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Arboricultural Implications Report

Proposed development at

56a Church Hill

Enfield



March 2024

Ref. SJA air 24115-01

SUMMARY

S1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of low magnitude, as defined according to the categories set out in **Table 1** of this report.

S2. Our assessment of the impacts of the proposals on the existing trees concludes that the proposed tree removals will not have a discernible impact on visual amenity or biodiversity and that the main arboricultural features of the site are to be retained. The proposed removals will have only a very minor alteration to the overall arboricultural character of the site and will not have a significant adverse impact on the arboricultural character and appearance of the local landscape or the conservation area.

S3. The incursions into the Root Protection Areas of trees to be retained have been thoroughly assessed and considered in detail during the design phase. They are all minor, and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix 1**, no significant or long-term damage to the root systems or rooting environments of retained trees will occur.

S4. Whilst the proposals do require the removal of TPO trees, the LPA's policy resisting all developments that involve the removal of TPO trees is an unreasonably high bar, and in any event the woodland canopy (protected by the woodland TPO) will remain largely intact, the proposed removals will not have a significant detrimental impact on visual amenity or biodiversity and therefore they comply with the LPA's Policy DMD 80.

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1. INTRODUCTION AND BACKGROUND INFORMATION

1.1. Instructions

1.1.1. SJAtrees has been instructed by Atelier Ochre to visit 56a Church Hill, Enfield and to survey the trees growing on or immediately adjacent to this site.

1.1.2. We are further asked to identify which trees are worthy of retention within a proposed development of the site; to assess the implications of the development proposals on these specimens, and to advise how they should be protected from unacceptable damage during construction.

1.2. Scope of report

1.2.1. This report and its appendices reflect the scope of our instructions, as set out above. It is intended to accompany a planning application to be submitted to the London Borough of Enfield (“the LPA”) and complies with local validation requirements.

1.2.2. It complies also with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations* (‘BS 5837’). However, the British Standard is not a Code of Practice that consists of written rules outlining how actions or decision must be taken and it “should not be quoted as if it were a specification¹”; it is a set of recommendations intended to “assist decision-making with regard to existing and proposed trees in the context of design, demolition and construction²”. It doesn’t form part of planning policy; but it is a material consideration to which weight is likely to be given.

1.2.3. The proposed development comprises the construction of a single storey three-bedroom dwelling.

¹ British Standard BS 5837:2012. *Trees in relation to design, demolition and construction – Recommendations*; Foreword. *The British Standards Institution*.

² *Ibid.*, p.1, Introduction.

1.2.4. This report summarises and sets out the main conclusions of the baseline data collected during the tree survey and identifies those trees whose removal could result in a significant adverse impact on the character or appearance of the local area (Section 3). It then details and assesses the impacts of the proposed development on individual trees, including those to be removed (Section 4), those to be pruned (Section 5), those which might incur root damage that might threaten their viability (Section 6) and those that might become under pressure for removal after occupation because of shading (Section 7). A summary and conclusions, with regard to local planning policy, are presented in Section 8.

1.3. Site inspection

1.3.1. A site visit and tree inspection were undertaken by Will Hovell of SJAtrees on Friday the 18th May 2022. Weather conditions at the time were clear, dry and bright. Deciduous trees were in full leaf.

1.4. Site description

1.4.1. The site is 604m² in size and is located on the west side of Church Hill adjacent to St Paul's Church, as shown at **Figure 1** below. The north boundary adjoins 56 Church Hill and the south boundary adjoins the car park of St Paul's Church. The west boundary adjoins the rear garden no. 22 Branscombe Gardens and the east boundary fronts Church Hill.



Figure 1: Site location shown on satellite imagery³

1.4.2. The site is on ground that rises by approximately 1m from its northern boundary to its southern boundary adjacent to St. Paul's Church, and currently comprises unmade ground with established trees.

1.5. Soil type

1.5.1. The British Geological Survey Solid and Drift Geology map of the area indicates the site overlies a bedrock of London clay formation.

1.5.2. The class of soil in this area is recorded on the Department for Environment, Food & Rural Affairs ('Defra') Magic website as a seasonally wet clayey soil.

1.5.3. We are not aware of a site investigation or soil analysis having been undertaken; but the class of soil and the indications of the British Geological Survey map suggest that the soil is likely to be susceptible to compaction.

³ Please note that the aerial imagery is not taken perpendicular to the earth's surface and hence the angle of the image distorts the impression of the shape and location of the site which is still drawn in plan form. Therefore, in this image it looks like the site extends into the neighbouring property, that is not the case, this Figure should be used for illustrative purposes only.

1.6. Statutory controls

1.6.1. Twelve of the trees surveyed individually are covered by a tree preservation order (TPO). This is TPO no. W001 of 1966 made by the London Borough of Enfield that protects one woodland on and immediately adjoining the site. The trees protected by this TPO are identified within our tree survey schedule at **Appendix 2** and on the accompanying tree locations and tree protection plans.

1.6.2. The site is within the boundaries of the Winchmore Hill Conservation Area. The Character Appraisal for this area mentions trees along Church Hill at paragraph 2.7.2, where it states that **“Well-planted front gardens, often with mature trees and bounded by a variety of close-boarded fencing and low stock brick walls, smooth the transition between buildings of contrasting styles and give the area a leafy, suburban feel that is almost rural to the west of the church.”**

1.7. Non-statutory designations

1.7.1. There are no woodlands within or abutting the site that are classified as ‘Ancient’. Ancient woodland is defined as “any area that’s been wooded continuously since at least 1600 AD” and is considered an important and irreplaceable habitat.

1.7.2. There are no trees within or abutting the site that can be classified as ‘Ancient’ or ‘Veteran’. Ancient and veteran trees are also considered to be irreplaceable habitats, and contribute to a site’s biodiversity, cultural and heritage value, and the National Planning Policy Framework (see below) states that development resulting in the loss or deterioration of ancient or veteran trees should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

2. METHODOLOGY

2.1. National policy context

2.1.1. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when considering planning applications. The effects of proposed development on trees are therefore a material consideration, and this is normally reflected in local planning policies.

2.1.2. The National Planning Policy Framework ('NPPF')⁴ sets out the Government's planning policies for England and how these should be applied in both plan and decision-making. Paragraph 2 makes it clear that the NPPF is itself a material consideration in the determination of planning application. Paragraph 11 states that **"Plans and decisions should apply a presumption in favour of sustainable development."**

2.1.3. In paragraph 135, within Section 12 "Achieving well-designed places" the NPPF states: **"Planning policies and decisions should ensure that developments:**

a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

⁴ The National Planning Policy Framework (NPPF) (July 2021) Ministry of Housing, Communities & Local Government

e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.”

2.1.4. Paragraph 136 in this section states: **“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.”**

2.1.5. The section titled “Meeting the challenge of climate change, flooding and coastal change” states at paragraph 158: **“Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.”**

2.1.6. In paragraph 180, within Section 15 “Conserving and enhancing the natural environment” the NPPF states: **“Planning policies and decisions should contribute to and enhance the natural and local environment by:**

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

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 the best and most versatile agricultural land, and of trees and woodland;...

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;

2.1.7. In paragraph 186, under the ‘Habitats and biodiversity’ section, the NPPF states: **“When determining planning applications, local planning authorities should apply the following principles:**

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists....”

2.2. Regional policy context

2.2.1. Policy G1 ‘Green infrastructure’ of the London Plan⁵ states:

“A 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.

B Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.

⁵ The London Plan (March 2021); Greater London Authority

C Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:

- 1) identify key green infrastructure assets, their function and their potential function**
- 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.**

D Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network."

2.2.2. Policy G7 'Trees and woodlands' of the London Plan states:

"A London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees.

B In their Development Plans, boroughs should:

- 1) protect 'veteran' trees and ancient woodland where these are not already part of a protected site¹³⁹**
- 2) identify opportunities for tree planting in strategic locations.**

C Development proposals should ensure that, wherever possible, existing trees of value are retained.¹⁴⁰ 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.

¹⁴⁰ **Category A, B and lesser category trees where these are considered by the local planning authority to be of importance to amenity and biodiversity, as defined by BS 5837:2012".**

2.3. Local policy context

2.3.1. Local planning policies are contained in the London Borough of Enfield Development Management Document 2014.

2.3.2. The relevant section of Policy DMD 46 of the development document states:

“...Vehicle crossovers and dropped kerbs that allow for off-street parking and access onto roads will be permitted where:...

...b. There is no loss of street trees;”

2.3.3. Policy DMD 80 of the development document states:

“Trees on Development Sites

All development including: subsidiary or enabling works that involve the loss of or harm to trees covered by Tree Preservation Orders, or trees of significant amenity or biodiversity value, will be refused.

Where there are exceptional circumstances to support the removal of such trees, adequate replacement must be provided.

All development and demolition must comply with established good practice, guidelines and legislation for the retention and protection of trees. Proposals must:

- a. Retain and protect trees of amenity and biodiversity value on the site and in adjacent sites that may be affected by the proposals;**
- b. Ensure that the future long term health and amenity value of the trees is not harmed;**
- c. Provide adequate separation between the built form and the trees including having regard to shading caused by trees and buildings.**

Works to Protected Trees

Works to trees covered by a Tree Preservation Order or trees situated within a Conservation Area must ensure the long term health of the tree, and retain and enhance amenity value to the locality. Works must comply with current arboricultural best practice, guidelines and legislation.”

2.4. Neighbourhood policy context

2.4.1. At the time of writing there is no Neighbourhood Plan covering the area within which the site is found.

2.5. Tree survey and baseline information

2.5.1. We surveyed individual trees with trunk diameters of 75mm and above⁶, trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows⁷ growing within or immediately adjacent to the site; and recorded their locations, species, dimensions, ages, condition, and visual importance in accordance with BS 5837 recommendations.

2.5.2. The baseline information collected during the site survey was recorded on site using a hand-held digital device. This information was then imported into an Excel spreadsheet and used to produce the tree survey schedule at **Appendix 2**. The numbers assigned to the trees in the tree survey schedule correspond with those shown on the appended tree protection plan.

2.5.3. We surveyed trees as groups where they have grown together to form cohesive arboricultural features, either aerodynamically (trees that provide companion shelter), visually (e.g., avenues or screens) or culturally⁸. However, where it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

2.5.4. We inspected the trees from the ground only, aided by binoculars as appropriate, but did not climb them. We took no samples of wood, roots or fungi. We did not undertake a full hazard or risk assessment of the trees, and therefore can give no guarantee, either expressed or implied, of their safety or stability.

2.5.5. We have categorised the trees in accordance with BS 5837, and details of the criteria used for this process can be found in the notes that accompany the tree survey schedule. We applied this methodology in line with the NPPF's presumption in favour of sustainable development, giving greater weighting to the contribution of a tree to the character and appearance of the local landscape, to amenity, or to biodiversity, where its removal might have a significant adverse impact on these factors.

⁶ BS 5837, paragraph 4.2.4 b), recommends that all trees over 75mm stem diameter should be included in a pre-planning land and tree survey.

⁷ Ibid., 4.4.2.7

⁸ Ibid., 4.4.2.3

2.6. Tree constraints

2.6.1. In line with the NPPF's presumption in favour of sustainable development, we assessed whether any trees should be retained in the context of the proposed development. Our assessment of which trees might have to be retained, and which can be removed, is based on:

- whether any trees are classed as 'ancient' or 'veteran', and thereby are designated as 'irreplaceable habitats';⁹
- which trees contribute to local character and history, including to the surrounding landscape setting; which trees contribute to biodiversity; and which trees help mitigate and adapt to climate change; and whose removal would thereby be unlikely to comply with national planning policy guidance;
- which trees are of significant amenity or biodiversity, such that their removal would be contrary to local planning policies: specifically, Policy DMD 80 of the London Borough of Enfield development document, as set out above;
- our assessment of the tree's' quality, value and remaining life expectancy, in accordance with BS5837:2012, as summarised in the notes that accompany the tree survey schedule.

2.6.2. As trees growing outside the boundaries of the site are in the control of others, we have assumed they will be retained, irrespective of their size, age or condition.

2.6.3. Whilst we have categorised trees in accordance with BS5837, we have not used these categorisations as the main criterion of whether specimens might be removed or should be retained. Trees in categories 'A', 'B' and 'C' are all a material consideration in the development process; but the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary should they impose a significant constraint on development.

⁹ The National Planning Policy Framework (NPPF) (July 2021). Paragraph 180 (c).

2.6.4. Furthermore, BS 5837 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature **“need not necessarily be a significant constraint on the site’s potential”**¹⁰.

2.6.5. Moreover, BS 5837 states that **“... care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal”**¹¹.

2.6.6. The ‘Root Protection Areas’ (RPAs)¹² of the trees identified for retention were calculated in accordance with Section 4.6 of BS 5837; and were assessed taking account of factors such as the likely tolerance of a tree to root disturbance or damage, the morphology and disposition of roots as influenced by existing site conditions (including the presence of existing roads or structures), as well as soil type, topography and drainage. Where considered appropriate, the shapes of the RPAs (although not their areas) were modified based on these considerations, so that they reflect more accurately the likely root distribution of the relevant trees.

2.6.7. To assess whether the trees identified for retention would be in a sustainable relationship with the proposed development (without casting excessive shade or otherwise unreasonably interfering with incoming residents’ prospects of enjoying their properties, and thereby leading inevitably to requests for consents to fell), we plotted a segment or “shading arc” from each trunk, with a radius equal to the current height of the tree concerned, from due north-west to due east. This gave an indication of potential direct obstruction of sunlight and the shadow pattern cast through the main part of the day¹³.

2.6.8. Based on these principles and recommendations, the tree survey and assessment of suitability for retention informed the production of a tree constraints

¹⁰ BS 5837, 4.5.10.

¹¹ Ibid., 5.1.1.

¹² Ibid., paragraph 3.7. “The minimum area around a retained 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.”

¹³ Ibid., paragraph 5.2.2 Note 1.

plan (TCP) which indicates the most suitable trees for retention, and their associated below-ground and above-ground constraints.

2.6.9. As a design tool, the TCP also indicates how close to those trees selected for retention the proposed development could be positioned, in terms of three key criteria:

- a). avoidance of unacceptable root damage;
- b). avoidance of the necessity for unacceptable pruning works; and
- c). avoidance of future felling or pruning works to prevent unacceptable shading or apprehension on behalf of the occupants.

2.6.10. The TCP was then used to inform the siting of the proposed dwelling and areas of hard surfacing, about both of which we were consulted on several occasions during the design process. In this way, it has been ensured that the existing trees have made a significant contribution to the design of the proposed development, rather than the design having dictated which trees are to be removed.

2.7. Arboricultural impact assessment and tree protection plan

2.7.1. Once finalised, we assessed the arboricultural impacts of the proposed layout, by overlaying it onto the TCP, and produced the tree protection plan (TPP) presented at **Appendix 4**. This is based on the site layout by Atelier Ochre Architects, drawing no. 220002-101 Rev P1.

2.7.2. The TPP identifies the trees to be removed to accommodate the proposed development, either because they are situated within the footprints of proposed structures or surfaces, or because in our judgment they are too close to these structures or surfaces to enable them to be retained. These are shown by means of **red crosses** on the TPP.

2.7.3. The TPP also shows how trees to be retained will be protected from damage during construction, and the measures identified are set out and described at **Appendix 1** to this report. The implementation of, and adherence to, these measures can readily be secured by the imposition of appropriate planning conditions.

2.7.4. For the trees shown to be retained, all measurements for pruning specifications, percentage estimates of RPA incursions and shading issues have been calculated using AutoCAD software.

2.7.5. Details of the impacts identified within these categories, and our assessment of their respective significance, are analysed in Sections 4 to 7 below.

2.7.6. Based on these findings, we have assessed the magnitude of the overall arboricultural impact of the proposals according to the categories defined in **Table 1** below.

Impact	Description
High	Total loss of or major alteration to main elements/ features/ characteristics of the baseline, post-development situation fundamentally different
Medium	Partial loss of or alteration to main elements/ features/ characteristics of the baseline, post-development situation will be partially changed
Low	Minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be discernible but the underlying situation will remain similar to the baseline
Negligible	Very minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be barely discernible, approximating to the 'no change' situation

Table 1: Magnitude of impacts¹⁴

¹⁴ Determination of magnitude based on DETR (2000) Guidance on the Methodology for Multi-Modal Studies, as modified and extended.

3. THE TREES

3.1. Survey findings

3.1.1. We surveyed 14 individual trees, and two groups of trees growing within or adjacent to the site. Their details can be found in the tree survey schedule at **Appendix 2**.

3.1.2. The site is dominated by large, mature oak specimens which are relatively evenly spaced across the site with scattered small self-seeded trees and shrubs. The trees within the site adjoin a belt of trees along the south-western boundary. The character of the site is consistent with the generally native, broadleaf tree cover of the surrounding area.

3.2. Assessment of suitability for retention

3.2.1. As noted above in Section 2.3, local planning policies require that proposed developments “retain and protect trees of amenity and biodiversity value”. The individuals within or adjacent to the site, whose attributes we consider meet these criteria, are as follows:

- English oaks nos. 1, 2 and 5 adjacent to Church Hill.
- English oak nos. 10, 12 and 14 along the western edge of the site.

The other mature oak trees (nos. 7, 9 and 13) have not been included in this list due to a combination of their deteriorating condition and the fact they are less visible from the public realm resulting in lower amenity value.

3.2.2. Two individual trees (nos. 6 and 13) have been assessed as category 'U'. These are trees that are unsuitable for retention, on the basis of them being 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.

3.2.3. There are no category 'A' trees and six category 'B' specimens (nos. 1, 2, 9, 10, 12 and 14). The remaining six trees are assessed as category 'C' trees, being

either of low quality, very limited merit, only low landscape benefits, no material cultural or conservation value, or only limited or short-term potential; or a combination of these.

3.2.4. Both of the groups of trees surveyed have been assessed as category 'C'.

4. TREES TO BE REMOVED

4.1. Details

4.1.1. To accommodate the proposed development, as shown on the proposed layout plan, two individual trees (nos. 7 and 8) are to be removed, either because they are situated within the footprints of proposed structures or surfaces, or because they are too close to these to enable them to be retained.

4.1.2. Details of the trees to be removed, including their dimensions, age class and British Standard categorisation, are shown and listed on the TPP and at **Table 2** below.

Tree no.	TPO No.	Species	Height	Trunk diameter	Age class	BS category
7	W001	English oak	20m	770mm	Mature	C (2)
8	W001	Cherry laurel	10m	145mm	Semi-mature	C (1)

Table 2: Trees to be removed

4.1.3. An additional two trees (nos. 6 and 13) will be removed as they are moribund and should be felled for arboricultural management reasons, irrespective of the proposed development.

4.2. Assessment

4.2.1. The arboricultural implications for these proposals are set in the context of the planning history for the site and what is now proposed. We are fully aware that previous applications on this site have been refused and we can see that they did not strike an appropriate balance between tree loss and the sensitivity of the proposals. These new proposals do get that balance right in the context of making reasonable use of a derelict site in an appropriate and sustainable way at a time of National housing crisis.

4.2.2. The applicant has described the development as follows:

“The proposal is a single storey three-bedroom home, designed as a sensitive infill development situated on the treelined Church Hill, Enfield. The project’s design must

take into account the proximity to the Grade II Listed church, as well as the existing stone and brick boundary wall, along with several mature trees dotted throughout the site. The terraces and the various volumes alternate in their position to work with the existing trees, giving good clearance and minimising any impact on tree roots. The shell is created from a prefabricated insulated timber cassette system, faced in natural limestone blocks and a recycled metal rain screen, resulting in a simple palette.

Throughout the design process, trees and green roofs have been integrated to bring forward a landscape led scheme which will promote biodiversity and sustainability.

Atelier Ochre's approach strives to build responsibly and with the proper use of natural materials. Our studio's entire approach is centred on contemporary and environmentally friendly design. The end result is a simple and elegant home."

4.2.3. As set out in the tree survey schedule (**Appendix 2**) tree no. 7 is in significant decline, its condition seemingly¹⁵ having deteriorated since previous applications to remove it were refused by the Council. In purely arboricultural terms, irrespective of the proposed development, the removal of this tree to favour the continued growth and development of the more dominant and healthier tree no. 9 would be considered good practice. Similarly, the removal of no. 13 to favour trees nos. 9, 12 and 14 would also be considered good practice. This would be akin to a woodland thinning operation, albeit on a smaller scale, that is widely considered to be good practice for the development long-term canopy cover and a greater diversity of niche habitats with light penetrating beneath canopies.

