ARBORICULTURAL CONSULTANTS

ARBORICULTURAL IMPACT ASSESSMENT

FOR

113 MYCENAE ROAD,

BLACKHEATH,

LONDON

SE3 7RX.

By

ARBORICULTURAL SOLUTIONS LLP

AUGUST 2021.

SUMMARY

The purpose of this report is to provide a consideration of the arboricultural implications of the redevelopment of the existing house to create three new town houses including new basement level accommodation. Trees considered to be within the influencing distance of the development have been assessed in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations". I have inspected all the trees on and near the site that could potentially be affected by the development and list their details in Appendix A and as a result, 10 trees were inspected. The implications of the proposal are:

1. Trees 1, 2 and 3 (London Plane) located within the public footway will be protected and retained throughout the redevelopment.

2. The footprint of House 1 extends into the circular representation of the RPA of tree 1 by 0.7% and tree 2 by 5.5%. While the root spreads may have been restricted by the foundations of the existing house, the encroachment is minor and is unlikely to significantly impact on the long-term health and condition of these trees.

3. Trees 4 (Beech) and 5 (Pine) are within the neighbouring property. There are no development works proposed within the RPAs of these trees.

4. Trees 7 (Wild Cherry), 8 (Hawthorn), 9 (Ash) within the rear garden, 10 (Ash) within the front garden will be removed to facilitate the redevelopment and replacement tree planting is proposed.

5. Tree 6 (Deodar) is located within St. Andrews Mews adjacent to the flank elevation of the existing property. The footprint of the new basement excavation encroaches into the circular representation of the RPA. However, the root spread of tree 6 may have been restricted by the foundations of the existing house. If the consent of the tree owners can be secured this tree will be removed and replacement planting undertaken. If the tree is retained, it will require a high level of tree protection (in accordance with BS 5837:2012) and significant arboricultural supervision during the demolition and construction phases.

This report includes guidance on tree protection measures and providing these are adhered to there will be no adverse impact on the long-term potential on the retained trees.

1. Introduction

1.1. Instructions

1.1.1. We are instructed by Goodcare Limited to inspect and report on several trees growing in the vicinity of the application site. We are to report on their current condition, amenity value, suitability for retention and comment on any potential impacts on the trees from proposed development and provide guidance on any necessary tree protection.

1.2. Drawings and Documents

1.2.1. We can confirm sight of the following documents and drawings:

Existing site:

- Ground floor and first floor plans. Drawing number 20055-13-B-GA at scale 1:100@A1 dated 16th November 2020.
- Topographical survey. Drawing number 20055-13-B-T at scale 1:100@A1 dated 16th November 2020.
- Elevations 1,2,3&4. Drawing number 20055-13-E-GA at scale 1:100@A1 dated 16th November 2020.
- Elevations 5,6&7. Drawing number 20055-13-E-GA at scale 1:100@A1 dated 16th November 2020.

Proposed site:

- Ground floor plan – Drawing number PP-10 at scale 1:100@A3 dated July 2021.
- Lower ground level floor plan – Drawing number PP-11 at scale 1:100@A3 dated July 2021.
- Design and Access Statement July 2021.

2. Report on site visit

2.1. General

2.1.1. The site was inspected on 17th November 2020 by F. Critchley of Arboricultural Solutions LLP. All arboricultural data contained in this report was recorded at that time. Weather conditions were sunny with light winds and good visibility.

2.1.2. The relevant data was recorded to assess the condition of the trees, their potential constraints on the proposed development and the protection and construction measures required to ensure their long-term retention.

2.1.3. Information is given on condition, size and indicative positions in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations.*

3. Tree inspection and methodology

3.1. Inspection

3.1.1. Trees likely to be affected by the development were identified and inspected from ground level only. The trees were inspected based on the Visual Tree Assessment (VTA) method as proposed by Mattheck and Breloer (1994) and were not climbed. No invasive examination technique (such as increment boring, or internal decay detection) was carried out. As the inspection was visual only, no guarantee, either expressed or implied, of the internal condition of the wood of these trees can be given.

3.2. Marking

3.2.1. The existing site plan provided was converted for use in Arbortrail tree data collection software. Crown measurements were taken using a laser rangefinder (Leica Disto D510). The trees surveyed were referenced with a number corresponding to the particular tree on the site plan.

3.2.2. Each reference number refers to a survey sheet entry completed on site to show the following data:

- Sequential tree reference number (recorded on tree survey plan)
- Species - Common name followed by the Latin name for the first entry of each different species
- Height in metres
- Trunk diameter in millimetres, measured in accordance with Annex C of BS 5837:2012
- Crown radius measured at the four cardinal points – where only one measurement is given, the crown is symmetrical
- First significant branch height and direction of growth
- Crown clearance above ground level
- Life stage (young, semi-mature, early mature, mature, over-mature, veteran)
- General observations, particularly of structural and/or physiological condition, and/or preliminary management recommendations
- Estimated remaining contribution in years (less than 10, 10+, 20+, more than 40)
- Category U or A to C grading, to be recorded on the tree survey plan

3.2.3. Survey sheet entries are shown at Appendix A of this report.

3.3. Tree categorisation

3.3.1. Trees vary in, size, age, and landscape importance. All trees were categorised in accordance with the British Standard Trees in relation to design, demolition and construction - recommendations BS 5837: 2012. BS Categories have been entered in the tree schedule and are as follows:

U – Trees unsuitable for retention. 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.

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

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

C - **Low Category.** Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

3.3.2. The existing site plan was edited to produce a Tree Constraints Plan (TCP) showing the constraints on the existing site layout (refer to drawing TCP_113MYCENAERD_1 Rev A). This information is then overlaid onto the proposed layout (refer to TCP_113MYCENAERD_2A Rev B and TCP_113MYCENAERD_2B Rev B) and a tree protection plan produced.

3.3.3. The root protection areas (RPAs) have been calculated using Trees in Relation to Design, Demolition and Construction - recommendations BS 5837: 2012 (refer to Appendix A). The RPAs of trees implicated in the design proposal have not been adjusted in shape to take into account the existing or past site conditions such as the presence of buildings, boundary walls or hard surfacing. Whilst the presence of boundary walls and buildings may restrict root spread, hard surfaces such as tarmac/paved footpaths are likely to have roots present beneath them but at a reduced volume. In this case, the full RPAs have been retained to show the areas where special precautions are required to prevent potential damage to the roots.

3.3.3. The trunk diameter circle and crown outline show the BS Category in the following colours:

Category U	**Dark red**
High Quality (A)	**Light green**
Moderate Quality (B)	**Mid-blue**
Low Quality (C)	**Grey**

3.3.4. Trees in Relation to Design, Demolition and Construction - Recommendations BS 5837: 2012 do not include arguments for or against development, or for the removal or retention of trees. Where development is likely to occur, the standard provides guidance on how to decide which trees are appropriate for retention.

4. Brief Site Description

4.1. General

4.1.1. Mycenae Road encompasses late-Victorian, Edwardian and inter-war streetscapes, with the older properties to the north, the inter-war properties on the east side to the south, and with several later infill buildings.

4.1.2. The proposed development site was formerly occupied by a Victorian Church (St Andrews Church), which was demolished in the 1960s due to subsidence. The current building is a detached 5-bedroom house located on a generous corner plot between Mycenae Road and Vanbrugh Park.

4.1.3. The local area is primarily residential in character and its built form is varied. It includes large, detached dwellings; large semi-detached houses; other terraced dwellings, purpose-built blocks of flats and other properties that have been converted into flats.

4.2. Statutory Tree Protection

4.2.1. The Town and Country Planning (Tree Preservation) (England) Regulations 2012 allows for trees either as groups, or individuals, or as woodlands, to be protected by Tree Preservation Orders (TPO). These have the effect of preventing the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except in certain circumstances, other than with the consent of the local planning authority.

4.2.2. A Conservation Area is an area designated by the Local Planning Authority as one of "special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance". Special controls exist with regard to demolition and alteration of buildings; Listed Building Consent must also be obtained for any demolition, even if the building is not itself listed. Similarly, trees are given some protection with the requirement for the local authority to be given six weeks written notice before carrying out any work on trees; this gives the authority time to decide if a TPO is necessary.

4.2.3. Online search (London Borough of Greenwich Planning Services) has indicated that the trees surveyed are not protected by TPO. However, the property stands within Blackheath Conservation Area.

4.3. Development Proposal

4.3.1 The full development description is for the demolition of the existing house and redevelopment of three town houses including excavation of new basement level accommodation. The application also includes off-street parking and courtyard gardens.

5. Tree Population

5.1. Tree schedule

5.1.1. As noted in sections 2.1.3. and 3.2, inspection of the trees followed a defined protocol as per BS 5837:2012 to ensure a systematic and consistent approach and assessment of the condition and value of the trees.

