# BS 5837:2012 Tree Survey, Arboricultural Method Statement and Tree Protection Plan

**At**

**56 Madrid Road, London**

**for**

**Mr& Mrs Cornish**

**November 2021**

**Advanced Tree Services**
**The Depot**
**Pixham Lane**
**Dorking**
**Surrey RH4 1PH**

**Phone: 01483 210066**
**E-mail: info@atstrees.co.uk**

## Introduction

1. I have been instructed by Mr & Mrs Cornish to produce an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) for 56 Madrid Road, London.

2. The purpose of the Method Statement is to demonstrate how works will be undertaken at the property to avoid unacceptable arboricultural impact and provide an adequate level of protection for those trees shown to be retained. This is shown diagrammatically on the TPP, indicating the positions of protective fences delineating the Construction Exclusion Zones (CEZ).

3. I undertook the original BS 5837:2012 tree survey on the 24th May 2021.

## Proposed Development

4. Permission was granted by the London Borough of Richmond upon Thames on the 8th September 2021 for a garden outbuilding for summer house/studio/office/gymnasium (*21/2583/HOT*).

## Arboricultural Method Statement (AMS)

### Pre-development works

5. The following tree works are required,

    - T2, T3, T4, T5 and T7 – Fell and grind
    - T6 – remove lowest limb on south side back to parent branch and reduce canopy on south side back by 1.5m

6. It will be the responsibility of the tree contractor to ensure that all the necessary consents have been sought from the local authority.

7. Where stumps are to be removed within the RPA for any retained tree, grinding will be kept to a maximum depth of 100mm.

### Timing of operations

8. A logical sequence of events is to be observed as follows;

    - Installation of protective measures
    - General construction phase
    - Remove protective fences

9. No tree pruning works are to take place in early spring (bud break) or autumn (leaf fall) so as to minimise stress levels on the trees in question.

## Pre-Commencement Site Meeting

10. A pre-commencement meeting will take place on site, with the appointed arboricultural consultant, the tree contractor, the site manager and the local authority arboricultural officer in attendance. The purpose of this meeting is to ensure that everyone fully understands the implications of the Arboricultural Method Statement and to agree on finer points of detail prior to any works commencing.

## Site Monitoring

11. All site monitoring will be undertaken by a suitably qualified and experienced Arboriculturalist. Key operational points will be agreed in writing with the client and LPA prior to commencement of works. Typically, these will include;

    - Installation of protective fences
    - General construction works
    - Removal of protective fences
    - Landscaping within RPA's
    - Site completion

12. Monitoring will be undertaken at intervals requested by the LPA. A checklist will be completed, and a copy will be retained by the Site Manager with a copy sent to the LPA within 5 working days.

13. Any defects requiring attention will be notified to the Site Manager and Client (copied to the LPA by e-mail). Any emergencies will be notified to the Client and LPA by phone.

14. Day to day site supervision will be the responsibility of the Site Manager. They will be aware of the tree protection measures and significant steps in the development process which have arboricultural implications. To ensure compliance the Site Manager will undertake a site briefing with the retained Arboriculturalist before the commencement of works.

15. A final sign off visit will be carried out at the end of the development and a formal letter sent both to the client and the LPA to indicate the end of the monitoring period.

## Where responsibilities lie

16. It will be the responsibility of the Site Manager to ensure that the AMS is adhered to at all times by site operatives, sub contractors and hauliers during the construction process.

17. Should any problems arise the Site Manager will immediately inform the arboricultural consultant who will assess the situation and make recommendations accordingly. If modifications to the AMS are proposed the arboricultural consultant will immediately advise the local authority arboricultural officer.

## Erection and Location of Protective Fencing

18. All protective fences are to be erected, in accordance with the Tree Protection Plan (TPP).

19. Given the nature of the build and the limited space within the garden, full protective fencing as stipulated in BS 5837:2012 (figure 2) would be superfluous. Consequently, T1 shall be cordoned off using orange hazard fencing mounted on road pins or wooden stakes (in orange on the TPP).

20. All site operatives will be made fully aware of the function of the protective fencing and its importance in the construction process as part of their site induction. All weather notices will be placed on all the protective fencing stating words such as – “Construction Exclusion Zone – Keep Out”.

