Arboricultural Survey, Impact Assessment and Method Statement

as per BS5837:2012 Trees in relation to design demolition and construction- Recommendations

at

32 Crediton Hill,
London,
NW6 1HP

File Ref: ASIAMS149.2

Ross Fountain Dip. Arb. L4 (ABC)
03.08.22

Contents

1. Summary

1.1 Instruction and overview of the report

1.1.1 Reeves Arboricultural Services were instructed to carry out an Arboricultural Survey and prepare an Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) by Lauren Matus at 32 Crediton Hill, London, NW6 1HP. Existing significant trees were recorded.

1.2 Arboricultural Survey (AS)

1.2.1 A tree survey as per the requirements for BS5837:2012 was carried out. Existing significant trees within the land of 32 Crediton Hill and neighbouring land that was deemed necessary for consideration were recorded within the Arboricultural Survey (AS). The results of the survey are presented within this report.

1.3 Arboricultural Impact Assessment (AIA)

1.3.1 The Arboricultural Impact Assessment (AIA) examines the relationship between trees and adjacent features (present & proposed). It examines how the trees and features will interact, influence and impact each other.

1.3.2 The purpose of the AIA study is to determine whether the proposed development will adversely affect the established trees and whether these trees will be the cause of nuisance to the proposed development.

1.4 Arboricultural Method Statement (AMS)

1.4.1. A method statement has been created to incorporate the proposed development and prevent or minimise impact from the proposed development and the construction process upon the retained trees.

2. Introduction

2.1 Development proposals

2.1.1 It is understood the proposed development encompasses a basement extension, a rear extension of the ground floor and a paved area adjoining this extension.

2.2 Site, location and details

2.2.1 The site includes a semi-detached residential dwelling, a front garden and rear garden.

2.2.2 The trees described in this report are located within and close to the site boundaries.

2.2.3 The site is in the urban area of West Hampstead within the London Borough of Camden, at grid reference TQ 25695 85109.

2.2.4 The area immediately surrounding the site is suburban residential and urban, with predominantly semi-detached dwellings on Crediton Hill. Immediately to the west of the property is an area containing sports courts and playing fields.

2.2.5 This site is within the West End Green Conservation Area, in the London Borough of Camden.

2.2.6 From the information provided on the Camden website there are no trees on site or in immediately neighbouring gardens which are protected by a Tree Preservation Order (TPO).

2.2.7 This site is not a site of specific scientific interest.

2.2.8 The Geology of Britain viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html has been used to check the prevailing soil type in the area. This indicated that the underlying bedrock comprises of London Clay Formation - Clay, Silt and Sand. No superficial deposits are listed at this location.

2.3 Planning status

2.3.1 It is understood this report is in support of a planning application to redevelop the existing site, as set out in ***2.1.1*** of this report**.**

2.4 Scope of this study and limitations

2.4.1 The purpose of this report is to assess the trees in and around the site and to consider the proposals in relation to those trees. This report aims to enable appropriate planning to ensure a well-considered approach to the design and implementation processes is achieved regarding the trees.

2.4.2 This report is not concerned with the health and safety risks these trees could pose, other than determining their individual categorisation and establishing acceptable levels of risk for the proposed land use, nor is it to decide whether planning permission should or should not be granted.

2.4.3 The surveying was carried out from ground level. No aerial inspections, decay detection or further arboricultural testing has taken place.

2.4.4 No ecological survey has taken place in direct connection with this report.

2.4.5 No soil survey has taken place in direct connection to this report.

2.4.6 The surveyed trees have been plotted and then overlayed onto the provided survey plan, (drawing 12477-02P-A1). However, only some of the trees were plotted on the provided plan. The remainder of the trees (listed as T004-T009) have been plotted as accurately as possible. The GPS plotting used is guaranteed to an accuracy of up to 3m and measurements of nearby features have been taken to provide more data to minimise any inaccuracy in the plotting of T008.

2.4.7 Access was not possible to measure and categorise T004. Access was restricted in order to fully assess T007 and T008. The stems of both trees were clad in ivy. DBH measurements were taken as accurately as possible with the ivy in place. The main stems and basal regions were not able to be fully assessed due to the ivy and therefore the trees have not been categorised.

3. Arboricultural Survey

3.1 Methodology

3.1.1 The trees were inspected from ground level by consultant arboriculturalist Ross Fountain on the 5th of August 2021.