4.2.4. In terms of amenity value, tree no. 7 is only visible from the public realm from a narrow field of view and with a backdrop of other mature oak specimens. It is not an essential component of the wider canopy cover, covering the site. The full canopy over the site formed by the collection of semi-mature and mature oak trees does have amenity value and is protected by the TPO. If tree no. 7 were removed, again irrespective of the development (which, indeed, will barely be visible from the public realm in any event), there would be negligible difference to public amenity value.

¹⁵ SJA trees was not involved in previous applications but having seen previous survey data and surveyed the tree ourselves, comparison between the results points at ongoing decline.

4.2.5. In terms of impact on the character and appearance of the conservation area the site will have a front garden that will contain mature oak trees, thus maintaining the existing character acknowledged in the area's character appraisal. These trees will continue to smooth the transition between buildings of contrasting styles and maintain a leafy suburban feel. The listed church will still be a prominent feature in views from the street and its setting unaltered by the loss of one individually indistinguishable specimen.

4.2.6. In terms of impact on biodiversity, again the impact is assessed to be negligible or indeed to have a positive outcome. Initial thoughts on the removal of an oak tree might conclude that this is detrimental to biodiversity but whilst that might be true for an individual specimen the fact that there will be ten other semi-mature and mature oak trees retained on and immediately adjacent to the site, any biodiversity living on tree no. 7 will not have any shortage of alternative habitat to occupy.

4.2.7. The green roofs proposed for the dwelling will afford the site additional biodiversity opportunities effectively replacing the existing ground with a new woodland floor that will be managed rather than left derelict. Positive management would result in better biodiversity than is likely to occur naturally on this site.

4.2.8. Looking at the site in its wider context, the trees along the boundaries between 46-56 Church Hill and Branscombe Gardens form a corridor that connects the site with woodland on Grovelands Park to the north-west. Retained trees on this site will also retain connectivity between that corridor and the tree lined frontages on Church Hill (albeit this being somewhat truncated by the lack of trees at Nos. 46-48 Church Hill). This is illustrated in **Figure 2** below, with green arrows representing green corridors and the woodland sink to the west.



Figure 2: Illustration of green corridors left unharmed by the proposals

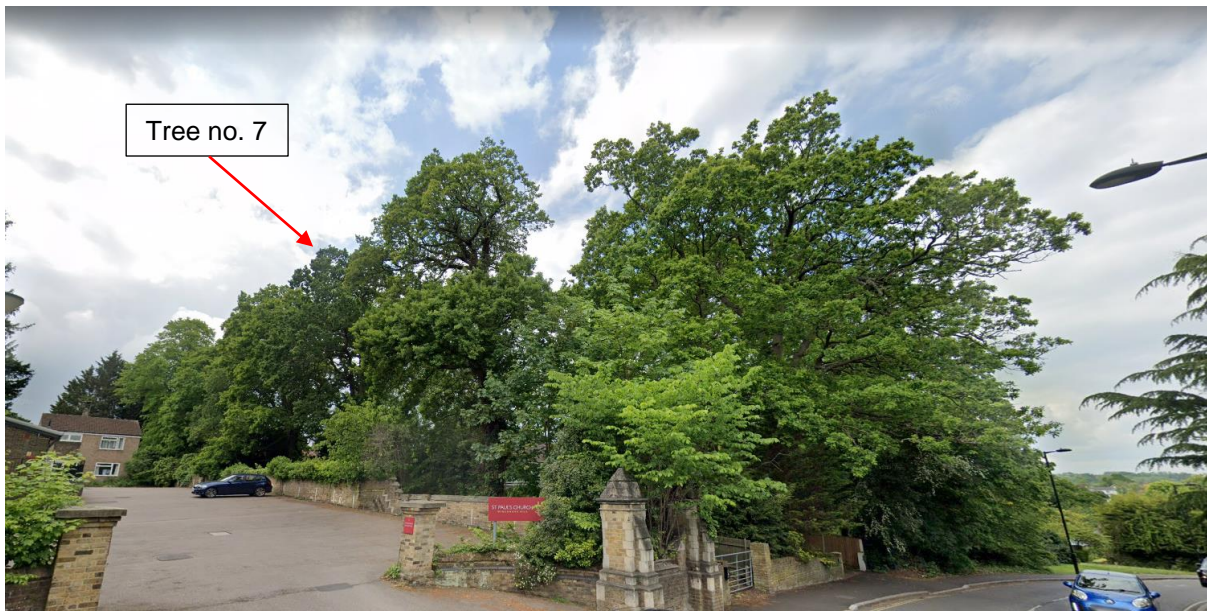
4.2.9. Assessing the proposals in the context of the TPO, this is a woodland TPO that was made in 1966. The woodland dynamic was largely lost in the early 1970's when No. 56 Church Hill was built. A woodland TPO is not an appropriate designation for a private residential garden and hence is not an appropriate TPO for this location. Nevertheless, a high canopy remains more or less intact, giving the impression of woodland when viewed from the public realm. In this way whilst the woodland has ostensibly been lost through historic planning permission, the 'visual' amenity the TPO sought to protect remains intact. As set out above, this will continue to be the case as the proposed development will work with the existing landscape and its appearance rather than against it.

4.2.10. Despite the point set out in paragraph 2.6.3 of this report, that the BS5837 categorisation is not the main criterion by which we have assessed whether specimens might be removed or should be retained¹⁶, a note on the categorisation of tree no. 7 is appropriate here.

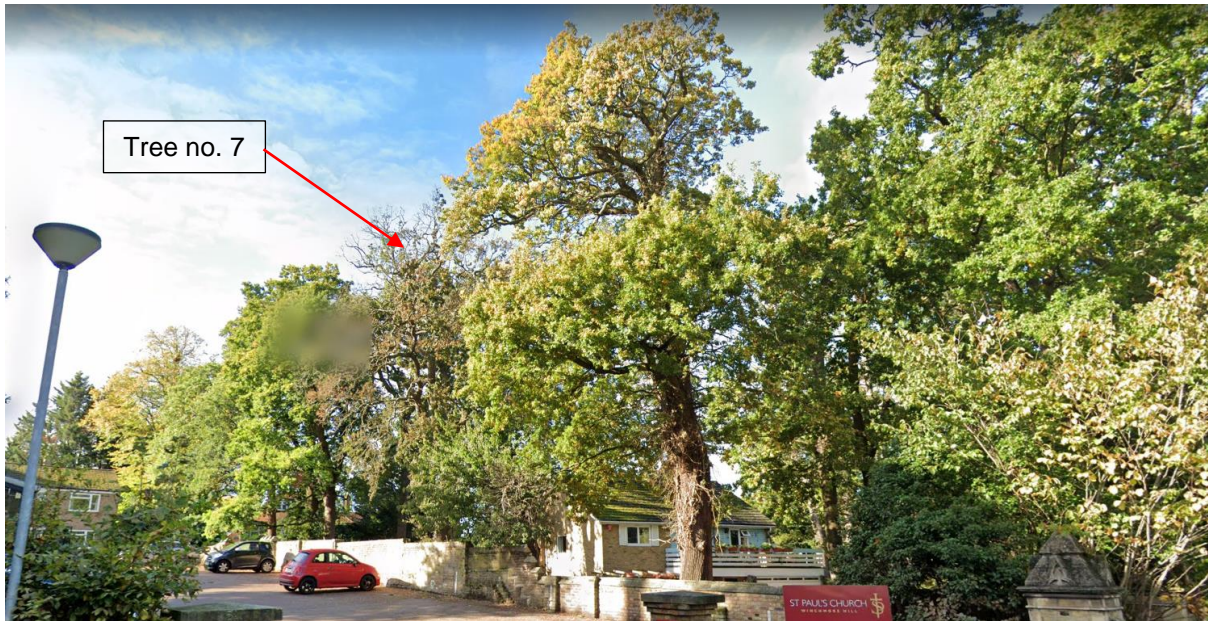
¹⁶ Assessment of whether or not trees might be removed or should be retained in a development context should be made in accordance with planning policy, on which planning decisions are made.

4.2.11. Due to the tree's declining condition, evidenced below, we do not think it will last at least 20 years, and hence its impaired condition does not qualify it for a higher category than 'C'. The combined effect of the high canopy across the site made up of several mature oak trees does warrant a higher categorisation but as that would be altered significantly by the removal of this one tree, it does not confer upon this tree a higher categorisation when assessed individually.

4.2.12. Evidence gathered from Google StreetView has shown that the current dieback in the tree's upper canopy is recent and progressive. **Photographs 1 - 3** below, show that the dieback in the upper canopy has progressed rapidly over a short span of time (17 months in the images below) suggesting an acute issue such as acute oak decline may be the cause.



Photograph 1: image from May 2019 showing no crown dieback in tree no. 7.



Photograph 2: image from October 2020; tree no. 7 shows clear dieback in the upper canopy as well as early de-foliation compared to adjacent specimens.



Photograph 3: Image of tree no. 7 taken by SJA trees in May 2022 showing further dieback in the upper canopy, progressing downwards.

4.2.13. The rapid onset coupled with the extent of the dieback eliminates natural retrenchment as an explanation and suggests that the decline of the tree is progressive and irreversible. The presence of numerous instances of black exudate on the trunk of tree no. 13 is indicative of 'Acute Oak Decline' and whilst this was not observed on tree no. 7 it should not be ruled out as being a possible cause of the decline and sufficient reason in itself to remove the trees affected by it.

4.2.14. At the public consultation event in the build up to the application, criticisms were levelled at the Applicant as to the condition of the trees being attributable to the Applicant tampering with them. There is no evidence to suggest this is the case and it is a serious allegation. However, this is not something that should influence a decision on a planning application. If there is evidence to suggest the trees have been tampered with, then it should be reported to the LPA as a breach of the TPO rather than as an objection to a planning application. The planning application needs to be based on the merits of the application as submitted.

4.2.15. To summarise, tree no. 7 is in decline, is a category 'C' specimen and its removal, irrespective of the proposed development, will not have a significant impact on visual amenity, biodiversity, ecological connectivity or the TPO. The development proposed is significantly more sensitive than previous schemes and the innovative design will not detract from any of these factors either, thus striking an appropriate balance between reasonable use of a derelict site for housing and retaining and protecting trees of amenity and biodiversity value.

4.2.16. Policy DMD 80 which states that **"All development including: subsidiary or enabling works that involve the loss of or harm to trees covered by Tree Preservation Orders, or trees of significant amenity or biodiversity value, will be refused."** Could be interpreted to mean that any loss of TPO trees in a development context would be refused. Whilst we do not set out to challenge LPA's Development Management Document, this does seem to set an unreasonably high bar for the following reason.

4.2.17. The presence of a TPO on a tree does not mean that that specimen necessarily meets the criteria for a TPO: the tree may not have fully met the criteria for a TPO at the time it was made, the tree might have deteriorated since the time the TPO was made or its visibility or impact on the local landscape may have decreased since the time the TPO was made. Furthermore, a tree that has been made the subject

of a TPO is not, for this reason alone, worthy of protection. A tree should be protected by a TPO if it is of amenity value; it does not acquire value or additional value merely because it has been protected.

4.2.18. In this context it would seem to be unreasonable to refuse a sensitive, sustainable and environmentally friendly development simply because it would require the removal of a tree covered by a TPO, whose removal would be in line with best practice in any event. Instead, we have demonstrated how the removal will have a negligible impact on amenity or biodiversity and that best practice has and will be employed to ensure the retention and protection of the retained trees – this will be set out in the following sections.

4.2.19. With regards to the other tree removals proposed for this site, these are discussed below.

4.2.20. English oak no. 13 is moribund with the only living growth being clusters of epicormic shoots on structural limbs and is of limited potential, and unlikely to survive for more than 10 years – hence it being assessed as a category ‘U’ specimen. As this tree is screened in views from Church Hill by the existing trees to be retained, its removal will represent no alteration to the arboricultural character of the local area. As outlined in paragraph 4.2.3 above, the removal of tree no. 13 to create space for the future growth and development of the adjacent mature oak specimens would be good arboricultural practice, regardless of any proposed development.

4.2.21. Furthermore, the removal of tree no. 13 would help avoid the spread of Acute Oak Decline (should the fluxing on the tree’s trunk transpire to be from this pathogen).



Photograph 4: English oak no. 13 showing only minor epicormic growth.

4.2.22. Trees nos. 6 and 8 are both small specimens providing no contribution to the arboricultural character of the site or the wider landscape; due to their small size and limited public visibility, their removal will have a negligible impact on the character of the local area.

4.2.23. More specifically tree no. 6 has a squat form with the entirety of the tree's crown being formed by epicormic growth and a single lateral limb extending towards the St Paul's Church car park. The tree has lost its top and there is evidence of decay in the failure point (although this is partially obscured by ivy). This is illustrated in **Photograph 5** below. Consequently, the significant crown imbalance coupled with the likely internal decay resulting from the historic stem failure has resulted in the remaining limb being a failure risk, with the risk of failure damaging the boundary wall and/or cars parked in the church car park. Therefore, the tree is likely to need to be removed in the near future, irrespective of any proposed development and hence has been assessed as category 'U'.



Photograph 5: Flowering cherry no. 6 (left) showing limited growth extending over car park.

4.2.24. The cherry laurel no. 8 is small 'spindly' specimen, as shown in **Photograph 6** below, is of limited potential due to its proximity to the established oak trees and of minimal screening value due to its drawn-up form. Further to this, cherry laurel, as a species, is incongruous with the predominantly native species of the surrounding area and detrimental to the otherwise native species dynamic of the habitat potential for the site. Arguably, this is not even a 'tree'¹⁷ and thus not protected by the TPO. As such, the removal of tree no. 8 will have no appreciable impact on the arboricultural quality of the area.

¹⁷ A tree being anything one would normally call a tree; a cherry laurel is more accurately defined as a shrub than a tree.



Photograph 6: Cherry laurel no. 8, small specimen of limited screening value.

4.2.25. By way of further mitigation for these four proposed removals the proposals incorporate considerable replacement tree planting; this is shown on the Landscape General Arrangements plan by enplan, submitted with the application (06-1116-300). This will improve the age class balance of the trees on site, enhance the local landscape, and re-establish a framework for the ongoing and long-term character of the site and its canopy connectivity to the wider landscape. The establishment of the replacement planting will progressively reduce the magnitude of the impact of the proposed removals on the character and appearance of the site and conservation area.

4.2.26. In the light of these considerations, and taking account of the numbers, sizes and locations of the trees to be retained, including those that are off-site, the felling of the trees identified for removal will represent only a minor alteration to the arboricultural character of the site, local landscape or conservation area.

5. TREES TO BE PRUNED

5.1. Details

5.1.1. None of trees to be retained need to be pruned to facilitate implementation of the proposals.

5.2. Assessment

5.2.1. As no trees are to be pruned, and the proposal consists of only single-storey buildings, there will be adequate working space for construction close to trees, and a reasonable margin of clearance for future growth.

6. ROOT PROTECTION AREA INCURSIONS

6.1. Details

6.1.1. Parts of the proposed buildings and hard surfacing will encroach within the RPAs of the trees to be retained. These incursions are summarised in **Tables 3** and **4** below.

Tree no.	Species	Incursion	Extent of incursion	% of RPA
5	English oak	Proposed foundation piles	1m ²	0.3%
9	English oak	Proposed foundation piles	2.5m ²	1.1%
10	English oak	Proposed foundation piles	2.6m ²	1%
11	English oak	Proposed foundation piles	1.1m ²	0.8%
12	English oak	Proposed foundation piles	1.3m ²	0.5%

Table 3: Proposed excavation within RPAs

Tree no.	Species	Incursion	Extent of incursion	% of RPA
1	English oak	Proposed driveway	30.2m ²	10.4%
2	English oak	Proposed driveway	19.5m ²	17.2%
3	English oak	Proposed driveway	15.7m ²	31.8%
4	English oak	Proposed driveway	21.1m ²	23%
5	English oak	Proposed driveway	93.6m ²	26.1%

Table 4: Proposed hard surfacing within RPAs

6.2. Assessment

6.2.1. The principles for assessing the impact of the development on the RPAs of retained trees are set out here with tree specific details below. The proposed development is only single storey and is designed specifically to accommodate the soil levels within the site. This is the reason for it being divided up into terraced levels, which in turn means there is negligible excavation required in its construction. The entire building and associated terraces and decking will all be founded on screw pile foundations that are small in diameter, can be installed with handheld machinery and result in negligible excavation.

6.2.2. Significant work has gone into ensuring that this is indeed possible and that the impact on each tree is kept to a minimum. To illustrate this, Atelier Ochre has produced a suite of cross-sectional and detailed plan drawings for each of the four oak trees on the site that are close to where structures are proposed. Those drawings, references: 22002-410-P2, 22002-411-P3 and 22002-412-P3 can all be found at **Appendix 5** of this report.

6.2.3. The cross section drawings take into account the existing ground levels as determined by the topographical survey. They take into account the trunk diameters of each tree but also take account of each tree's root flare and buttressing, also measured on site.

6.2.4. The principle of using screw piles has been developed in conjunction with a structural engineer. A balance needs to be met between minimising the number of piles and the cost of the steel required to span the piles. Reducing the number of piles means an uplift in cost as the integrity of the steel needs to be increased if there are fewer piles. This has been accepted by the client and a suitable balance has been found whereby the numbers of piles have been reduced and their proximity to the trunks of retained trees minimised, but the scheme is still deemed to be viable.

6.2.5. In consultation with a structural engineer a flexibility tolerance in the location of piles of up to 500mm has been built into the design. This means that even if a pile is needed close to a tree trunk, there is scope to ensure its installation avoids any structural roots. Pilot holes will be dug by hand prior to the installation of the piles to determine the presence of any significant roots; if necessary, pile locations will be adjusted to avoid the need for severance of any significant roots encountered.

6.2.6. In terms of the proximity of proposed structures to retained tree trunks, as has been detailed in **Appendix 5**, the closest building elevation is 610mm from a tree's trunk. The closest structure (decking and associated steps) is 400mm from the trunk of a tree. Bearing in mind that the typical growth rate for a tree with a full crown (which these do not have, having grown in competition with one another, and hence the

growth rate would be slower) is 25mm increase in girth per year¹⁸, this equates to a radial increase in a full canopied tree of 4mm per year (8mm increase in diameter). Even if this were rounded up to 5mm it would take the closest tree 80 years to come into conflict with the closest structure and over 100 years to conflict with the closest elevation. It seems likely the trees will die or the or the dwelling cease to be habitable before (average lifespan of a newly built home being 70-100 years) there is a direct conflict between the two.

6.2.7. Prior to construction, the soil across the site it so be decompacted and injected with enriched biochar. This provides indefinite soil structure and nutrients for trees and alleviates any past compaction. This will not only holistically treat the trees in their current condition ensuring them the best possible chance of survival and incorporation into the new property, but it will ensure they have continued access to nutrients in the absence of leaf litter enriching the soil. Even then, as there will be a void between the proposed building and the soil beneath it is expected that some leaf litter and other organic matter will collect under the void and improve the soil in any event.

6.2.8. In terms of water and air needed for heathy root growth beneath the proposed building, only 196m² of the site would be covered in the footprint of the proposed dwelling (32% of the site area). In this, the decking area is not included as this will be decking with full permeability. Even if nothing else is done to mitigate this, ground water does not just flow straight down into the soil, it would seep and spread as gravity acts on it, allowing for a 1:1 (45 degree) lateral flow of rainwater hitting the soil, only 98m² of the site footprint would not have direct access to water. Please note that this is an approximation to illustrate the point, exact water filtration rates and ground water flow is beyond the expertise of SJAtrees, but the principle is sound in the context of further mitigation measures.

6.2.9. As well as the expectation that the void beneath the proposed dwelling will allow gaseous exchange, the water falling on the roof of the dwelling can be collected and directed via a system of drainage pipes to the soil beneath the buildings so that there is direct transfer of water from roof to soil. This is not a specialist solution; all it

¹⁸ A Field Guide to the Trees of Britain and Northern Europe, A. Mitchell 1978 (COLLINS)

would need is a slight adaptation to standard drainage systems whereby outlets are directed beneath the building rather than entering a surface water drainage system.

