TIM MOYA ASSOCIATES

Arboricultural Report

for planning purposes

2 Thurlow Road
London
NW3 5PJ

May 2022

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1 EXECUTIVE SUMMARY

1.1 The key components and conclusions of this *Arboricultural Report* (the 'Report') are as follows:

- The proposed development involves the renovation and extension of the existing dwelling and changes to landscape features to the front, side and rear of the property.
- Losses involve three B category trees (T3, T4 and T6), seven C category trees (T8-T10 and T12-T15), two C category shrubs (S2 and S5) and two C category hedges (H17 and H18). These losses are mostly confined to C category items of low quality and / or limited landscape value.
- Tree protection methods includes (1) careful demolition of existing hard surfaces, (2) minor root pruning operations, (3) use of no-dig surfacing to form the bike store sub-base, and (4) the use of protective tree barriers.
- Some minor crown pruning operations will be required as part of the proposed development (T1 and T16).
- There is sufficient space for landscape planting to mitigate for the loss of vegetation and restore amenity value in the short-medium term. The comparative existing and proposed soft and hard landscaping plans (APPENDIX C) show that overall, soft landscaping areas and planting opportunity will increase to the front, side and rear of the property.
- Existing hard standing is being lifted and replaced with soft landscaping in the front garden within the RPA of T19 and T20. This is considered to have a positive impact on the mature lime (T19 and T20) currently growing in a restricted Pved soil environment.
- The Site is within the *Fitzjohns Netherhall Conservation Area* which values public and privately owned trees. Despite loss of vegetation the proposed development has the potential to enhance the private garden landscape whilst increasing areas of greenery within the Site. The mature lime trees (T19 and T20) that form part of the street scene will be fully protected and to some degree have their growing conditions enhanced.
- Providing landscape planting is carried out to mitigate for loss the proposed development will comply with planning policies.

2 INTRODUCTION

Instruction

2.1 This *Arboricultural Report* (the 'Report') has been instructed by *Philippe Bodereau* (the 'Client').

Author

2.2 This report has been completed by Kit Hardy who is a Senior Arboricultural Consultant specialising in trees and planning with around 15 years industry experience. Related professional qualifications that he holds are as follows; MSc Arboriculture and Urban Forestry, Professional Tree Inspection (PTI) qualification by LANTRA, Quantified Tree Risk Assessment (QTRA), and Tree Risk Assessment Qualification (TRAQ) by the International Society of Arboriculture (ISA).

Proposed development

2.3 The proposed development at *2 Thurlow Road, London, NW3 5PJ* ('the Site') is for the renovation and extension of the existing dwelling and changes to landscape features to the front, side and rear of the property ('the proposed development'), within the area administrated by *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 05/11/2021 by Kit Hardy. 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.

Map 1: showing the area discussed in this Report within the indicative line.

Report preparation

2.7 This report has been prepared, with reference to the following supplied documents and information:

- proposed architectural plans;
- topographical survey.

2.8 The appendices of this report include:

- Appendix A (plans);
- Appendix B (schedules); and
- Appendix C (architectural drawings).

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 Located around half a kilometre south-west of Hampstead Heath, the Site is comprised of a townhouse with a small front garden and sunken rear garden at 2 Thurlow Road (Map 1, above). Photo 1 shows the property frontage with two common lime street trees (T19 & T20) directly outside of the front garden.

3.2 Photo 2 shows the metal gated access with yew hedges and existing paving slabs which continue along the south-western boundary where access is gained to the rear garden (Photo 3). The rear garden currently consists of a sunken, well-worn lawn area surrounded by tree and shrub boarders on three sides (Photo 4).

3.3 Viewing the property from the rear garden, the extent of the five-storey dwelling with upper and lower terraces can be seen in relation to the neighbouring properties (Photo 5)

Photo 1 - view of 2 Thurlow Road seen centre with two street tree common lime (T19 & T20) in front of the property:

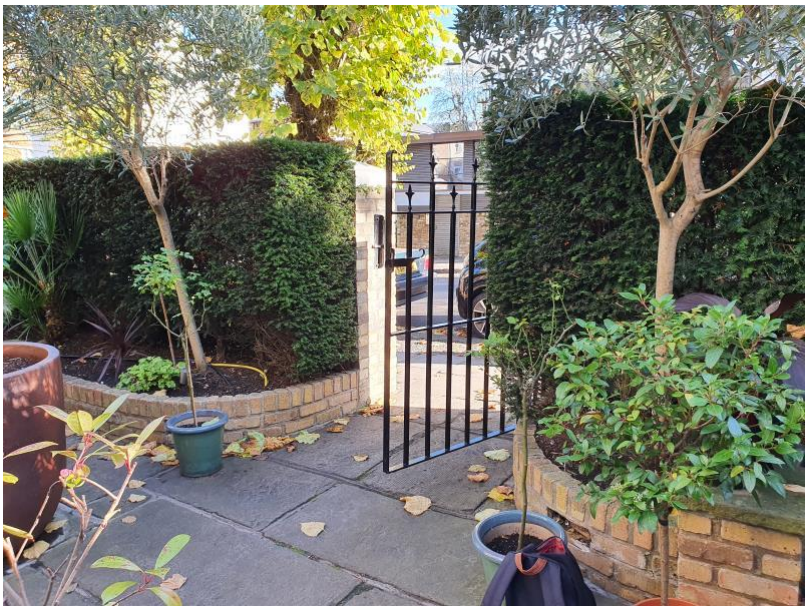


Photo 2 - existing gated access from 2 Thurlow Road and paving:

Photo 3 - existing side access to rear garden:

Photo 4 - view roughly south-east to north-west of rear garden:

Photo 5 - view north-west to south-east of property from rear garden:

Relevant planning history

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

Landscape character

3.5 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.

3.6 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

3.7 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 *Claygate Member* (comprised of clay, silt and sand), over which no superficial deposits are recorded.

3.8 There are no publicly available borehole logs within or adjacent to the Site that are provided by the BGS.

3.9 Soils where the clay content is significant will tend to encourage tree root growth at shallower depths - often, within the upper 600mm of soil[1]. 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.

1 - Forestry Commission. (2005) Information Note FCN078 - The influence of soils and species on tree root depth.

4 TECHNICAL ARBORICULTURAL DETAILS

Landscape details

4.1 Directly in front of the property there are two mature common lime stret trees (T19 &T20) managed as high pollards (Photo 6). The paved front garden area is currently filled with potted plants surrounded by raised beds containing yew hedges (H17 & H18) and interspersed with olive trees (T12-T15). In Photo 7, the olive tree (T16) left of photo is in the neighbouring property.

4.2 To the rear, Photos 8-10 gives good perspective on tree cover within the property and surrounding landscape formed by private gardens. The three birch (T3, T4 and T6) form filtered views to and from the property along the boundary.

4.3 The heavily worn lawn area is partly shown in Photo 11 with a close up of surface roots emanating from the birch highlighting the extent of rooting from beneath the small retaining wall. In the neighbouring garden south-west there is a pear tree (T11) with branches overhanging the Site and is formatively pruned.

Photo 6 - T19 and T20 street trees in front of 2 Thurlow Road:

Photo 7 - front garden surrounded by yew hedges and olive trees, one of which seen left of photo is in the neighbouring property:

Photo 8 - view to the west including rear garden:

Photo 9 - rear garden boundary trees including the three birch:

Photo 10 - view to the north with part of the rear garden:

Photo 11 - birch roots visible within lawn area:

Photo 12 - view of pear tree in the adjacent garden to the south:

4.4 Highlighted in the photos above and in Photo 13 below, the rear garden landscape is largely formed by private gardens containing trees that have limited visibility in the public realm. The birch trees (T3, T4 and T6) do however have some value in that they provide filtered views between the properties at the north-western boundary despite their relatively young age and size. To the frontage along Thurlow Road it is clear that the two mature common lime (T19 & T20) are highly visible in the street scene and play an important role in the landscape. Also seen here are the yew hedges and olive trees which also contribute to urban greening, albeit with limited capacity due to size and age.

