

Arboricultural Report

for planning purposes

1 Kidderpore Avenue Hampstead London NW3 7SX

February 2022

220168-PD-11

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1 EXECUTIVE SUMMARY

- 1.1 The key components and conclusions of this *Arboricultural Report* (the 'Report') are as follows:
 - The proposals are for the construction of a front boundary wall, gate pillars and the
 installation of a vehicle access gate. It is also proposed to relandscape the front garden
 area with new paving, retaining walls and storage for bikes and bins with new planting,
 including new tree planting.
 - The potential impacts on retained trees have been considered and methods of construction are proposed to reduce impacts to acceptable levels.

2 INTRODUCTION

Instruction

2.1 This *Arboricultural Report* (the 'Report') has been instructed by *Kinland Design* (the 'Client').

Author

2.2 This report has been written by Tim Moya; Tim is an arboricultural consultant dealing with trees in relation to all forms of human activity including trees in the built environment. He is a Fellow of the Arboricultural Association, a Chartered Arboriculturist, a Chartered Environmentalist, a Registered Consultant of the Institute of Chartered Foresters and has a Level 7 Postgraduate Diploma in arboriculture and community forest management from Middlesex University. He is a Registered Quantified Tree Risk Assessment practitioner.

Proposed development

2.3 The proposed development at 1 Kidderpore Avenue ('the Site') is for the construction of a new front boundary wall with an entrance gate, relandscaping of the front garden area with retaining walls, new paving and planting (including new trees) and the installation of bike and bin storage ('the proposed development'), within the area administrated by the London Borough of Camden ('the LPA').

Scope

2.4 This Report has been provided to assist all parties involved in the planning process, in accordance with *British Standard 5837:2012 - Trees in relation to design demolition and construction - Recommendations* ('BS5837').

Site survey

- 2.5 The Site was visited, and the trees and other vegetation surveyed, referring to the recommendations of BS5837, on 11th February by the Author. The details of this survey are found within the Report appendices.
- 2.6 The survey was not an assessment of the health and safety of the trees. However, any trees identified as a current notable risk to people and property will have been highlighted in the schedules, at Appendix B.



Image 1: View of T1 (recently pruned) and T2 (right) from the adjacent footpath

Report preparation

- 2.7 This Report has been prepared, with reference to the following supplied documents and information:
 - proposed landscape plans;
 - topographical survey.
- 2.8 The appendices of this Report include:
 - Appendix A (plans); and
 - Appendix B (schedules).

Definition of terms

- 2.9 The following terms and abbreviations may be used within this Report. These terms are defined by BS5837 as follows, unless provided without quotation marks:
 - Arboricultural Method Statement ('AMS') "methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained".

- Local Planning Authority ('LPA') the planning department of the borough, district, or metropolitan council.
- Root Protection Area ('RPA') "layout design tool indicating 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.
- **Service(s)** "any above- or below-ground structure or apparatus required for utility provision" that may for example include "drainage, gas supplies, ground source heat pumps, CCTV and satellite communications".
- Tree Protection Plan ('TPP') "scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures".

3 SITE INFORMATION

Current Site use

3.1 The Site consists of the front garden area of the property which is currently paved with shrub beds on the side boundaries containing trees and shrubs. There are also some shrubs in neighbouring property. The trees and other vegetation are listed in the schedule at Appendix B.



Image 2: T2 (yew) showing topiarised form

Relevant planning history

3.2 There is no relevant planning history, in the context of this report and the proposed development.

Landscape character

3.3 England is divided into 159 distinct areas ('National Character Areas' or 'NCAs'), assessed by Natural England, which follow natural lines in the landscape to define the given area and how it differs from adjacent areas.

