Landmark Trees

ARBORICULTURAL METHOD STATEMENT

Land at 22 Frognal Way

London

NW3 5EX

REPORT PREPARED FOR:

KSR Architects LLP

14 Greenland Street

London

NW1 0ND

REPORT PREPARED BY:

Adam Hollis

MSc ARB MICFor FArbor A MRICS C Env

Ref: KSR/22FW/AMS/02a

Date: 4th August 2020

Contents

Appendices

1.0 Introduction

1.1 Purpose & Use of the Method Statement

1.1.1 This method statement has been prepared for KSR Architects, in support of a planning application made to the London Borough of Camden regarding development at 22 Frognal Way, London NW3 5EX.

1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.

1.1.3 Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

1.2 Terms of Reference

1.2.1 We (LT) are instructed by the client, KSR Architects to prepare a method statement for proposed development based on the above planning application with reference to BS 5837:2012 Trees in Relation to Design, Demolition and Construction.

1.2.2 For this purpose, the client has supplied us with a site survey plan (15529 A1 (LAND SURVEY)), and the proposed drawings (FGWO-P-(O)-100 rev2 – Proposed Plans). We are also reliant upon our own impact assessment report KSR/22FW/AIA/01 and plan overlays of tree constraints contained therein.

1.3 Development Proposals & Potential Impacts

1.3.1 The principal proposals are for: *Removal of existing boundary wall and external facade of linked outbuilding and its reinstatement to match existing including formation of new gate (Use Class C3).*

1.4 Sequence of Works

1.4.1 It is anticipated that the works considered herein will be carried out during the landscape phase of the wider development of the site consented under Planning Inspectorate appeal decision APP/X5210/W/16/3150327. As such, this document complements rather than supersedes the Method Statement KSR/22FW/AMS/01g which details tree protection during that development.

1.4.2 The sequence of works will be as follows:

- initial tree works – felling, stump grinding and pruning for working clearances
- installation of Tree Protection Barrier (TPB) & ground protection
- demolition of existing building & wall
- installation of underground services
- main construction
- removal of TPB
- soft landscaping

These works and their arboricultural implications are outlined in sequence below

1.5 Site Supervision

1.5.1 On this site, a site manager will be nominated to be responsible for all arboricultural matters on site. A pre-commencement site briefing/meeting between the site manager and arboricultural consultant will be held (see Table 1 below). The site manager's details will be issued to the London Borough of Camden in the minutes / site monitoring report for this meeting. During this meeting all the tree protection methods below will be studied and familiarization with requirements of this AMS. The site manager will also:

- be present on site for the majority of the time;
- have the authority to stop any work that is causing, or has the potential to cause harm to any tree;
- be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities;
- make immediate contact with the Arboricultural consultant in the event of any tree related problems occurring, whether actual or potential, in accordance with a tree protection protocol (see section 1.6 below).

1.5.2 At this stage, the nominated Key Personnel are as follows:

Adam Hollis Tel: 0207 851 4544
Arboricultural Consultant
Landmark Trees
info@landmarktrees.co.uk

1.6 Site Monitoring

1.6.1 Landmark Trees are to be retained as Arboricultural Consultants responsible for site monitoring for the duration of the development. As noted above Adam Hollis MSc (Arb) is the key contact, with monitoring occasionally undertaken by James Bell Tech Cert. (subject to any new staff intake). Site supervision will be undertaken by a qualified and experienced arboriculturalist at pre-determined and agreed time intervals as indicated in Table 1 below. In addition to specific task supervision, general monitoring of protection measures will be undertaken at least once per month, coordinated where practical with visits detailed in Table 1.

1.6.2 Routine visits will generally be unannounced. However, the arboriculturalist will also visit subject to advance notification (2 weeks) and agreement to supervise any agreed works within the RPA, in accordance with table 1 below.

1.6.3 A tree protection protocol for contingencies will be integrated into the site induction process at a pre-commencement meeting involving the developer, the arboricultural consultant, the site manager and the Council tree officer as appropriate. The protocol will be that, in the event of any unplanned incursion / accident / spillage within the RPA, the site agent should notify (by telephone) the retained arboricultural consultant immediately. The consultant will provide advice and attend site as soon as possible. This may require the stoppage of all or part of the works in the vicinity of the tree. The consultant will notify the LPA Tree Officer of the nature and extent of damage, the mitigation strategy and likely prognosis. The contact details of the LPA Tree Officer are:

Nick Bell Tel: 0207 974 4444
Aboricultural Officer
LB Camden
nick.bell@camden.gov.uk

1.6.4 The site monitoring sheet in Appendix 3 will be used to provide photographic evidence, indicate the remedial action required and timescales for remediation completion. The consultant and officer will further liaise as necessary (perhaps meeting on site) until the officer is satisfied that protection measures are again satisfactory. The action in response to incidents will be commensurate with and appropriate to the nature of any such incident. Any breach of the stipulated timescale for remediation will trigger a further monitoring report.