Photo 13 - T19 and T20 forming part of the street scene with front garden yew hedges and olive trees:

BS5837 details

4.5 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.

4.6 In BS5837 terms, the surveyed trees and other forms of vegetation comprise:

- Eight *Category B* trees (i.e., moderate-quality):
- Eight trees, two shrubs and two hedges identified as *Category C* (i.e., low-quality):

4.7 The rear garden birch trees (T3, T4 and T6) would ordinarily be considered as Category C trees based on their individual merits. They are small-medium sized trees with limited public visibility and as species have a relatively short lifespan, particularly in urban settings[2], where it is debateable whether they would fulfil the 20 year plus life expectancy detailed within BS:5837 categorisation. However, the author considered at the time of survey that, collectively, the trees do offer moderate value in the landscape, especially as they create some visual separation along the north-western boundary.

4.8 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 circular RPA have in particular instances been amended. These changes are reflected on the plans found in this Report's appendices. Photo 14 shows the retaining wall of the lower garden terrace which is thought to be affecting the RPA of the pear tree (T11).

2 - 1993 Trees In Towns, Internal Library, ISBN 0 11 752845 5

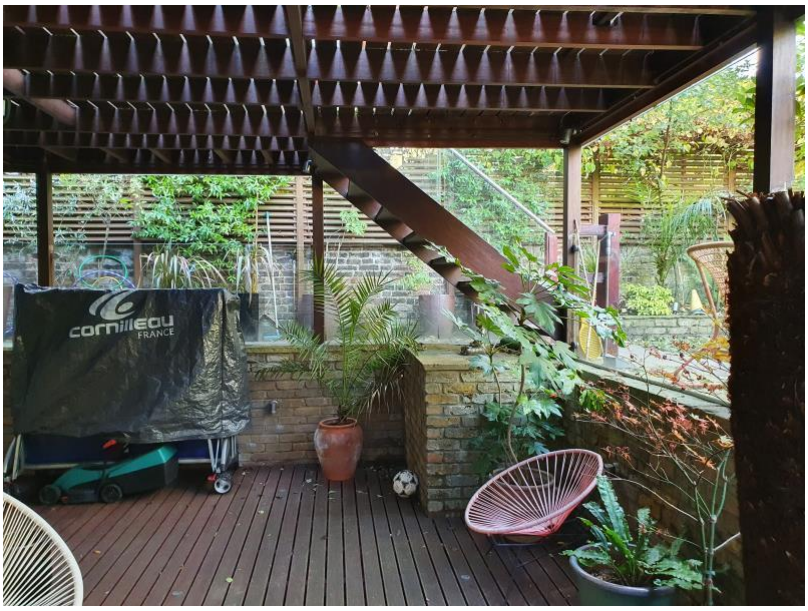


Photo 14 - rear garden lower terrace with retaining wall acting as a root barrier to the neighbouring pear tree (T11):

Statutory protections

4.9 The LPA publishes details of its *Conservation Areas* ('CAs') online. According to this information, the Site is within the *Fitzjohns Netherhall* 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*.

4.10 The LPA has confimed that there are no *Tree Preservation Orders* ('TPOs') within the Site's boundary, however the pear (idententified in this Report as T11) does have a TPO. The relevant provisions of *The Town and Country Planning (Tree Preservation)(England) Regulations 2012* therefore apply, to this tree.

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')[3] 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 tree-lined, 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.

5.5 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*

3 - Ministry of Housing, Communities and Local Government (2021). National Planning Policy Framework.

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'), adopted 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 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 vegetation; k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout; l. 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; m. expect developments to incorporate additional trees and vegetation wherever possible.*"

Neighbourhood

5.8 Planning at the local level is currently set out online by *The Heath and Hampstead Society*.

5.9 In the context of the proposed development, the current NDP provides the following guidance that is relevant in terms of the surveyed trees:

- "*The sub-committee scrutinises all planning applications in the Hampstead area and assesses them with particular reference to; their impact on our Conservation Areas, the character and appearance of our architecture, streets, trees and other urban detail.*"
- "*Trees, both privately and publicly owned, are immensely important to the character of urban areas, especially in a high-density area such as Hampstead. Many trees are endangered by development, disease, and even some residents! After all, trees obstruct light, undermine foundations, drop leaves. The Planning Committee has formed a specialist tree group, which works with Camden's tree officers, to try to protect endangered trees and encourage the planting of new ones.*"

6 ARBORICULTURAL IMPACT ASSESSMENT

Removals

6.1 The proposed development requires the removal of a total of three B category trees (T3, T4 and T6), seven C category trees (T8-T10 and T12-T15), two C category shrubs (S2 and S5) and two C category hedges (H17 and H18), in order to directly facilitate the proposed development.

6.2 While loss of some low-moderate value trees is required in order to facilitate the proposed development, the ability for the site to accommodate change is such that the overall impact on the surrounding landscape will be minimal, subject to appropriate landscape proposals.

6.3 Landscape proposals in the rear garden includes raising the existing ground level by 780 mm, as shown on APPENDIX C, and therefore the existing trees and shrubs (S2, T3, T4, S5, T6 and T8-T10) will be removed to accommodate these level changes. The B category birch (T3, T4 and T6) along the boundary do offer moderate value as a group, but visually could be replaced through mitigation planting in the short-medium term due to their limited age and size. Overall, these private garden trees with limited public visibility can be removed with relatively limited impact in the landscape in the short-medium term providing mitigation landscape planting is carried out.

6.4 The front garden area will also be re-landscaped involving the necessary removal of T12-T15 and H17-H18. Despite the low quality of these trees and hedges they do have a role in the street scene's character and therefore additional landscape planting will also be required to mitigate for loss of this vegetation.

Mitigation greening

6.5 At this stage of the planning process, the proposed development has not provided details regarding the planting of new trees and other forms of vegetation. However, there is considered to be sufficient capacity to mitigate the proposed loss of trees and vegetation with new planting located within the Site.

6.6 Details relating to the provision of a landscape specification can be provided, in response to a suitable planning condition.

6.7 In ideal circumstances trees and shrubs will be replaced on a one-for-one basis and the loss of the three birch (T3, T4 and T6) will be replaced by trees that will reinstate the filtered views along the north-western boundary. APPENDIX C indicates that four new trees at the north-western boundary will be planted to mitigate for the loss of the three birch (T3, T4 and T6).

Pruning

6.8 The proposed development requires the pruning of a total of two trees in third party ownership (T1 and T16) with branches overhanging the Site boundary, in order to directly facilitate the proposed landscaping - this includes for permitting the required working space.

6.9 Some crown pruning will be required in order to facilitate the proposed development. These works are minor and will not be detrimental to tree health or the character and appearance of the local area. Proposed tree pruning will include pruning of T1 and T16 to reduce their south-western crown spreads that overhang the boundary by no more than 0.5 and 1 m off the current branch spread, respectively.

Retained tree juxtapositions

6.10 In relation to the retained trees and vegetation (including any outside of the Site), the proposed development does not place any increased pressure upon these items that may result in inappropriate management (e.g., major branch removal or heavy pruning). The proposed development is therefore considered to be acceptable, regarding its juxtaposition to the retained trees and vegetation.

Demolition works

6.11 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.

6.12 The demolition of the existing hard surfaces / light structures on the site will have the potential to impact upon retained trees. Where these operations are to take place within the root protection area (RPAs) of retained trees special methods of work will be required. These specific areas are highlighted and precautionary measures outlined in the tree protection method statement at Appendix A. A working methodology is supplied below.