3.4 The Site is within NCA 112 for the area known as *Inner London* (the Profile'), which is predominantly urban and "relies heavily on ecosystem services provided by the surrounding NCAs". Nonetheless, it has an "extensive network of green infrastructure throughout" that is often "close to people's homes and places of work", though "many communities in London suffer a shortage of green space". The Profile recognises that it is important to "protect, manage and plan for expansion of the urban forest", because of its overall beneficial effects to the character and function of the NCA.

Geotechnical information

- 3.5 The *British Geological Survey* ('BGS') provides on-line information, regarding the general soil properties of an area, including the underlying bedrock and any superficial deposits that overlay the bedrock. This information indicates that the Site is situated upon a bedrock of *London clay* (comprised of clay silt and sand), over which no superficial deposits are recorded.
- 3.6 There are no publicly available borehole logs within or adjacent to the Site that are provided by the BGS.
- 3.7 Soils where the clay content is significant will tend to encourage tree root growth at shallower depths often, within the upper 600mm of soil¹. Where other soil components are present to greater extents, root morphology may differ, though impermeable layers of heavy compacted clay may restrict penetrative root growth, which may influence how far roots radiate from the stem of the tree to acquire nutrients.

4 TECHNICAL ARBORICULTURAL DETAILS

Landscape details

- 4.1 There are two significant trees on the eastern side boundary of the front garden, both are rather small but are considered to be healthy and sustainable.
- 4.2 The tree and neighbouring vegetation are visible from the public domain and constitute green elements of the street scene. However, T2 (yew) has been topped at a height of about 1.5m and has subsequently been managed as a formal topiarised feature (see image below).



Image 3: Main trunk of T2 showing level at which this has been topped and regrown (about 1.5m above ground level)

BS5837 details

- 4.3 The surveyed trees and other vegetation items have been generally categorised, in terms of the arboricultural and landscape criteria as defined in BS5837. These criteria consider the arboricultural merits of individual trees, in addition to the wider value afforded in contributing to the character of the landscape.
- 4.4 Both T1 (plum) and T2 (yew) have been categorised as being of low quality based on the BS5837 methodology. In the case of T1 due to its size and potential life expectancy

- and in the case of T2 due to the previous topping and the presence of decay in the topped stem.
- 4.5 Based on the ground conditions of the Site that includes the known or foreseeable presence of buried structures, in addition to the context within which the surveyed trees and other vegetation items are growing, the standardised circular RPAs have not been amended. However, it is considered that the large theoretical RPA of the yew tree (T2) does not represent the required rooting volume fort his tree which, given the crown size is likely to be much smaller.

Statutory protections

- 4.6 The LPA publishes details of its *Conservation Areas* ('CAs') online. According to this information, the Site is within the *Redington Frognal* CA, which affords a baseline level of protection to the surveyed trees, under the relevant provisions of *The Town and Country Planning (Tree Preservation)(England) Regulations 2012.*
- 4.7 The LPA does not publish details of its *Tree Preservation Orders* ('TPOs') online. It is not therefore known, from this information, whether TPOs apply to any of the surveyed trees. No direct communications have been undertaken with the LPA, to obtain information relating to any TPOs.

5 PLANNING POLICY AND GUIDANCE

National

- 5.1 Planning policy at national level is set out in the government's *National Planning Policy Framework* (the 'NPPF')² that was published in July 2021.
- 5.2 At this level, policy addresses the key principles of development. At its core, there is a presumption in favour of sustainable development incorporating good and durable design, by combining economic, social, and environmental strands in a balanced manner. Trees comprise an element of green infrastructure, which is one aspect of the environmental strand of sustainability.
- 5.3 In the context of the proposed development, the NPPF provides the following guidance that is relevant in terms of the surveyed trees:
 - Paragraph 131 "Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are treelined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users."
 - Paragraph 174 "Planning policies and decisions should contribute to and enhance the natural and local environment by: ... b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of ... trees and woodland".