21. The Construction Exclusion Zone (CEZ) shall remain sacrosanct throughout the entire development process. No access will be permitted within the fenced areas. Ground levels will not be changed within them and existing vegetation and topsoil will remain undisturbed.

## Surplus Arisings

22. Skips will not be placed within any CEZ or adjacent to any protective fencing and no demolished material will be stockpiled against any protective fencing.

23. No fires shall be lit on site.

## Foundation Excavation

24. In order to safeguard the Cherry tree next door (T8), a trial hole shall be dug at the location of the corner of the building closest to this tree. Hand dug to a minimum depth of 750mm, this will reveal if any roots from T8 were present and if so their size. Generally, roots smaller than 25mm can be cut without undue harm to the tree but specialist advice should be sought before any root pruning is carried out.

25. If no roots are discovered, then traditional foundations could be used. If significant roots are found, then consideration must be given to a suitable engineering solution to minimise the impact on T8. This may be a pile, cantilever foundation design or bridging roots.

26. This methodology will also apply to the elevation closest to T6.

## Service runs/installation

27. If existing utilities are not to be used, the routing of all the drainage and services needs to be considered from an early stage. This will ensure that any encroachment into the CEZ is avoided or kept to an absolute minimum. If the CEZ cannot be avoided then it will be a contractual requirement that all excavations are undertaken by hand and in strict accordance with the 'National Joint Utility Guidelines (NJUG) Volume 4 – Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to trees' and BS 5837 section 7.7.

## Site Deliveries / Storage space

28. All site deliveries are to be made via the designated site entrance and placed outside of the CEZ. Consideration should be given to staggered deliveries to guard against stockpiling on site and the temptation to move protective fences to gain more room.

29. No building materials are to be stored against any protective fences so as to avoid the temptation of moving the fences.

## Location of huts, toilets

30. No site huts or toilets will be placed within any CEZ.

## Potential effect of slopes

31. Storage and/or mixing of materials which have the potential to spill and contaminate the soil (such as concrete and fuel) will not take place within 10m of any tree shown to be retained.

## Use of Herbicides

32. It is not proposed to use any herbicides on the site.

## Compaction avoidance and mitigation

33. As mentioned previously, all CEZ's are to be clearly marked on site and will be avoided. If for any reason the CEZ is compromised, it will be the duty of the site supervisor to contact the arboricultural consultant immediately. Remedial measures will be discussed, and an agreed course of action implemented in consultation with the local authority arboricultural officer. This may involve the use of soil aeration techniques such as an airspade. Action will be dictated by severity and extent of compaction.

## Use of sub-contractors

34. Any sub-contractors will be made fully aware of the AMS and the importance of the CEZ as a part of their site induction by the site supervisor.

## Fence removal

35. The protective measures shall be the last item removed from site prior to the implementation of the soft landscaping.

## Mitigation planting

36. A standard tree (8-10cm girth) shall be planted in the rear garden in the position shown on the TPP. I recommend the following species.

    - Amelanchier lamarckii

37. Planting should take place during the season 1st November to 31st March. It is not advisable to plant when there are heavy frosts, very cold drying winds, snowy or waterlogged conditions.

38. The base of the planting pit is to be excavated to the horizontal and forked to a further depth of 100mm to provide aeration and drainage. The sides of the pit are to be well forked for aeration.

39. A low tree stake is to be placed off-centre on the windward side of the planting pit and driven into the base of the pit for a further 400mm ensuring it is vertical and firm. The tree is to be placed in the pit and any root wrapping material removed. Roots are to be spread evenly. A distance of 50mm is to separate the stem of the tree and the stake.

40. The planting medium is to be backfilled, ensuring that the soil settles around the roots with no cavities (the plant can be gently moved up and down to allow the soil to settle). The backfill shall then be firmed around the plant by gently treading and consolidating every 100mm. The top level of the backfill should be slightly lower than the surrounding soil but compatible with the nursery depth on the plant (allowing for settlement) to facilitate watering.

41. One tree tie as specified shall be attached 60mm from the top of the stake, secured around the tree and nailed into the stake.

## Final Inspection

42. Prior to handover, following the completion of the development an Arboriculturalist will inspect the trees on site to check for any indications of accidental damage or change in the condition of any tree.