1.6.5 Supervision will not require the arboriculturalist to be present throughout all operations to ensure tasks are carried out as per the approved methodology, but certainly, during the key elements of proposed (and any other unplanned) incursions into the protection areas (subject to LPA agreement and for whatever reasons) to ensure the arboricultural objectives were met. However, where tasks are ongoing, provided the arboriculturalist is satisfied, and after an appropriate briefing, the supervision may be reduced to telephone and email contact between the site manager and Arboricultural consultant.

1.6.6 The Local Authority will be accorded free access to the site subject to H&S requirements; as noted at 1.6.3, any problems will be reported directly to Arboricultural consultant, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure implementation. As noted in Table 1 below, a final sign-off visit will be carried out at the end of the development and a formal letter sent to both the client and the London Borough of Camden indicating an end to the monitoring period. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection.

1.6.7 Landmark Trees will be instructed to provide the above monitoring. In the absence of routine payment (as per our business terms), routine monitoring will cease (temporarily or permanently) and the London Borough of Camden will be informed of the cessation of monitoring. The client will also reserve the right to dismiss Landmark Trees and replace with another arborist, but must inform the London Borough of Camden.

Table 1: Site Monitoring Visits

Supervision Visit No:	Details	Lead in Time Required by LT	Action
Visit 1: Pre-Development Site Inspection (S.2.3 of AMS) To be repeated prior to Construction Phase	• To include Site Agent briefings (S.1.5) prior to both demo AND construction phases. • To confirm position of protective fencing and that it has been erected in accordance with AMS (S.2.2 and Tree Protection Plan in Appendix 4); • To check any pre-demolition/construction ground protection is in place. • To check any tree works have been undertaken in accordance with this AMS (S.2.1. and Appendix 1). • Determine if further tree work is required and seek required permission if necessary. • To check site facilities/access are in accordance with the AMS (S.3.3).	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days of site supervision visit (Site Monitoring Sheet in Appendix 3).
Visit 2: Demolition of existing building / wall	• Attend any demolition activities where supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification. • Date to be confirmed following formal project planning. • 2 weeks prior notice required.	Minimum 2 weeks	As per Visit 1
Visit 3: Installation of wall foundations within RPA (S3.4)	• Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification. • Date to be confirmed following formal project planning. • 2 weeks prior notice required.	Minimum 2 weeks	As per Visit 1
Ongoing Monitoring Visits	• Periodically during 12 months (or longer) of entire project and prior to construction phase. • Visits will be based on intensity of site operations, but at a minimum of monthly visits. • Attend site at least once per month to confirm protective measures are still in place / can be removed at appointed times. Ensure attendance is timed for any other key elements of proposed (and any other unplanned) incursions into the protection areas. • Pre-start landscape meeting with main contractor to confirm ongoing tree protection measures.	TBC as project develops	As per Visit 1
Final Site Visit - Completion of construction phase supervision visit (S.5)	After it has been confirmed that the construction phase is complete, allow removal of temporary protective fencing and ground protection. Specify any remedial work if necessary.	Minimum 2 weeks	As per Visit 1 and provide signed arboricultural checklist (see Appendix 3)

2.0 Pre- Development Site Preparation

2.1 Arboricultural Works

2.1.1 All works must be carried out by a competent arborist in accordance with BS 3998: 2010 and any other prevailing good professional practice including BS 8545:2014 Trees: from nursery to independence in the landscape. Recommendations.

2.1.2 Specific works recommended to facilitate development felling of T18. These specific works to facilitate development and any other husbandry works are listed in Appendix 1.

2.2 Installation of Tree Protection Barrier

2.2.1 The Root Protection Area (RPA) indicates the minimum 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 default position is for the RPA's to be fully fenced off to form the boundary of the Construction Exclusion Zone (CEZ), an area based on the RPA, from which access is prohibited for the duration of the project, including the storage of any works materials and equipment.