6.13 The removal of existing hard standing and surfaces is required within the RPAs of retained trees T11, T19 and T20 as highlighted on the Tree Protection Plan at Appendix A as both purple and blue hatched areas. This includes the removal of existing hard surface paving and ground level changes in the front garden area (APPENDIX C).

- All working operations with tree RPAs are required to be carried out under the guidance and supervision of the appointed arboriculturist.

- 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 arboriculturist 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.

6.14 The site levels in the front garden will be graded down towards the building to form a sloped landscape feature and steps. This work is illustrated at APPENDIX A - TPP as part of the purple hatch area to the front of the property and shown again on APPENDIX C as a cross section.

6.15 This work is situated within the RPA of the common lime (T19) and on the edge of the RPA of the lime (T20). On the grounds of limited rooting within the restricted paved soil environment and the ability for *Tilia sp*. to have moderate-good tolerance of root pruning and considerable resistance to "contractor pressures"[4] the alteration to / grading of existing ground levels can be constructed with limited impact to tree health. T19 and T20 are also managed as high pollards which reduces how many roots are required to support a relatively smaller crown and hence the trees should have the ability to recover from the minor root disturbance. The following root pruning operation methods will be adhered to:

- Careful excavation and root pruning operations with be carried out as part of the excavation work.
- The hard surface and soil will be excavated using hand tools carefully exposing tree roots.

4 - Marheny N and Clarke J - Trees and Development - a technical guide to the preservation of trees during development (ISA 1998)

- Any tree roots uncovered will be pruned back to the edge of the excavations using sterilised and sharp hand tools to provide a clean cut for root regeneration and wound occlusion.
- The new soft landscaping levels and hard surface steps will be constructed using normal techniques.
- These works will be carried out with arboricultural monitoring by the appointed arboriculturist.

6.16 In the front garden the majority of existing hard surfacing will be replaced by soft landscaping, planted beds and turf areas, within the RPA of the mature *Tilia sp.* (T19 and T20). This is likely to have a positive effect on the growing conditions of both street trees (T19 and T20).

Construction works

6.17 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.

6.18 Built development is proposed within the root protection area of retained trees. In order to avoid unacceptable physiological or structural harm to these trees, 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 Tree Protection Method Statement at Appendix A. A working methodology is detailed below.

6.19 Construction will involve the introduction of replacement hard surfacing within the RPA of T19 and T20. Where new paving is to replace lifted slabs the existing sub-base will be used as the formation layer to allow for levels to be maintained. This area is shown on APPENDIX A - TPP as blue cross hatch.

6.20 In relation to T11, once the existing south-western boundary footpath has been carefully removed this area will be soft landscaped. Good quality free draining soil will be used to support healthy root development and plant growth.

6.21 Bin stores have been located in the front garden within the RPA of T19. As shown on APPENDIX A - TPP as orange hatching, this area will require the careful removal of the existing raised bed and / or hard surface. Construction of the sub-base to support the bin stores will involve the introduction of new hard surfacing. The bin store hard surface within T19's RPA will be built upon the existing formation level, if possible, constructing a surface concrete slab.

6.22 The level changes in the rear garden are unlikely to significantly affect the neighbouring trees T1 and T7. The garden on both the south-western and north-eastern boundaries has a brick wall which is thought to be limiting rooting into the Site. Roots that may be present will be situated in the existing raised bed where the increase in levels will be less than in the remaining rear garden.

6.23 A new garden shed is proposed adjacent to T1 but outside the RPA of this tree. A new air source heat pump is proposed adjacent to T7 and within the theoretical RPS. However, given the proposed level increases in the rear garden the slab foundation for this will be above existing ground level.

Landscaping works

6.24 Landscaping 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.

6.25 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

6.26 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.

6.27 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*[5].

5 - NJUG. (2007) Volume 4: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees - Issue 2. UK: National Joint Utilities Group.

7 CONCLUSIONS

Arboricultural impacts

7.1 Taking into account the above impacts and mitigation, our assessment is that while the proposed loss of trees will have a minor impact in the short term the retained good quality trees can be protected and high quality proposed new planting will compensate for these losses, resulting in a neutral impact in the medium term with a positive impact in the longer term. The proposals are therefore considered sustainable in landscape terms.

Landscape impacts

7.2 Landscape proposals have not yet been fully formulated but there is sufficient space on site to plant new trees which can contribute significantly to the amenities of the local area. The detail of the size, number of new planting on the site may be conditioned as part of the consented development.

7.3 The existing and proposed soft and hard landscaping plans see at APPENDIX C show that overall, soft landscaping areas and planting opportunity will increase significantly in the front garden, along the southern boundary and in the rear garden of the property. Therefore, subject to finalised landscape proposals, the proposed development will have a positive impact in the landscape through increased green space.

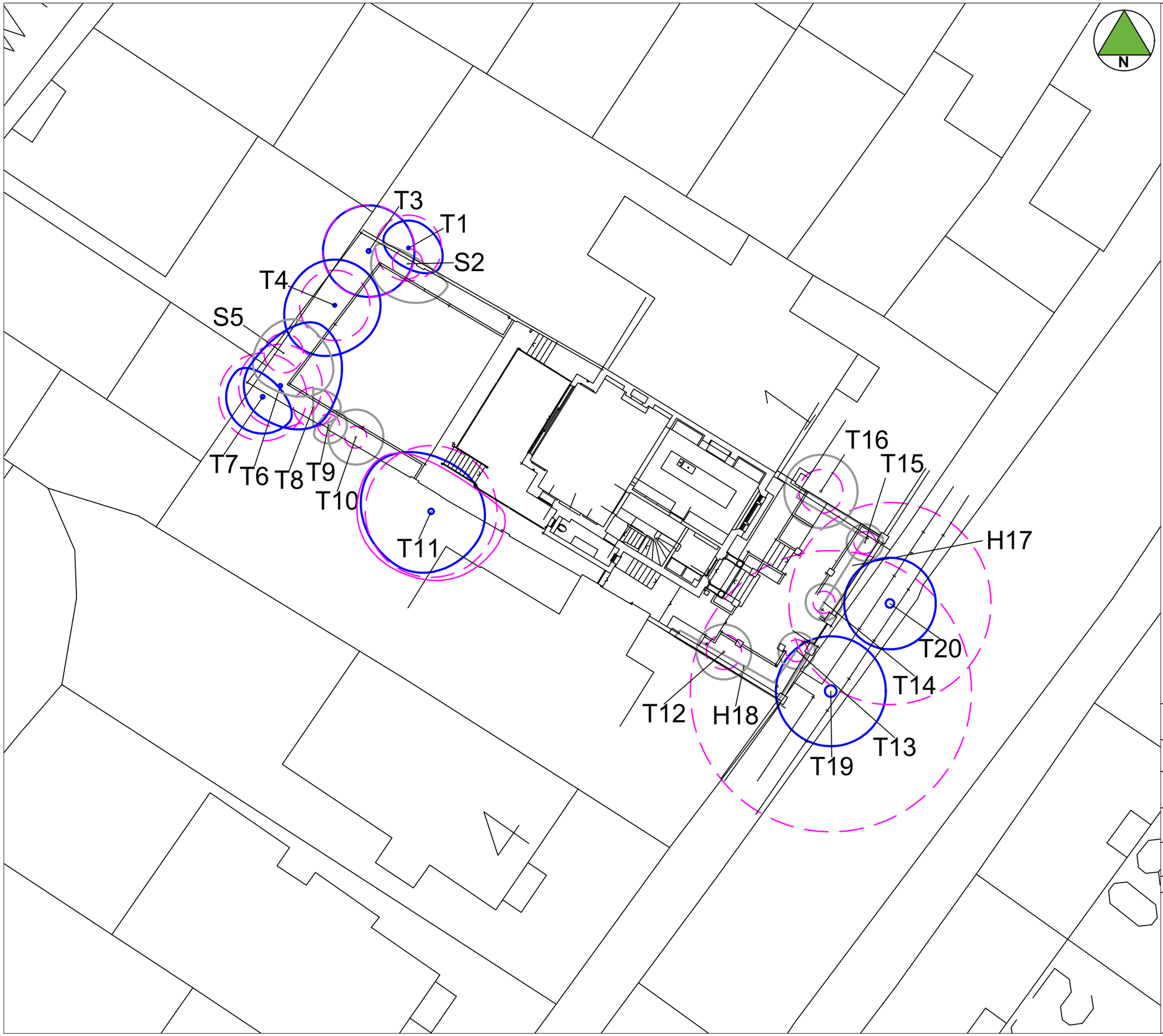
Policy compliance

7.4 Providing landscape planting is carried out to mitigate the loss of vegetation the proposed development will comply with planning policies. In particular, the rear garden will be re-landscaped to incorporate replacement trees and shrubs on a one-for-one basis whilst reinstating the filtered views along the north-western boundary.