5.1.2. Refer to appendix A for detailed records of individual trees and drawing Tree Constraints Plan (drawing number TCP_113MYCENAERD_1 Rev A) for the locations of trees and groups. Trees that have been surveyed and included as groups have not been included in the following tree population analysis.

Species	Age Class	BS Category	Total Number
London Plane	Mature	B2	3
Beech	Early mature	B2	1
Corsican Pine	Early mature	B2	1
Deodar	Mature	B2	1
Wild Cherry	Semi mature	C2	1
Hawthorn	Early mature	C2	1
Ash	Early mature	C2	2
Total			**10**

5.1.3. Trees 1 to 3 (London Plane) are located within the public footway on the east side of Mycenae Road and are managed by London Borough of Greenwich Highway Services. The trees were originally managed by pollarding at approximately 6 metres height. But this management regime has been discontinued and the tree allowed to regrow full crowns which are now managed by crown reduction. These are large trees, visible to the public and of high landscape amenity value (refer to photograph 1 below).



Photograph 1 of trees 1 to 3 – London Plane at the front of the property.

5.1.3. Tree 4 is an early mature Beech within the front garden of the neighbouring property (refer to photograph 2 below). The crown of the tree is suppressed by the adjacent London Plane trees and the tree has a poor structural form with a bowed and distorted trunk that may have been topped at approximately 4 metres height in the past. The crown has been reduced in the past. This tree is publicly visible and contributes to the screening and canopy cover in the locality.

5.1.4. Trees 5 is a mature Corsican Pine within the rear garden of the neighbouring property (refer to photograph 3 below). The tree is mutually suppressed by the other large growing trees in the vicinity. It is only partially visible from a public place and makes a contribution to the general amenity of the area.



Photograph 2 of tree 4 – Beech within the front garden of the neighbouring property.



Photograph 3 showing trees 5 and 6 visible in St Andrews Mews.

5.1.5. Tree 6 is a mature Deodar standing within a shrub bed on the south side of St Andrew's Mews adjacent to the flank elevation of the property (refer to photograph 3 above). The tree is of poor structural form having been topped at approximately 9 metres height in the past. The crown is unbalanced and suppressed by the adjacent large trees to the north. The crown is unbalanced to the south with branches lying on the roof of 113 Myacenae Road and this may cause an Actionable Nuisance. The tree is visible in St Andrew's Mews and from Vanbrugh Park to the south and so can be considered to be of some landscape amenity value (refer to photograph 4 below).



Photograph 4 showing trees 6 to 9 visible from Vanbrugh Park.

5.1.6. Trees 7 (Wild Cherry), 8 (Hawthorn) 9 and 10 (Ash) are with the exception of tree 8 likely to be self-set in origin. Trees 7, 9 and 10 are growing in inappropriate locations against boundary wall and close to residential property. In general, these trees are of average condition but poor form due to inappropriate crown management in the past. While the trees provide some screening and canopy cover, they are of little landscape amenity value.



Photograph 5 of tree 7 in rear garden growing against the neighbouring property.



Photograph 6 showing tree 9 visible in rear garden.



Photograph 7 showing trees 9 and 10 visible from Vanbrugh Park.

6. Arboricultural Impact Assessment

6.1. Impact on Trees

6.1.1. Existing trees are an important factor on construction sites, whether on or near the working areas. BS5837:2012 – "Trees in relation to design, demolition and construction – Recommendations" is intended to assist decision-making with regard to existing and proposed trees in the context of design, demolition and construction. Root systems, stems and canopies, with allowance for future movement and growth, need to be taken into account.

6.1.2. BS5837:2012 - Trees in relation to design, demolition and construction – recommendations have been used to calculate the RPAs. It should be noted that this method is primarily used to calculate the volume of soil required to maintain healthy growth based on the trunk diameter of the tree. In practice, roots may extend beyond this area, and in some cases the spread may be less. The majority of a tree's root system is generally considered to be in the top 600mm of the soil, extending radially in any direction for distances frequently in excess of the tree's height.

6.1.3. The combined circular representations of the RPAs of trees 1 to 3 inclusive (London Plane) encompasses the entire front garden area of 113 Mycenae Road. The footprint of House 1 extends into the circular representation of the RPA of tree 1 by 0.7% and tree 2 by 5.5%. The root spread of these trees may have been restricted to the east by the foundations of the existing house, the encroachment is minor and is unlikely to significantly impact on the long-term health and condition of these trees.

6.1.4. Whilst it is difficult to determine the location of tree roots without preliminary investigations in the form of hand-dug test trenches within the front garden. Our experience of similar development works with similar London Plane trees within London Borough of Hackney has generally found a low number of roots of small size extending into the proposed area of excavation for the basement of House 1. If the excavation works are carefully undertaken in accordance with section 8.3 of method statement (Excavations with the RPA), they will have no significant impact on the long-term health or stability of the London Plane trees.

6.1.5. The proposed off-street parking bay and boundary walls for House 1 are within the RPAs of trees 1 to 3. The vehicle access and parking bay can be constructed using a cellular confinement system with a permeable finishing surface. The installation of the cellular confinement system will require a project specific method statement to minimise the risk of damaging the tree roots and soil structure during the installation process. If required, the boundary walls can be constructed using micro pile foundations and above ground lintels to minimise excavations within the RPAs.

6.1.6. The proposed development will have no impact on trees 4 and 5. These trees are within the gardens of the neighbouring property at 111 Mycenae Road and will be retained and protected in accordance with BS 5837:2012 specifications.

6.1.7. Trees 7 to 10 inclusive within the grounds of 113 Mycenae Road will be removed to facilitate the redevelopment of the property.

6.1.8. Tree 6 (Deodar) is located approximately 2.7 metres from the flank elevation of the existing building. The RPA of this tree extends 6 metres as a circle based on the centre of the tree. The tree is of poor structural form having been inappropriately pruned in the past and while the root spread to the south into the development area may have been restricted by the foundations of the existing house, the proposed excavations may cause significant root damage. The proposed redevelopment will require extensive works within the RPA, including the demolition of the existing building, excavation of the lower ground level and the construction of the new town houses. The new town houses are taller than the existing house and this will obscure the public amenity of the tree as it will no longer be visible from Vanbrugh Park. The proposed redevelopment will significantly impact the RPA and the aerial space for crown development of tree 6.

6.1.9. There are two options available to the developers. Firstly, the tree could be removed, and a replacement tree planted following the completion of the development. This will require the consent of the tree owners. If consent to remove the tree cannot be secured the tree will require a high level of tree protection (in accordance with BS 5837:2012) and significant arboricultural supervision during the demolition and construction phases.

6.1.10. All replacement trees will Heavy Standards at least 3.5 metres height with stem circumference at 1 metre height of 12 to 14 cm. Trees are to be container grown and should be selected in accordance with BS 8545 Trees: from nursery to independence in the landscape – Recommendations, this will ensure that they are of good form and condition and the handling of plants to be in accordance with current National Plant Specification Section 10.2 "Handling & Establishing landscape Plants".

6.2. Tree Protection Plan (TPP)

6.2.1. The TPP illustrates the location of the protective barriers and must be displayed on site in a highly visible area so that all staff involved in the works have a point of reference for tree protection issues.

6.3. Construction Exclusion Zone (CEZ)

6.3.1. For the purpose of this report the CEZ can be defined as all the area within the RPAs of retained trees outside the work areas and the areas behind the tree protection fencing.

6.3.2. Site operations are not permitted in the CEZs without reference to the Arboricultural Method Statement in this report (refer to section 8 of this report).

7. Development

7.1. Threats to trees during development

7.1.1. These may be listed, in general terms as:

- Compaction of ground
- Covering rooting areas with impervious surfaces
- Excavations for foundations
- Excavation for service runs

- Alterations in ground level
- Access and movement of machinery
- Need for temporary site storage
- Crown damage by passage of high-sided vehicles

7.1.2. British Standard 5837 (1991) 'Trees in relation to construction' provided useful guidance for the assessment and formulation of measures for the mitigation of such threats. Using the experience gained from this Standard, it was revised and upgraded to 'Recommendation' status as British Standard 5837 'Trees in Relation to Construction' (2005). This British Standard was withdrawn on 30th April 2012 and replaced with Trees in Relation to Design, Demolition and Construction - Recommendations BS 5837: 2012. To assist in the prediction of the likely impact of development on retained trees, a model is used. This model is based on the age, vitality and size of individual specimens.

7.1.3. The British Standard relies heavily on the creation of a protected zone (RPA) around each tree. This area should be protected from disturbance "in order to avoid unacceptable damage to the tree as a result of severance or asphyxiation of the root system." The recommended minimum area (m^2) for each tree to avoid potentially harmful disturbance have been calculated for all the trees on site and entered into the tree schedule (appendix A).