6.2.10. Where hard surfacing is required for the proposed driveway, this can be installed entirely above existing soil levels, and this too has been designed into the terraced design to line-up with above soil surfaces. Whilst new above soil surfacing does, in a couple of instances equate to more than the 20% recommended by BS5837 these are only recommendations and the Arboricultural Practice Note 12 (APN12) – which post-dates BS5837 by eight years – states that this is a cautious recommendation and should not necessarily be considered as an absolute limit. In the context of the low impact of the development and lightweight use of the proposed driveway with the capacity for the materials used to allow it to be freely permeable we feel the proposed incursions are justified in this instance.

6.2.11. Thought has been given to the need to provide services to the new dwelling. Technical notes on each of these subjects is provided by the Applicant's engineers. In principle, each service provider has its standards for installation and protection of its assets, this usually involves them being buried to a minimum depth. The intention is, where this is indeed necessary, for them to be buried within the new above soil surfacing; i.e. where, for example, a service needs to be 400mm beneath the surface of a driveway, this can be laid at grade and the new surface constructed above it to the required depth.

6.2.12. This solution will require more than one layer of cellular confinement system but there is no reason why this is not possible whilst still water filtration and gaseous exchange. If the new level is more than 500mm above the existing soil a system of ventilation pipes will be built into the design to ensure gas exchange. The use of a no-fines aggregate will still allow water through. A finishing layer such as 'Flexipave' could be used to surface the driveway with an flexible and freely permeable finish.

6.2.13. Proposal specific impacts on each tree are discussed below. This will be done from west to east rather than in numerical order.

Tree no. 11

6.2.14. See Plan ref: 22002-410-P02 in **Appendix 5**, including detail plan 1 and cross sections 5 and 6. The three closest, 150mm diameter, screw-piles would be no less than 1000mm from the root flare of the tree where this enters the ground. At 1m it is expected that there will be some structural roots, but with 500mm flexibility tolerance in the location of piles, a hand-dug pilot hole will ensure that roots are avoided.

6.2.15. The closest structure is 400mm from the trunk's buttresses and the principle of this is discussed above. The closest elevation is 2,225mm away. Approximately 12 piles in total would be needed within this tree's RPA and this would have a negligible impact. Part of the western-most terrace is within the RPA but with deflected rainwater drainage the tree's roots will still have access to water and air transfer. Furthermore, the tree has access to soft landscape areas to the west and south, contiguous with the RPA within which the tree has access to soil, air, water and beneficial root interactions away from the proposed development.

Tree no. 10

6.2.16. See Plan ref: 22002-410-P02 in **Appendix 5**, including detail plan 2 and cross sections 7 and 8. The four closest, 150mm diameter, screw-piles would be no less than 1000mm from the root flare of the tree. At 1m it is expected that there will be some structural roots, but with 500mm flexibility tolerance in the location of piles, a hand-dug pilot hole will ensure that roots are avoided.

6.2.17. The closest structure is a decking area 440mm from the trunk's buttresses and the principle of this is discussed above. The closest elevation is 750mm away and comparing this singly story element with the photograph provided shows that this will not conflict with the trunk or branches. Approximately 33 piles in total would be needed within this tree's RPA but this would have negligible impact. Parts of the western-most and central terraces are within the RPA but with deflected rainwater drainage the tree's roots will still have access to water and air transfer. Furthermore, the tree has access to soft landscape areas to the west, contiguous with the RPA within which the tree has access to soil, air, water and beneficial root interactions away from the proposed development.

Tree no. 9

6.2.18. See Plan ref: 22002-410-P2 in **Appendix 5**, including detail plan 3 and cross sections 9 and 10. There would be no 150mm diameter screw-piles within 1000mm of the tree's root flare. At 1m it is expected that there will be some structural roots, but with 500mm flexibility tolerance in the location of piles, a hand-dug pilot hole will ensure that roots are avoided.

6.2.19. The closest structure is a set of steps accessing a narrow decking area and is 450mm from the trunk's buttresses and the principle of this is discussed above. The closest elevation is more than 2,700mm away. However, some made ground is necessary within the RPA. This would be no more than 300mm and will not be formed within 500mm of the closest exposed element of the tree's trunk and buttressing (although shallow soil batter outside an edge structure would be needed but would have negligible impact. This made ground would be no more than 350mm deep and will be installed using a cellular confinement system to allow ongoing air and moisture exchange and alleviate any compaction.

6.2.20. Approximately 25 piles in total would be needed within this tree's RPA and this would have a negligible impact. Part of the western-most terrace is within the RPA but with deflected rainwater drainage the tree's roots will still have access to water and air transfer. Furthermore, the tree has access to soft landscape areas to the north-west and west, contiguous with the RPA, within which the tree has access to soil, air, water and beneficial root interactions away from the proposed development.

Tree no. 5

6.2.21. See Plan ref: 22002-410-P2 in **Appendix 5**, including detail plan 4 and cross sections 11 and 12. The closest, 150mm diameter, screw-piles are more than 6.5m away. At 6.5m it is expected that there will be some translocation roots up to 25mm in diameter, but with 500mm flexibility tolerance in the location of piles, a hand-dug pilot hole will ensure that roots are avoided.

6.2.22. However, the potential impacts on this tree are a little different. The additional cross sections presented on plans 22002-411-P3 and 22002-412-P3 in **Appendix 5**

show that much of the potential impact on this tree is from the proposed driveway buildup, parking space and services.

6.2.23. These plans show where and by how much the front of the site would be built up to accommodate the proposed services and the driveway and parking space. Based on the principles set out above, this is a deviation away from the recommendations of BS5837, but there is no reason to suggest that they are not feasible and that the trees would suffer as a consequence. Indeed, with the initial injection of biochar to alleviate any compaction, provide a stable soil structure and long-term nutrient provision, the trees are likely to benefit from the proposals. As set out in the APN12, there is no reason why BS5837 needs to be seen as the absolute limit of what the trees would tolerate.

6.2.24. A degree of pragmatism needs to be applied to the proposals for this site. It is an exciting and innovative scheme and ought to be considered as such. There are ways of resolving the issues and these will be ironed out at a detailed design phase. However, to provide confidence at this application stage, everything has been done to ensure potential harm to the existing trees will be avoided or minimised.

6.2.25. Implementation of measures to prevent other incursions into the RPAs of retained trees and to protect them during construction can be assured by the installation of ground protection and protective boxing, as shown on the TPP at **Appendix 4**.

6.2.26. Accordingly, subject to implementation of the above measures, and considering the ages, current physiological condition and tolerance of disturbance of these retained trees, no significant or long-term damage to their root systems or environments will occur as a result of the proposed development.

7. CONCLUSIONS

7.1. Summary

7.1.1. Our assessment of the impacts of the proposals on the existing trees concludes that the proposed tree removals will not have a discernible impact on visual amenity or biodiversity and that the main arboricultural features of the site are to be retained. The proposed removals will have only a very minor alteration to the overall arboricultural character of the site and will not have a significant adverse impact on the arboricultural character and appearance of the local landscape or the conservation area.

7.1.2. The incursions into the Root Protection Areas of trees to be retained have been thoroughly assessed and considered in detail during the design phase. They are all minor, and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix 1**, no significant or long-term damage to the root systems or rooting environments of retained trees will occur.

7.2. Compliance with national planning policy

7.2.1. As the proposals will retain all the main arboricultural features of the site, its arboricultural attractiveness, history and landscape character and setting will be maintained, thereby complying with Paragraph 130 of the National Planning Policy Framework.

7.2.2. Whilst some trees are to be removed, there is no duty in planning policy to retain all existing trees in all circumstances. Paragraph 131 of the NPPF states (*italics added for emphasis*): “**Planning policies and decisions should ensure... that existing trees are retained wherever possible**”; and thereby recognises circumstances in which it might not be possible to retain every tree. Accordingly, the proposed removal of trees does not mean that this application must thereby be refused; and does not mean it conflicts with Paragraph 131 of the NPPF.

7.2.3. The retention of all the main arboricultural features of the site recognises and will maintain the local landscape, its countryside character, and the wider benefits of

the existing trees within the Winchmore Hill conservation area, and thereby complies with Paragraph 176 of the NPPF.

7.2.4. As the proposals will not result in the loss or deterioration of any ancient woodland or any ancient or veteran trees, they comply with paragraph 180 (c) of the NPPF.

7.3. Compliance with regional planning policy

7.3.1. As the majority of the existing trees assessed as being features in the existing built environment will be retained, in arboricultural terms the proposed development complies with Policy G1 'Green infrastructure' of the London Plan.

7.3.2. As all trees of significant value and importance to amenity will be retained, the proposed development will protect, maintain and enhance the main arboricultural features of the site. As such, it complies with Policy G7 'Trees and woodlands' of the London Plan.

7.4. Compliance with local planning policy

7.4.1. Whilst the proposals do require the removal of TPO trees, the LPA's policy resisting all developments that involve the removal of TPO trees is an unreasonably high bar, and in any event the woodland canopy (protected by the woodland TPO) will remain largely intact, the proposed removals will not have a significant detrimental impact on visual amenity or biodiversity and therefore they comply with the LPA's Policy DMD 80.

7.5. Conclusion

7.5.1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of low magnitude, as defined according to the categories set out in **Table 1** of this report.

APPENDIX 1
Outline Arboricultural Method Statement

Outline arboricultural method statement

A1.1. Tree Protection Plan

A1.1.1. The TPP at **Appendix 4** shows the general and specific provisions to be taken during construction of the proposed development, to ensure that no unacceptable damage is caused to the root systems, trunks or crowns of the trees identified for retention. These measures are indicated by coloured notations in areas where construction activities are to occur either within, or in proximity to, retained trees, as described in the relevant panels on the drawing.

A1.2. Pre-start meeting

A1.2.1. Prior to the commencement of any site clearance, ground preparation or construction works the developer will convene a pre-start site meeting. This shall be attended by the developer's contract manager or site manager, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to attend. At that meeting contact numbers will be exchanged, and the methods of tree protection shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to the TPP required as a result of the meeting shall be circulated to all attendees.

A1.3. Site clearance

A1.3.1. No clearance of trees or other vegetation shall be undertaken until after the pre-start meeting and installation of ground protection and trunk boxing (see below).

A1.3.2. Except where within the RPAs of trees to be retained, all trees and other vegetation to be removed may be cut down or grubbed out as appropriate; but within the RPAs of trees to be retained, trees and vegetation will be cut by hand to ground level and stumps will be either left in place or ground out with a lightweight self-powered stump grinding machine. No excavators, tractors or other vehicles will enter the RPAs.

A1.4. Ground preparation

A1.4.1. No ground preparation or excavation of any kind, including topsoil stripping or ground levelling, shall be undertaken until after the pre-start meeting and installation of ground protection and trunk boxing (see below).

A1.5. Trunk boxing

A1.5.1. A temporary protective timber box shall be erected around the trunk of tree no. 2, to prevent accidental damage by impacts from materials, machinery, vehicles or pedestrians during demolition/construction. The box (shown by the blue square) shall consist of a 2m high timber framework, constructed around the trunk, surmounted by an outer layer of heavy-duty plywood.

A1.5.2. To prevent movement, the framework shall include internal cross-members that abut the trunk on four sides immediately above the root flare, as shown at **Figure 1** below. Where these abut the trunk, they will first be wrapped in at least six layers of hessian sacking to prevent any scuffing or damage of the bark. The box will not be nailed, screwed or otherwise attached to the trunk.

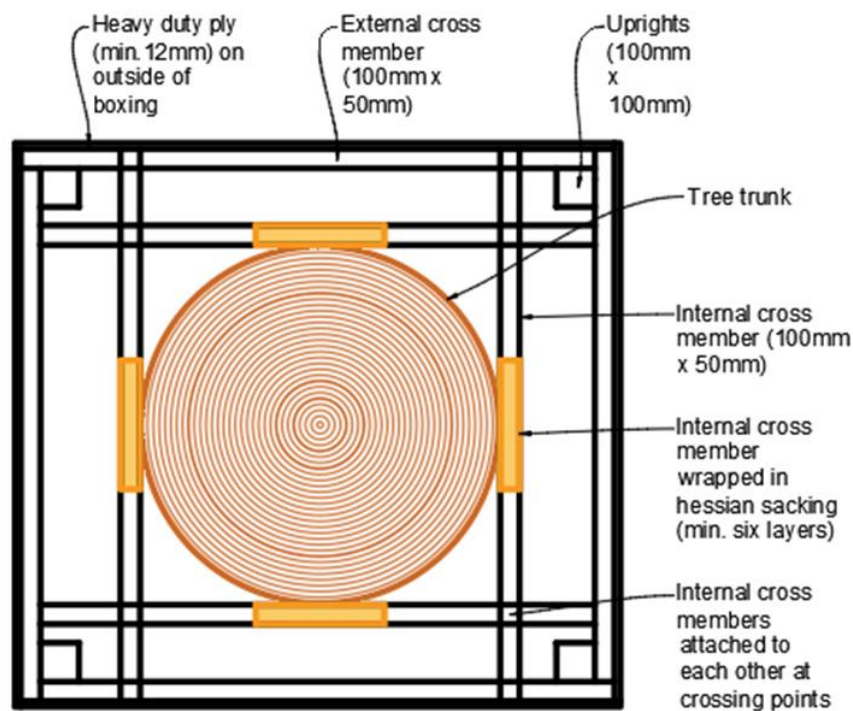


Figure 1: Cross section of proposed boxing showing internal arrangement

A1.5.3. To prevent damage to buttress roots, the boxing will extend beyond the points where these disappear beneath the ground and therefore, may be rectangular rather than square in shape. To provide additional stability, the same arrangement of cross-braced, hessian-wound cross members may be installed at 1.8m; alternatively, two strips of a woven fabric webbing may be attached to two opposite top corners of the framework, be passed around the trunk but not be attached to it and then be attached to themselves with rivets or staples to prevent movement, before being attached to the opposite corner of the framework.

A1.5.4. Once cut and secured in place, the plywood cladding shall have high-vis tape or signage attached to it to make it readily visible to pedestrians and road users. The boxing shall be retained in place for the duration of demolition and construction operations and shall not be removed until all works are completed, and all equipment and materials are removed from site.

A1.6. Ground protection

A1.6.1. To allow space for construction and protection from soil compaction where proposed structures are in close proximity to RPAs of trees to be retained, the ground between the protective fencing and the footprints of the proposed structures will be covered by appropriate ground boarding, in accordance with the guidelines of Section 6.2.3.3 of BS 5837. The locations where these measures will be required are marked by **pink hatching** on the TPP.

A1.6.2. For purely pedestrian traffic, scaffold boards (or similar) will be used. Scaffold boards will comply with British Standard BS 2482: 2009 *Specification for timber scaffold boards* and be at least 225mm in width and 38mm thickness; they will be butted up and attached to each other with wooden battens or metal tie straps, and laid either on an above-ground scaffold framework, or secured to the ground with steel pins above a compressible material (a 75mm deep layer of woodchips may be appropriate) laid on top of a geotextile membrane of an appropriate specification.

A1.6.3. For wheeled or tracked traffic, ground boarding will be designed by a structural engineer, to take account of the type of soil and the likely loadings. Temporary aluminium roadway ('Trakway' or similar), interlocking plastic tread boards ("Ground-

Guards” or similar), or reinforced concrete slabs may be appropriate. These will also be laid on top of a compressible material above a geotextile membrane.

A1.7. Manual excavation within RPAs

A1.7.1. The first 300mm depth of excavations for pilot holes for piles required within the RPAs of the trees to be retained (as shown by **bold orange lines** on the TPP) will be dug by hand, using a compressed air soil pick if appropriate, and under on-site arboricultural supervision, to safeguard against the possibility of unacceptable root damage being caused to these specimens. Any roots encountered of less than 25mm diameter will be cut back cleanly to the face of the dig nearest to the tree, using a sharp hand saw or secateurs, and their cut ends covered with hessian to prevent desiccation. If larger roots are encountered, the location of the pile will be adjusted.

A1.8. Proposed hard surfaces within RPAs

A1.8.1. Unacceptable damage to the roots and rooting environments of the trees to be retained during the construction of proposed hard surfaces that encroach within RPAs will be avoided by building them above existing soil level, to avoid digging and thus severing of roots; and an appropriate ground covering will be used beneath the sub-base, to prevent or minimise compaction of the soil. This will be done in accordance with Section 7.4 of BS 5837. The locations where these measures will be required are marked by **orange honeycomb-hatching** on the TPP.

APPENDIX 2

Tree Survey Schedule



ARBORICULTURAL PLANNING CONSULTANTS

THE OLD POST OFFICE
DORKING ROAD
TADWORTH
SURREY KT20 5SA

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E-mail: sja@sjatrees.co.uk

Directors: Simon R. M. Jones Dip. Arb. (RFS), FArborA.,
RCArborA. (Managing)
Frank P. S. Spooner BSc (Hons), MArborA, TechCert (ArborA)
(Operations)

Preliminary Tree Survey Schedule

56a Church Hill, Enfield

May 2022

SJA Ref: 22203

Tree Survey Schedule: Explanatory Notes

56a Church Hill, Enfield

This schedule is based on a tree inspection undertaken by Will Hovell of SJA trees (the trading name of Simon Jones Associates Ltd.), on Friday the 18th May 2021. Weather conditions at the time were clear, dry and bright. Deciduous trees were in full leaf.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

1. Tree no.

Given in sequential order, commencing at "1".

2. TPO no.

Number assigned to tree in the Enfield Council Tree Preservation Order no. W001 1966, as shown in the TPO schedule and plan.

3. Species.

'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

4. Height.

Estimated with the aid of a hypsometer, given in metres.

5. Trunk diameter.

Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

6. Radial crown spread.

The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest half metre, unless shown otherwise. For small trees with reasonably symmetrical crowns, a single averaged figure is quoted.

7. Crown break.

Height above ground and direction of growth of first significant live branch.

8. Crown clearance.

Distance from adjacent ground level to lowest part of lowest branch, in metres.

9. Age class.

Young: Seedling, sapling or recently planted tree; not yet producing flowers or seeds; strong apical dominance.

Semi-mature: Trunk often still smooth-barked; producing flowers and/or seeds; strong apical dominance, not yet achieved ultimate height.

Mature: Apical dominance lost, tree close to ultimate height.

Over-mature: Mature, but in decline, no crown retrenchment

Veteran: Mature, with a large trunk diameter for species; but showing signs of veteranisation, irrespective of actual age, with decay or hollowing, and a crown showing retrenchment and a structure characteristic of the latter stages of life.

Ancient: Beyond the typical age range and with a very large trunk diameter for species; with extensive decay or hollowing; and a crown that has undergone retrenchment and has a structure characteristic of the latter stages of life.

10. Physiology.

Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

11. Structure.

Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.

Good: No significant morphological or structural defects, and an upright and reasonably symmetrical structure.

Moderate: No significant pathological defects, but a slightly impaired morphological structure; however, not to the extent that the tree is at immediate or early risk of collapse.

Indifferent: Significant morphological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.

Poor: Significant and irreparable morphological or pathological defects, such that there may be a risk of failure or collapse.

Hazardous: Significant and irreparable morphological or pathological defects, with a risk of imminent collapse.

12. Comments.

Where appropriate comments have been made relating to:

- Health and condition
- Safety, particularly close to areas of public access
- Structure and form
- Estimated life expectancy or potential
- Visibility and impact in the local landscape

13. Category.

Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012; adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to arboricultural biodiversity.

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

- (1) Trees that have a serious, irreparable, 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).
- (2) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
- (3) Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

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

- (1) Trees that are particularly good examples of their species, especially if rare or unusual.
- (2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
- (3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

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

- (1) 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 minor 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.
- (2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
- (3) Trees with material conservation or other cultural value.

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.

- (1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
- (2) 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 landscape benefits.
- (3) Trees with no material limited conservation or other cultural value.