2.2.2 A Tree Protection Barrier [TPB] comprising netlon fencing should be erected to protect those trees immediately adjacent to the proposed works. The TPB's are to be erected before any work (other than tree surgery) commences on site, are to remain *'in situ'* undamaged for the duration of all work or each phase, and only to be removed once all work is completed. If any work is deemed necessary prior to the erection of fencing a Landmark Trees representative should be informed to enable their presence to oversee the work being carried out.

2.2.4 The location of the TPB's are shown in the Tree Protection Plan at Appendix 4.

2.3 Ground Protection

2.3.1 Extant areas of RPA that cannot be fenced off and therefore lie outside the CEZ must be protected with fit-for-purpose ground protection. The location and type of ground protection is shown in the Tree Protection Plans at Appendix 4. As per paragraph 2.2.3, this ground protection is to be installed before any work (other than tree surgery) commences on site, is to remain *'in situ'* undamaged for the duration of all work until the landscape phase and only to be removed once all construction work is completed.

3.0 Development Phase

3.1.1 The following general precautions will apply:

- No fires shall be made on any part of the site, or within 20m of any tree to be retained.
- No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.
- No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
- No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- No storage of materials shall be made within the protective fences.
- No breaching or moving of the protective hoarding without the approval of an arboriculturist.

3.1.2 The procedures for dealing with variations and incidents are detailed in S1.6.

3.2 Working within Root Protection Areas (RPA)

3.2.1 Although the default position is to exclude all construction activity from the RPA, this degree of protection is not entirely possible on the site: it is necessary to perform some works (in part) within the RPA i.e. demolition of existing building and wall and construction of their replacements.

3.2.2 All involved parties will need to be made aware of the deficiencies. In these instances, careful and supervised working, as described in sections, S. 3.6 (demolition) and S. 3.7 (construction) will be required.

3.3 Site Access, Accommodation & Storage

3.3.1 Site access will be as per the existing arrangement. Site accommodation and material storage will utilise the site interior / rear garden away from tree RPAs.

3.3.2 Delivery lorries will be excluded from RPA's by the nature of the site. Adequate allowance must be made for vehicle heights and ground clearance, where tree canopies overhang access routes. Any further pruning for working clearances must be discussed first with the arboriculturalist; once agreed in principle these works should be approved by the appropriate tree officer and approved in writing by the LPA.

3.4 Routing & Installation of Services

3.4.1 We have not at this time been supplied by the applicant with full service details, although understand existing services will be used if possible. If not, these matters will need to be resolved separately by variation of condition. This cannot be resolved herein as a generic item.

3.5 Changes in Grade

3.5.1 No changes in level are proposed within or adjacent to retained trees' RPAs.

3.6 Demolition Measures.

3.6.1 The above ground sections of wall within the RPAs of T13 and T15 will be removed by hand with the removed bricks stored outside the RPA of any retained tree until they are re-used.

3.6.2 The footings of the wall within the RPAs of T13 and T15 will first be broken up using hand held tools only before being carefully removed by hand. Spoil from this operation shall be stored outside the RPA of any retained tree.

3.6.3 Where scaffolding is to be erected within the RPA of T13, the proposed ground protection will be sufficient to prevent compaction of the soil.

3.6.4 Should levels of dust build-up on trees occur, it may be necessary to seek the advice of Landmark Trees on remedial measures, e.g. hose down the tree(s) immediately following any significant accumulation of dust.

3.7 Construction Measures

Detailed method statements and risk assessments will be obtained from all specialist subcontractors involved in the new build and these will be scrutinised by the site agent to ensure the AMS requirements have been considered therein.

3.7.1 The limits of the new wall's footing within RPAs will be manually pre-excavated to a min. 1m depth and root-pruned (as applicable) under arboricultural supervision. Should roots be encountered whose removal would jeopardise the health or stability of T13, they shall be retained, sleeved and have the retaining foundation cast around them. Sufficient allowance for future growth of any such roots will be provided. It is not anticipate that roots from T15 will be encountered but in the unlikely event that they are present, they will receive the same protection.

3.7.2 The remaining construction activities take place outside the RPA of all retained trees and specialist methods are therefore not required.

3.7.3 Where scaffolding is to be erected within the RPA of T13, the proposed ground protection will be sufficient to prevent compaction of the soil.

3.8 Removal of Ground Protection & Post Construction Landscaping & Treatment

3.8.1 The tree protection may be removed upon completion of the construction phase and any site machinery has been removed from the RPA.

