appropriate recommendations The Local Planning Authority Tree Officer will be informed by the Arboricultural Consultant of such incidents and recommendations will be submitted for approval by the Local Planning Authority, initially verbally, and then in writing

A record of any emergency incidents and works shall be maintained by the Arboricultural Consultant

Incidents which may merit such contingency plans include

- Accidental / unauthorised damage to the limbs, roots or trunk of trees
- The spillage of chemicals within or adjacent to a Root Protection Area
- The discharge of toxins / waste within or adjacent to a Root Protection Area
- The un-scheduled access over the RPA's (post break up of existing surface)

Incidents and breaches of the agreed protection measures will result in a stopping of the operation, review and remediation where necessary. In some extreme cases the whole site may be closed and re-assessed.

10. Aftercare & Monitoring

Health, vigour and future development of the root systems, where possible should be encouraged, below are recommendations for maintaining the roots ability to breath, take up water and nutrients and expand if needed.

- Tree roots should be undisturbed in the existing environment
- Avoiding and alleviating compaction is highly beneficial
- A qualified Arboriculturalist should visit the site post development and undertake a health & safety assessment of the retained and newly planted trees to determine any issues arising and to recommend an adjustment or any additional measures he deems suitable to maintain the health a viability of the trees.

11. References

British Standards: 5837: 2012 Trees in relation to design, demolition and construction.

British Standards: 8545: 2014 Trees from nursery to independence in the landscape

British Standards: 3998:2010 Tree work – Recommendations

Tree Preservation Orders - A Guide to Good Practice·

APN 1 Driveways close to trees

The body language of trees - Claus Mattheck and Helge Breloer – FC Publication ISBN 0-11-753067-0

Arboriculture research and Information note 12 ‘Tree Root Systems’.

12. Key to Tree Protection Plan.

Trees to be retained – Green, Blue, Grey

Trees to be removed – Red

Root protection areas – Magenta

Contractors access and materials storage - Blue

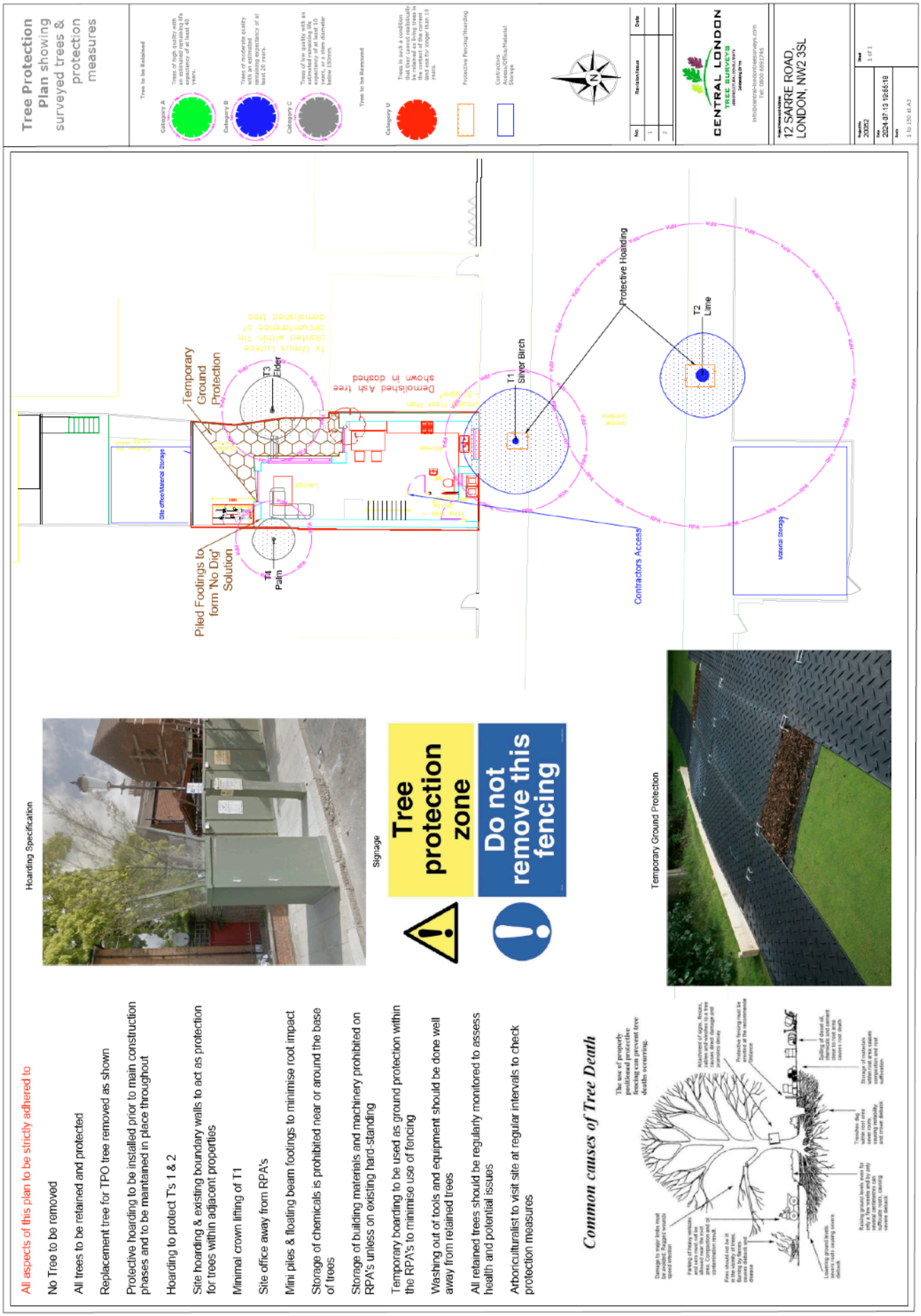
Protective Hoarding - Orange

Temporary ground protection - Brown

PDF plans within this A4 report may not be to scale and should only be used for reference within the report. Scaled drawings should be taken from the original AutoCad plans.