7.1.4. BS 5837: (2012) acknowledges that the shape of the tree root system may be affected by several factors and that the shape of the RPA should reflect this. Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:

a) The morphology and disposition of the roots, when influenced by past or present existing site conditions (e.g. the presence of roads, structures and underground apparatus).

b) Topography and drainage.

c) Likely tolerance of the tree to root disturbance or damage based on factors such as species, age, condition and past management.

7.2. Root Damage

7.2.1. Trees that are growing satisfactorily have achieved equilibrium with their surroundings. Any construction work that affects this equilibrium could be detrimental to health, future growth and the safety of the tree.

7.2.2. The part of the tree most susceptible to damage is the root system, which, because it is not immediately visible, is frequently ignored. Damage or death of the root system will affect the health, growth, life expectancy and safety of the rest of the tree. The effects of such damage may only become evident several years later.

7.2.3. The majority of a tree's root system is generally considered to be in the top 600mm of the soil, extending radially in any direction for distances frequently in excess of the tree's height. However, roots are adventitious and if conditions suitable for root development exist

to a greater depth, the roots may extend to depths of three metres or more. Works within the root spread may damage the root system.

7.2.4. Close to the trunk are the main structural roots that develop in response to the tree's need for structural stability. Beyond these major roots, the root system rapidly subdivides into smaller diameter roots; off this main system a mass of fine roots develops.

7.2.5. Tree root systems can be damaged in a number of ways during construction works.

- **Root severance**. Severing of a root will destroy all parts of the root beyond that point. Even roots less than 10mm diameter may be serving a mass of fine roots over a large area. The larger the root severed, the greater the impact on the tree.

- **Damage to root bark**. The bark protects the root and is essential for further root growth; it is loosely attached and easily damaged. If damage extends around the whole circumference, the root beyond that point will be killed.

- **Compaction of the soil**. Compaction of the ground reduces the space between soil particles, particularly in clay soils. A single passage of heavy equipment or the storage of materials can cause significant damage. Compaction can restrict or even prevent gaseous diffusion through the soil and thereby asphyxiate the roots. The roots must have oxygen for survival, growth and effective functioning.

- **Alterations in ground levels**. Lowering the level will strip out the mass of roots near to the surface. Raising the ground levels will have the same effect as compaction.

- **Covering the rooting area with impervious surfaces**. This prevents natural diffusion of gases between the soil and the atmosphere and can lead to oxygen depletion in the soil.

- **Direct toxicity of some materials**. For instance, petrol or diesel spillage or lime in cement can kill underlying roots.

- **Wounding**. Minor wounds to root bark can allow pathogens into the tree root system that can lead to a further impairment of water absorption. The general debilitation of trees due to root severance can make them more susceptible to invasion by some decay fungi such as Armillaria spp.

- **Damage to the fine roots** by severance of a main root, or by compaction, or by alteration of levels, will prevent the fine roots absorbing the water and nutrients essential for tree growth. The effects of damage from different causes will be cumulative.

7.2.6. The effects of tree root damage may not be immediately apparent. If the root system is capable of rapid regeneration, the tree may recover without noticeable ill effects, though usually symptoms take several years to develop. The range of symptoms varies from minor branch dieback, to deterioration and ultimate tree death depending on the severity of the damage and the ability of the roots to regenerate.

7.2.7. The default position should be that structures are located outside the RPAs of trees that are to be retained. The cumulative effects of incursions into the RPA e.g. from excavations for utility apparatus are damaging and should be avoided. Where there is evidence that a tree has been previously subjected to damage by construction activity this should be taken into account when considering the acceptability of further activity within the RPA.

8. Outline Arboricultural Method Statement

8.1. Tree protection with barriers and ground protection.

8.1.1. At the front of the property, any root protection area within the development site will be subject to ground protection restrictions as shown on drawing TPP_113MYCENAERD_3 Rev B. For vehicle traffic an effective means of protecting tree roots is to use a double layer of Ground-Guards panels (or similar product) with 150mm of wood chips sandwiched in-between to create a cushioned roadway for vehicle use.

8.1.2. All materials storage and mixing will be confined to areas outside the RPAs of all retained trees and confined to areas where ground protection has been installed. Where mixing of materials is undertaken close to the RPAs, this should be on an impervious surface with no run-off to prevent chemical contamination of the RPAs.

8.1.3. All tree protection measures **must** be in place before any works commence or materials or machinery is brought onto site. Ground protection **must** not be moved or altered without prior consultation with the arboriculturalist or Local Authority Tree Officer. Protection measures will remain in place throughout the following processes:

- Contractor occupancy
- Plant and materials delivery
- Demolition/construction works
- Installation of utilities
- Completion of development

8.1.4. Protective fencing must be clearly marked using a warning sign such as the example shown in Fig 3. If a protective fence requires temporary repositioning, ground protection must be used within the exposed RPAs unless there is existing hard surfacing.

8.2. Undertake Approved Tree Works.

8.2.1. All tree works should be undertaken prior to any site works commencing. Motorised vehicles will be restricted to areas of existing compacted/hard surfaces, or where ground protection is in place, and should not be taken onto un-surfaced areas within the root protection areas (as shown on drawing TPP_113MYCENAERD_3 Rev B). Refer to Table below for tree works.

Tree No.	Recommended Works
Tree 6 (subject to owner's consent)	Fell to ground level and remove stump to allow replacement planting.
Trees 7 to 10	Fell to ground level and remove stumps.

NB: All tree works must be carried out in accordance with the British Standard Recommendations for Tree work, BS 3998:2010 as modified by later research.

8.3. Basement Excavations in RPAs

8.3.1. Any work in RPAs **must** be carried out with care as set out in Appendix C section 1.6. On this site special precautions **must** be taken near retained trees 1 to 3 at the front of the property and tree 6 in St Andrew's Mews if retained, (refer to Appendix C section 1.12 and drawing as shown on drawing TPP_113MYCENAERD_3 Rev B locations of Special Precaution Areas).

8.3.2. All excavation works will be undertaken from within the existing building footprint. The excavation for the lower ground level should be carried out by hand within 1 metre of the RPAs of the retained trees until it can be confirmed that no roots are present within the proposed excavation footprint, to prevent diggers 'pulling' roots out of the ground beyond the maximum extent of the excavation. Soil removal must be undertaken with care to prevent disturbance of the roots beyond the immediate area of the excavation.

8.3.3. Clumps of roots less than 25mm diameter (including fibrous roots) will be retained in situ without damage. Where a mass of flexible roots is encountered, it may be possible either to displace the roots to another location temporarily or permanently to avoid areas of excavation. All exposed roots to be removed should be cut cleanly with a sharp saw or secateurs approximately 20cm back from the face of the final excavation.

8.3.4. If roots above 25mm in diameter within the RPAs are uncovered then the ground around the root will be carefully removed, avoid de-barking, breaking, splitting, splintering, or shattering the roots. Once uncovered the roots which will have to be removed to accommodate the basement construction should be cut back to a point 100mm beyond the nearest edge of the construction, they must be pruned back cleanly with sharp, clean pruning saws or bypass loppers making level, smooth right angle cuts with no ragged edges.

8.3.5. The outer face of all concrete walls and foundations will be sheathed to protect the soil and adjacent roots from the potential toxic effects of concrete.

8.3.6. Backfilling of trenches should be carried out using the excavated soil, which should be worked in around roots and lightly "tamped" not compacted and preserving the original soil profile.

8.4. Installation of new Surfaces

8.4.1. Changes of surfacing within RPAs is potentially very damaging as it usually involves changes in gradient/levels that may lead to root damage. As cement is toxic to roots, any excavations close to the RPAs must be lined with an impermeable membrane to prevent concrete leachates being exposed to roots. Whenever practicable, the old hard surface should be removed by working away from the tree so that any plant/equipment operates from the existing hard surface to prevent compaction damage.

8.4.2. Cellular confinement systems can be used in areas where tree root damage would be caused by digging into the ground to lay a conventional sub-base for new hard surfacing and where the long-term viability of trees could be harmed if soil that they may depend upon is at risk of becoming compacted. Compaction can occur for many reasons but

vehicles passing over unreinforced ground are particularly damaging, although repeated foot traffic can also be detrimental to soil structure.

8.4.3. A cellular confinement system is a series of geocells arranged in a honeycomb-like formation that is combined with an underlying geotextile and angular stone to spread loads in such a way as to minimise compaction of underlying soil. Due to its 3-dimensional structure, a geocell mat offers all-round confinement to the encapsulated material, which provides a long-term improvement in the performance of the sub-base. When a surface is reinforced in this way the load is distributed over a larger area of the subgrade-base interface, leading to lower vertical stress and reduced deformation of the subgrade. (Refer to Appendix C Fig 4. for an example of this phase of construction).

8.4.4. The finished surface can be either a granular material or permeable and gas-porous wearing surface (porous paving/tarmac or resin bound gravel) to allow moisture infiltration and gaseous diffusion. It is essential to maintain adequate supplies of water and oxygen for trees through the soil. Porosity is important particularly where the new hard surface covers an area of previously unmade ground, under which tree roots may have developed preferentially.