TREE SURVEY SCHEDULE

56a Church Hill, Enfield

No.	TPO no.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
1	W001	English oak	21m	800mm est.	N 8.5m E 5.75m S 3.5m W 6m	6m	E 3.5m	Semi-mature	Below average	Moderate	Off site tree; situated in raised bed adjacent to Church Hill; inspection of western side of trunk and crown impeded by limited access; prominent buttress root south; minor surface wound on south east side from base to 0.5m, 200mm wide, internal heartwood not exposed; tensile main unions; multiple historic pruning wounds from 7m to 8m on north side of trunk, consistent with crown raising showing significant reaction wood, cavities visible but depth indeterminable, maximum diameter 150mm; minor dieback at branch tips in north and east crown extends, though not consistent throughout entire crown; minor deadwood throughout crown consistent with age and species; asymmetrical crown as suppressed by adjacent specimens; of moderate potential; clearly visible for 400m stretch of Church Hill; significant component of the group in which it stands.	B (2)
2	W001	English oak	21m	500mm est.	N 3.75m E 5.75m S 6m W 5m	5m	S 3.75m	Mature	Average	Moderate	Off-site tree; situated in raised bed; inspection of base impeded by access; single trunk; established epicormic growth forms lower crown; tensile main unions; minor deadwood throughout crown consistent with age and species; foliage of average size, density and colour; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; of moderate potential; visible for 200m stretch of Church Hill; significant component of the group in which it stands.	B (12)
3	W001	English oak	16m	330mm est.	N 3.5m E 4m S 3m W 3m	4m	E 4.5m	Semi-mature	Average	Poor	Off-site tree; inspection of base impeded by boundary fence; single trunk; woodpecker hole at 7m on east side of trunk; tensile main unions; structural limb at 7m east historically heavily reduced to 3m from source, epicormic shoots extending laterally, showing average physiology; central leader historically snapped out at 13m, diameter at failure point approximately 200mm, established epicormic growth at failure point forms new upper crown; suppressed crown as overtopped by adjacent specimens; foliage of average size, density and colour; of short-term potential; visible for 100m stretch of Church Hill; inessential component of the group in which it stands.	C (12)

No.	TPO no.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
4	W001	English oak	14m	450mm est.	N 2.75m E 2.75m SE 4m S 4.25m W 4m	7m	S 5m	Mature	Below average	Poor	Off-site tree; inspection of base impeded by boundary fence; single trunk; established epicormic growth forms lower crown; cavity at 8m on south side of trunk, 200mm diameter, depth indeterminable, moderate reaction wood around periphery; significant dieback in upper crown leaving deadwood up to 300mm diameter; of short-term potential; visible for 100m stretch of Church Hill; inessential component of the group in which it stands.	C (12)
5	W001	English oak	22m	890mm	N 6m NE 7.5m E 7m S 5.75m W 5m	5m	SW 3m	Mature	Below average	Indifferent	Prominent buttress roots; bark falling away from trunk on south east side from base to 1m, internal heartwood exposed; dark exudate visible on east and south sides of trunk from base to 2.5m; variations in tone on east and south sides of trunk when tapped with acoustic mallet, suggesting internal defects, possible Acute Oak Decline (AOD); trunk covered by dead, severed ivy; branch stubs on lower trunk from historic pruning, maximum diameter 150mm; historic tear out wound at 7m on north side of trunk, no visible decay extending into trunk suggesting compartmentalisation, wound measures approximately 400mm x 500mm x 250mm tensile main unions; significant wounding on upper side of limb extending from west side of trunk at 4m, internal heartwood exposed around 50% of circumference for full length of 6m limb, moderate reaction wood at periphery; minor epicormic growth throughout structure consistent with age and species; slightly sparsely foliated upper crown; mid crown to east historically reduced; of moderate potential; visible for 300m stretch of Church Hill; significant component of the group in which it stands.	C (2)
6	W001	Flowering cherry	6m	300mm ivy	N 1m E 2m S 5m SW 4.5m W 2.5m	4.5m	2m	Semi-mature	Average	Poor	Single trunk; poor pruning cuts on lower trunk leaving branch stubs with epicormic growth; historically topped to 3.5m; suppressed crown as overtopped by adjacent specimens; of poor quality and minimal arboricultural value; inessential component of the group in which it stands.	U
7	W001	English oak	20m	770mm	N 8m E 8.25m S 7m W 5m	8m	E 3m	Mature	Low	Indifferent	Prominent buttress roots; historic wound at 0.5m on east side of trunk, 50mmx100mm, internal heartwood exposed and evidence of insect attack, significant reaction wood; no significant variations in tone when tapped with acoustic mallet; tensile main unions; twin-stemmed from 7.5m; southern leader showing significant dieback with minimal live growth in upper 10m of crown, leaving significant deadwood up to 300mm in diameter, established epicormic growth on lower half of leader shows slightly sparse foliage; northern leader of below average physiology with much epicormic growth and sparse foliage and dieback in upper crown; of short-term potential; visible for 200m stretch of Church Hill but partially obscured by crowns of other roadside specimens; significant component of the group in which it stands.	C (2)

No.	TPO no.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
8	W001	Cherry Laurel	10m	145mm	N 3m E 3m S 0.5m W 2m	4m	N 3m	Semi-mature	Average	Poor	Many basal suckers; poor pruning cuts on lower trunk leaving deadwood stubs up to 100mm diameter; single trunk; asymmetrical crown as suppressed by adjacent specimens; suppressed crown as overtopped by adjacent specimens; of poor quality and limited arboricultural value; of short-term potential; glimpsed in narrow views from Church Hill; inessential component of the group in which it stands.	C (1)
9	W001	English oak	21m	700mm	N 6m E 6m SE 12m S 9.5m W 5m	8m	W 5m	Mature	Average	Moderate	No significant defects noted at base; established epicormic growth forms lower crown; tensile main unions; moderate deadwood throughout lower and mid crown, consistent with setting, maximum diameter 150mm; foliage of average size, density and colour; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; of moderate potential; visible as part of feature created by adjacent specimens for 200m stretch of Church Hill; significant component of the group in which it stands.	B (12)
10	W001	English oak	22m	755mm	N 5.5m E 7m SE 7.25m S 6.5m W 6m	5m	E 4m	Mature	Average	Moderate	Prominent buttress roots; established epicormic growth forms lower crown; tensile main unions; significant deadwood throughout inner crown, maximum diameter, 250mm; foliage of average size, density and colour; minor epicormic growth throughout structure consistent with age and species; of moderate potential; visible as part of green feature for 200m stretch of Church Hill; significant component of the group in which it stands.	B (12)
11		English oak	16m	565mm	N 0m E 4.25m S 5.75m W 1m	8m	E 5m	Mature	Average	Poor	No significant defects observed at base; single trunk; historic leader loss at 10m leaving two deadwood stubs approximately 300mm in diameter, visible decaying heartwood and woodpecker hole on south western side, upper crown formed by established epicormic limb with potentially weak attachment point at apex of lost leaders; southern and eastern crown extents historically reduced; foliage of average size, density and colour; of limited potential; glimpsed in narrow views from Church Hill; inessential component of the group in which it stands.	C (2)
12		English oak	19m	800mm est.	N 4m E 4.5m SE 11m S 11m W 7m	8m	6m	Mature	Average	Moderate	Off-site tree; inspection of base impeded by boundary fence; tensile main unions; minor epicormic growth throughout structure consistent with age and species; minor deadwood throughout crown consistent with age and species; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; foliage of average size, density and colour; of moderate potential; visible as part of green feature along Church Hill; significant component of the group in which it stands.	B (1)

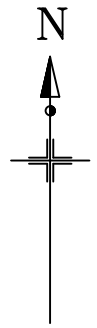
No.	TPO no.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
13	W001	English oak	23m	865mm	N 8m E 6m S 5m W 6.5m	6m	10m	Mature	Low	Poor	Prominent buttress roots; minor cavity between buttress roots on north west side of trunk 200x100mm, internal heartwood exposed; many instances of black exudate around full circumference of lower 10m of trunk; no significant variations in tone when tapped with acoustic mallet; crown predominantly made up of significant deadwood up to 300mm in diameter; significant dieback at branch tips leaving single foliated limb extending north; clusters of epicormic growth throughout lower and mid structure; moribund and of very limited potential; glimpsed in narrow views from Church Hill but obscured by adjacent specimens.	U
14	W001	English oak	18m	450mm est.	N 6.75m E 3.5m S 6.5m W 6m	4m	4m	Mature	Average	Moderate	Off-site tree; inspection of base impeded by boundary fence; single trunk; tensile main unions; minor lean south west; asymmetrical crown as suppressed by adjacent specimens; foliage of average size, density and colour; of long-term potential; glimpsed in narrow views from Church Hill but obscured by adjacent specimens; significant component of the group in which it stands.	B (1)
G1		Various	Max 9m Avg 3m	Max 250mm est. Avg 100mm est.	1.5m	0.5m	0.5m	Young	Average	Indifferent	Off-site group of trees; group consisting of Leyland cypress, yew, cherry laurel, elm and mixed non native shrubs; provides low level screening from Church Hill; predominantly young readily replaceable specimens of limited arboricultural value; overtopped by mature oak specimens; of short-term potential; inessential component of the group in which it stands.	C (2)
G2		Various	Max 10m Avg 6m	Max 250mm est. Avg 100mm est.	2m	1m	1m	Semi-mature	Average	Indifferent	Off-site group of trees; group consisting of yew, holly and rhododendron; shrub habit specimens forming understory to mature oak specimens; provides boundary screening to adjacent property; of short-term potential; glimpsed in narrow views from Church Hill; inessential component of the group in which it stands.	C (1)

Root Protection Areas (RPAs)

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837:2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

<i>Tree No.</i>	<i>Species</i>	<i>RPA</i>	<i>RPA Radius</i>
1	English oak	289.5m ²	9.6m
2	English oak	113.1m ²	6.0m
3	English oak	49.3m ²	4.0m
4	English oak	91.6m ²	5.4m
5	English oak	358.3m ²	10.7m
6	Flowering cherry	40.7m ²	3.6m
7	English oak	268.2m ²	9.2m
8	Cherry Laurel	9.5m ²	1.7m
9	English oak	221.7m ²	8.4m
10	English oak	257.9m ²	9.1m
11	English oak	144.4m ²	6.8m
12	English oak	289.5m ²	9.6m
13	English oak	338.5m ²	10.4m
14	English oak	91.6m ²	5.4m
G1	Various	28.3m ²	3.0m
G2	Various	28.3m ²	3.0m

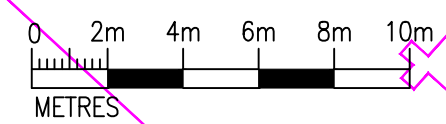
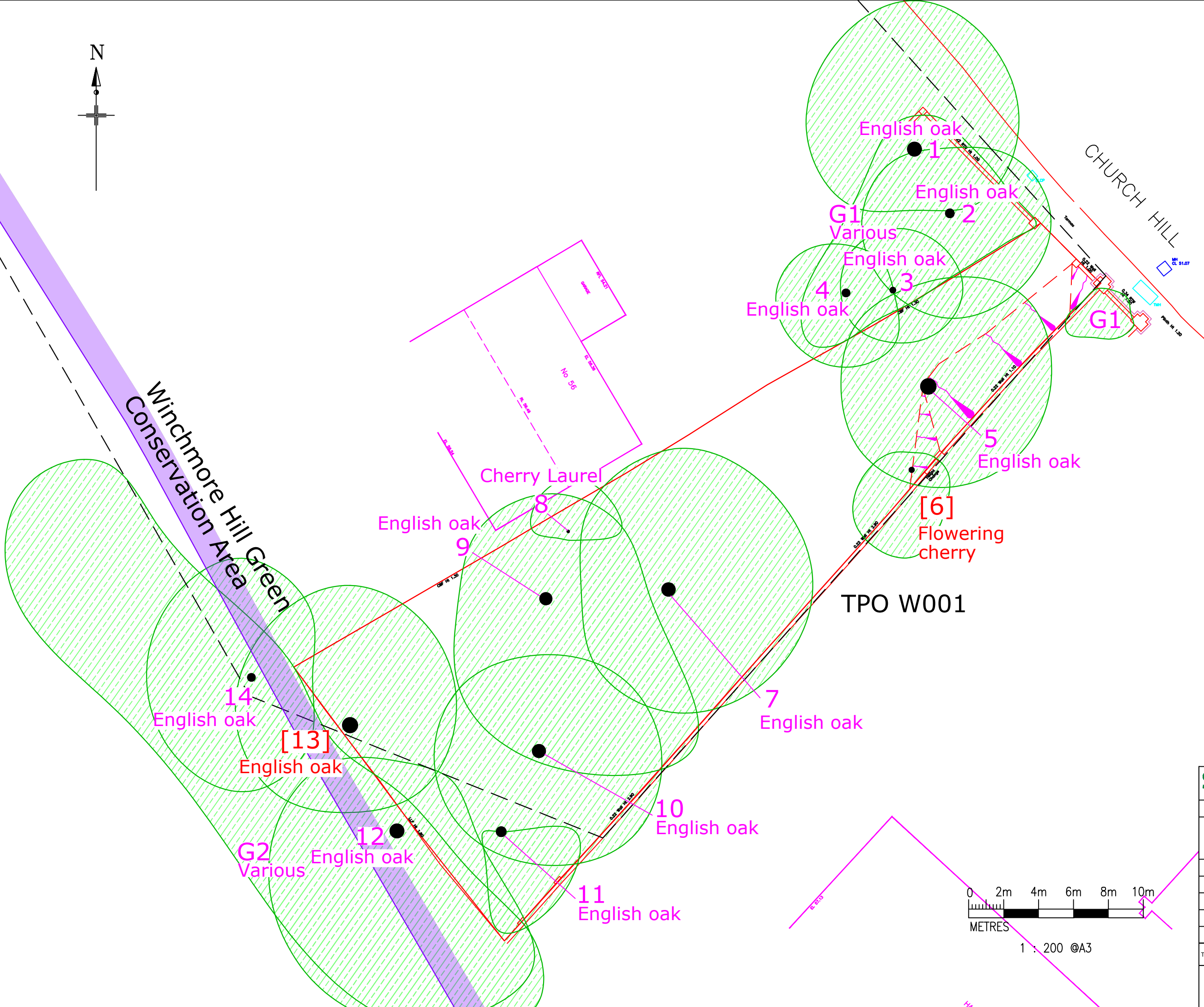
APPENDIX 3
Tree Location Plan



Winchmore Hill Green
Conservation Area

CHURCH HILL

TPO W001



1 : 200 @A3

SJA trees ARBORICULTURAL PLANNING CONSULTANTS		
Project:	56a Church Hill, Enfield	
Client:	Atelier Ochre	
Drawing:	TREE LOCATIONS PLAN	
Drawing no:	SJA TL 24115-031	
Based on:		
Drawn by:	Date of Issue:	Scale:
FPS	March 2024	1:200 @ A3
Checked by:	Tel: (01737) 813058	sj@sjatrees.co.uk
Tree nos.:	Category 'U' trees:	Tree canopies:
● 1	● [6]	
<small>For further information refer to the SJA Tree Survey Schedule. Do not scale from this drawing; please check all dimensions on site, and notify us of any discrepancies. SJA trees (the trading name of Simon Jones Associates) cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based. © Simon Jones Associates Ltd. 2024. This drawing is copyright and may not be used or changed without the written consent of SJA trees.</small>		

APPENDIX 4
Tree Protection Plan

Arboricultural Impacts: Summary
(For details, see below)

Impact	No. of Trees
Trees to be removed	4
Groups of trees to be removed	0
TPO trees to be removed	4
Trees to be pruned	0
Trees where manual excavation needed within RPAs	5
Trees where above soil surfacing needed within RPAs	5
Trees with proposed underground services within RPAs	0

Trees to be Removed

No.	Species	Category
6	Flowering cherry	U
7	English oak	C (2)
8	Cherry laurel	C (1)
13	English oak	U

Trees that require manual excavation within RPAs

No.	Species	Type of structure
5	English oak	Proposed screw pile foundations
9	English oak	Proposed screw pile foundations
10	English oak	Proposed screw pile foundations
12	English oak	Proposed screw pile foundations

Manual Excavation

Within root protection areas the all excavation for proposed screw piles shall be undertaken by hand under arboricultural supervision. A 250mm diameter, 400mm deep pilot hole will be dug prior to the installation of the screw pile to ensure no damage to significant roots will occur. If roots over 50mm in diameter are encountered, the pile location will be moved laterally to avoid damaging them. The soil will be loosened with a pick or fork, and then will be cleared from roots with a compressed air soil pick. All roots below 25mm in diameter will be cut cleanly with a hand saw or secateurs.

Trees that require above soil surfacing within RPAs

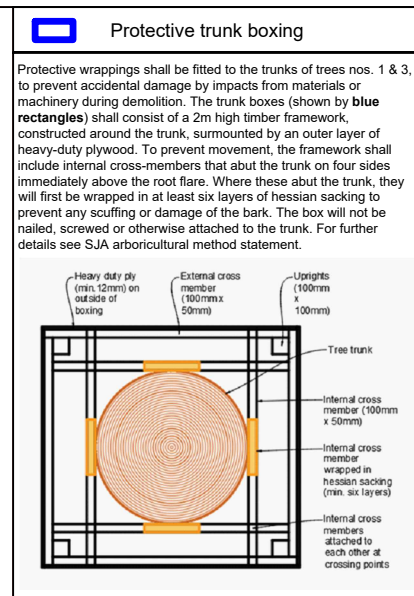
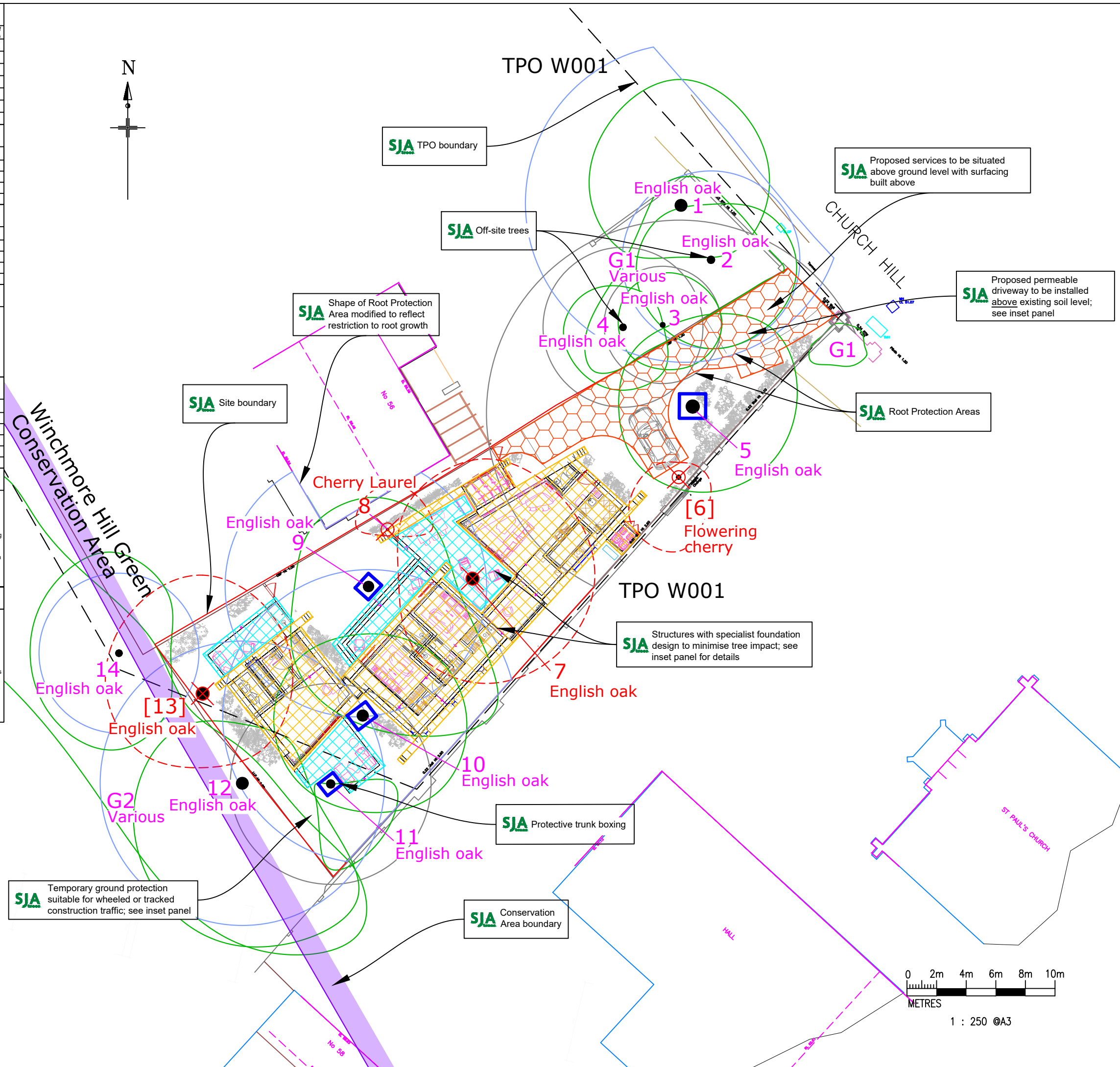
No.	Species	Type of structure
1	English oak	Proposed permeable driveway
2	English oak	Proposed permeable driveway
3	English oak	Proposed permeable driveway
4	English oak	Proposed permeable driveway
5	English oak	Proposed permeable driveway

Above Soil Surfacing

Proposed permeable hard surfacing within root protection areas (RPAs) of retained trees to be constructed in accordance with section 7.4 of BS 5837: 2012, Trees in relation to design, demolition and construction - Recommendations. Other than the careful removal, using hand tools, of any turf layer, surfaces will be installed above existing soil level, or no deeper than the base of any existing surfacing it is replacing, so that the soil is not disturbed and no roots are severed; and an appropriate ground covering, possibly using a geogrid, a geoweb, or a combination of the two will be placed beneath the sub-base to minimise compaction of the soil in which tree roots are growing. Edge supports will also be installed above existing soil level.