7.5 The total area / coverage for greenery within the Sites boundaries will increase following the removal of hard surfaces to be replaced with soft landscaping areas for planting beds and areas of turf.

APPENDIX A - PLANS

- 210420-P-10; Tree Survey
- 210420-P-11b Proposed
- 210420-P-12b Tree Protection Plan



The original of this drawing was produced in colour -a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer that 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

REV	DATE	DESCRIPTION	DRAWN
-	xx.xx.xx	-	xx

Base Drawing

-	10.11.21	TOPO

0 1m 5m 10m

Title
Tree Survey

Client
Philippe Bodereau

Project
2 Thurlow Road, London NW3 5PJ

Date	Drawn by	Checked by
November 2021	HR	KH

Drawing No	Rev	Scale
210420-P-10	-	1:200@A3

DO NOT SCALE Use only figured dimensions

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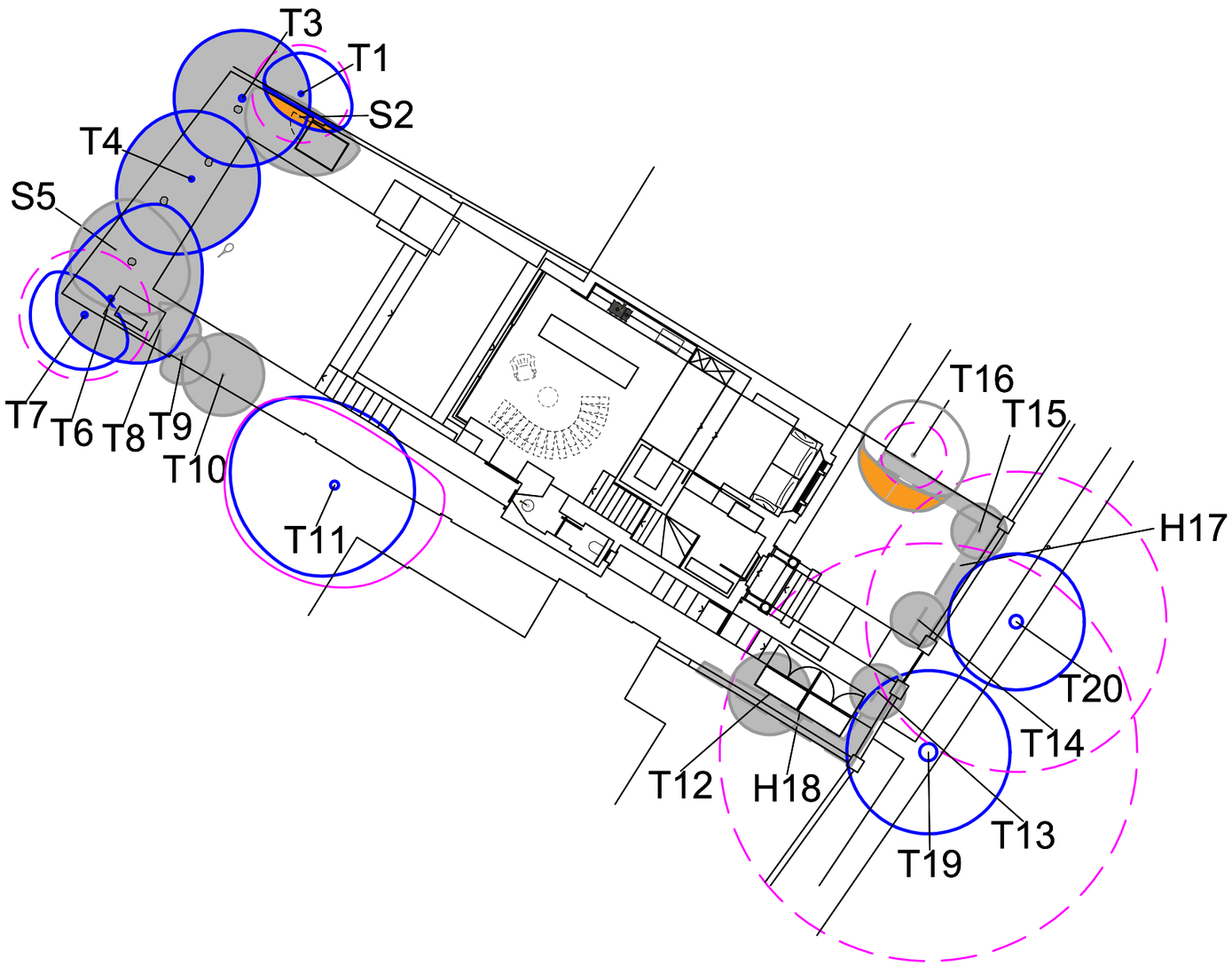

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The original of this drawing was produced in colour -a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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.

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BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

Trees to be removed shown shaded grey.

Trees to be pruned back shown shaded orange.

REV	DATE	DESCRIPTION	DRAWN
b	31.05.22	0086_landscape revA	HR
a	24.05.22	0086_landscape rev	HR
-	10.11.21	Base Drawing 0086_pln_DWG	

0 1m 5m 10m

Title
Proposed Layout and Tree Works

Client
Philippe Bodereau

Project
2 Thurlow Road, London NW3 5PJ

Date	Drawn by	Checked by
November 2021	HR	KH

Drawing No	Rev	Scale
210420-P-11	b	1:200@A3

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ARBORICULTURAL METHOD STATEMENT

TREE WORKS

Only the tree works specified within this report may be undertaken, after the appropriate planning consents have been acquired and in order to implement the consent. In the event of any uncertainty regarding tree works, the retained arboricultural consultant will be consulted and where appropriate the Local Planning Authority.

All tree works will be undertaken, in accordance with the best-practice recommendations provided in BS 3998:2010. The statutory responsibilities as outlined in the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010 will also be complied with.

TREE PROTECTION FENCING

The tree protection fencing and (where appropriate) ground protection, will be installed as specified within this plan, prior to the commencement of any demolition and construction works. No plant or materials will be delivered to site prior to the construction of the tree protective fencing other than those required to install the tree protection fencing. On every third panel, a sign will be fixed that states "*Tree Protection Zone (TPZ). Keep out. Any incursion into this area must be agreed in advance with the retained arboricultural consultant and Local Planning Authority.*" An example of this sign is provided within this plan.

The position of the tree protection fencing must not be amended and no individual panels will be uncoupled, without the agreement of the retained arboricultural consultant and/or Local Planning Authority.

SERVICES AND DRAINAGE

The installation of drainage runs, manholes, storage tanks, and utilities will be positioned outside the root protection areas of retained trees. If the installation of new services and drainage runs are required within the root protection areas (RPAs) of retained trees, all methods of working will follow the guidance within Table 3 of BS 5837 or the National Joint Utilities Group's (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (volume 4, issue 2).