8.4.5. No-fines granular materials should be used wherever fill or a sub-base is required to help to ensure adequate gaseous diffusion. Excess water in the root protection area should be avoided, particularly on clay soils where water logging can occur.

8.4.6. Paving slabs and block pavers. Paving slabs and block pavers are available with built in infiltration spaces between the slabs or blocks. These are ideal, though they should be laid dry-jointed on a sharp sand foundation to allow air and moisture to penetrate to the rooting area.

8.5. Installation and/or upgrading of existing services

8.5.1. Where possible the proposed development will make use of the existing services. Any new service routes will be positioned outside the RPAs of retained trees where possible.

8.6. Lightly founded structures

8.6.1. Where new fencing, gates or boundary walls are planned within the RPAs of retained trees, the excavations for supporting posts/foundations should be excavated by hand to ensure no roots are present. If significant roots >than 25mm diameter are found the design should be suitably flexible to allow repositioning of any foundation structure. If required, the boundary walls can be constructed using micro pile foundations and above ground lintels to minimise excavations within the RPAs. Any design involving concrete must utilise an impermeable membrane in the excavation to prevent concrete leachates contacting roots.

8.7. Landscaping

8.7.1. Soft landscaping includes the re-profiling of existing soil levels and covering the soil surface with new plants or an organic covering (mulch). It does not include the construction/installation of solid structures or compacted surfacing. No significant excavation or cultivation, especially by rotovators, should be carried out within the RPAs. Where new designs require levels to be increased to tie in with new structures or the removal of an existing structure has left a void below the surrounding ground level, good quality and

relatively permeable topsoil should be used for the fill. It should be firmed into place but not over compacted in preparation for turfing or careful shrub planting

8.8. Other tree-related site works

8.8.1. **Pre-commencement site visit:** Subject to the removal of tree 6, this is a small-scale development not requiring significant tree protection measures and therefore it is not considered necessary to arrange site meetings for this aspect. Any modifications to the proposed development may require that the tree report is updated. However, if tree 6 is retained it will require a high level of tree protection (in accordance with BS 5837:2012) and significant arboricultural supervision during the demolition and construction phases.

8.8.2. **Site supervision:** Site visits by the project arboriculturist may be required by the local planning authority, particularly if works are proposed within the RPAs of retained trees. Once the site is active, the project arboriculturist will ensure compliance with arboricultural conditions and advise on tree problems or any modifications that may arise. The developer must ensure that all conditions of the arboricultural method statement and any amendments are known and fully understood by all site personnel. All personnel engaged in works near trees must have access to written copies of the method statement and understand the content before working near trees.

8.9. Sequence of events Table

Proposed Works
1. Undertake facilitation tree works- if required
2. Implementation of protective barriers and ground protection as per the TPP.
3. Construction operations, including further supervisory visits by the Arboriculturist or suitable delegate if required.
4. Completion of construction phases.
5. Removal of protective barriers.
6. Post-completion site meeting with all relevant stakeholders

9. General

9.1.1. Arboricultural Standards: Any tree works should be done in accordance with the British Standard Recommendations for Tree work, BS 3998 as modified by later research. Works should be undertaken by properly qualified and experienced tree contracting company as recommended by a local authority or one approved by the Arboricultural Association. A Register of Contractors is available from:

The Arboricultural Association
The Malthouse
Stroud Green
Standish
Stonehouse
Gloucestershire GL10 3DL
UKTel +44 (0) 1242 522152
Fax +44 (0) 1242 577766
Email: admin@trees.org.uk.

9.1.3. Statutory wildlife implications: Wildlife in this country is afforded protection under the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000. Statutory protection is given to birds, bats and other species that inhabit trees. Tree work is governed by these statutes and advice should be sought from an ecologist before undertaking any works that may constitute an offence.

- If the intention is to complete tree work between the 1st of March and the end of August, a due diligence check for nesting birds must be completed before work starts in order to comply with the Wildlife & Countryside Act 1981. Arborists should record such checks in their site-specific risk assessment. If active nests are found work should not take place until the young have fledged.

- A due diligence check for bats and likely habitats (see attached link) must be completed before work starts in order to comply with the Wildlife & Countryside Act 1981. Arborists should carry out and record such checks in line with BS8596:2015 Surveying for bats in trees and woodland in their site-specific risk assessment. If bats or potential roosting features are found work must not start until an appropriately licenced bat handler has been engaged.

Report by: Fiona Critchley B. Sc. (Sp. Hons), Ad Dip. F. Arbor. A, Tech Cert. (AA), R.F.S Cert Arb LANTRA accredited Professional Tree Inspector.

Checked by: Graham Causey B. Sc (Hons), F. Arbor.A. R.F.S Cert Arb. LANTRA accredited professional tree Inspector.

APPENDIX A TREE SCHEDULE 113 MYCENAE ROAD.

Tree No.	Species	Height (m)	Stem No.	DBH (mm)	Crown radius (m)				Lower crown height (m)	Life stage	Condition Comments	Est. Rem'ing contrib'n	BS Cat	RPA (m^2)	RPA as circle of radius (x)m
					N	E	S	W							
1	London Plane	12	1	690	8	6	4	4	4	M	LA street tree. Average condition. Normal vigour. Regrown pollard. Roots lifting surfacing. Tree located within hard surface area. Epicormics on stem. Previously crown reduced. Crown distorted due to group pressure. Appropriate to location. Contributes to general amenity of area.	40+	B2	215.4	8.28
2	London Plane	10	1	700	7	4.5	5	5.5	4	M	LA street tree. Average condition. Normal vigour. Regrown pollard. Bark wounds on surface roots. Roots lifting surfacing. Tree located within hard surface area. Previously crown reduced. Crown distorted due to group pressure. Decay in shed limb wound on east side of crown-occluding. Branches encroaching upon building. Appropriate to location. Contributes to general amenity of area.	40+	B2	221.7	8.4

Tree No.	Species	Height (m)	Stem No.	DBH (mm)	Crown radius (m)				Lower crown height (m)	Life stage	Condition Comments	Est. Rem'ing contrib'n	BS Cat	RPA (m^2)	RPA as circle of radius (x)m
					N	E	S	W							
3	London Plane	11	1	680	4	3	4	2	4	M	LA street tree. Average condition. Normal vigour. Regrown pollard. Roots lifting surfacing. Tree located within hard surface area. Previously crown reduced. Light deadwood in crown. Dieback in crown. Possible Massaria. Crown distorted due to group pressure. Appropriate to location. Contributes to general amenity of area.	20+	B2	209.2	8.16
4	Beech	16	1	350	6	5	2	5	3.5	EM	Diameter estimated. Canopy estimated. In neighbouring property. Average condition. Normal vigour. Poor shape & form. Tree located within hard surface area. Occluded wounds on trunk. Multiple stems above 1.5m. Previously crown reduced. Light deadwood in crown. Crown distorted due to group pressure. Appropriate to location. Contributes to general amenity of area.	40+	B2	55.4	4.2

Tree No.	Species	Height (m)	Stem No.	DBH (mm)	Crown radius (m)				Lower crown height (m)	Life stage	Condition Comments	Est. Rem'ing contrib'n	BS Cat	RPA (m^2)	RPA as circle of radius (x)m
					N	E	S	W							
5	Corsican Pine	15	1	300	3.5	3	2.5	2.5		EM	Diameter estimated. Canopy estimated. In neighbouring property. Average condition. Normal vigour. Light deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Appropriate to location. Not over site.	40+	B2	40.7	3.6
6	Deodar	13	1	490	5.5	5	5	4	3	M	Average condition. Normal vigour. Poor shape & form. Roots lifting surfacing. Multiple stems above 1.5m. Rubbing branches causing damage. Light deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Previously topped at 9m. Branches on roof of house. Low branches over road/footpath. Branches encroaching upon building. Contributes to general amenity of area.	20+	B2	108.6	5.88

Tree No.	Species	Height (m)	Stem No.	DBH (mm)	Crown radius (m)				Lower crown height (m)	Life stage	Condition Comments	Est. Rem'ing contrib'n	BS Cat	RPA (m^2)	RPA as circle of radius (x)m
					N	E	S	W							
7	Wild Cherry	8	1	260	4	4	3	3	1.6	SM	Self-set tree. Average condition. Normal vigour. Suppressed growth. Leaning north. Root spread restricted. Stem divides above 1.5m. Crown distorted due to group pressure. Branches encroaching upon building. Screen value. Inappropriate location.	20+	C2	30.6	3.12
8	Hawthorn	4	1	180	1	1.5	1.5	2	1.5	EM	Average condition. Normal vigour. Suppressed growth. Unable to inspect stem due to Ivy. Unable to inspect stem due to undergrowth. Stem divides above 1.5m. Previously crown reduced. Rubbing branches causing damage. Crown distorted due to group pressure. No particular landscape value. Contributes to low level screening.	20+	C2	14.7	2.16