Ground Protection

To be installed prior to commencement of demolition or construction works and rolled back/adjusted throughout construction to maintain proper coverage, at same time as erection of protective fencing. For purely pedestrian traffic: scaffold boards or similar, of at least 35mm thickness, butted together and attached to each other with wooden battens or steel tie straps, laid either on an above ground scaffold framework, or on a compressible material (a 75mm deep layer of woodchips may be appropriate) above a biaxial geotextile grid ('geogrid' - 'Tensar' or similar) and pinned to the ground with steel pins to prevent movement. For wheeled or tracked traffic: temporary aluminium roadway ('Trakway' or similar), interlocking polyethylene tread boards ('Ground-Guards' or similar), or reinforced concrete slabs laid on an appropriate compressible layer above a biaxial geotextile grid - to be designed by a structural engineer to accommodate likely loadings.



SJA trees ARBORICULTURAL PLANNING CONSULTANTS

Project: 56a Church Hill, Enfield

Client: Atelier Ochre

Drawing: TREE PROTECTION PLAN

Drawing no: SJA TPP 24115-041

Based on: Proposed layout 22002-100 P1

Drawn by: WFH | Date of issue: Mar 2024 | Scale: 1: 250 @ A3

Checked by: TBA | Tel: (01737) 813058 | sja@sjatrees.co.uk

Tree nos.: ● 10	Category 'U' trees: ● [13]	Canopies of trees to be retained:
Trees to be removed:	Category 'B' RPA:	Category 'C' RPA:
Screw pile foundation:	Above soil surfacing:	
Protective trunk boxing:	Cnsv area boundary:	TPO boundary:

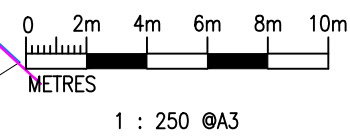
For further information refer to the SJA Trees Tree Survey Schedule

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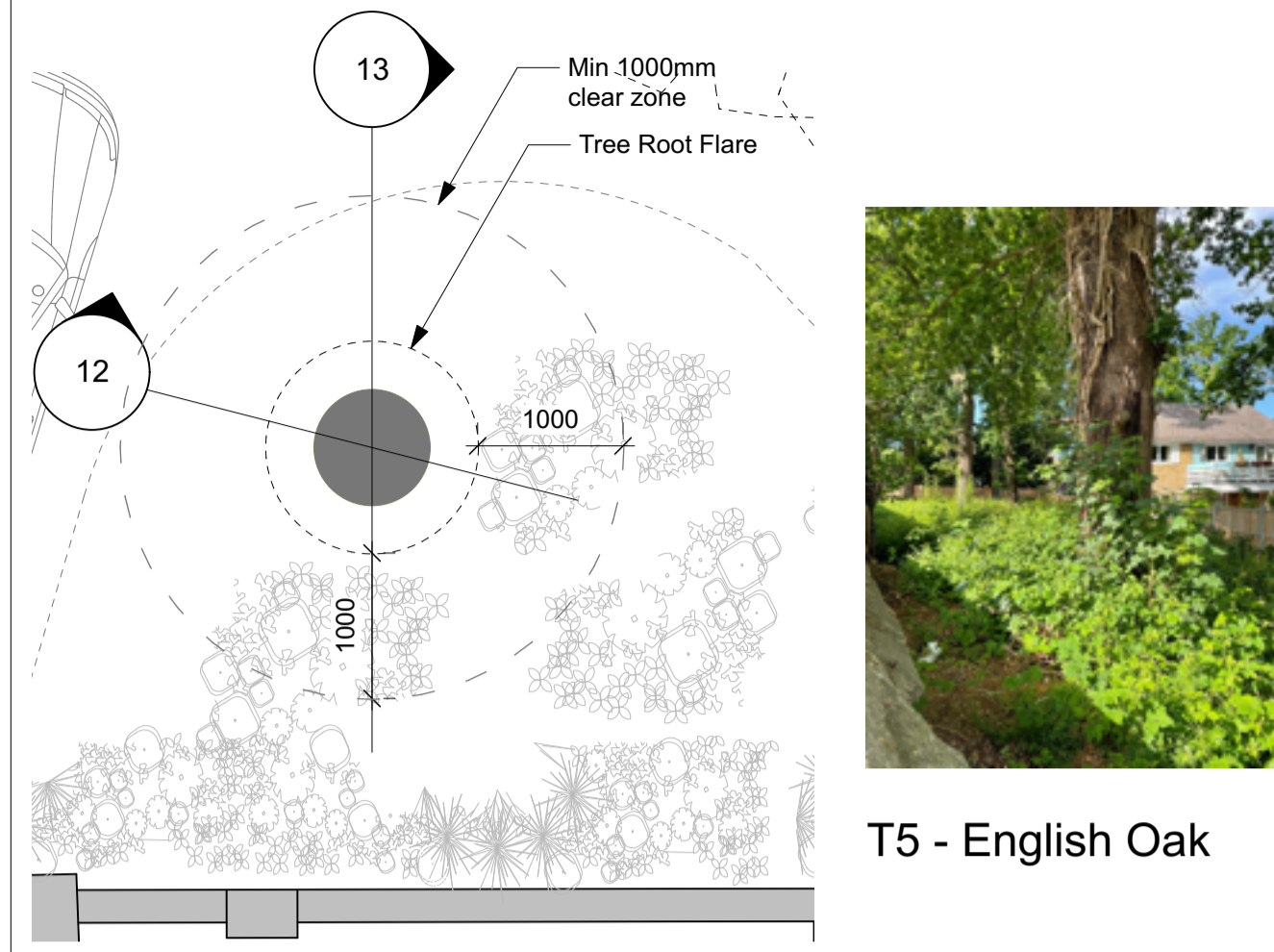
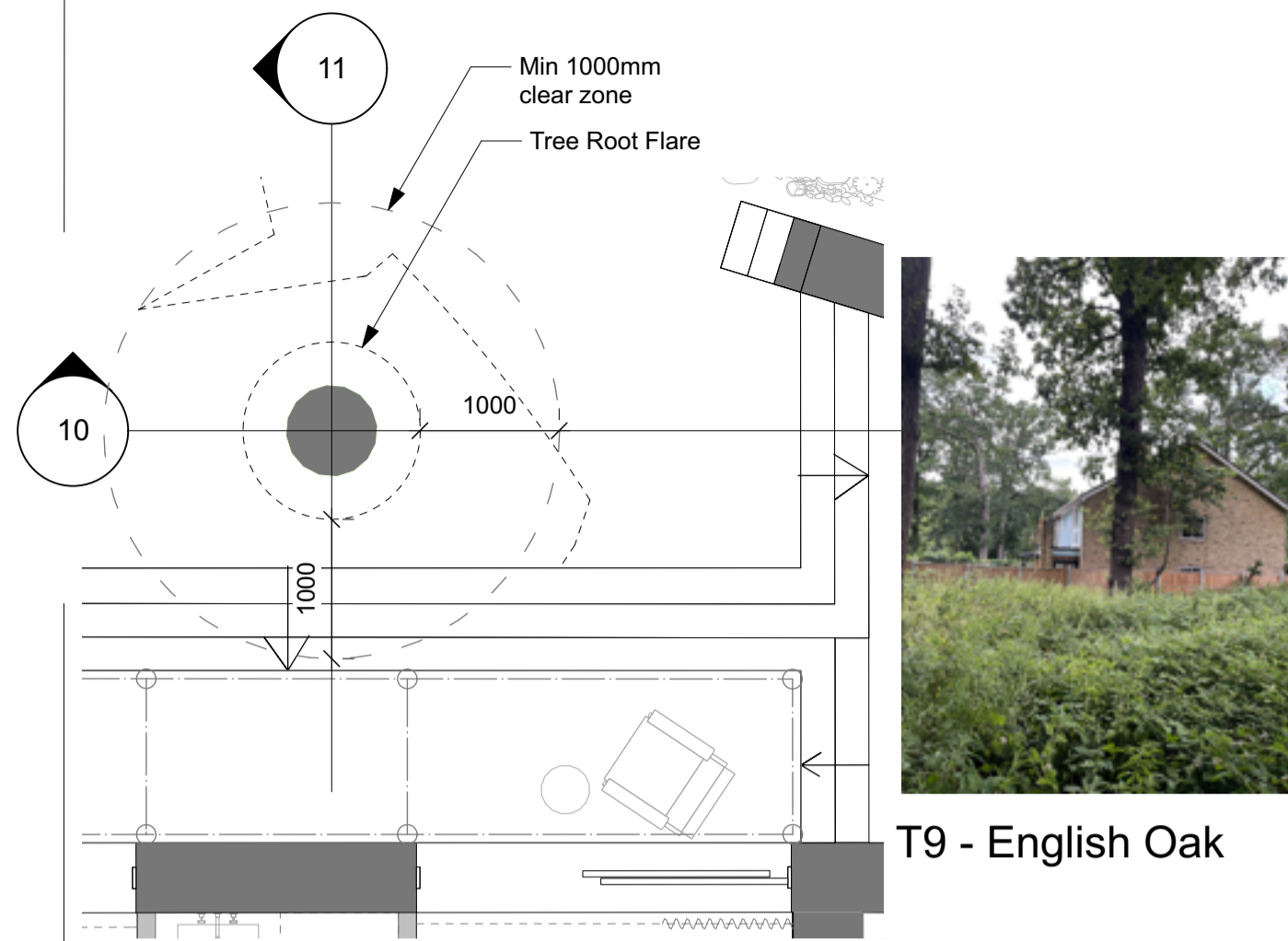
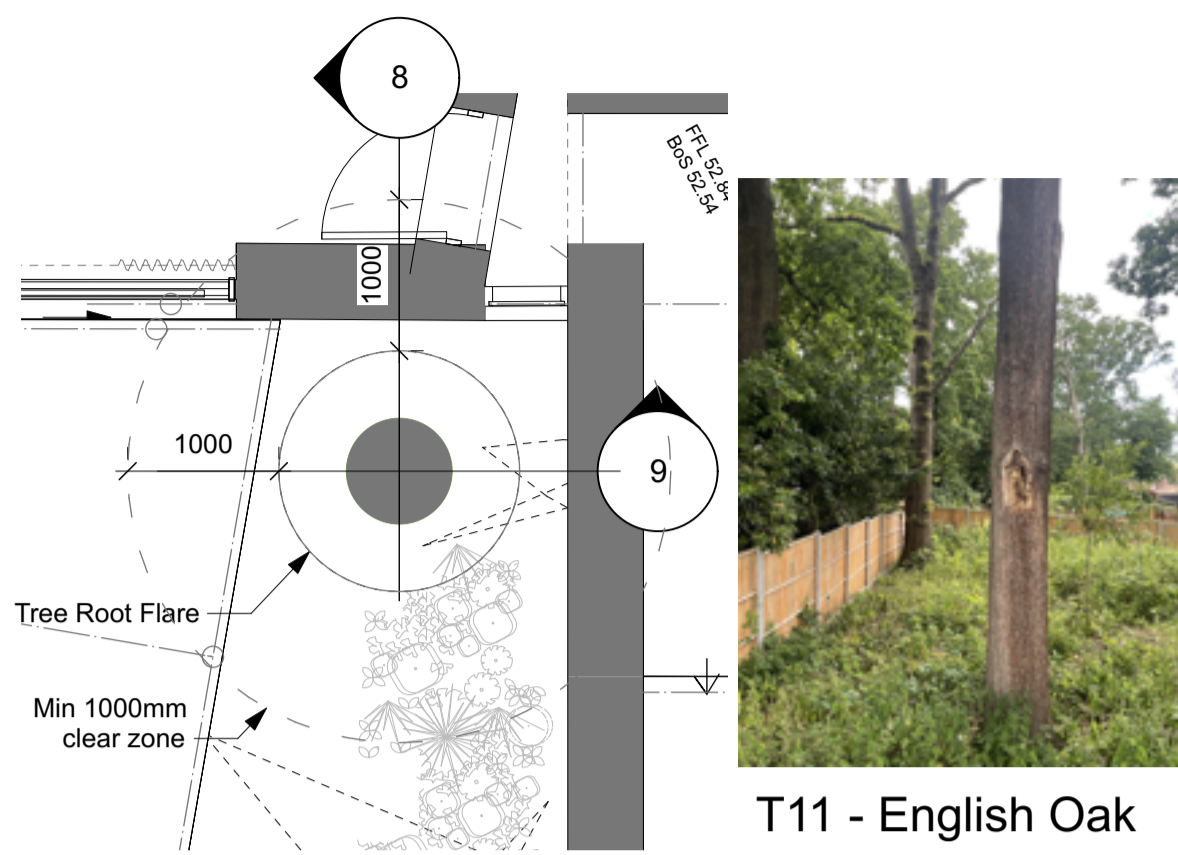
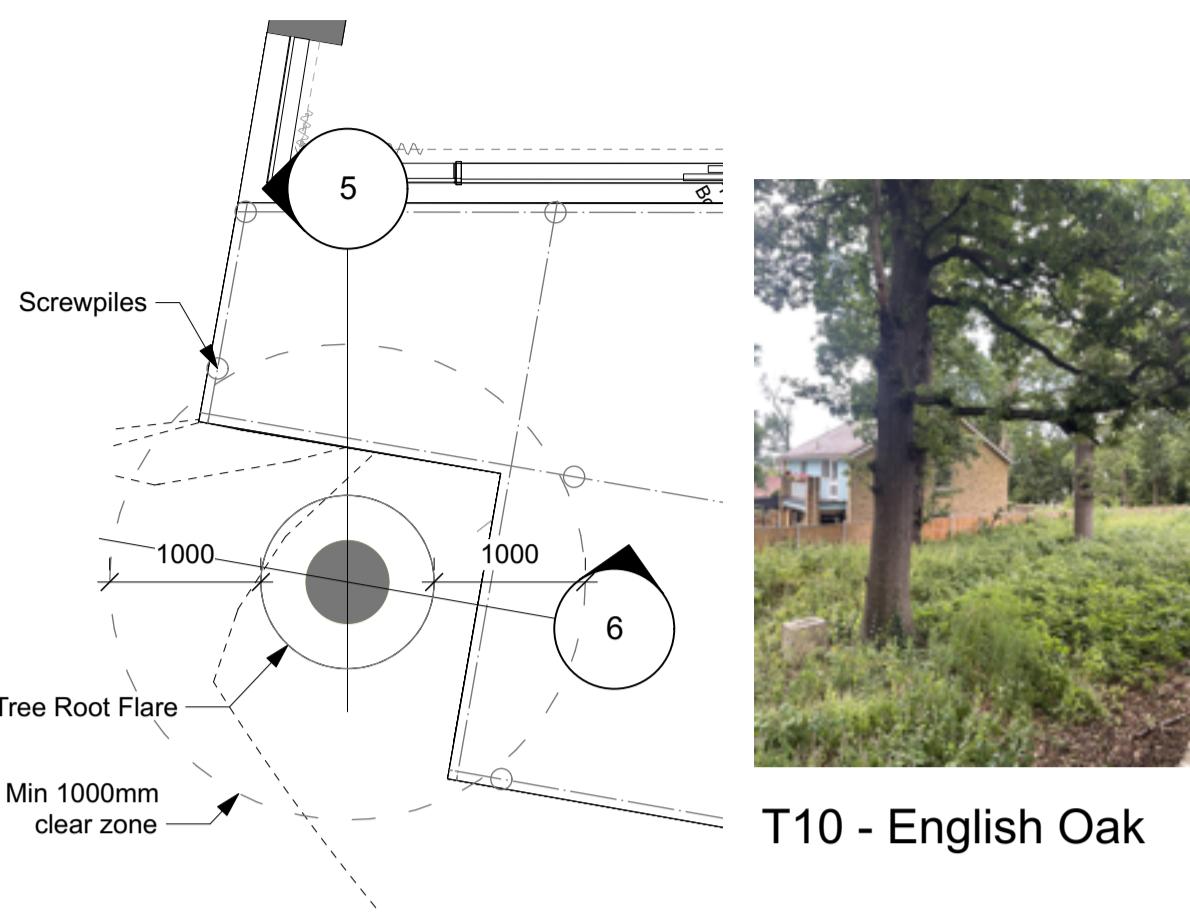
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This drawing is designed to reflect only the principles of layout and/or design insofar as these relate to the protection of trees to be retained, and should NOT be read as a definitive engineering or construction method statement. Reference should be made to the architect or structural engineer, as appropriate, over any matters of construction detail or specification, or any engineering standards or regulatory requirements relating to proposed structures, hard surfaces or underground services.