Greater London

- 5.4 Planning policy at the *Greater London* level is set out in *The London Plan* (the 'LP'). The current iteration of the LP was published, in March 2021.
- In the context of the proposed development, the LP provides the following guidance that is relevant in terms of the surveyed trees:
 - Policy D8 Public Realm "[D]evelopment proposals should: ... i) incorporate
 green infrastructure such as street trees and other vegetation into the public realm

- to support rainwater management through sustainable drainage, reduce exposure to air pollution, moderate surface and air temperature and increase biodiversity".
- Policy G1 Green Infrastructure "London's network of green and open spaces, and green features in the built environment, should be protected and enhanced.
 Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits".
- Policy G7 Trees and Woodlands "Development proposals should ensure that, wherever possible, existing trees of value are retained. If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy".

Local

- 5.6 Planning policy at the local level is currently set out in the LPA's *Camden Local Plan* (the 'LDP'), published in 2017.
- 5.7 In the context of the proposed development, the current LDP provides the following guidance that is relevant in terms of the surveyed trees:
 - Policy D1: Design "The Council will seek to secure high quality design in development. The Council will require that development: ... k. incorporates high quality landscape design (including public art, where appropriate) and maximises opportunities for greening for example through planting of trees and other soft landscaping";
 - Policy D2: Heritage "The Council will: e. require that development within
 conservation areas preserves or, where possible, enhances the character or
 appearance of the area; ... g. resist development outside of a conservation area
 that causes harm to the character or appearance of that conservation area; and h.
 preserve trees and garden spaces which contribute to the character and
 appearance of a conservation area"; and
 - Policy A3: Biodiversity "The Council will protect, and seek to secure additional, trees and vegetation. We will: j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees ... [and] I. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or

harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development".

6 ARBORICULTURAL IMPACT ASSESSMENT

Removals

6.1 The proposed development does not require the removal of a total of any trees. New tree planting is proposed as part of the proposals.

Mitigation greening

6.2 The proposals include the planting of at least 4 No. new trees which have been specified on the submitted plans from Kinland Design.

Pruning

6.3 It may be necessary to lightly prune the yew tree (T2) in order to construct the proposed bike store. However, any pruning required will be minor and will not detract from the health or landscape value of this tree.

Retained tree juxtapositions

6.4 The main issues to be addressed in arboricultural terms are the installation of the bike and bin stores within the RPAs of trees T1 and T2, and the construction of the front boundary wall and gate pillars within the RPA of T1.

Demolition works

- No specific tree protection fencing is proposed in relation to this development as works are required within RPAs. However, care must be taken when lifting existing paving or removing existing structures to avoid damage to the roots of retained trees. This can be achieved by careful demolition of the existing structures using hand tools to break up brickwork and foundations. All tree roots of 25mm or larger should be retained.
- 6.6 The demolition of the existing light structures on the site will have the potential to impact upon retained trees. Where these operations are to take place within the RPAs of retained trees, special methods of work will be required. These specific areas are highlighted and precautionary measures outlined in the TPP at Appendix A. A working methodology is supplied below.
- 6.7 The removal of existing hard standing and surfaces is required within the RPAs of retained trees as highlighted on the TPP at Appendix A.
 - All working operations with tree RPAs are required to be carried out under the guidance and supervision of the arboricultural clerk of works.

- Prior to works commencing, trial holes will be excavated using hand-held tools
 within the RPA/s of the tree/s concerned to establish depth of the existing hard
 surface material. The results from these trial holes will inform how working
 operations will be undertaken and whether machinery is permitted.
- The use of machinery to fracture and remove waste material will only be permitted
 if approved by the supervising arboricultural clerk or works and under the careful
 guidance of a banksman.
- Works will commence at the point closest to the tree and operate backwards until outside the designated RPA to avoid moving over exposed ground.
- Working from either outside the designated RPA or from an area of existing hard standing or temporary ground protection, the upper surface layer of hard standing will be fractured into small sections.
- Broken material will be manually lifted and removed to a designated storage area located outside the RPA of retained trees.
- The removal of the sub-base material will be undertaken in a carful manner, ensuring that no excavation works occur beyond the depth of the built material and into the soil layer below.