Tree No.	Species	Height (m)	Stem No.	DBH (mm)	Crown radius (m)				Lower crown height (m)	Life stage	Condition Comments	Est. Rem'ing contrib'n	BS Cat	RPA (m^2)	RPA as circle of radius (x)m
					N	E	S	W							
9	Ash	7	1	290	5	2	4	1	2	EM	Self-set tree. Average condition. Normal vigour. Poor shape & form. Root spread restricted. Stem divides at ground level. Stem divides above 1.5m. Light deadwood in crown. Unbalanced crown shape. Sub dominant stem trained along wall to north. Stem on east side topped at 3m. Low branches over road/footpath. Screen value.	40+	C2	38	3.48
10	Ash	8	2	150	6	3.5	2	4.5	2.5	SM	Inappropriate location. Self-set tree. Average condition. Normal vigour. Poor shape & form. Suppressed growth. Root spread restricted. Exposed roots. Ivy on stem. Stem divides at ground level. Rubbing branches causing damage. Unbalanced crown shape. Crown distorted due to group pressure. Branches encroaching upon building. Screen value. No particular landscape value. Inappropriate location.	20+	C2	10.2	1.8

KEY

Y = Young
SM = Semi-mature
EM = Early-mature
M = Mature
OM = Over-mature
V = Veteran

H = Hedge G = Group B = Shrubs
K = Small tree
W = Woodland
RPA-R (m) = RPA of radius x metres

Appendix B TREE QUALITY ASSESSMENT CASCADE CHART

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

APPENDIX C TREE PROTECTION

1.1. Pre-commencement site meeting.

1.1.1. A pre-commencement site meeting is advised prior to any works commencing on site, to agree all the approved processes with the relevant concerned parties.

1.2. Protective fencing and ground protection.

1.2.1. All trees to be retained on site should be protected by barriers and ground protection where applicable. Barriers should be in place before any materials or machinery is brought onto site. Once in place, barriers and ground protection should be considered sacrosanct and should not be altered or removed without prior recommendation by an arboriculturist and approval of the local planning authority. Barriers should be fit for excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete.

1.2.2. The protective fencing is to be erected prior to any site works or demolition works.

1.2.3. The barrier is to comprise of a vertical and horizontal framework (Figure 1 below), well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Weldmesh panels, such as Heras, should be securely fixed with wire or scaffold clamps to this framework. Weldmesh panels on rubber or concrete feet are not resistant to impact and should not be used. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a freestanding scaffold support framework.

1.2.4. Where retained trees are near the existing buildings, a higher specification hoarding will be required to prevent damage from falling rubble. In place of the weldmesh, panels solid hoarding should be used, for example, scaffold boards.

1.2.5. Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturist and, where relevant, agreed with the local planning authority. For example, 2 m tall welded mesh panels on rubber or concrete feet might provide an adequate level of protection from cars, vans, pedestrians and manually operated plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 2 below). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray

1.2.6. It is advised that a plan be pinned up on site in highly visible areas such as in the site huts, so that all ground staff involved in the demolition and construction works have a point of reference for tree protection issues. All demolition and construction workers should be briefed on the importance of tree protection prior to works commencing. Special attention must be paid to ensure that protective fencing remains rigid and complete during all works.

1.2.7. Where it is agreed that vehicular or pedestrian access for construction purposes is necessary within the RPA, ground protection measure will be required to prevent damage to the soil structure within the RPA.

1.2.8. For pedestrian access within the RPA, the installation of ground protection in the form of a single thickness of scaffold boards over a compressible layer laid onto a geotextile, or supported by scaffold, is likely to be acceptable.

1.2.9. For wheeled or tracked vehicle, access within the RPA the ground protection should be designed by an engineer to accommodate the likely loading and may involve the use of proprietary systems or reinforced concrete slabs. The structure must use a no dig design (see methodology described in 1.7 below) to prevent root severance and must prevent localised soil compaction by distributing the load across the track width. Such a system may include the use of three-dimensional cellular confinement systems (CCS) as a component of the sub-base, to act as a load suspension layer.

1.2.10. New permanent hard surfacing should not cover more than 20% of the RPA or be wider than 3m within it; it should be constructed to be permeable to moisture and gas.

1.3. Construction exclusion zone

1.3.1. Once the construction exclusion zone (CEZ) has been protected by barriers and/or ground protection, demolition/construction can take place.

Inside the Construction Exclusion Zone (CEZ) of the protective fencing, the following prohibitions shall apply:

- No mechanical digging or scraping
- No hand digging
- No storage of plant, equipment or materials
- No vehicular or plant access
- No fire lighting
- No washing down of vehicles or machinery
- No handling, discharge or spillage of any chemical substance, including cement washings
- No action likely to cause localised waterlogging
- No change in ground levels
- No construction of a hard surface
- No earthworks

1.3.3. To inform site personnel of the purpose of the fencing, information notices shall be fixed to the fencing at 5m intervals. These notices shall be of all-weather construction and shall be in the form of the example provided at Figure 4 below, and replaced as and when necessary.

1.3.4. In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:

- Materials that will contaminate the soil, e.g. concrete mixing, diesel soil and vehicle washings, should not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes to avoid materials such as concrete washings running towards trees.

- Fires should not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.

- Notice boards, telephone cables or other services should not be attached to any part of the tree.

1.4. New Services

1.4.1. **Service connections:** The location of all new service routes should ideally be outside of the root protection zones of the trees to be retained to avoid damage to tree roots. All proposed service installations should be carried out in accordance with the guidelines set out in NJUG Publication No.10, and Section 11.3.5 and 11.7 of BS5837:2005. Great care should be taken to preserve and work around roots greater than 25mm in diameter, and clusters of smaller roots avoiding damage to bark. Where it is necessary to sever roots greater than 25mm in diameter, arboricultural advice must be sought. Where smaller roots must be severed, they should be cut back cleanly using secateurs or a sharp pruning saw. Where possible, services laid through protected areas need to be installed at a depth preferably not less than 750mm deep in order to preserve the maximum number of roots, and avoid conflicts between the tree roots and the utility service run. The trench should be kept as narrow as possible to reduce the potential amount of root severance. Backfilling of trenches should be carried out using the excavated soil, which should be worked in around roots and lightly "tamped" not compacted and preserving the original soil profile. The backfill should be left proud of surrounding levels to allow for settlement. Trenches must not be left open overnight, and arboricultural supervision should be provided during excavation of trenches through protected zones. If the trench is to remain open for any period during the day to prevent the roots from drying out, it is advised that moist Hessian sacking be wrapped around the exposed roots, and/or trench to prevent desiccation from occurring. All existing site services that are already within the root protection areas that are to be made redundant will still need to comply with the above to prevent any damage to roots within these areas.

1.5. Removing Surfacing in RPAs

1.5.1. Roots are frequently found beneath or adjacent to existing surfacing or built structures and care is needed. Damage to the roots may be by direct physical damage or compaction of the soil from the weight of plant and machinery or repeated pedestrian movement. This is generally not a problem whilst surfacing is in place as the load is spread and additional protection is not required. However, once the existing surface is removed and the soil below

exposed significant damage can occur to the soil structure and directly to the roots in a very short time. The following rules must be followed:

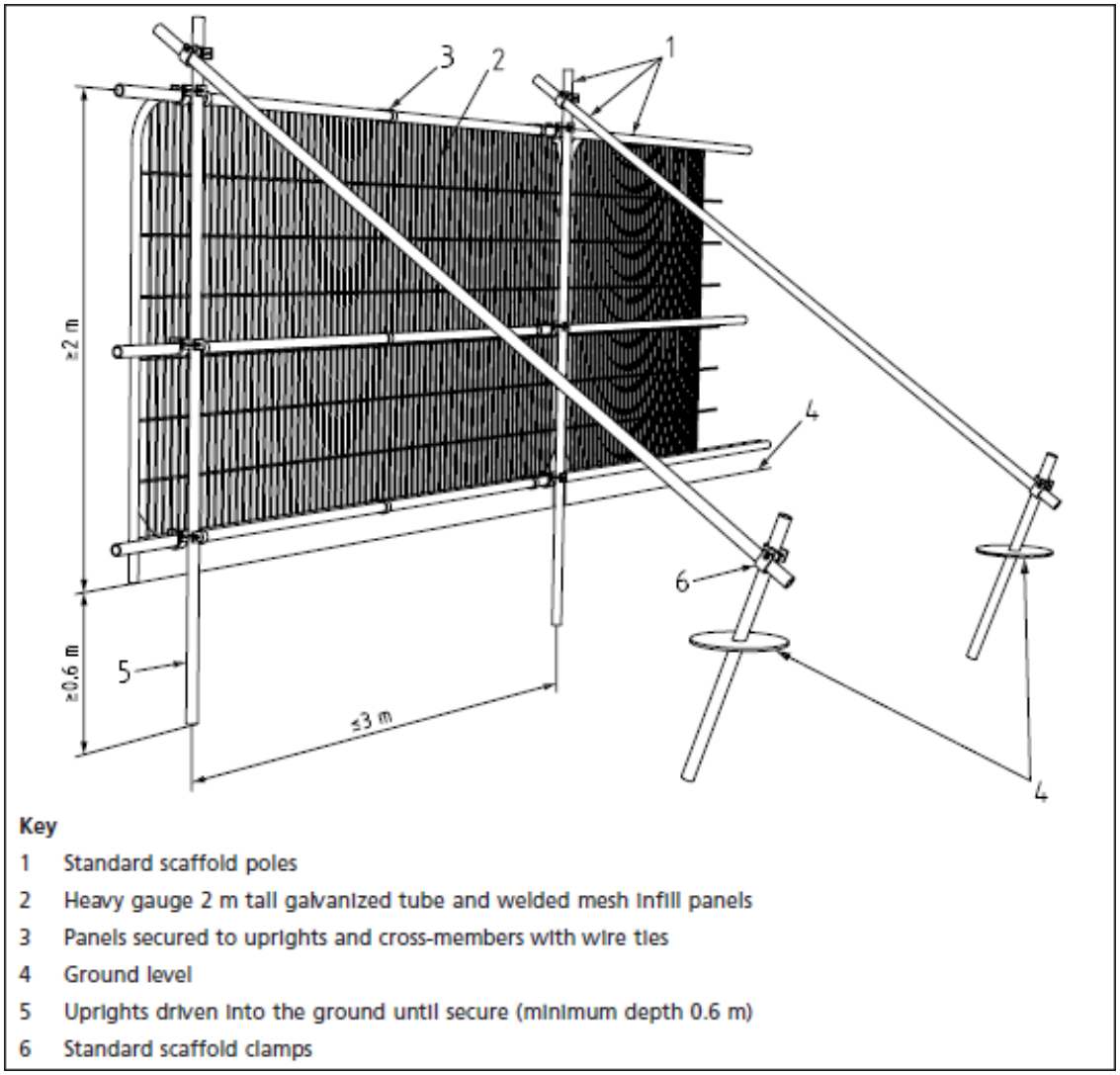
1. No vehicular activity or repeated pedestrian access into the RPAs unless on existing hard surfacing or custom designed ground protection, this must be designed for anticipated loads.
2. Regular vehicle and pedestrian access routes must be protected from compaction by temporary ground protection.
3. RPAs exposed by the works must be protected as set out in BS 5837:2012 until there is no risk of damage from construction activity

Appropriate tools for manually removing debris may include a pneumatic breaker/drill, crow bar, sledgehammer, pick, mattock, shovel, spade, trowel, fork and wheelbarrow. Secateurs and a bow saw must be available to deal with any exposed roots that have to be cut. Machines with a long reach may be used if they can work from outside RPAs or from areas protected by ground protection designed for the loading within the RPA. Debris to be removed from RPAs manually must be moved across existing hard surfacing or temporary ground protection to prevent compaction damage. If possible, leaving below ground structures in place should be considered if their removal may cause excess root disturbance.

1.6. Soft Landscaping

1.6.1. Soft landscaping includes the re-profiling of existing soil levels and covering the soil surface with new plants or an organic covering (mulch). It does not include the construction/installation of solid structures or compacted surfacing. No significant excavation or cultivation, especially by rotovators, should be carried out within the RPAs. Where new designs require levels to be increased to tie in with new structures or the removal of an existing structure has left a void below the surrounding ground level, good quality and relatively permeable top soil should be used for the fill. It should be firmed into place but not over compacted in preparation for turfing or careful shrub planting

Figure 1: Tree Protective fencing



Key

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

Figure 2: Tree Protective fencing (alternative)