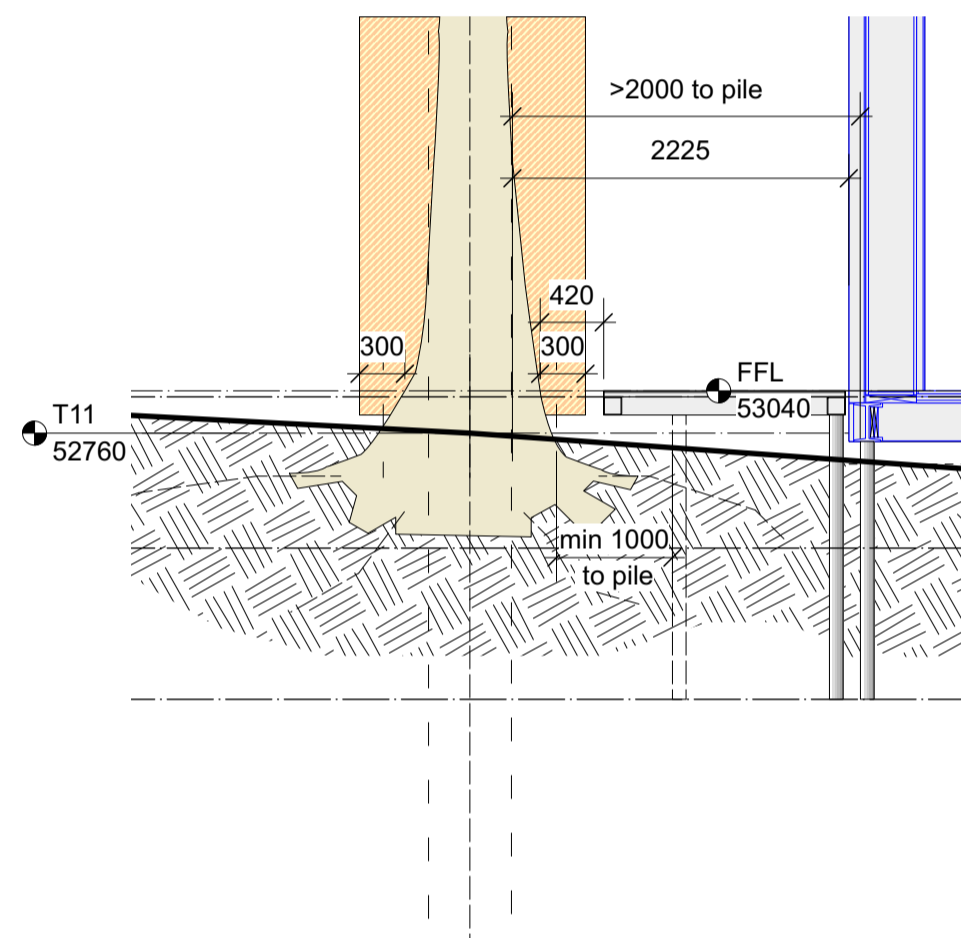


APPENDIX 5
Architect's drawings

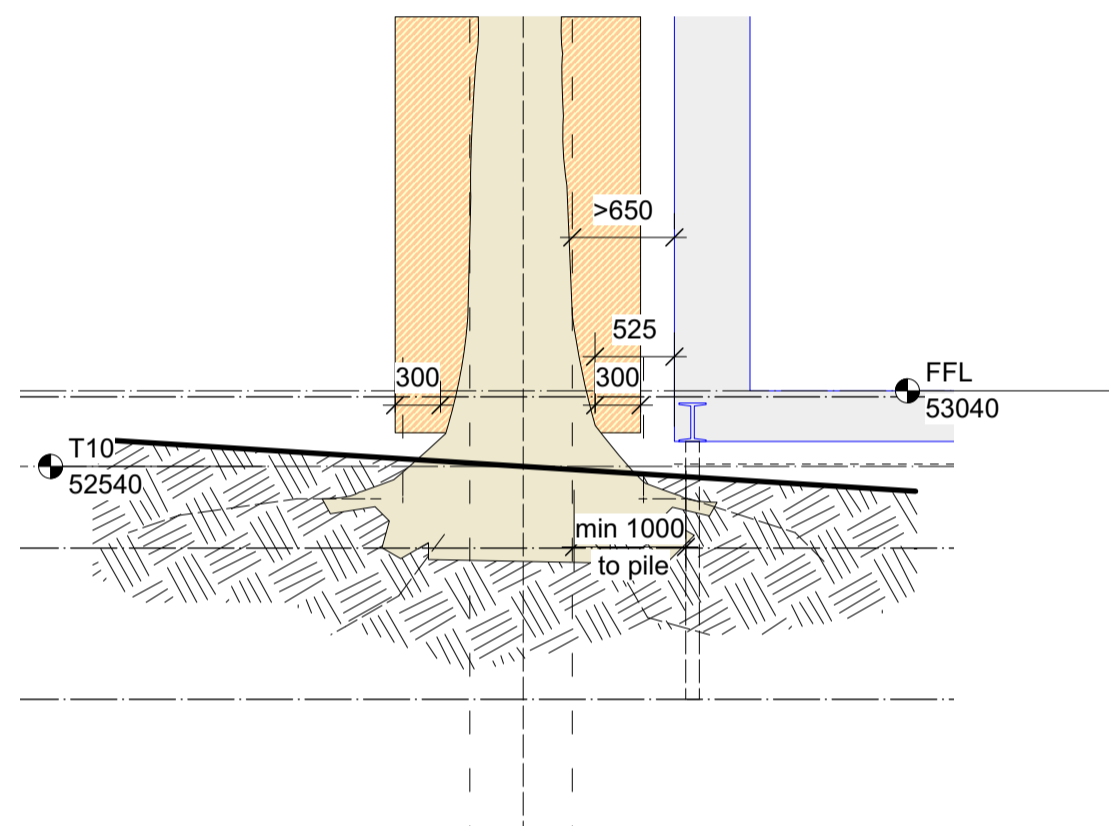


Key Plan
Scale: 1:500

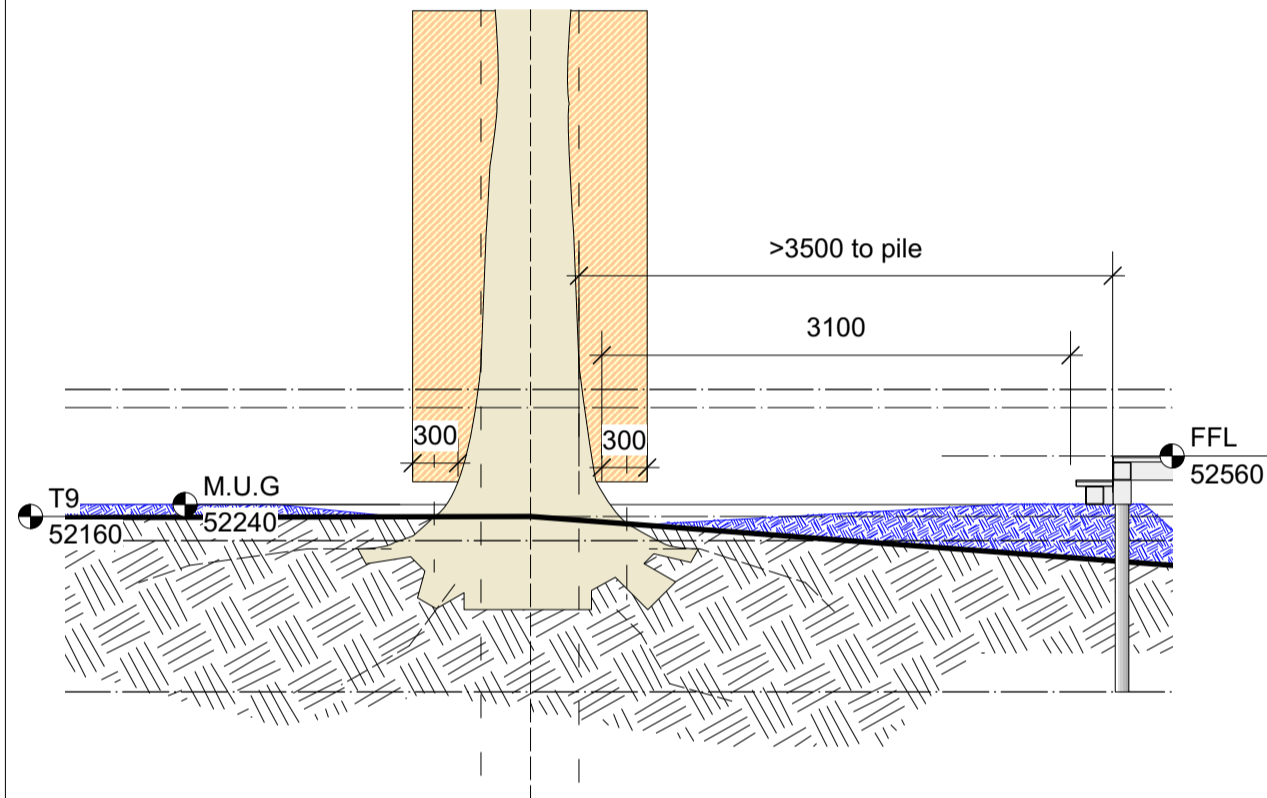
1 T11 English Oak
Scale: 1:50



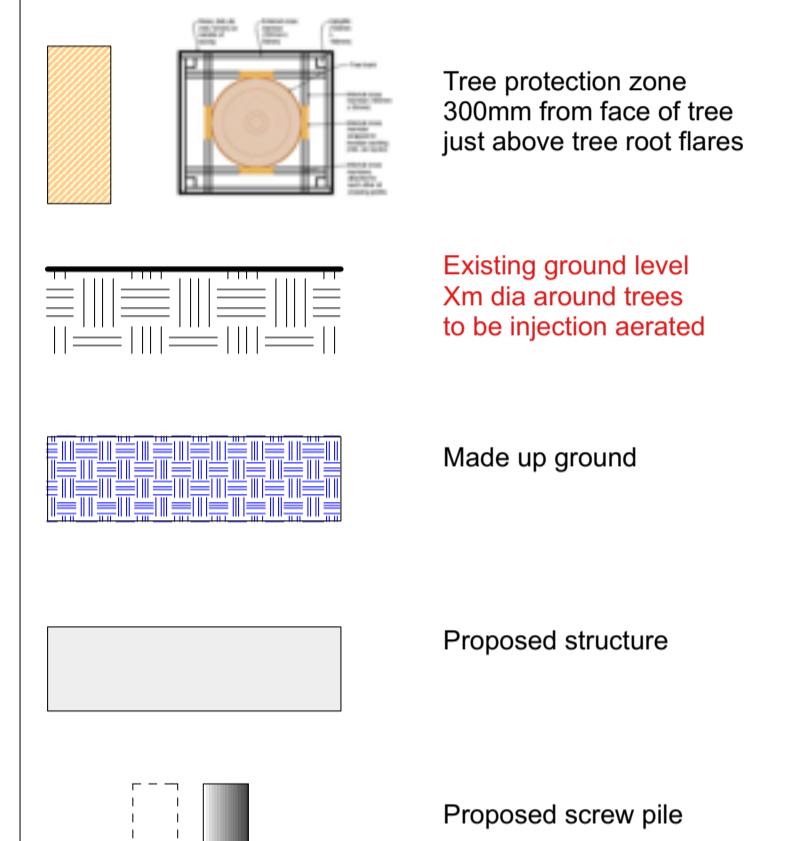
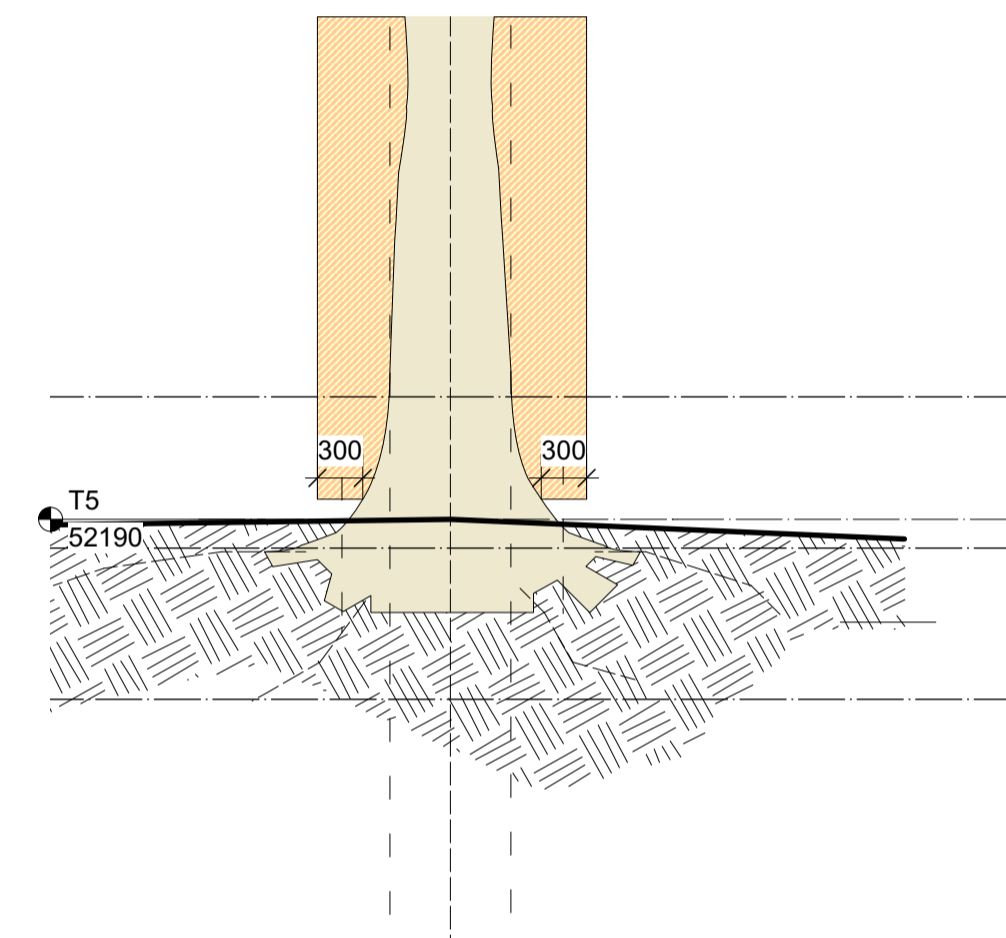
2 T10 English Oak
Scale: 1:50