Construction works

- 6.8 The TPP at Appendix A sets out the specifications for tree protection that are associated with the implementation of the proposed development, based on the details that are currently available. This TPP includes an AMS, which provides some baseline information relating to the installation and management of tree protection measures.
- 6.9 Built development is proposed within the RPAs of retained trees. In order to avoid unacceptable physiological or structural harm to this/these tree/s, special construction methods are proposed which will allow for the retention of important roots and the protection of the soil environment in which they are growing. Details of the measures proposed are included in the TPP at Appendix A. A working methodology is detailed below.
- 6.10 Any requirement for light structures within tree protection zones such as walls or paving will observe the following methodology:
- 6.11 Excavations for foundations and other purposes will be carried manually using appropriate hand tools or using an air lance to expose tree roots.
 - No machinery will be permitted into the working area unless agreed by the arboricultural clerk of works.

- All excavated spoil will be manually removed from the area or placed on temporary ground protection to be used for back filling upon completion.
- All roots in excess of 25mm in diameter and all clumps of fibrous roots will be retained and wrapped in wet hessian during the works to prevent desiccation.
- Roots less than 25mm may be pruned under supervision of the arboricultural clerk of works where deemed essential to complete works.
- Root pruning will only be carried out under supervision of the arboricultural clerk of works, using sharp, sterile tools suitable to the size of the root to be cut. Where possible roots will be pruned cleanly back to a side branch or junction.
- The construction of the bike and bin stores will be above existing ground level using a concrete slab construction as recommended in BS5837.
- Where retained tree roots intersect with new foundations, roots above 25mm diameter will be retained within the structure of the foundation and protected as shown below.

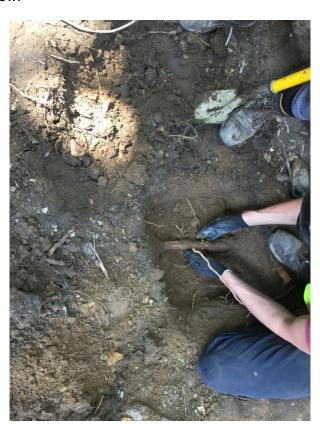


Image 4: hand excavation to retain tree roots: Careful hand excavation or the use of compressed air or vacuum excavation can be used to retain tree roots larger than 25mm diameter



Image 5: flexible split pipe used to protect and retain tree roots: Once exposed by hand digging, tree roots are protected using a flexible split pipe



Image 6: Pipe taped over: To prevent cement products from coming into contact with retained roots, the split pipe is taped up (including the ends of the pipe). Root is now ready for further hand excavation or concrete pouring

Landscaping works

6.12 Landscaping planting operations will typically take place at the end of the construction period. These works will normally require the removal of barrier fencing, to facilitate the required access for works. There is a risk that plant and machinery may damage the soil structure within which tree roots are growing.

6.13 These risks can be managed, by maintaining good professional standards of work and by working in accordance with an AMS. The principle of avoiding soil disturbance or changes in levels within the RPAs of retained trees must be followed, unless advice has been sought by the project arboriculturist.

Services and utilities

- 6.14 At this stage of the planning process, details pertaining to the location of new service runs and any required access to existing runs are not established. In this context, it is not possible to determine the level of impact of this element of the designs to the retained trees.
- 6.15 In the eventuality that access to existing service runs or to install new service runs involves work operations within the RPA of the retained trees, the impact to the trees can be managed by following the recommendations of BS5837, which includes as a normative reference the *National Joint Utilities Guidance*³.

7 CONCLUSIONS

Arboricultural impacts

7.1 The proposed development has minimal impacts upon trees and landscaping with the potential to enhance the landscape and amenities of the property and the wider area over the short to medium term with new planting. The proposals are therefore considered to be positive in landscape terms.