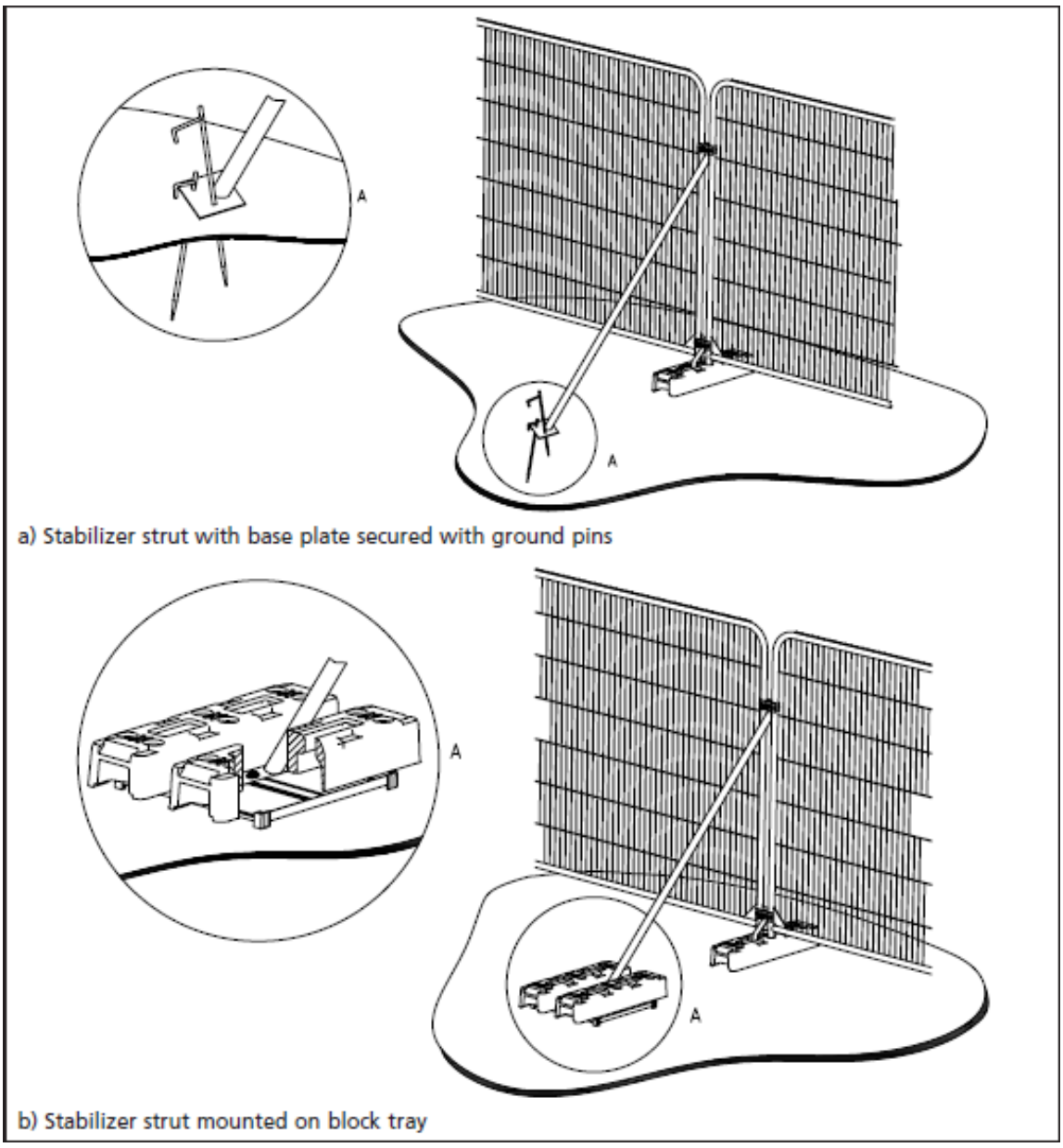


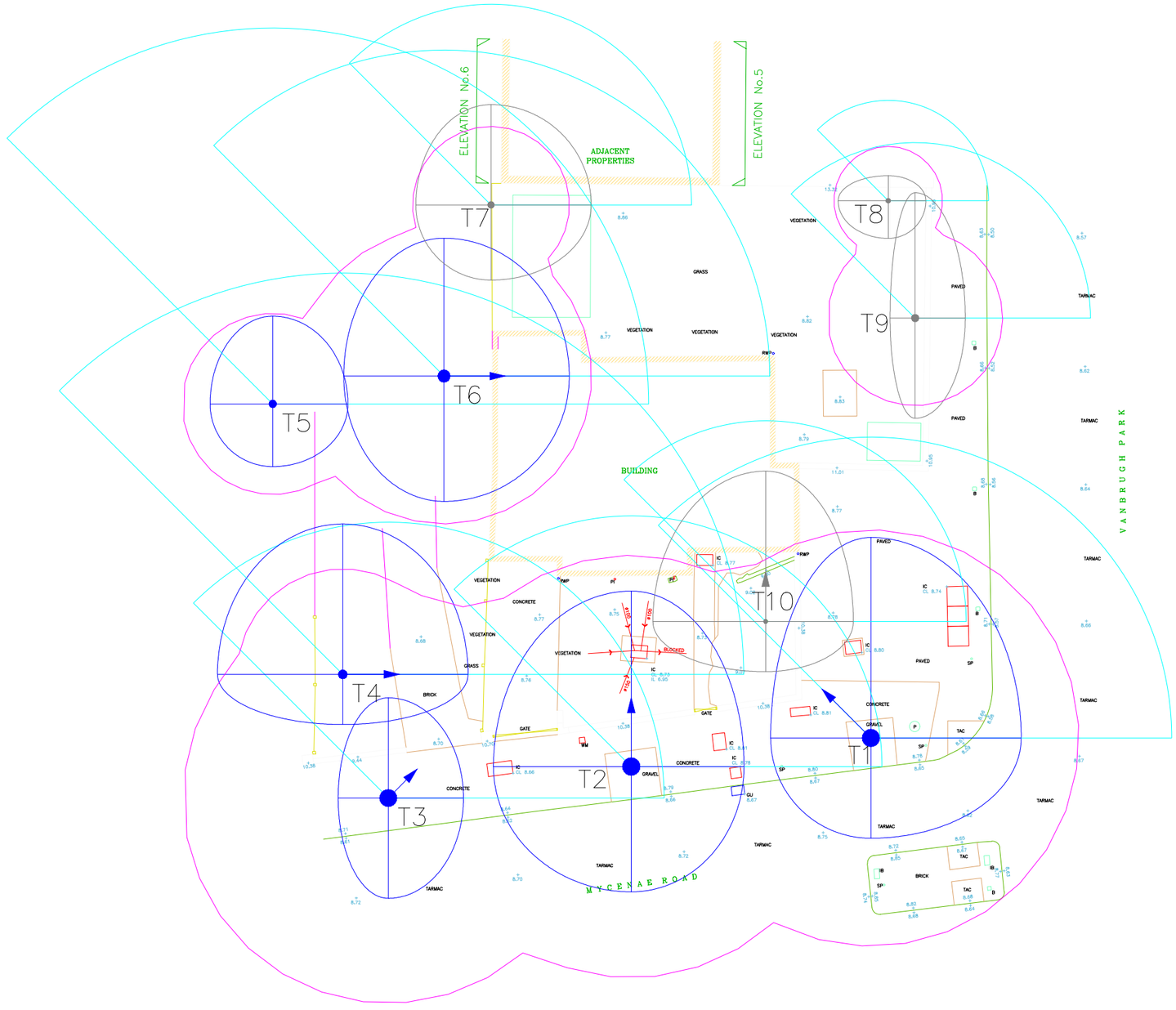
Figure 3: Example of warning notice



Figure 4 Cellular Confinement System



EXAMPLE OF INSTALLATION OF CELLULAR CONFINEMENT SYSTEM



ARBORICULTURAL SOLUTIONS LLP

3 WALNUT CLOSE
PETERBOROUGH, PE7 1LL

TEL: 01733 208661
EMAIL: grahamcausey@gmail.com
fionacritchley2016@gmail.com

KEY

BS CAT B

BS CAT C

ROOT PROTECTION AREA

SHADE SEGMENT

DRAWING TITLE

TREE CONSTRAINTS PLAN
EXISTING SITE

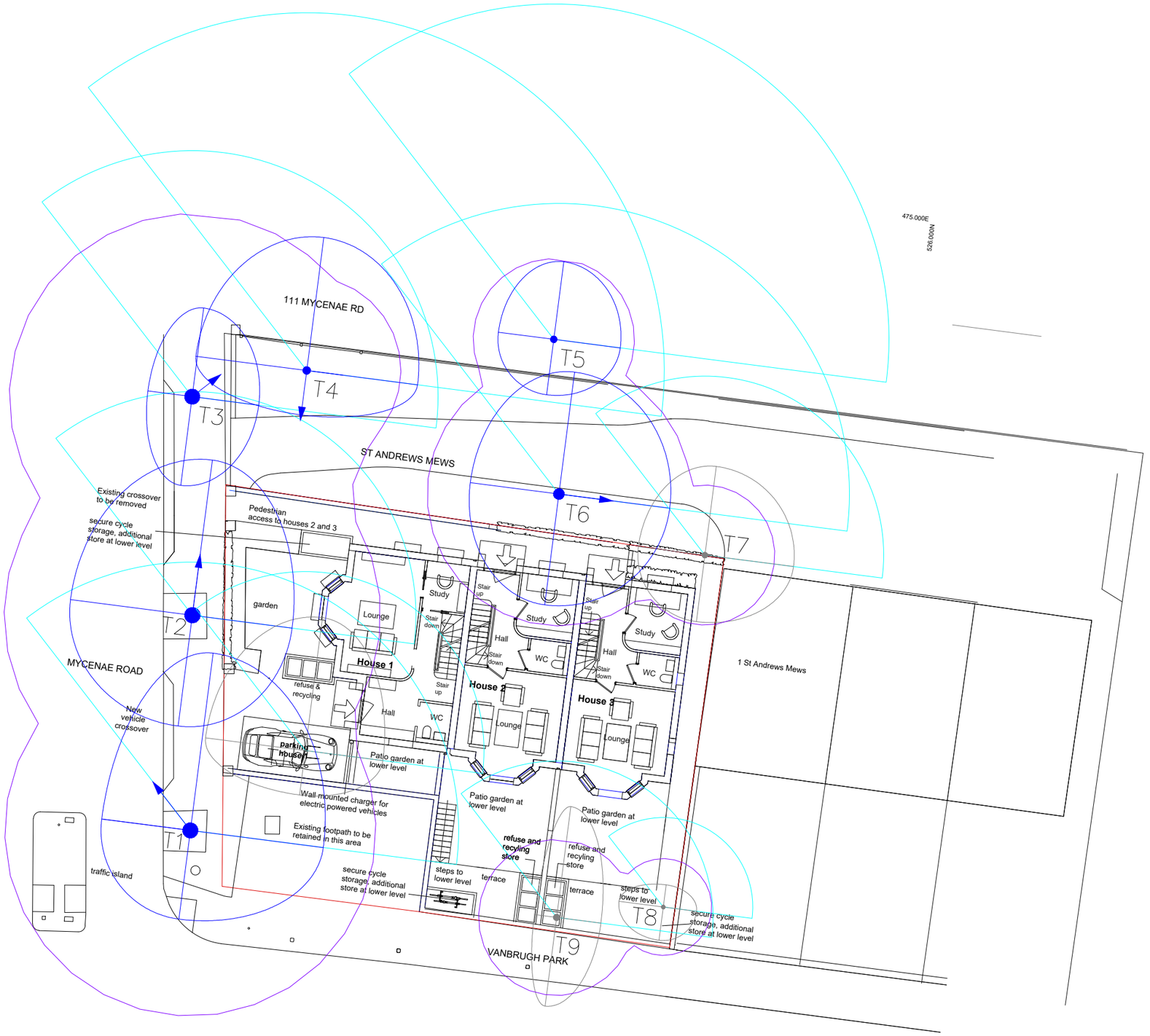
PROJECT

113 MYCENAE ROAD

CLIENT

SCALE	1:200@A3		
DATE OF ISSUE	NOVEMBER 2020		
SURVEYOR	FC	DATE	
DRAWN BY	GMC		
DRAWING No.	TCP_113MYCENAERD_1	REV	A

No.	DATE	REVISION



GROUND FLOOR

ARBORICULTURAL SOLUTIONS LLP

3 WALNUT CLOSE
PETERBOROUGH, PE7 1LL

TEL: 01733 208661
EMAIL: grahamcausey@gmail.com
fionacritchley2016@gmail.com

KEY

BS CAT B

BS CAT C

ROOT PROTECTION AREA

SHADE SEGMENT

DRAWING TITLE

TREE CONSTRAINTS PLAN PROPOSED GROUND FLOOR

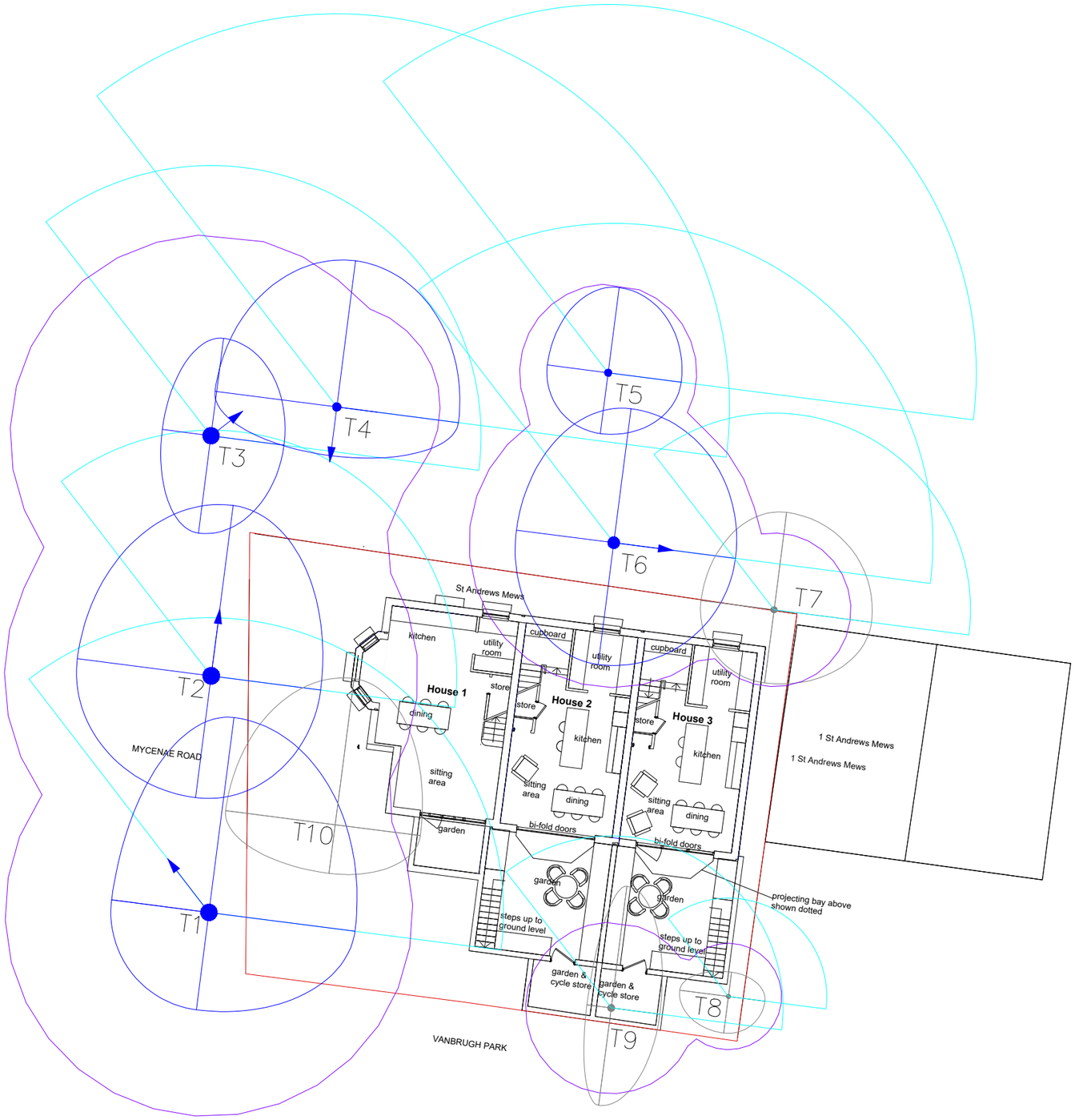
PROJECT

113 MYCENAE ROAD

CLIENT

SCALE	1:200@A3
DATE OF ISSUE	JULY 2021
SURVEYOR	FC DATE
DRAWN BY	GMC