3.1.2 Categorisation was made, and measurements were taken in accordance with the recommendations set out in *BS5837:2012*. Canopy spreads were measured and plotted to the four compass points. Where direct access was not possible, measurements have been estimated.

3.1.3 The surveyed trees are colour coded on the accompanying tree survey drawing according to their relevant BS category, where categorisation was possible.

3.1.4 The tree data collected was used to show the current canopy spread and to calculate the standard Root Protection Area (RPA). These are plotted on the accompanying plans (140- M01, M02 and M03).

3.1.5 The standard RPA used is defined by the formula in paragraph 4.6 from the BS 5837:2012 and may be refined by considering current on-site constraints to root activity such as buildings, underground structures, earthworks and hard paving.

3.2 Survey results - summary

3.2.1 The detailed results of the tree survey are provided in the Tree Survey Data (Appendix).

3.2.2 There were nine significant trees and no groups surveyed which were in or adjacent to the site.

3.2.3 Three of the nine trees were located in neighbouring land. As it was not possible to fully assess these trees on the day of the survey, these trees have not been categorised. The diameter and overall position of T004 is estimated, therefore the RPA is illustrative only.

3.2.4 There were no trees located within the site boundary highlighted for removal due to poor quality or unsuitable position.

3.3 The Survey Key

3.3.1 Ref – The identification number given to the tree

3.3.2 Species – Common/English and botanical name of the tree.

3.3.3. Full structure – type of structure and number of stems of a multi stemmed tree

3.3.4 Measurements:

- Height – Height of each tree in metres
- Stem diameter – Diameter of the stem at 1.5 metres above ground level
- Life stage – maturity
- Remaining Contribution – considered life expectancy in years
- Spread – Crown spread in four compass points
- Crown clearance – height in metres above ground level of the lowest part of the canopy
- Lowest branch – height and direction of the lowest branch.

3.3.5 General observations – observations recorded during the survey

3.3.6 RPA – Radius in metres and full **R**oot **P**rotection **A**rea in square metres

3.3.7 Physiological condition – the condition in relation to the functions of the tree as an organism

3.3.8 Structural condition – the condition in relation to the structure of the tree and structural integrity

3.3.9 Category – categorisation of the tree as per BS5837:2012, with colours presented on the tree constraints plan in the appendix (ASIAM148-M01):

- A - Tree of high quality with an estimated life expectancy of at least 40 years
- B – Tree of moderate quality with an estimated life expectancy of at least 20 years
- C – Tree of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter of below 150mm.
- U – Tree of low quality that is in such a condition that it cannot be retained as a living tree for longer than 10 years and therefore may be unsuitable for retention.

In addition to the categorisation letter, a number is attributed to category A, B and C trees. These numbers relate to the following qualities and values:

- 1- Mainly arboricultural qualities
- 2- Mainly landscape qualities
- 3- Mainly cultural values, including conservation

4. Arboricultural impact assessment (AIA)

4.1 Objectives

4.1.1 To assess the proposals in relation to the trees in and around site. This is particularly to assess if trees or woody plants would need to be removed to facilitate the proposals, or assess any impacts where works are proposed to be carried out near retained trees.

4.1.2 To determine whether the proposed works can be carried out successfully without adversely affecting the trees, both in the short and long term.

4.1.3 To determine whether the trees will have adverse impacts on the proposed development, both in the short and long term.

4.1.4 To assess if any alterations to the design or mitigation is necessary due to conflicts between retained trees and the proposed development.

4.2 Items for consideration

4.2.1 Direct impacts from tree losses, in terms of direct visual impact, environmental impact and impact on the landscape character of the area.

4.2.2 Root disturbance caused by demolition, excavation & construction.

4.2.3 Installation of services in close proximity to the retained trees and associated damage.

4.2.4 Grade/ground level and surface alterations that may have implications for tree root systems.

4.2.5 New planting- design of the scheme and associated landscape operations.

4.2.6 Sunlight shading of buildings or exterior amenity areas (such as gardens, patios etc.), which may lead to pressure to prune or fell.