Landscape impacts

7.2 The proposed new planting includes the establishment of at least 4 No. new trees. These trees will be of high quality and have been located in positions where they will be able to grow to a mature size. Over the long term, new tree planting has the potential to significantly enhance the amenities of the property and contribute to the character and appearance of the local area.

Planning policy adherence

7.3 Planning policy specific to trees has been considered in relation to these proposals and has been complied with: No tree removals are required and new tree planting has been specified as part of the proposals.

8 APPENDICES CONTENTS

APPENDIX A - PLANS

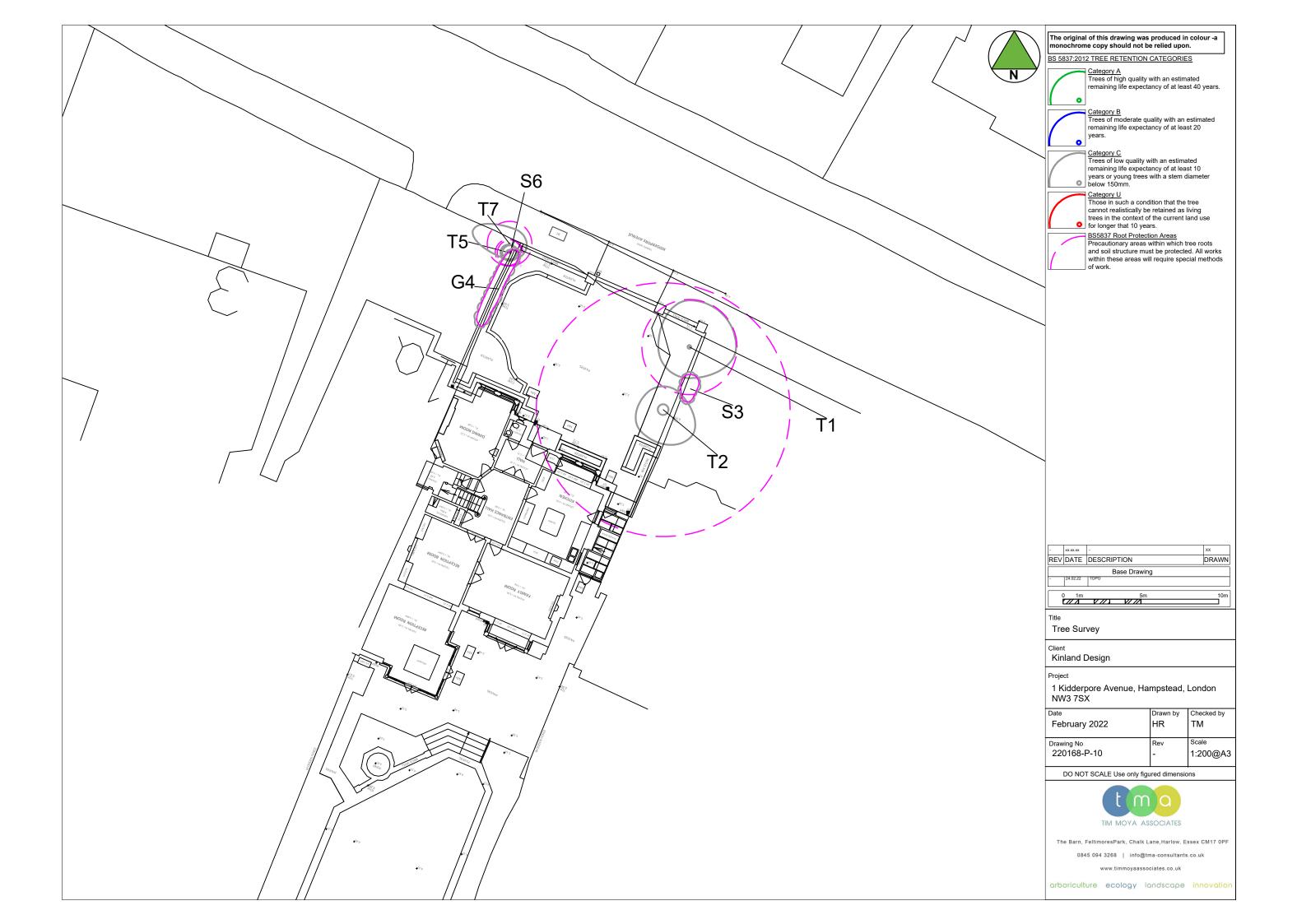
- 220168-P-10 Tree Survey
- 220168-P-11 Proposed Layout