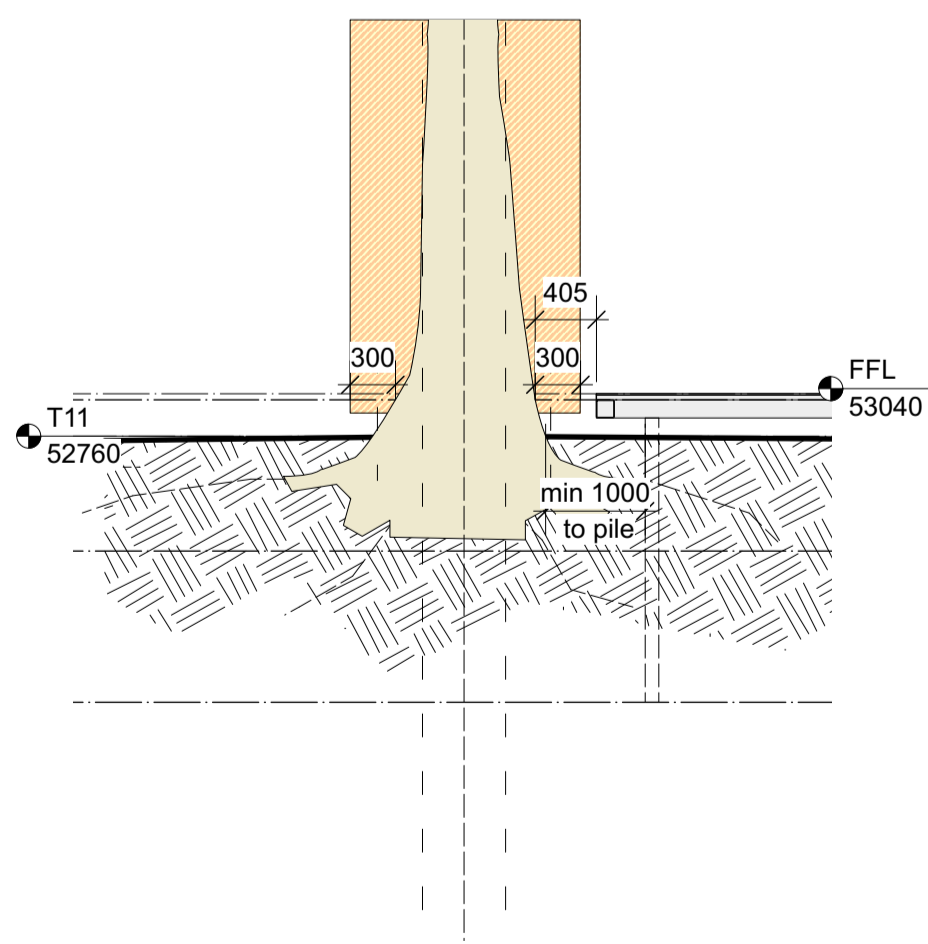
3 T9 English Oak
Scale: 1:50



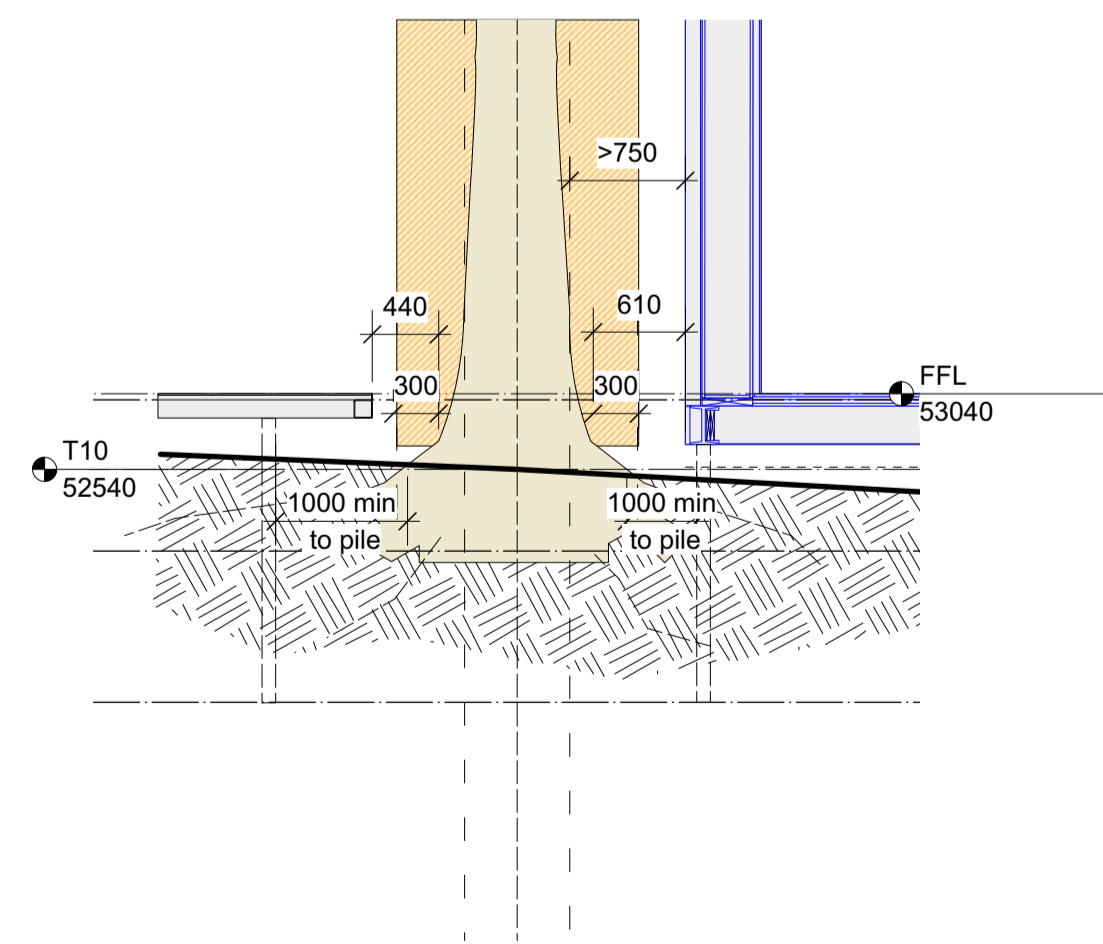
4 T5 English Oak
Scale: 1:50



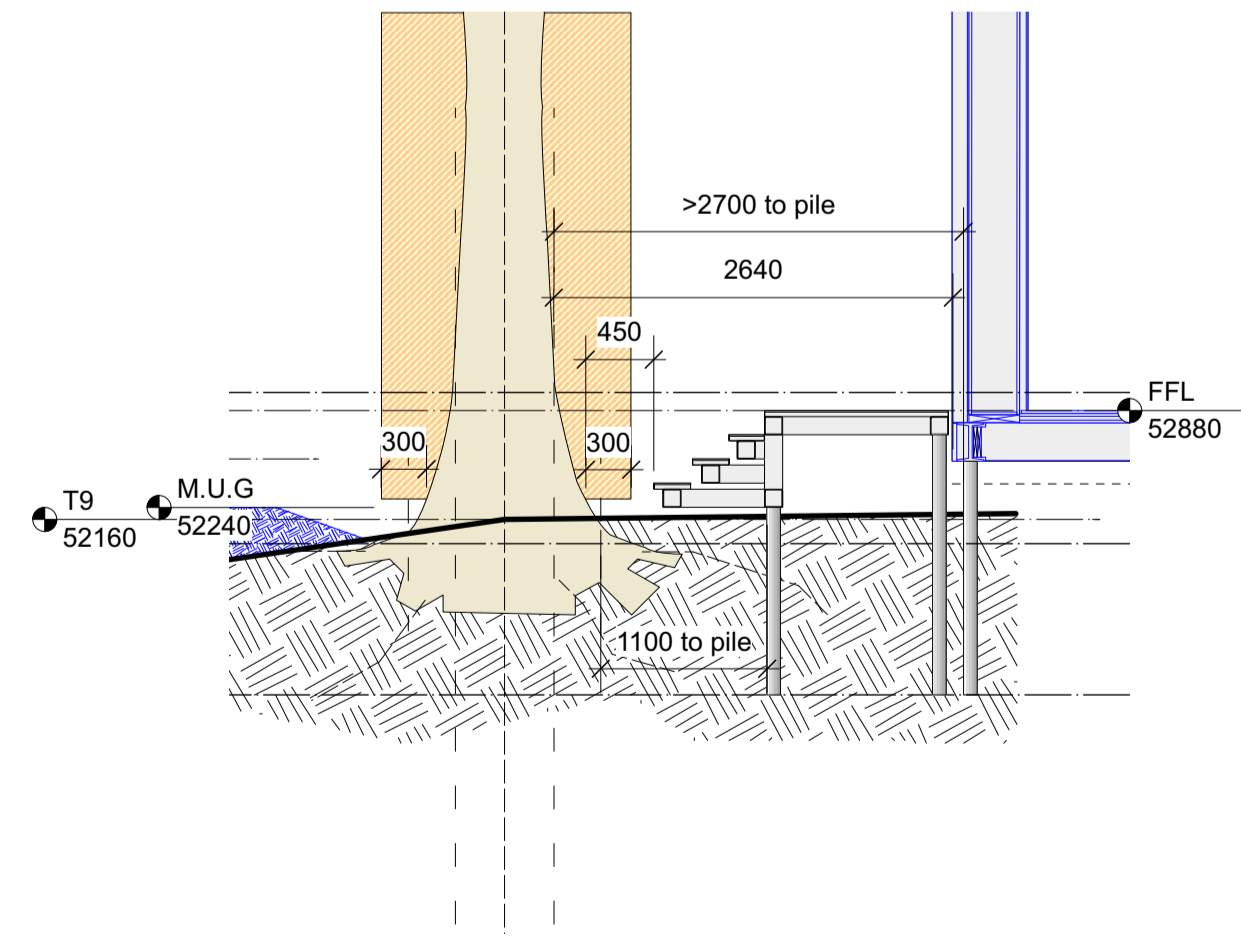
5 T11 Section
Scale: 1:50



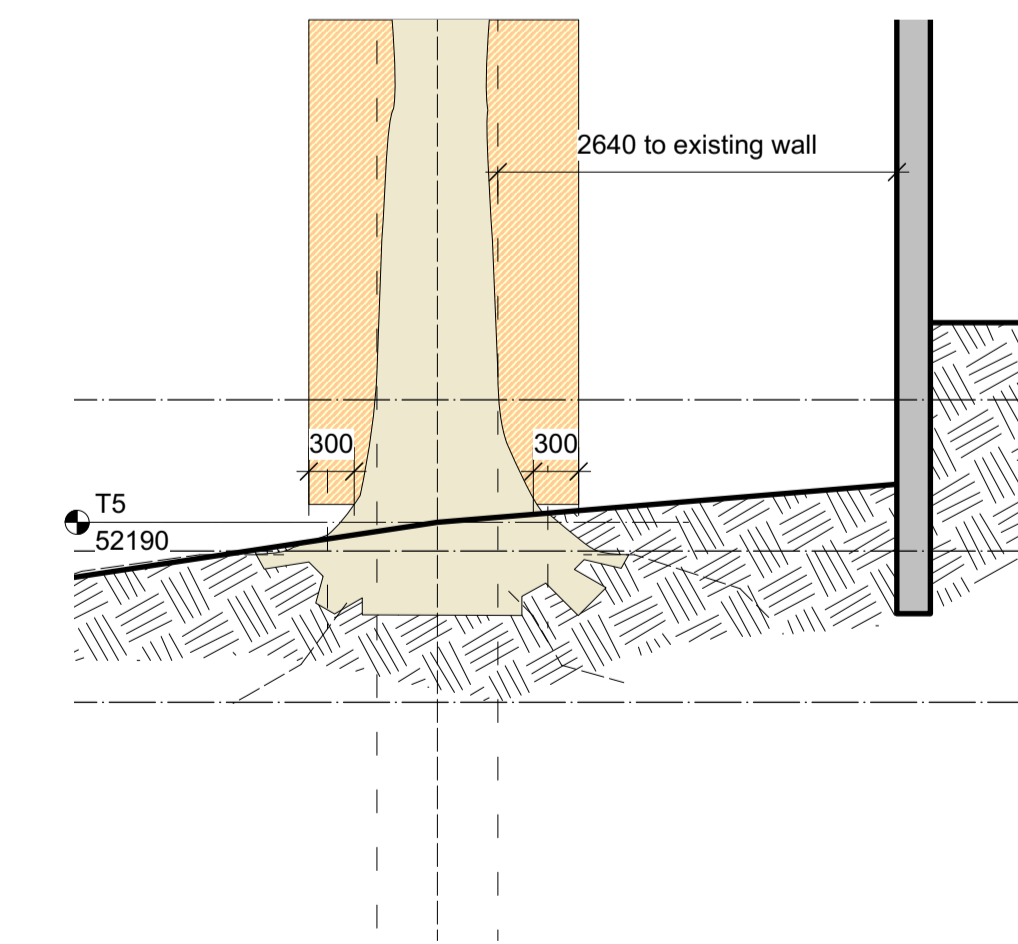
8 T10 Section
Scale: 1:50



10 T9 Section
Scale: 1:50



12 T5 Section
Scale: 1:50



7 T11 Section
Scale: 1:50

9 T10 Section
Scale: 1:50

11 T9 Section
Scale: 1:50

13 T5 Section
Scale: 1:50

Notes

PROJECT
56a Church Hill
CLIENT
Gradica Building Contractors
DRAWING TITLE
Tree sections

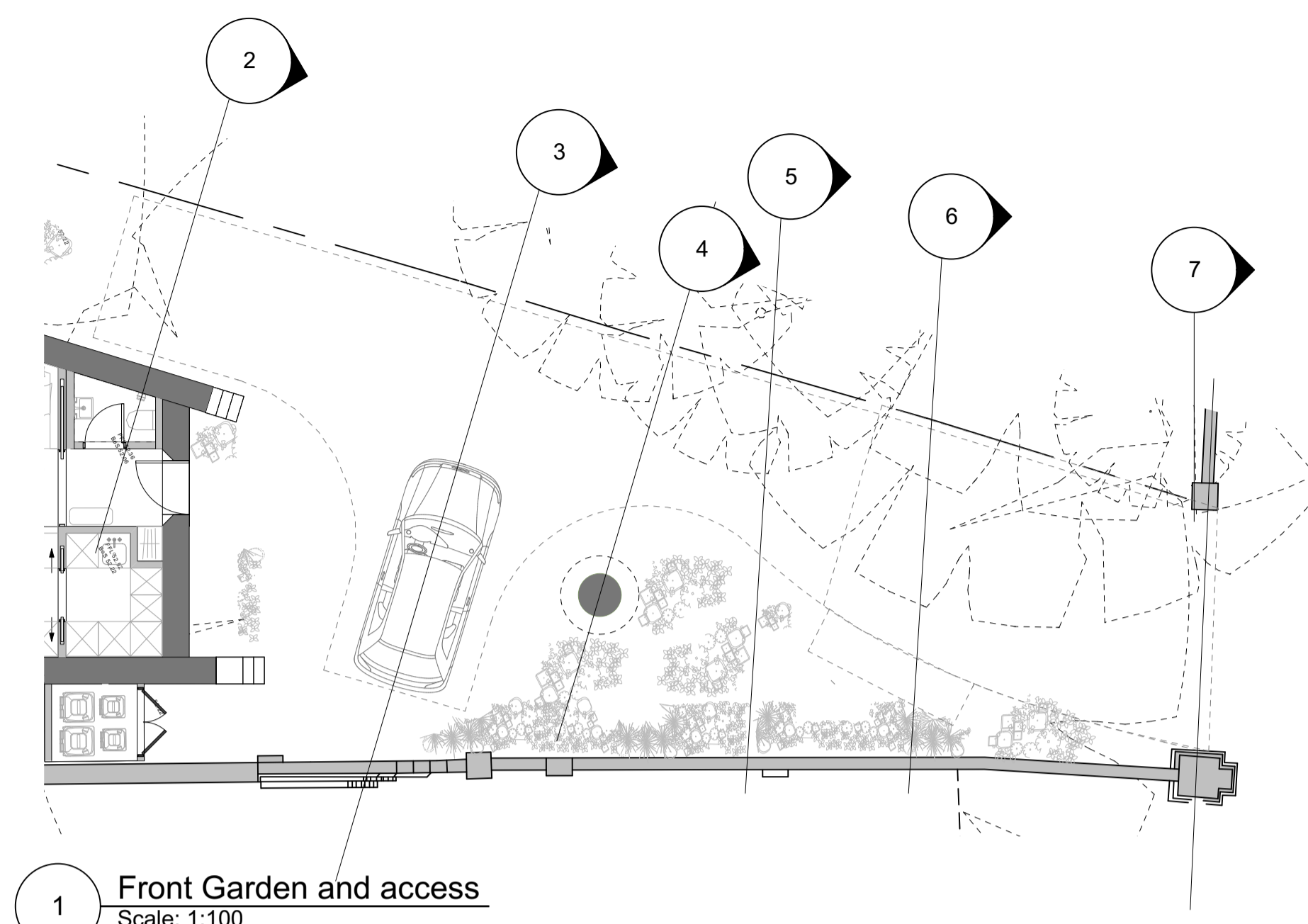
Drawing Number
22002-410

Scale
1:100 @A1
Date Created
09.01.24

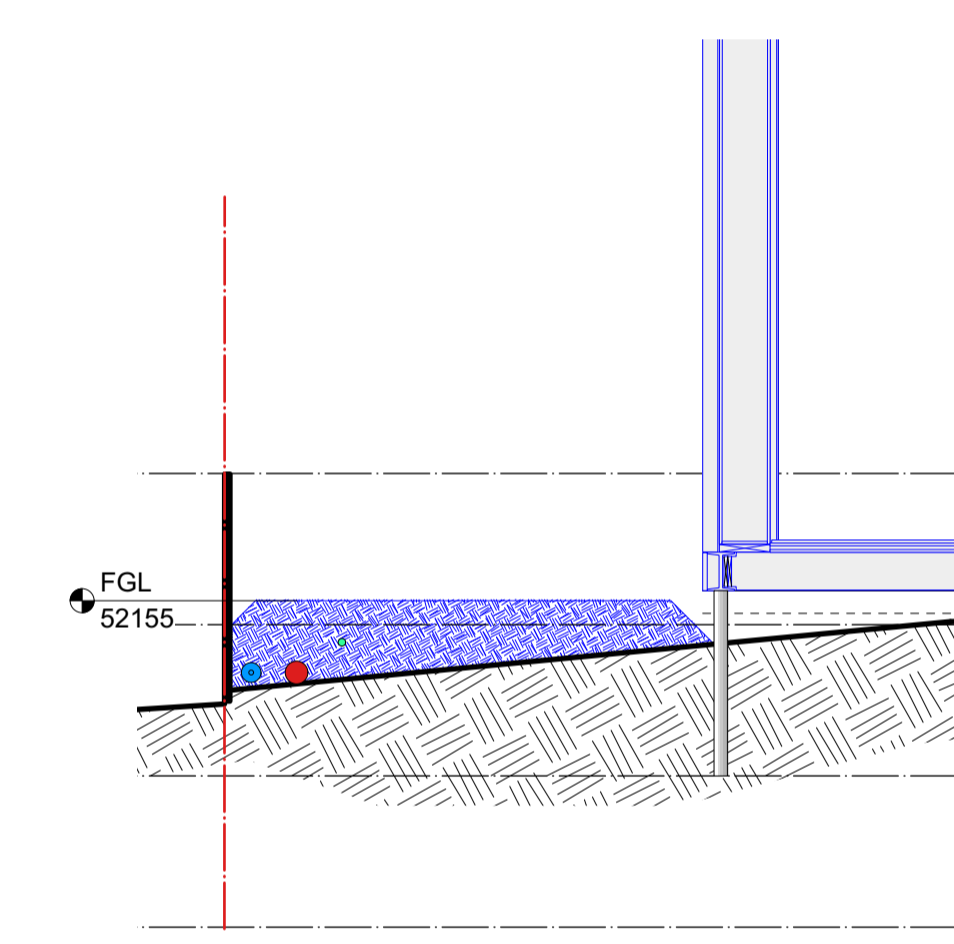
Revision
P2
Revision Date
14.03.24

Drawn By
DF
Checked By
DF

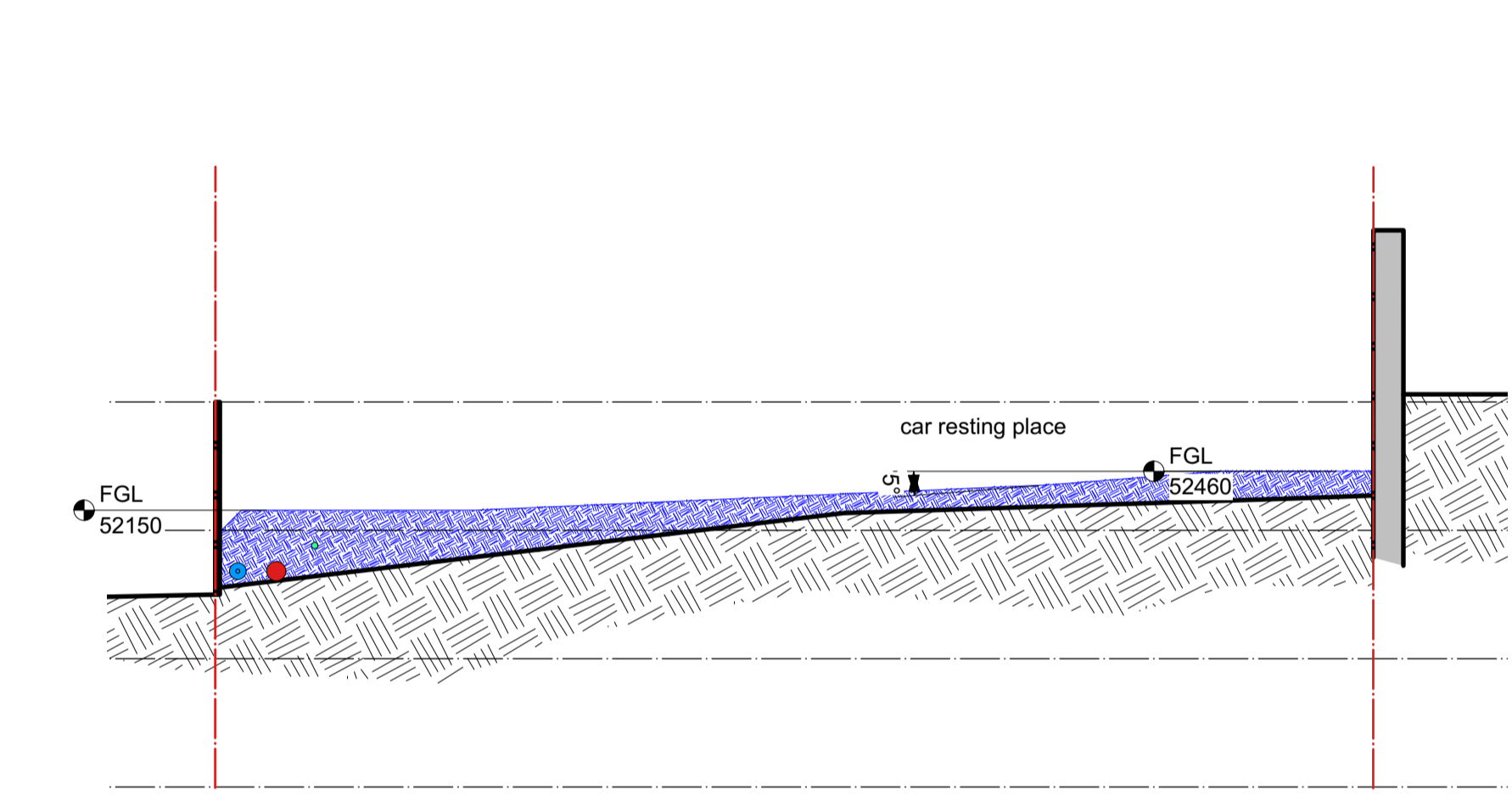
Do not scale from drawing, all dimensions to be checked on site. Report omissions and discrepancies to the architect immediately