43. A schedule of remedial works will be drawn up to ensure that there are no outstanding tree work issues prior to handover.

## Remedial tree works

44. Any tree works must be undertaken in accordance with BS 3998 – 2010 Tree Work – Recommendations and only once the necessary procedure has been undertaken with the Local Authority.

45. Under the Wildlife and Countryside Act 1981(Section 1) it is an offence to take damage or destroy the nest of any wild bird while that nest is in use or being built. Planning consent for a development does not provide a defence against prosecution under this act. Trees and scrub are likely to contain nesting birds between 1 March and 31 July. In order not to contravene the Wildlife and Countryside Act 1981 the timing of the tree surgery works should avoid the bird nesting season (March – May).

46. Under the Wildlife & Countryside Act 1981, The Countryside Rights of Way Act 2000 and The Conservation Regulations 1994 (known as the Habitats Directive) it is an offence to:

    - Intentionally kill, injure or take a bat.
    - Possess or control a live or dead bat, any part of a bat, or anything derived from a bat.
    - Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection.
    - Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

47. If a bat roost is suspected please contact the Bat Conservation Trust on 0845 1300 228 or at www.bats.org.uk.

## Conclusion

48. Exploratory hand digging shall determine the foundation design to minimise the impact on T6 and T8.

49. A new tree is shown to be planted along the northern boundary.

50. If the recommendations listed in the AMS and shown on the TPP are adhered to, I see no reason why this development should not be able to proceed without undue pressure on the existing tree cover.

Yours truly,

Dominic Blake PD Arb (RFS) MArbor A
CEO
November 2021

## Appendices

a) Survey schedule
b) Tree Protection Plan (1:150)

*References*

- *BS 5837:2012 – Trees in relation to design, demolition and construction – Recommendations*
- *BS 3998:2010 – Tree Works - Recommendations*
- *National Joint Utilities Group (NJUG) Volume 4*

# APPENDIX A

# BS 5837: 2012
# TREE SURVEY

## Advanced Tree Services

## Arboricultural Survey – Definitions

| | |
|---|---|
| **Hgt** | Tree Height (height in metres, measured with a clinometer) |
| **SD** | Stem diameter at 1.5 metres above ground level (in millimetres) |
| **N-E-S-W** | Branch spread taken at four compass points (in metres) |
| **Crown clearance** | Height of crown clearance above adjacent ground level (in metres) |
| **Life Stage** | **Y**- Young **SM** – Middle Aged **M** – Mature **OM** – Over Mature **V** – Veteran |
| **P.Cond** | Physiological condition **G** – Good **F** – Fair **P** – Poor **D** - Dead |
| **S.Cond** | Structural condition - General comment on safety of tree |
| **Radius** | Root Protection radius (m) |
| **RPA** | Root protection area ($m^2$) |
| **ERC** | Estimated remaining contribution in years |
| **Category grading** | Trees are categorized in accordance with the cascade chart given as Table 1 in B.S.5837:2012.<br>**A -** High quality & value (40 yrs+)<br>**B -** Moderate quality & value (20 yrs+)<br>**C -** Low quality & value (10 yrs+)<br>**U** – Those trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years |

*(NB. Any value suffixed with'#' is an estimated value)*

# ADVANCED TREE SERVICES

## Table 2 - BS 5837:2012 - Trees in Relation to design, demolition and construction - Recommendations - Cascade chart for tree quality assessment

| **TREES FOR REMOVAL** | | | | |
|---|---|---|---|---|
| Category and definition | Criteria | | | Identification on plan |
| **Category U**<br><br>Those 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 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).<br><br>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.<br>NOTE:- Category U trees can have existing or potential conservation value which it might be desirable to preserve. | | | **RED** |
| **TREES TO BE CONSIDERED FOR RETENTION** | | | | |
| | Criteria - Subcategories | | | Identification on plan |
| Category and definition | **1 Mainly Arboricultural values** | **2 Mainly landscape values** | **3 Mainly cultural values, including conservation** | |
| **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 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) | **GREEN** |
| **Category B** | | | | |
| **Trees of moderate quality** with an estimated 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 remediable defects including unsympathetic past management and storm damage), such that 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 occuring 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 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 lanscpe benefits | Trees with no material conservation or other cultural value | **GREY** |

Site: 56 Madrid Road
Client: Mr Mrs Cornish
Date of Survey: 24/05/2021
Tagged: No
Surveyor: DB
Weather: Clear, dry.