13. Tree Protection Plan

Plan below not to scale as PDF. Please refer to original drawing for scaling.



Appendix 1. List of Tree Names

Ash	*Fraxinus excelsior*
Aspen	*Populus tremula*
Atlas cedar	*Cedrus atlantica*
Austrian pine	*Pinus nigra*
Bay willow	*Salix pentandra*
Beech	*Fagus sylvatica*
Bird cherry	*Prunus padus*
Black cottonwood	*Populus trichocarpa*
Black poplar	*Populus nigra*
Black walnut	*Juglans nigra*
Box	*Buxus sempervirens*
Caucasian fir	*Abies nordmanniana*
Cedar of Lebanon	*Cedrus libani*
Coast redwood	*Sequoia sempervirens*
Common alder	*Alnus glutinosa*
Common juniper	*Juniperus communis*
Common lime	*Tilia x vulgaris*
Common silver fir	*Abies alba*
Common walnut	*Juglans regia*
Corsican pine	*Pinus nigra*
Crab apple	*Malus sylvestris*
Crack willow	*Salix fragilis*
Cricket-bat willow	*Salix alba*, var *caerulea*
Deodar cedar	*Cedrus deodara*
Douglas fir	*Pseudotsuga menziesii*
Downy birch	*Betula pubescens*
English elm	*Ulmus procera*
Eucalypts	*Eucalyptus* species
European larch	*Larix decidua*
Fig	*Ficus carica*
Field maple	*Acer campestre*
Giant fir	*Abies grandis*
Grey alder	*Alnus glutinosa*
Grey poplar	*Populus x canescens*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Holly	*Ilex aquifolium*
Holm oak	*Quercus ilex*
Honey Locust	*Gleditsia triacanthos*
Hornbeam	*Carpinus betulus*
Horse chestnut	*Aesculus hippocastanum*
Italian alder	*Alnus cordata*
Japanese larch	*Larix kaempferi*
Japanese zelkova	*Zelkova serrata*
Large-leaved lime	*Tilia platyphyllos*
Lawson cypress	*Chamaecyparis lawsoniana*
Lodgepole pine	*Pinus contorta*
Lombardy poplar	*Populus nigra* var. *italica*
London plane	*Platanus x hispanica*
Maritime pine	*Pinus pinaster*
Midland thorn	*Crataegus laevigata*
Monkey puzzle	*Araucaria araucana*
Monterey cypress	*Cupressus macrocarpa*
Monterey pine	*Pinus radiata*
Noble fir	*Abies procera*
Norway maple	*Acer platanoides*
Norway spruce	*Picea abies*
Oriental plane	*Platanus orientalis*
Pedunculate oak	*Quercus robur*
Red alder	*Alnus rubra*
Red oak	*Quercus rubra*
Robusta poplar	*Populus x robusta*
Rowan	*Sorbus aucuparia*
Sallow (Goat willow)	*Salix caprea*
Scots pine	*Pinus sylvestris*
Serotina poplar	*Populus serotina*
Sessile oak	*Quercus petraea*
Silver birch	*Betula pendula*
Sitka spruce	*Picea sitchensis*
Small-leaved lime	*Tilia cordata*
Smooth-leaved elm	*Ulmus carpinifolia*
Snakebark Maple	*Acer capillipes*
Southern beech	*Nothofagus antarctica*
Swamp cypress	*Taxodium distichum*
Swedish whitebeam	*Sorbus intermedia*
Sweet chestnut	*Castanea sativa*
Sycamore	*Acer pseudoplatanus*
Tree of Heaven	Ailanthus altissima
Turkey oak	*Quercus cerris*
Wellingtonia	*Sequoiadendron giganteum*
Western hemlock	*Tsuga heterophylla*
Western red cedar	*Thuja plicata*
White poplar	*Populus alba*
White willow	*Salix alba*
Whitebeam	*Sorbus aria*
Wild cherry (Gean)	*Prunus avium*
Wild service tree	*Sorbus torminalis*
Wych elm	*Ulmus glabra*
Yew	*Taxus baccata*

Appendix 2. Photographs

T2 Lime & adjacent parking

T1 Silver Birch

T's 3 & 4

Appendix 3. Caveats

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Specific - Trees

All tree inspections, unless specified, have been undertaken from ground level and using non-invasive techniques. Comments contained within the report on the condition and risk associated with any tree relate to the condition of the tree at the date and time of survey. Please note that the condition of trees is subject to change. This change may occur, but is not limited to biological and non-biological factors as well as mechanical/ physical changes to conditions in the proximity of the tree. Trees should be inspected at intervals relative to identified site risks and in accordance with relevant HSE and Central Government guidance. Central London Tree Surveys can provide further information on this matter if required.

Please note no statutory control checks have been undertaken (unless specified). Where tree surgery works have been identified these works are based on the assumption that planning is approved, no tree works should be undertaken prior to determination of this application without up to date confirmation of the Tree Preservation Order/Conservation Area Status of the vegetation. All works should be undertaken in accordance with the appropriate Duty of Care. This should include, for example, site specific risk assessments and due diligence inspections for the presence of protected species.

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