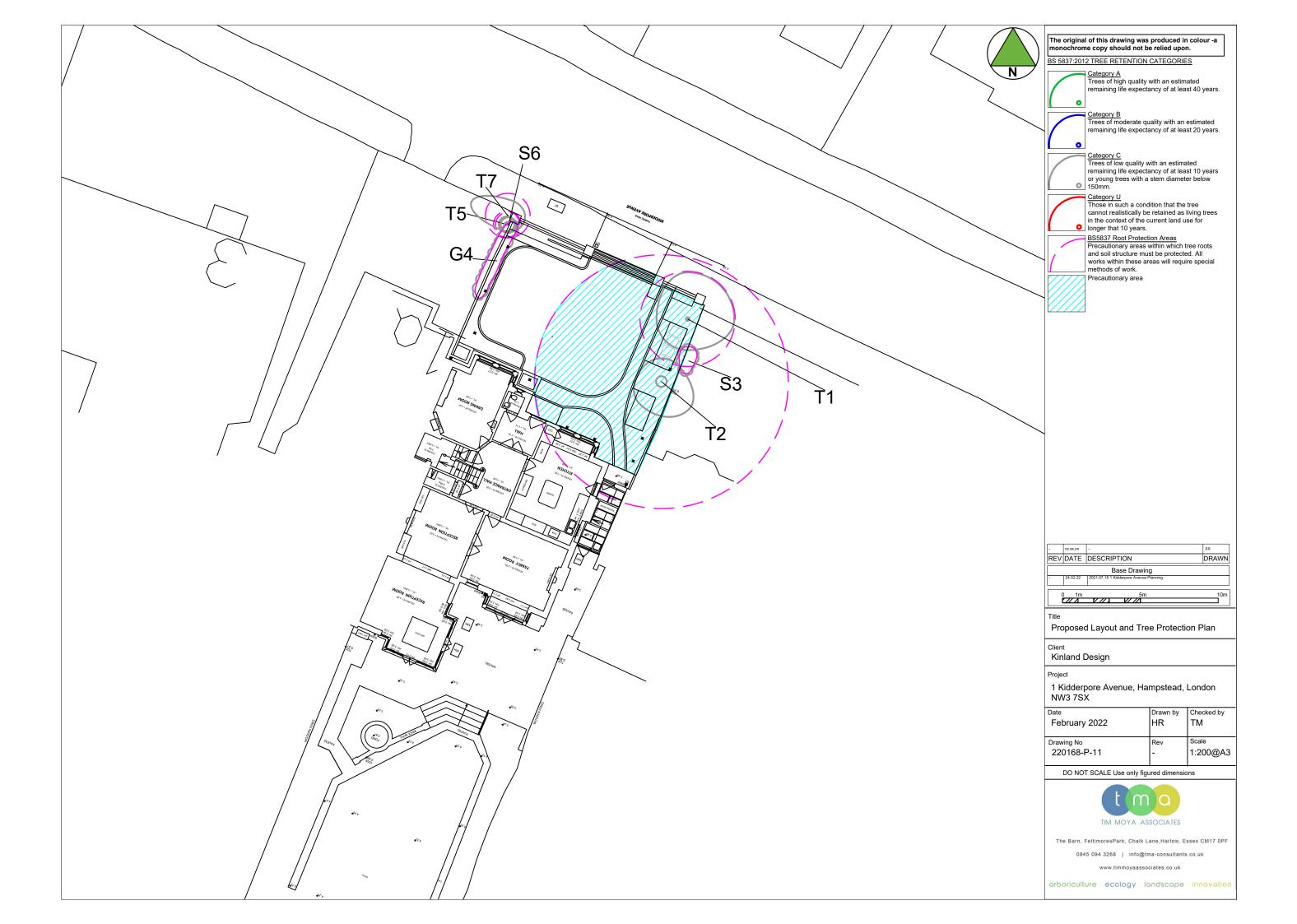
APPENDIX B - TREE SCHEDULE

• 220168-PD-10 Tree Schedule

APPENDIX A - PLANS

- 220168-P-10 Tree Survey
- 220168-P-11 Proposed Layout





APPENDIX B - TREE SCHEDULE

• 220168-PD-10 Tree Schedule

220168-PD-10-Tree schedule (BS5837)



220168 - 1 Kidderpore Avenue

Tree ID	No	. Species	Height (m)	Stem diameter (cm)	No. of Stems				AD (m)	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T1	1	Prunus cerasifera (Cherry Plum (Myrobalan))	7.0	25 COM	2	3.0	3.0	2.0	2.0		2.0		Early Mature	Structural condition Fair. Physiological condition Good. Fork - Suspected structurally sound. Recently Crown reduced	11/02/2022	29.4	3.1	10-20	
Tree T2	1	Taxus baccata (Yew)	4.5	68	1	1.5	2	5	2.0	1.5	0.5		Mature	Structural condition Fair. Physiological condition Fair. Decay / structural defect - Suspected. DBH measured at base Pollarded at 1.7m and trimmed to topiary form	11/02/2022	209.2	8.2	20-40	C1/C2
Shrub S3	1	Photinia x fraseri (Fraser's Photinia)	6.0	6 COM	4						0.0		Early Mature	Structural condition Good. Physiological condition Good.	11/02/2022	1.6	0.7	10-20	C1/C2
Group G4	8	Aucuba japonica	2.0	3 AVE							0.0		Mature	Structural condition Good. Physiological condition Good.	11/02/2022	2		20-40	C1/C2
Tree T5	1	llex sp. (Holly sp.)	6.0	7	1	0.5	0.5	0.5	0.5		1.0		Semi Mature	Structural condition Good. Physiological condition Good.	11/02/2022	2.2	0.8	20-40	C1/C2
Shrub S6	1	Forsythia sp. (Forsythia)	2.0	6 COM	3	0.5	0.5	0.5	0.5		0.0		Early Mature	Structural condition Fair. Physiological condition Fair.	11/02/2022	2.2	0.8	20-40	C1/C2
Tree T7	1	Corylus avellana (Common Hazel)	5.0	12 COM	9	1.0	1.11	1.0	2.5		0.0		Early Mature	Structural condition Fair. Physiological condition Good.	11/02/2022	6.5	1.4	20-40	C1/C2

Stem green Estimated value

Stem AVE Average stem diameter for tree groups

Stem COM Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

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Category and definition	Criteria (including subcategories	s where appropriate)	ldentificati	on on plan						
Trees unsuitable for retention (see not	e)									
* Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to 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										
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation							
Trees to be considered for retention										
Category A	Tree that are particularly good examples of	Trees, groups or woodlands of particular	Trees, groups or	GREEN						
Trees of high quality	their species, especially if rare or unusual; or those that are essential components of	visual importance as arboricutural and/or landscape features.	woodlands of significant conservation, historical,	ORCELIA						
with an estimated remaining life expectancy of at least 40 years	groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).		commemorative or other value (e.g. veteran trees or wood-pasture).							
Category B	Trees that might be included in category A,	Trees present in numbers, usually growing	Trees with material	BLUE						
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	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.	conservation or other cultural value.	BEGE						
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	GREY						



arboriculture ecology landscape innovation

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