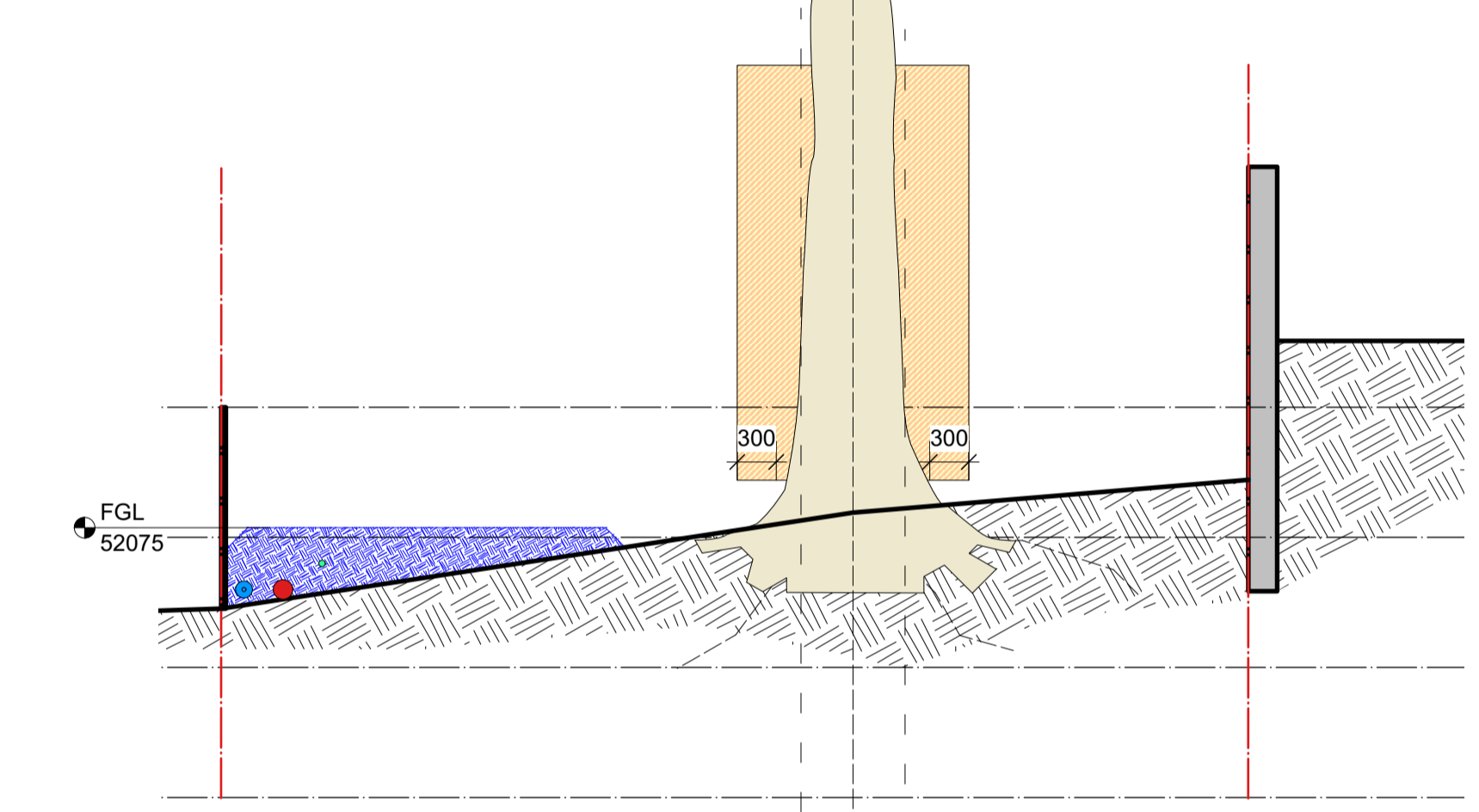
1 Front Garden and access
Scale: 1:100



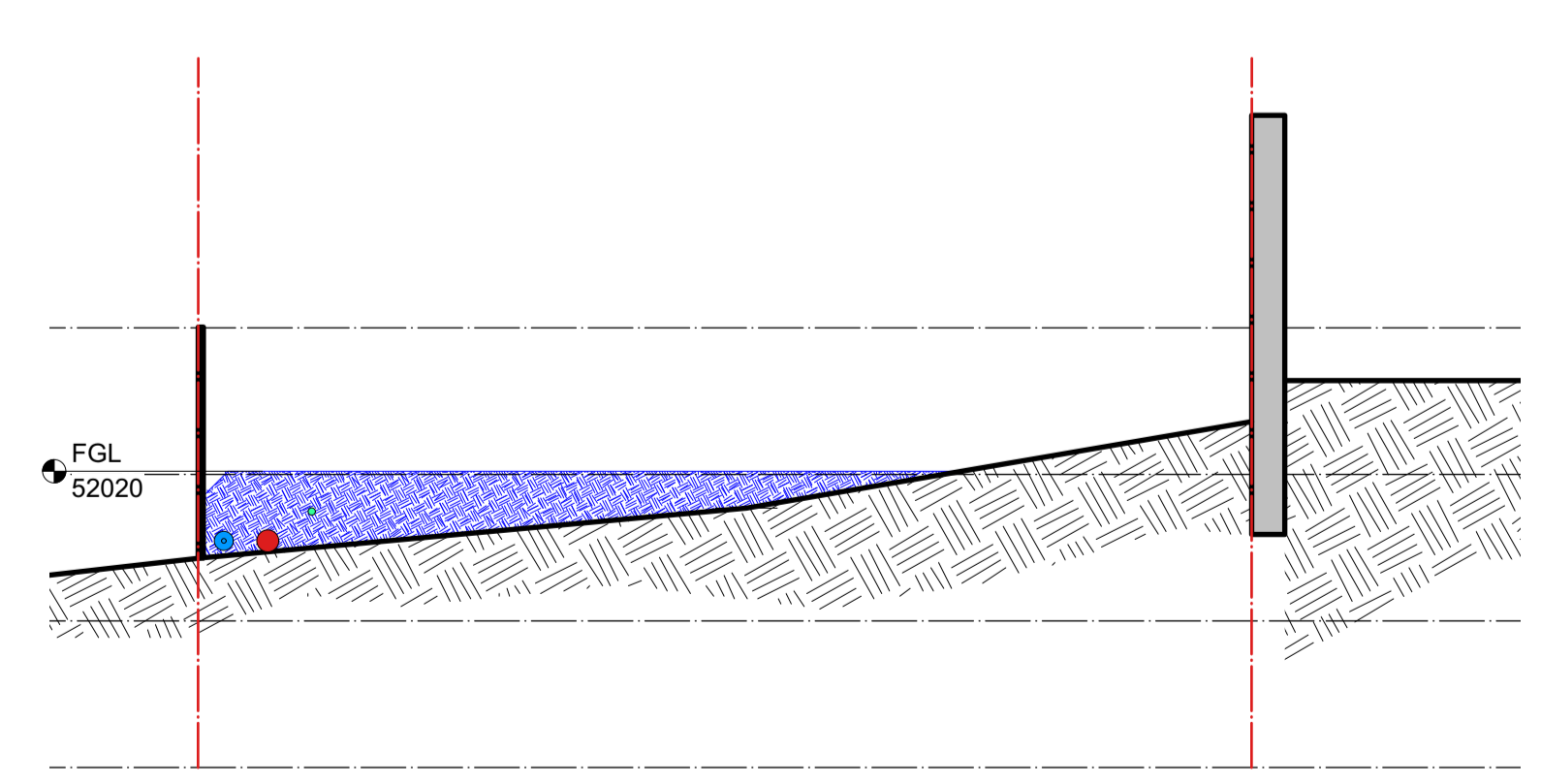
2 By building
Scale: 1:50



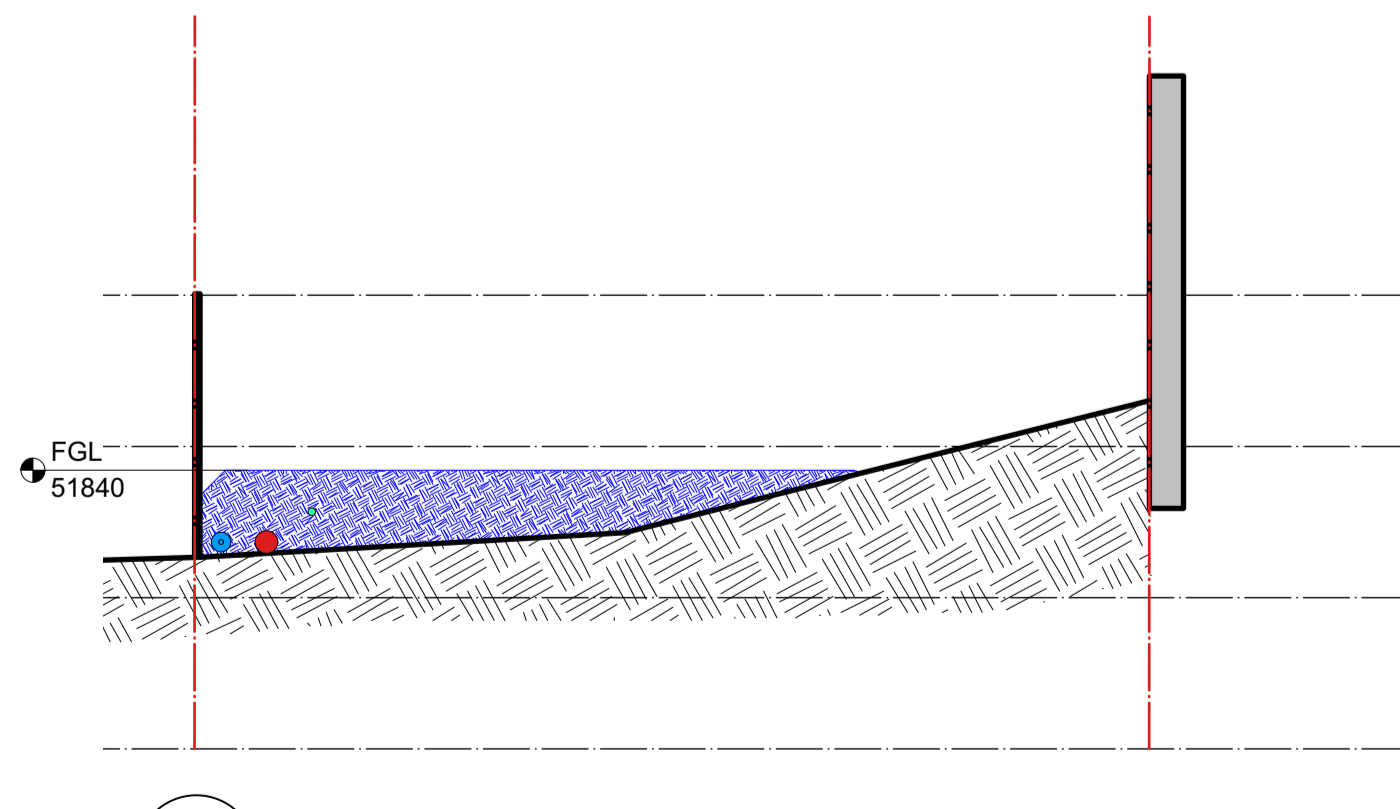
3 Turning T
Scale: 1:50



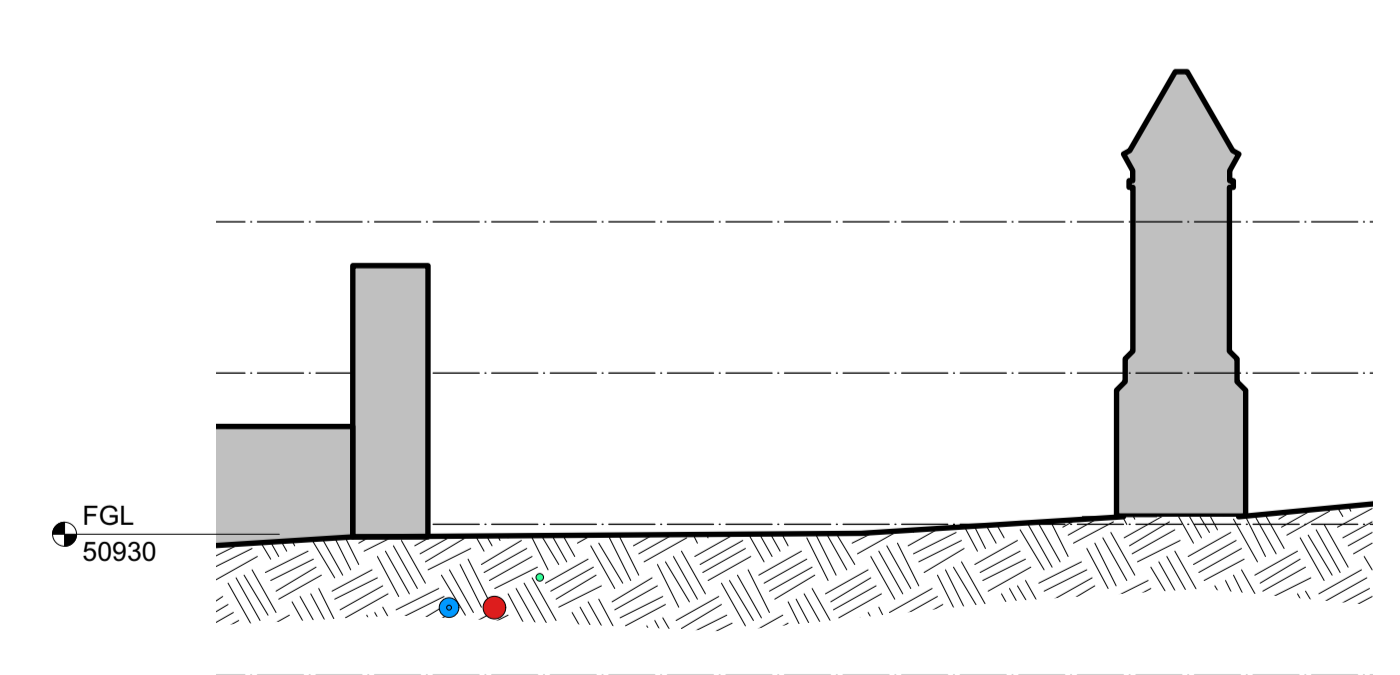
4 Tree
Scale: 1:50



5 Access
Scale: 1:50

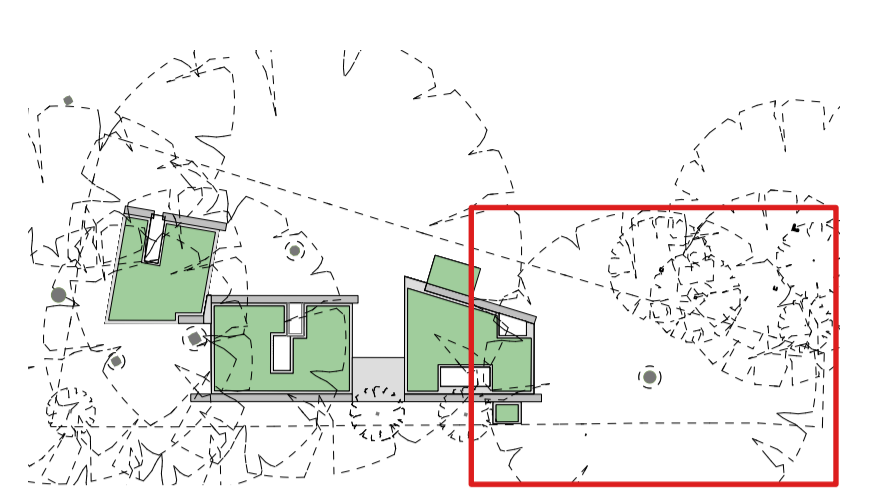


6 Access
Scale: 1:50

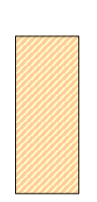

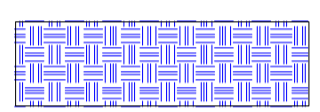




7 Site Entrance - connection to public services
Scale: 1:50

Notes



Key Plan
Scale: 1:500

-  Tree protection zone
300mm from face of tree
just above tree root flares
-  Existing ground level
Xm dia around trees
to be injection aerated
-  Made up ground
-  Proposed structure
-  Proposed screw pile

PROJECT
56a Church Hill
CLIENT
Gradica Building Contractors
DRAWING TITLE
Front Short Sections

Drawing Number
22002-411

Scale
1:100 @A1

Date Created
09.01.24

Revision
P3

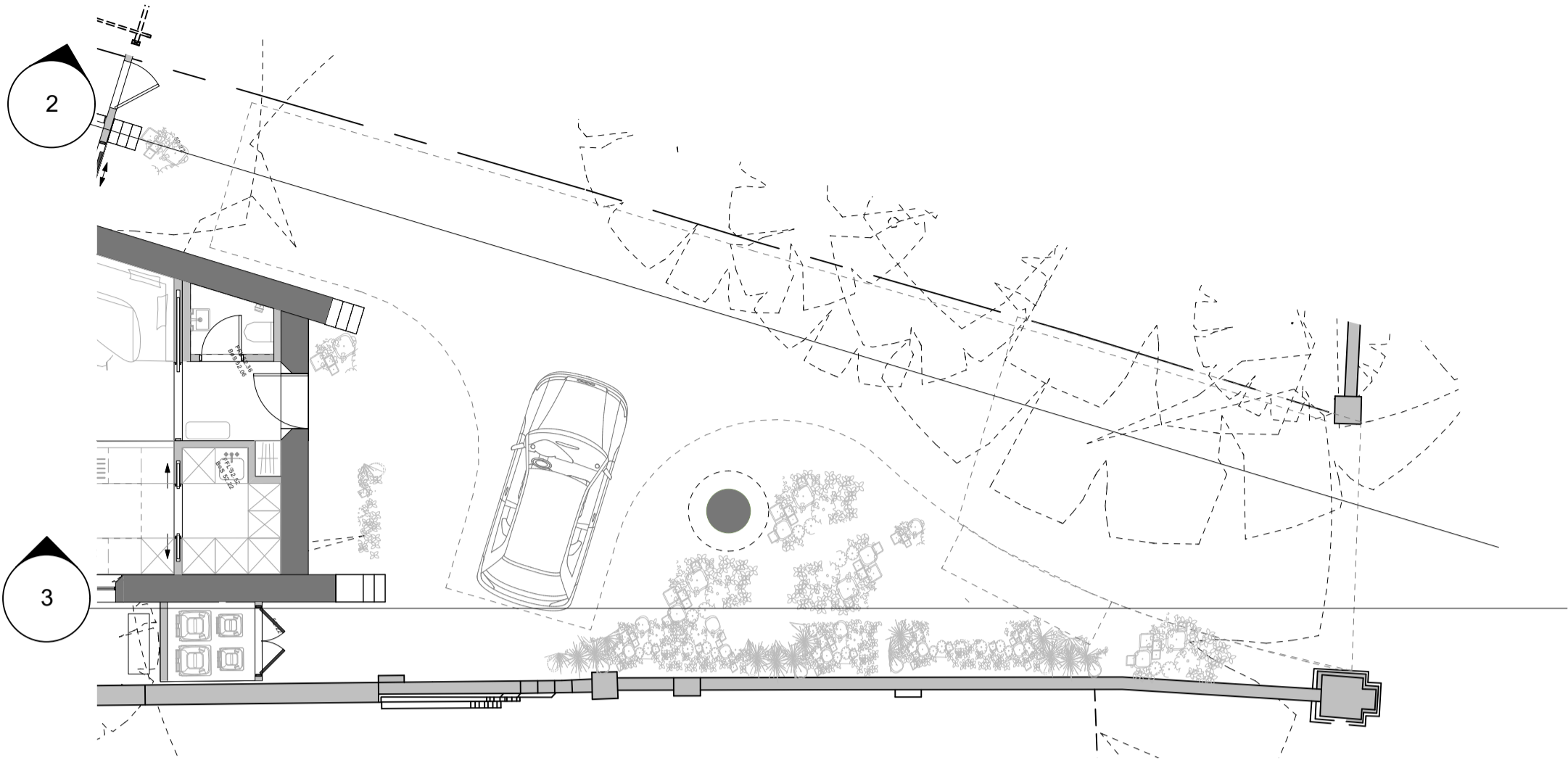
Revision Date
25.03.24

Drawn By
DF

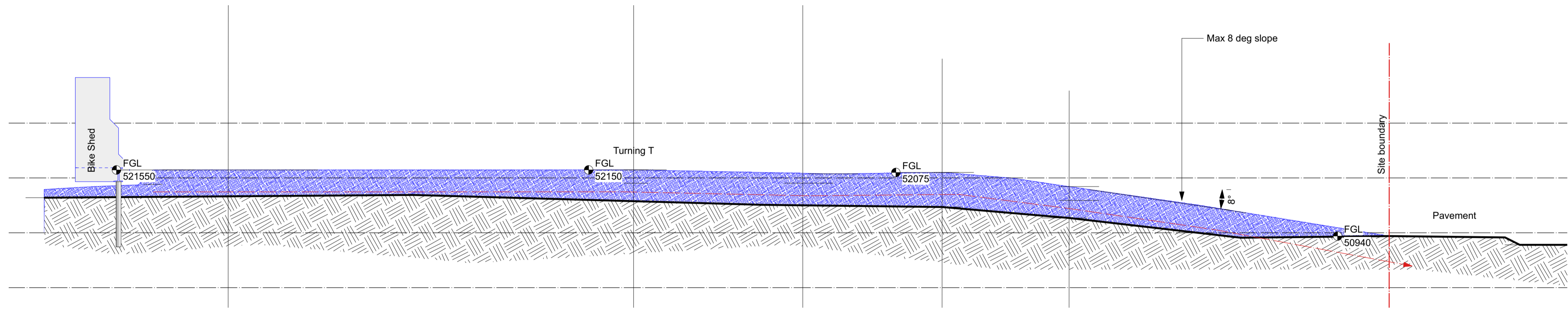
Checked By
DF

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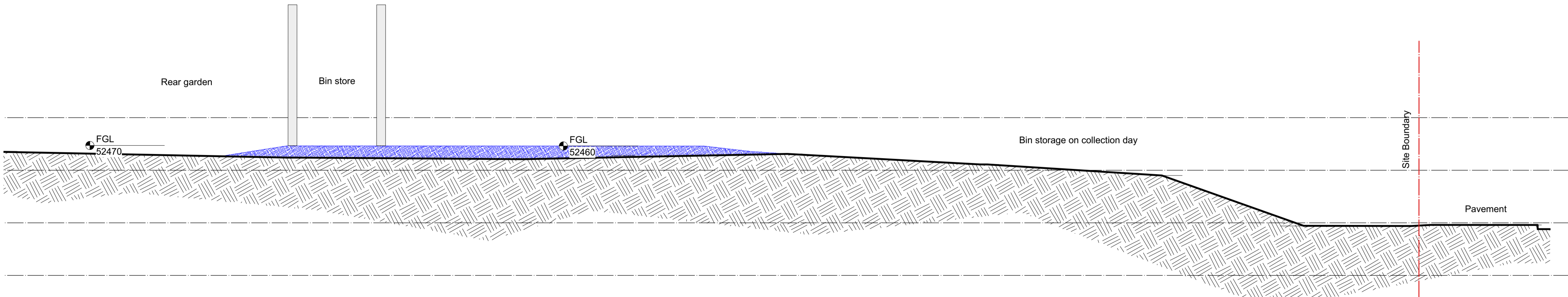




1 Front Garden and Access
Scale: 1:100

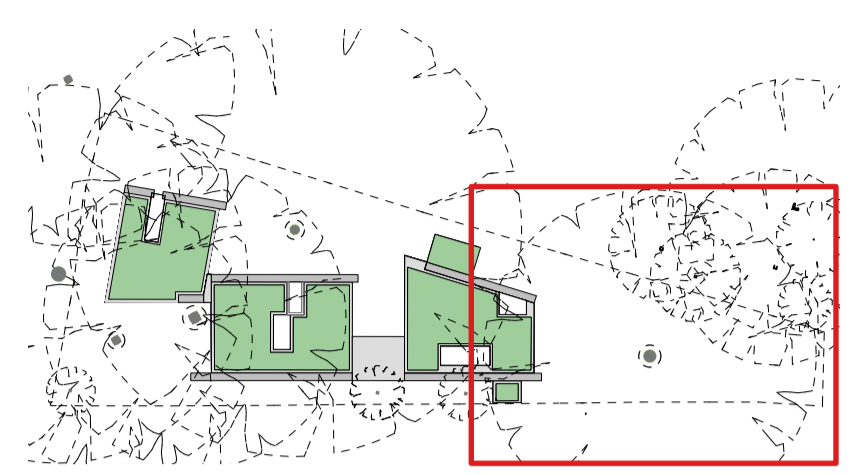


2 Vehicle Access
Scale: 1:50



3 Pedestrian Access
Scale: 1:50

Notes



Key Plan
Scale: 1:500

- Tree protection zone
300mm from face of tree
just above tree root flares
- Existing ground level
Xm dia around trees
to be injection aerated
- Made up ground
- Proposed structure
- Proposed screw pile

PROJECT
56a Church Hill
CLIENT
Gradica Building Contractors
DRAWING TITLE
Front Long Sections

Drawing Number	
22002-412	
Scale	Date Created
1:100 @A1	09.01.24
Revision	Revision Date
P3	25.03.24
Drawn By	Checked By
DF	DF

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