**ADVANCED TREE SERVICES**
**TREE SURVEY SCHEDULE**

| Tree ID | Species | Height (m) | SD (mm) | Crown Spread (N) | Crown Spread (E) | Crown Spread (S) | Crown Spread (W) | Age Class | P.Cond | Structural Condition | Radius | RPA | Sq.Sides | ERC | Category Grading | Category Criteria | Works in the interests of Health and Safety |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T1 | Pittosporum tenuifolium | 6 | 310 | 2.5 | 2.5 | 3 | 2.5 | Mature | **Good** | Good. Lightly crown reduced in the past | 4 | 43 | 7 | 10 to 20 yrs | A | 1 | No works required |
| T2 | Malus spp. | 2 | 40 | 0.5 | 0.5 | 0.5 | 0.5 | Mature | **Good** | Good. No obvious indications of weakness or decay | 0 | 1 | 1 | 10 to 20 yrs | A | 1 | No works required |
| T3 | Malus spp. | 2 | 80 | 0.5 | 0.5 | 0.5 | 0.5 | Mature | **Good** | Fair. Heavily pruned | 1 | 3 | 2 | 10 to 20 yrs | B | 1 | No works required |
| T4 | Malus spp. | 2 | 120 | 0.5 | 0.5 | 0.5 | 0.5 | Mature | **Good** | Fair. Heavily pruned | 1 | 7 | 3 | 10 to 20 yrs | B | 1 | No works required |
| T5 | Garrya elliptica | 4.5 | 130 | 1 | 1 | 1 | 2 | Semi-Mature | **Good** | Good. No obvious indications of weakness or decay | 2 | 8 | 3 | 10 to 20 yrs | A | 1 | No works required |
| T6 | Parrotia persica | 5 | 220 | 2 | 2 | 2 | 2.5 | Mature | **Good** | Good. No obvious indications of weakness or decay | 3 | 22 | 5 | 10 to 20 yrs | A | 1 | No works required |
| T7 | Pyrus salicifolia | 3 | 120 | 1.5 | 1.5 | 1.5 | 1.5 | Semi- Mature | **Good** | Good. No obvious indications of weakness or decay | 1 | 7 | 3 | 10 to 20 yrs | A | 1 | No works required |
| T8 | Prunus avium | 5 | 310 | 2.5 | 2.5 | 3 | 3 | Mature | **Good** | Fair. Heavily reduced in past. Unable to inspect main stem and base | 4 | 43 | 7 | 10 to 20 yrs | B | 1 | No works required |
| T9 | Liriodendron tulipifera Aureomarginata | 11 | 230 | 4 | 3.5 | 3.5 | 3.5 | Semi-mature | **Good** | Good. No obvious indications of weakness or decay. Unable to view base | 3 | 24 | 5 | 10 to 20 yrs | A | 1 | No works required |

Tree in neighbouring property

# APPENDIX B

# TREE PROTECTION PLAN

T1 - Pittosporum
T2 - Malus - remove
T3 - Malus - remove
T4 - Malus - remove
T5 - Garrya - remove
T6 - Parrotia
T7 - Pyrus - remove
T8 - Prunus
T9 - Liriodendron

Boundary fence to remain in situ during construction

New Tree
Amelanchier lamarckii
8-10cm

T1

3.5m

T9

T2

T3

T4

Lowest limb to south to be removed back to parent branch. Reduce remaining canopy on south side by 1.5m

T6

T7

T5

T8

Site access

54

Boundary fence to remain in situ during construction

Location of garden room

**Advanced Tree Services**

The Depot, Pixham Lane, Dorking RH4 1PH

01483 210066

## Tree Protection Plan

| SCALE : | DATE : |
|---|---|
| 1 : 150 @ A3 | 08/11/2021 |

MAP FILENAME :
56 Madrid Road TPP.mpd

N

Key
- New tree to be planted
- Orange hazard fencing