3.8.2 The bay felled to facilitate construction of the wall will be replaced with a 5m tall common yew (*Taxus baccata*) planted in accordance with best practice and the provisions below. The location of the yew will be indicated on a landscaping plan.

3.8.3 New trees will be containerised (i.e. grown in a container for at least one season after being lifted), ideally in an air pot, and will have well-established radial root growth including a substantial amount of fibrous rooting within the container. There shall be no circling or girdling roots present.

3.8.4 The trees will be of the size specified, true to type and free from discernible pests and diseases. If formative pruning has been carried out, the wounds shall have healthy and continuous bark occlusions. In case of any doubt, the recommendations of BS8545: 2014 Trees: from nursery to independence in the landscape – Recommendations will be adhered to.

3.8.5 Before any landscaping works are carried out, there shall be a site meeting between (as a minimum) the retained arboriculturist and the landscaping manager to discuss tree protection measures.

3.8.6 All landscaping and associated ground works within RPA will be carried out manually and carefully with due regard for soil and root protection, avoiding changes of ground levels or deep digging. Mechanised cultivation must not be used within any RPA's. If existing soft vegetation is to be removed, this shall be done using hand tools only.

3.8.7 Individual planting pits shall be dug by hand for trees and shrubs, there shall be no trench planting.

3.8.8 The planting pits of trees shall be square and dug to a diameter at least 500mm greater than the diameter of the root ball. The pit shall be deep enough to accommodate the depth of the root ball to the root collar. Should the sides and bottom of the pit be smeared or compacted, they shall be loosened with a fork to facilitate root penetration.

3.8.9 Trees and shrubs shall be planted so that the root collar is level with the finished level of the surrounding soil.

3.8.10 Planting pits will be backfilled with the excavated soil following the removal of stones and any foreign objects. This backfilling will be carried out in stages of approximately 150mm depth to allow for light consolidation of the backfill throughout the depth of the planting pit. No air pockets shall be left within the pit.

3.8.11 Trees shall be secured in place by being tied to double stakes of pressure-treated, peeled timber. The ties used shall be biodegradable and will be located at a height of not more than one-third of the clear height of the stem.

3.8.12 After planting, all trees and shrubs shall be watered slowly under low pressure until the soil around the trunk and an area equivalent to a circle 1000mm in diameter around it is thoroughly moistened.

3.8.13 All newly planted trees and shrubs shall be watered at least once a fortnight between March and October. This frequency will be increased according to rainfall and temperature.

3.8.14 An area equivalent to a circle 1000mm in diameter around the stems of all newly planted trees shall be mulched with bark or well-rotted woodchip to a depth of 75mm. This mulch should not be laid in direct contact with tree stems. This mulched area shall be hand-weeded once every fortnight between March and October. Any mulch disturbed during this process will be replaced.

3.8.15 Tree stakes and ties will be removed within 18 months of planting.

4.0 Summary of Proposed Methods

4.1 Table of Impacts and Mitigation

4.1.1 The table below summarises the main areas where trees could become damaged by the proposed development and the methods that need to be adopted in order to prevent such damage:

Table 2: Summary of Proposed Methods

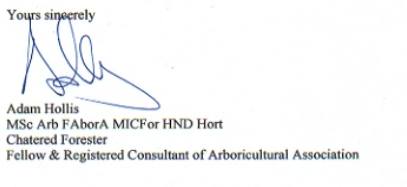
Impact	Mitigation	Reference	Trees Affected
General site access, material storage etc.	Ground protection to acceptable standards.	Paras 2.2.1 & 3.3.3 Tree Protection Plan in Appendix 4	All retained trees
Demolition of existing wall within RPA	Use of hand held tools only	Section 3.6	T13 & T15
Damage to roots caused by wall footing installation within RPA	Manual excavation of outer limits of footing within RPA to 1m depth with pre-emptive root pruning / sleeving of significant roots	Section 3.7	T13

5.0 Completion

5.1 Completion Meeting

5.1.1 Following completion of the works listed above, a Landmark Trees consultant will conduct a walkover survey of the trees to review any defects or signs of ill-health, and inform the local authority in a final report as per Table 1. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection. A separate LT post-development tree inspection is recommended to facilitate a constructive meeting.