DRAWING No.	TCP_113MYCENAERD_2A REV. B

No.	DATE	REVISION
B	8/21	REVISED LAYOUT



BASEMENT

ARBORICULTURAL SOLUTIONS LLP

3 WALNUT CLOSE
PETERBOROUGH, PE7 1LL

TEL: 01733 208661
EMAIL: grahamcausey@gmail.com
fionacritchley2016@gmail.com

KEY

BS CAT B

BS CAT C

ROOT PROTECTION AREA

SHADE SEGMENT

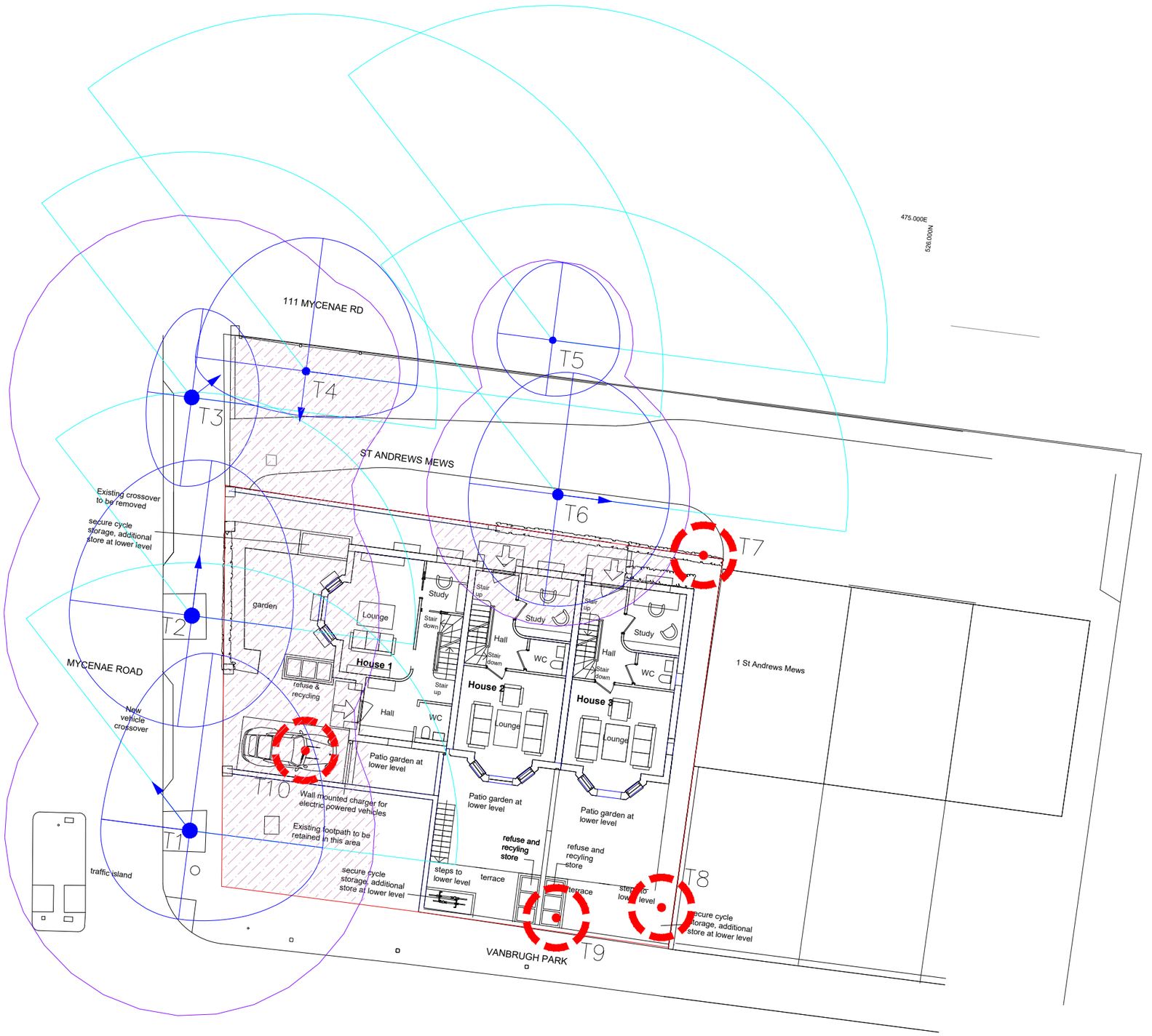
DRAWING TITLE
TREE CONSTRAINTS PLAN
PROPOSED BASEMENT

PROJECT
113 MYCENAE ROAD

CLIENT

SCALE	1:200@A3
DATE OF ISSUE	JULY 2021
SURVEYOR	FC DATE
DRAWN BY	GMC
DRAWING No.	TCP_113MYCENAERD_2B REV. B

No.	DATE	REVISION
B	8/21	REVISED LAYOUT



GROUND FLOOR

ARBORICULTURAL SOLUTIONS LLP

3 WALNUT CLOSE
PETERBOROUGH, PE7 1LL

TEL: 01733 208661
EMAIL: grahamcausey@gmail.com
fionacritchley2016@gmail.com

KEY

BS CAT B

BS CAT C

ROOT PROTECTION AREA

SHADE SEGMENT

TRUNK DIAMETER & 1st SIGNIFICANT BRANCH DIRECTION

TREE REMOVED

GROUND PROTECTION & SPECIAL PRECAUTIONS

DRAWING TITLE

TREE PROTECTION PLAN
PROPOSED GROUND FLOOR

PROJECT

113 MYCENAE ROAD

CLIENT

SCALE	1:200@A3
DATE OF ISSUE	JULY 2021
SURVEYOR	FC / DATE
DRAWN BY	GMC
DRAWING No.	TPP_113MYCENAERD_3 / REV B

No.	DATE	REVISION
B	8/21	REVISED LAYOUT