Excavation works within the RPAs of retained trees will be undertaken manually with the use of hand tools only (under the supervision of the retained arboricultural consultant), unless otherwise agreed in advance by the retained arboricultural consultant. It is recommended that an air lance - and if required a soil vacuum - is used, to excavate service trenches within RPAs. If soil conditions are not suitable for this method of excavation, alternative hand tools can be used once agreed in advance by the retained arboricultural consultant.

All roots greater than 25mm in diameter will be retained and will immediately be wrapped in hessian or another appropriate material, to prevent desiccation and temperature fluctuations. Roots will be pushed aside to allow for runs to be installed, where this is practical and without causing root damage.

No machinery will be permitted within the TPZ, at any time, unless agreed in advance with the retained arboricultural consultant.

NO-DIG CONSTRUCTION AREAS

Areas that will require no-dig methods of construction are shown within this plan. Working methods within these areas will comply with the details outlined in the main report and in advance of works being undertaken will be agreed with the retained arboricultural consultant.

ARBORICULTURAL CLERK OF WORKS

The monitoring of activities at the Site will occur, at the following points:

- To sign-off the tree protection measures;
- To sign-off the tree works;
- At other points as specified within this Report and the TPP.

It will be the responsibility of the main contractor (or other managing individual or organisation) to confirm the date and time of attendance, providing at least five working days of notice so that the project arboriculturist can confirm attendance.

GENERAL PROTECTION METHODS

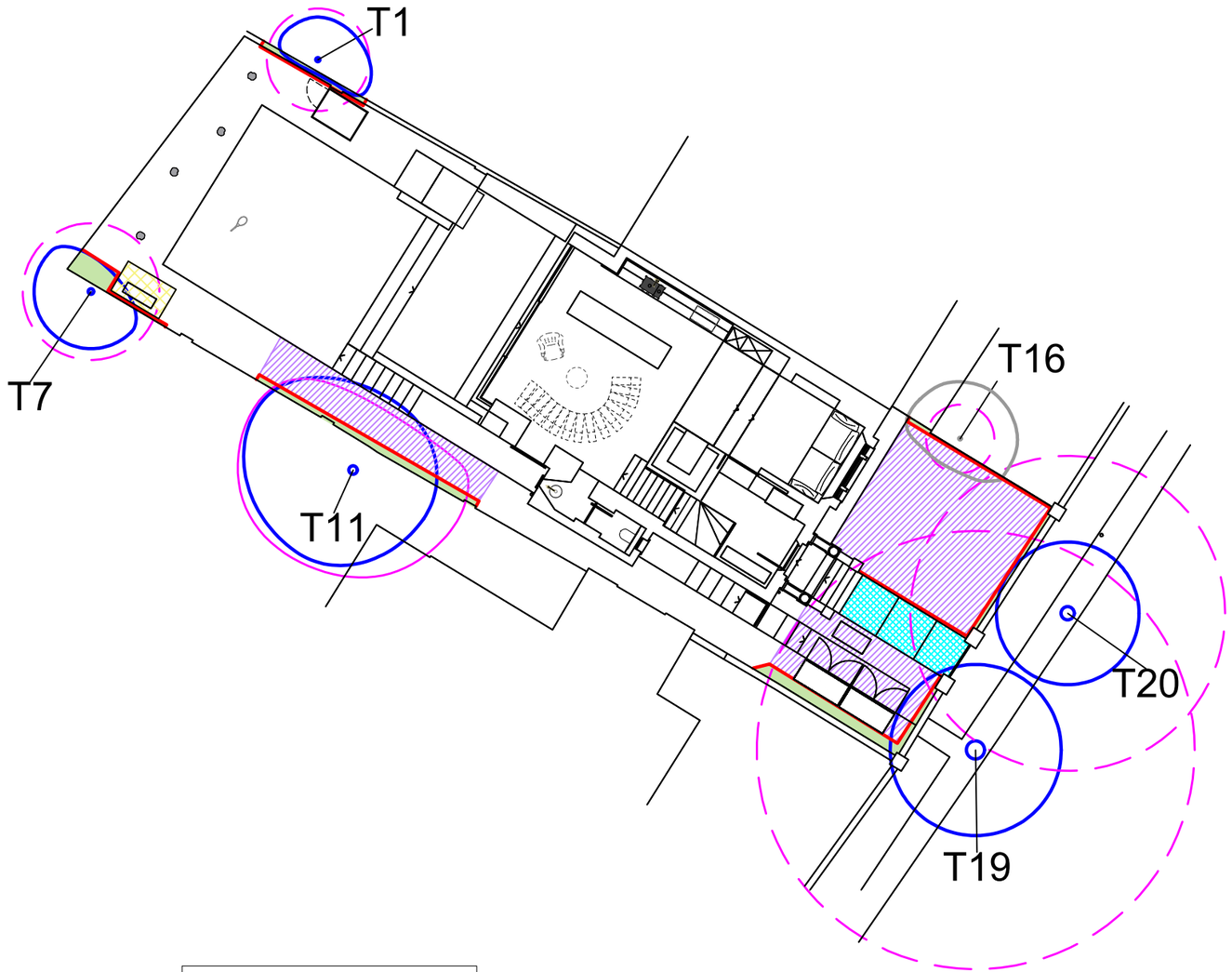
No fires will be permitted, within 20m of the crown of any tree or other area of vegetation that includes hedgerows and groups of trees.

No changes in soil level will occur, within the TPZs and RPAs, without agreement in advance with the retained arboricultural consultant.

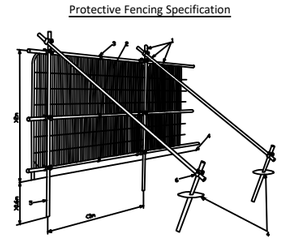
The TPZs will at all times remain free of liquids, materials, vehicles, plant, and personnel, without agreement in advance with the retained arboricultural consultant.

Any liquid materials spilled on site will immediately be cleared up. If liquids are spilled within 2m of any TPZ or RPA, the incident will immediately be reported to the retained arboricultural consultant, to determine the appropriate response.

All damage to trees and other vegetation will immediately be reported to the retained arboricultural consultant, to determine the appropriate response.

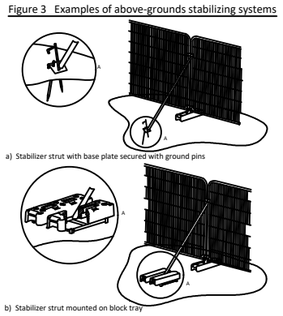


Protective Fencing Specification



Key
1 Standard scaffold poles.
2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels.
3 Panels secured to upright and cross-members with wire ties.
4 Ground level.
5 Uprights driven into the ground until secure (minimum depth 0.6m).
6 Standard scaffold clamps.

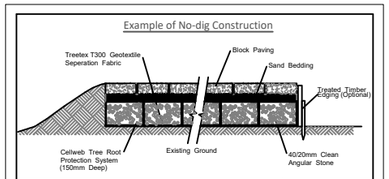
Figure 3 Examples of above-grounds stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

Example of No-dig Construction



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BS 5837:2012 TREE RETENTION CATEGORIES

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Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer that 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

Protective tree barriers / Construction Exclusion Zones (existing features may act as suitable barriers).

Landscaping within RPAs requiring careful excavation of existing surfaces and / or root pruning operations (see report for specific detail in each area).

Careful lifting of existing slabs to allow new paving to be laid on existing sub-base.

Once existing hedgerow and raised bed are removed, a no-dig method of construction will be used to form the bin store sub-base.

Area requiring methods of no-dig construction.