Signed



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Adam Hollis MSc ARB MICFor FArbor A

4th August 2020

For and on behalf of ***Landmark Trees***

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APPENDIX 1: ARBORICULTURAL WORKS

Notes for Guidance:

1, 2, 3 - Urgent (ASAP), Standard (within 6 months), Non-urgent (2-3 years)

RP - Pre-emptive root pruning of foundation encroachments under arboricultural supervision.
CB - Cut Back to boundary/clear from structure.
CL# - Crown Lift to given height in meters.
CT#% - Crown Thinning by identified %.
CCL - Crown Clean (remove deadwood/crossing and hazardous branches and stubs).*
CR#% - Crown Reduce by given maximum % (of outermost branch & twig length)
DWD - Remove deadwood.
Fell - Fell to ground level.
FInv - Further Investigation (generally with decay detection equipment).
Pol - Pollard or re-pollard.
Mon - Check / monitor progress of defect(s) at next consultant inspection which should be <18 months in frequented areas and <3 years in areas of more occasional use. Where clients retain their own ground staff, we recommend an annual in- house inspection and where practical, in the aftermath of extreme weather events.
Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

*Not generally specified following BS3998:2010

Site: 22 Frognal Way

Date: 27/03/2017

Appendix 1

Recommended Tree Works

Hide irrelevant | Show All Trees

Surveyor(s): Adam Hollis

Ref: KSR/22FRG/AMS

Landmark Trees

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
1	Lime, Common	25	1000	5	Re-inspect on completion of development	Die-back (minor), major storm damage, 30mm Included bark in main stem unions Acute forks from 5m; banana crack NE limb union: Lowest limb has partially failed and held, Remote Recommended husbandry 2
2	Beech, Copper	23	980	10, 9, 7,3	Re-inspect on completion of development	Asymmetry (minor) Rubbing & grafted branches Remote Survey Only Advisable for good arboricultural practice
18	Laurel, Bay	12	468	4	Fell	Included bark in main stem unions Co-dominant stems Recommended to permit development

APPENDIX 2: GENERAL GUIDELINES

2.1 All work must be to BS 3998:2010 - '*Recommendations for tree work'*.

2.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and will be covered by adequate public liability insurance.

2.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.

2.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of a Landmark Trees consultant.

2.5 It is advisable to have trees inspected by a consultant regularly. On this site it is recommended that these inspections are made every year.

APPENDIX 3: SAMPLE SITE MONITORING SHEET

Landmark Trees

Site Monitoring Report Sheet

Client:		**Planning Ref:**	
Local Authority:		**Date:**	
Site Address:			
Proposal:			

Visit Checklist	**Y/N**		**Y/N**
Tree protection barrier (TPB) in place		TPB as per approved	
Ground protection (GP) in place		GP as per approved	
TPB breached		Trees damaged since last visit	
Client briefed by LT			
LT briefed by Client			
LPA informed			
Remedial action required			