REV	DATE	DESCRIPTION	DRAWN
b	31.05.22	0086_landscape revA	HR
a	24.05.22	0086_landscape rev	HR

Base Drawing		
-	10.11.21	0086_pln_DWG

0 1m 5m 10m

Title
Tree Protection Plan

Client
Philippe Bodereau

Project
2 Thurlow Road, London NW3 5PJ

Date	Drawn by	Checked by
November 2021	HR	KH

Drawing No	Rev	Scale
210420-P-12	b	1:200@A3

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APPENDIX B - TREE SCHEDULE

- 210420-PD-10; Tree Schedule (BS5837)

210420-PD-10-Tree schedule (BS5837)

TIM MOYA ASSOCIATES

210420 - 2 Thurlow Road

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T1	1	Laurus nobilis (Bay/Bay Laurel/Poets Laurel)	5.5	15	1		1.5		2.0		1.0		1.5	1.5		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Structure. Third party ownership. Measurements estimated.	09/11/2021	10.2	1.8	10-20	**B3**
Shrub S2	1	Cornus sp. (Dogwood sp.)	4.0	6 COM	12		0.5		2.5		2.0		2.0	1.0		Early Mature	Structural condition Good. Physiological condition Good. Competition - Adjacent trees. Multi-stemmed.	09/11/2021	2.2	0.8	10-20	**C1**
Tree T3	1	Betula pendula (Silver Birch)	14.0	21	1		2.5		2.5		2.5		2.5	4.0		Early Mature	Structural condition Good. Physiological condition Fair. Root environment - Compacted. Root environment - Restricted.	05/11/2021	20.0	2.5	20-40	**B1/B2/ B3**
Tree T4	1	Betula utilis (Himalayan Birch)	11.0	16	1		2.5		2.5		3.0		2.5	4.0		Early Mature	Structural condition Good. Physiological condition Fair. Competition - Adjacent trees. Competition - Adjacent vegetation. Root environment - Compacted. Root environment - Restricted.	05/11/2021	11.6	1.9	20-40	**B1/B2/ B3**
Shrub S5	1	Cornus sp. (Dogwood sp.)	5.0	8 COM	20		2.0		3.0		2.0		1.5	2.0		Mature	Structural condition Good. Physiological condition Good. Commemorative tree. Competition - Adjacent trees. Multi-stemmed.	09/11/2021	3.6	1.1	10-20	**C1**
Tree T6	1	Betula utilis (Himalayan Birch)	11.5	19	1		4.0		3.0		2.0		2.0	4.0		Early Mature	Structural condition Good. Physiological condition Fair. Competition - Adjacent trees. Competition - Adjacent vegetation. Root environment - Compacted. Root environment - Restricted.	09/11/2021	16.3	2.3	20-40	**B1/B2/ B3**
Tree T7	1	Chamaecyparis lawsoniana (Lawson Cypress)	10.5	20	1		1.0		2.0		2.0		2.0	1.5		Mature	Structural condition Good. Physiological condition Good. Competition - Adjacent trees. Decay / structural defect - Bole. Fork - Suspected structurally sound. Third party ownership. Measurements estimated.	05/11/2021	18.1	2.4	10-20	**B3**

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.

Generated By MyTREES tree management software

210420 - 2 Thurlow Road

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T8	1	Cordyline sp.	3.5	9	1	1.0		1.5		1.0		0.0		1.5		Early Mature	Structural condition Fair. Physiological condition Good.	05/11/2021	3.7	1.1	10-20	C1
Tree T9	1	Cornus sp. (Dogwood sp.)	4.0	5	1		1.0		1.0		1.0		0.5	2.0		Semi Mature	Structural condition Fair. Physiological condition Fair.	05/11/2021	1.1	0.6	10-20	C1
Tree T10	1	Prunus cerasifera 'Nigra' (Purple Cherry Plum)	5.5	5	1	1.5		1.5		1.5		1.5		1.5		Semi Mature	Structural condition Fair. Physiological condition Fair. Wire support to wall embedded in stem.	05/11/2021	1.1	0.6	10-20	C1
Tree T11	1	Pyrus sp. (Pear sp.)	8.0	30	1		2.8		3.0		3.5		4.0	2.0		Mature	Structural condition Fair. Physiological condition Good. Crown reduction - Historic. Third party ownership. Measurements estimated.	09/11/2021	40.7	3.6	20-40	B1/B2/ B3
Tree T12	1	Olea europaea (Olive)	3.0	8	1	1.5		1.5		1.5		1.5		1.5		Semi Mature	Structural condition Good. Physiological condition Good.	05/11/2021	2.9	1.0	10-20	C1
Tree T13	1	Olea europaea (Olive)	2.5	5	1	1.0		1.0		1.0		1.0		1.0		Semi Mature	Structural condition Good. Physiological condition Good.	05/11/2021	1.1	0.6	10-20	C1
Tree T14	1	Olea europaea (Olive)	2.5	5	1	1.0		1.0		1.0		1.0		1.0		Semi Mature	Structural condition Good. Physiological condition Good.	05/11/2021	1.1	0.6	10-20	C1
Tree T15	1	Olea europaea (Olive)	2.5	5	1	1.0		1.0		1.0		1.0		1.0		Semi Mature	Structural condition Good. Physiological condition Good.	05/11/2021	1.1	0.6	10-20	C1
Tree T16	1	Olea europaea (Olive)	4.0	10	1	2.0		2.0		2.0		2.0		1.5		Semi Mature	Structural condition Good. Physiological condition Good. Third party ownership. Measurements estimated.	05/11/2021	4.5	1.2	10-20	C1
Hedge H17	20	Taxus baccata (Yew)	1.8	2 AVE	3									0.0		Early Mature	Structural condition Good. Physiological condition Good.	05/11/2021	0.5	0.4	10-20	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.

210420 - 2 Thurlow Road

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Hedge H18	15	Taxus baccata (Yew)	1.8	2 AVE	3									0.0		Early Mature	Structural condition Good. Physiological condition Good.	05/11/2021	0.5	0.4	10-20	C2
Tree T19	1	Tilia x vulgaris (Common Lime)	11.0	64	1	3.0		3.0		3.0		3.0		2.0		Mature	Structural condition Fair. Physiological condition Good. Crown reduction - Historic. Epicormic growth - Crown. Root environment - Restricted. Raised surface roots. Structural impact - Footpath / highway / drive disturbance.	05/11/2021	185.3	7.7	20-40	B3
Tree T20	1	Tilia x vulgaris (Common Lime)	11.0	46	1	2.5		2.5		2.5		2.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Crown reduction - Historic. Epicormic growth - Crown. Root environment - Restricted. Structural impact - Footpath / highway / drive disturbance.	05/11/2021	95.7	5.5	20-40	B3

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.

Generated By MyTREES tree management software

Summary table with retention category

	Hedgerow	Shrub	Tree	Total
B1/B2	0	0	4	4
B3	0	0	4	4
C1	0	2	8	10
C2	2	0	0	2
Total	2	2	16	20