Comments

Recommendations

Outcome		
1		
2		
3		
4		

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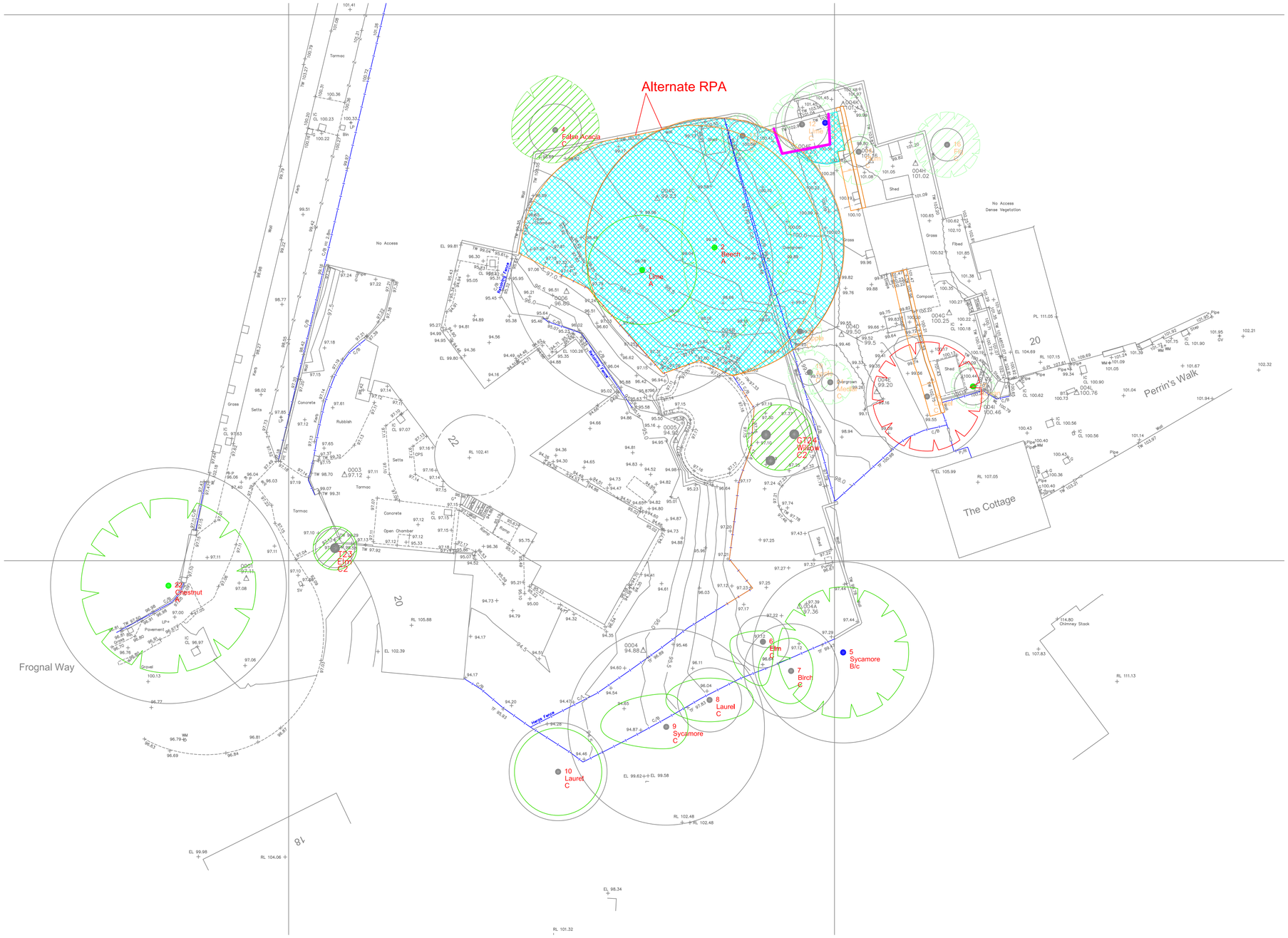
e-mail: info@landmarktrees.co.uk
Tel: 0207 851 4544

London Office: Holden House, 4th Floor, 57 Rathbone Place London W1T 1JU
Registered Office: 15 Abbey Road, Oxford OX2 0AD

Arboricultural Supervision Sign off Checklist

Tree No (s)	Project Phase	Task	Date Completed	Signed (Project arboriculturist)	Signed (Site Manager)
	Pre-commencement	Pre-commencement site meeting to include site manager briefing (S.1.5)			
	Pre-commencement	Confirm the location and specification of the protective measures is in accordance with AMS & Tree Protection Plan (TPP)			
	Pre-commencement	Confirm any tree works have been undertaken in accordance with this AMS (S.2.1/ App 1) and determine if further tree work is required			
	Pre-commencement	Seek required permission for further tree works if necessary.			
	Installation of any new services	Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS (S3.4) to ensure work is undertaken in accordance with NJUG provisions or other specification.			
	Demolition	Demolition of hard surfaces/ structures within RPA (S3.6) Confirm position of any additional temporary ground protection and that temporary ground protection is in accordance with AMS.			
	Completion of Demolition	Sign off of the demolition phase			
	Construction	Supervised manual excavation of foundations			
	Construction	Installation of 'No Dig' hard surfacing			
	Construction	Additional excavations (if required)			
	Completion of Construction	Completion of construction			
	Post Construction	Removal of machinery and materials from site			
	Post Construction	Dismantle & removal of protective measures			
	Landscaping	Completion of Landscaping			
	Project Completion	Sign off from project arboriculturist			

APPENDIX 4: TREE PROTECTION PLAN



NOTE:

This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.

Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the upslope side of the tree base).

Landmark Trees

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e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: 22 Frognal Way	1:200@ A1
Drawing Title: Tree Protection Plan	July 2020

Key:

- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category U Trees Unsuitable for Retention
- Ground Protection: 75mm woodchip topped with plyboards
- Tree Protection Fencing

Category · Crown Spread · Tree Number · Species · Root Protection Area · Category

- Tree Position Approximate (not shown on original survey)
- Tree To Be Removed