Summary table with life stage

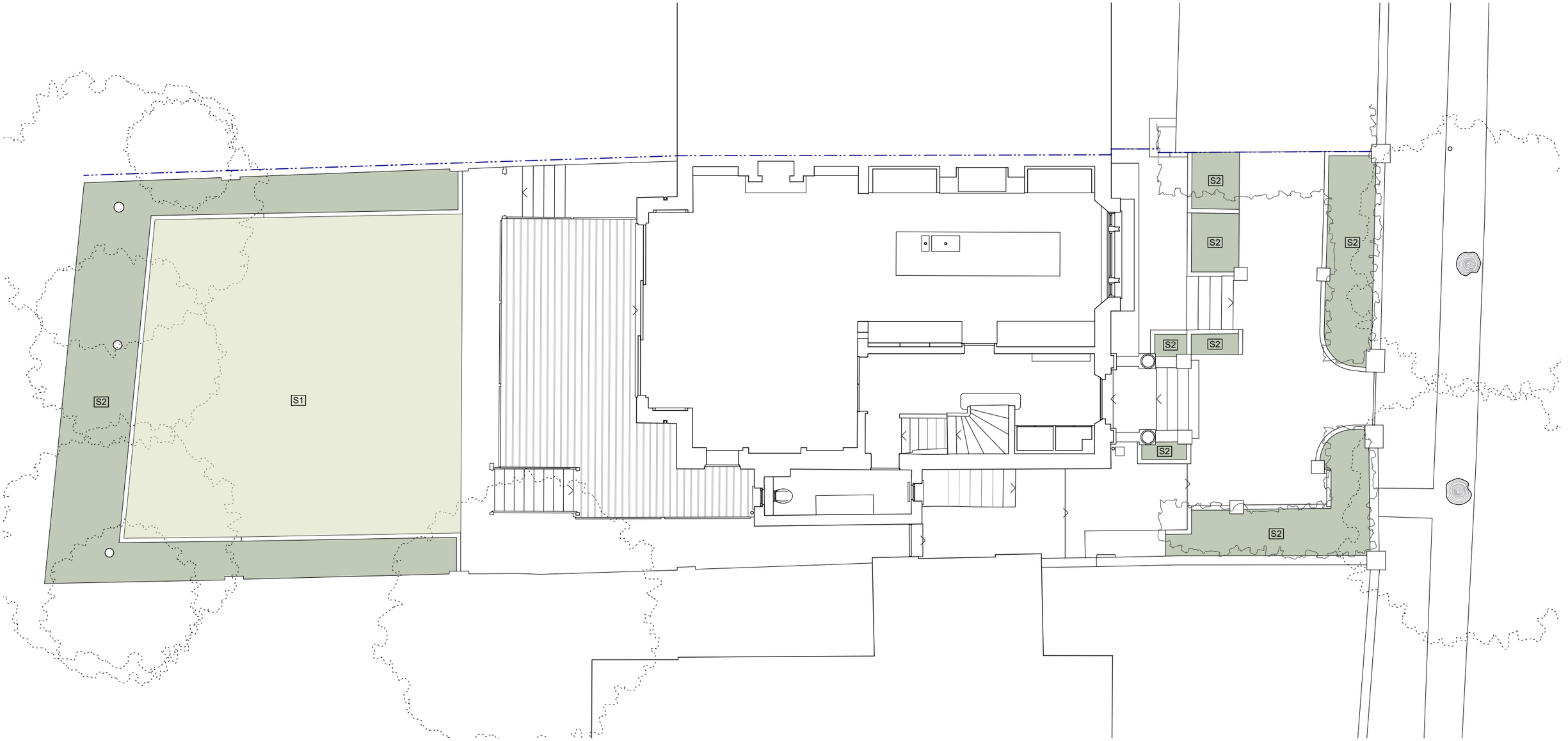
	Hedgerow	Shrub	Tree	Total
Early Mature	2	1	4	7
Mature	0	1	5	6
Semi Mature	0	0	7	7
Total	2	2	16	20

Table 1 of BS5837 (2012) **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	* Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) * Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline * Trees infected with pathogens of significance to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7			**RED**
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Tree that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricutural 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 remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value.	**BLUE**
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	**GREY**

APPENDIX C - LANDSCAPE PLANS

- Landscape plans



AREA OF TURF S1

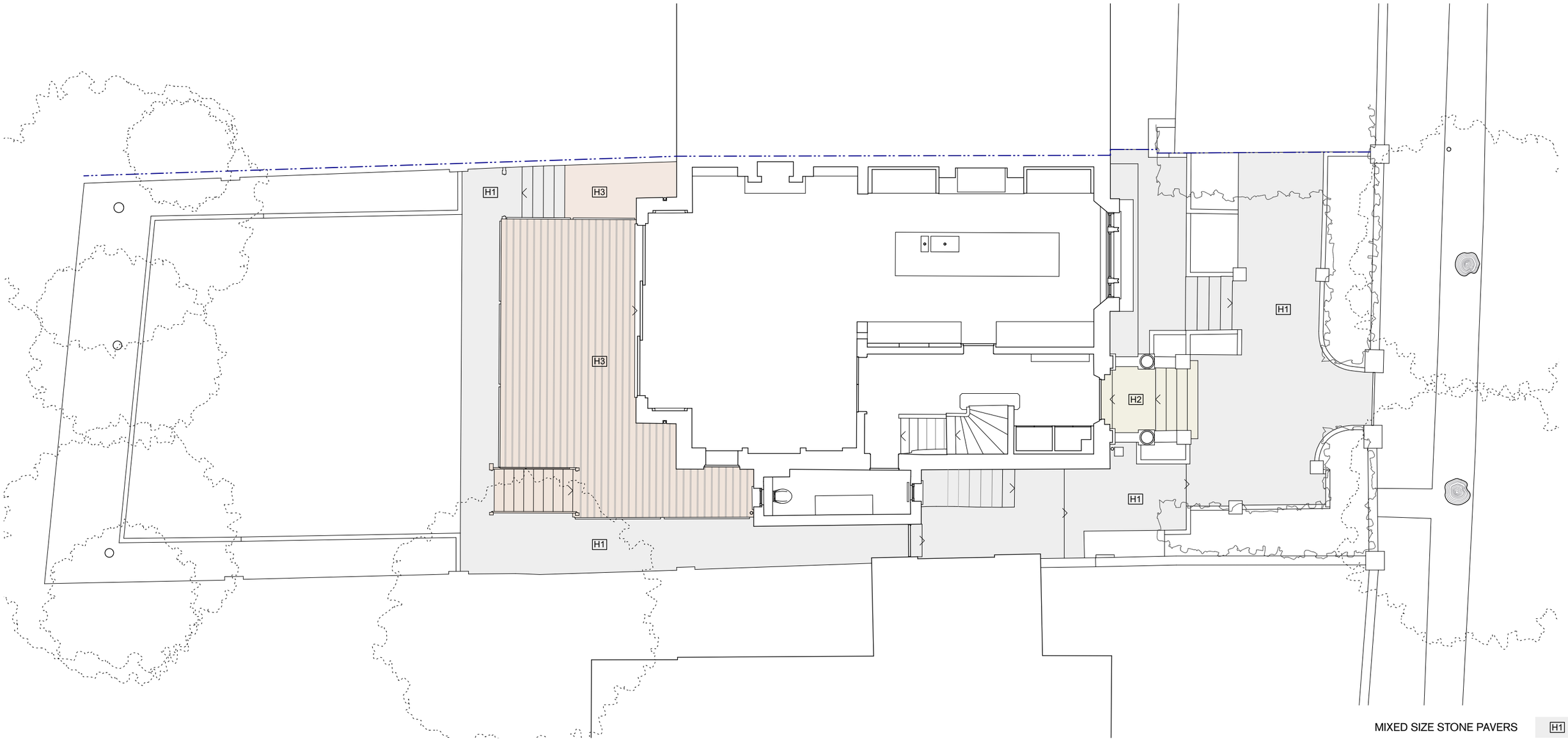
PLANT BED S2

revised 30 vi 22

0 2 4 6 8 10m

2 Thurlow Road | 003 - Existing Soft Landscape Plan | 1:100 @ A3

William Smalley RIBA



MIXED SIZE STONE PAVERS H1

YORK STONE SLABS H2

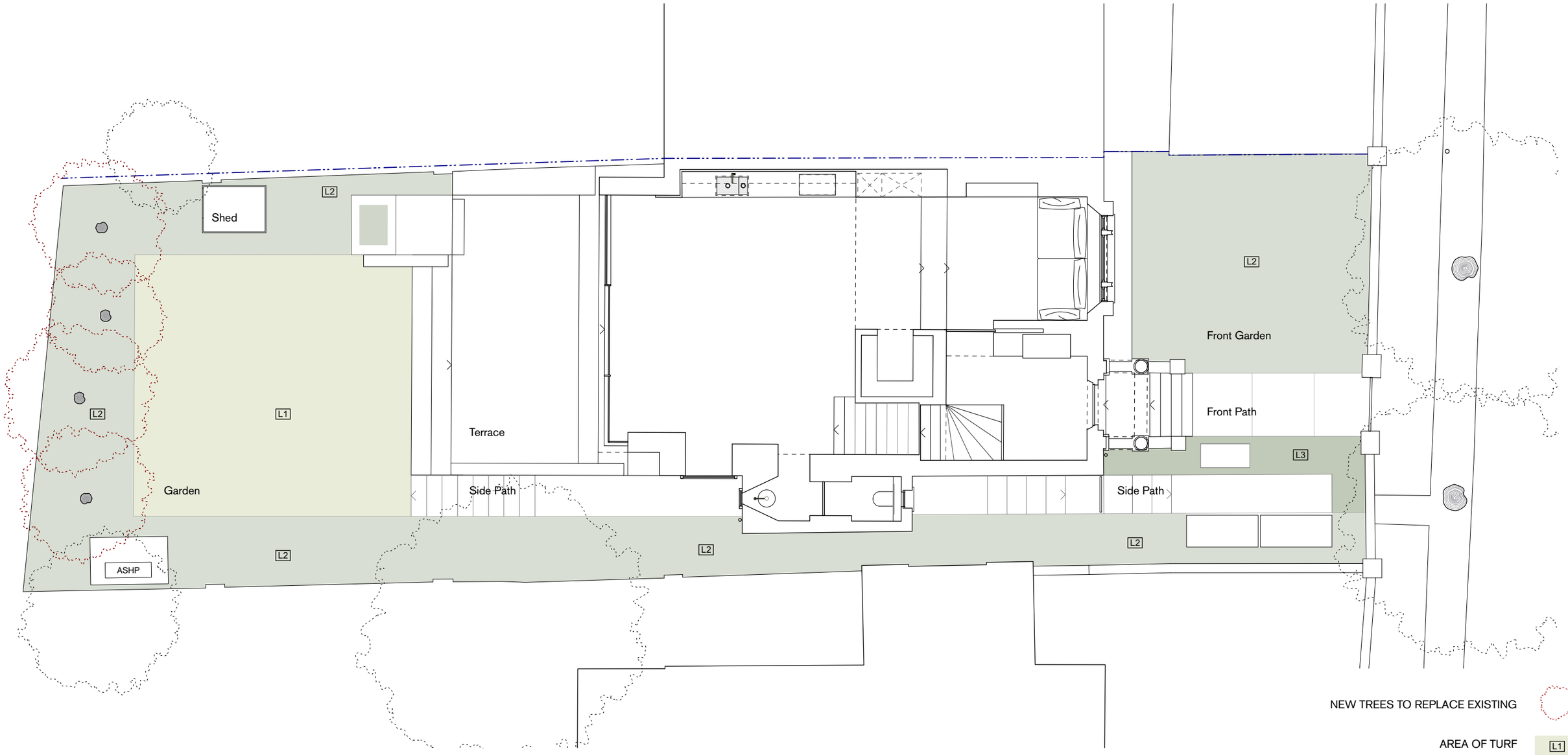
HARDWOOD TIMBER DECKING (LGF & UGF) H3

revised 30 vi 22

0 2 4 6 8 10m

2 Thurlow Road | 004 - Existing Hard Landscape Plan | 1:100 @ A3

William Smalley RIBA



NEW TREES TO REPLACE EXISTING

AREA OF TURF L1

PLANT BED
mix of ever green ground covering & overgrown planting L2

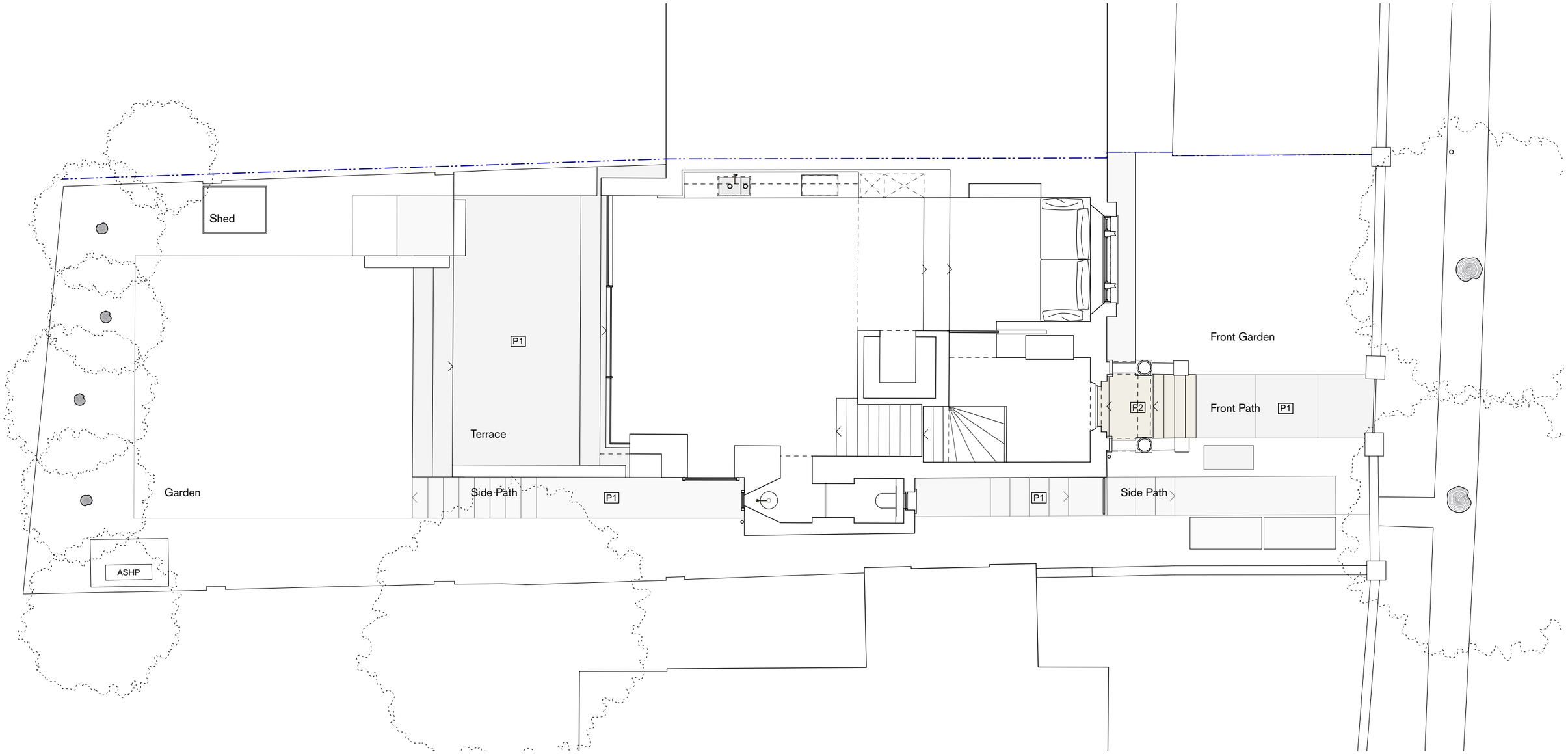
UNDERPLANTING
mix of ever green ground covering L3

revised 30 vi 22

0 2 4 6 8 10m

2 Thurlow Road | 110 - Proposed Soft Landscape Plan | 1:100 @ A3

William Smalley RIBA



STONE PAVING SLABS P1

PORTLAND STONE SLABS P2

revised 30 vi 22

0 2 4 6 8 10m

2 Thurlow Road | 111 - Proposed Hard Landscape Plan | 1:100 @ A3

William Smalley RIBA

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