4.2.7 Physical encroachment by roots, tree stems and branches.

4.2.8 Allowance for future tree growth.

4.2.9 Likelihood of indirect damage to the proposed development caused by retained trees.

4.2.10 Health, safety and nuisance items e.g. leaves, fruit and residues, which may lead to pressure to prune or fell.

4.2.11 Location of welfare/office buildings & material storage.

4.2.12 Likelihood of damage to retained trees caused by the likely development activities and prevention through tree protection measures.

4.2.13 Whether access pruning is required prior to enable access and prevent damage to retained trees.

4.2.14 Other tree works required to reduce risk to suitable levels given the proposed land use.

4.3 Results of Analysis - Summary

4.3.1 There is 1 individual tree that will require removal to enable the proposed development. This loss is of very low impact and will be mitigated by the proposed new planting.

4.3.2 There is no impact upon the landscape through tree losses due to the visibility, condition and longevity of trees proposed for removal and the proposed new planting.

4.3.3 The neighbouring trees have not been fully inspected. As T008 is close to the development the landowners should have the tree inspected by a suitably qualified and experienced arboricultural consultant, if this has not been carried out within the last 2 years. The inspection can be carried out by the project AC or independently and the results of the survey provided to the project AC.

4.3.4 A scheme to provide the methodology of development and guidance to minimise or prevent potential impacts on the retained trees' RPAs, or above ground structures, is set out in the Arboricultural method statement (AMS).

4.4 Results of Analysis - general

4.4.1 T009 (Plum) is proposed for removal and replacement to enable the proposed development. This young tree was classified as of low quality in category C. It is currently not visible from public areas. The proposed replacement tree is another plum tree- *Prunus Domestica*, which will have the same ultimate height and canopy volume as T009. Replacing T009 with a carefully selected and planted tree is considered to provide a tree with greater amenity value and longevity.

4.4.2 The risk of root disturbance caused by demolition, excavation and construction is considered to be very low if the Arboricultural Method Statement (AMS) is followed. The AMS defines how the risk of damage will be minimised through the erection and maintenance of tree protection fencing and the prohibitions within RPAs.

4.4.3 Given the location and the scope of the development, it is considered that the current services will be used. However, should any additional services be required during the project then the minimum standards required will be those as set out in the National Joint Utilities Group (NJUG) 2007 Volume 4, Issue 1: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. If the guidance, prohibitions and precautions for the installation of new services that is provided in the AMS is followed, the impact of service installation is expected to be low.

4.4.4 There are no landscaping or surfacing changes within the RPAs of retained trees.

4.4.5 The proposed new planting comprises of a Plum tree- Prunus Domestica. This tree should be around the size of a heavy standard nursery stock, with a girth of 12-14cm at 1m above ground level. Nursery stock levels are low and a select standard (10-12cm girth) or extra heavy standard (14-16cm girth) would also be suitable. The newly planted tree will be similar in height to the current size of T009 (plum) which it will replace, approximately 4m tall. The tree is a suitable replacement in terms of species choice and being a similar ultimate size to the tree it is replacing. It is also likely to quickly provide a tree with greater amenity value and longevity in comparison to T009. The location of the proposed new tree is shown in the Tree Protection Plan, ref: ***140- M03.***

4.4.6 Shading by the existing trees to the proposed development is considered to create insignificant impact given the nature of the proposals and the proposed land use. See shade plan, ref: ***140- M02.***

4.4.7 The impact of physical encroachment by parts of the retained trees upon the proposed development is considered to be low. The proposals are a significant distance away from above and below ground parts of the retained trees. Also, the proposed tree is 1.75m away from the paving, which is to be set in a rigid subbase and leaves more than the required 1m minimum distance as set out in BS5837:2012- *Table A.1 Minimum distance between young trees or new planting to avoid direct damage to a structure from future tree growth*.

4.4.8 The design provides adequate provision for future tree growth, also see ***4.4.7***. The AMS should be followed to ensure appropriate space is allowed between the proposed tree and the paved area, see ***5.3.5.2.***

4.4.9 Given the recorded soil type being London clay, the trees and the proposals, the risk of indirect impact is possible but considered to be low. It is expected that the project engineer will provide suitable foundation and engineering specifications for the basement, extension and paved area given the possibility of soil shrinkage or swelling.

4.4.10 Health, safety and nuisance items e.g. leaves, fruit and residues, which may lead to pressure to prune or fell is considered to be very low. There is a potential for leaf drop to cause a minor nuisance by causing a slippery surface on top of the paved area. However, this could be overcome with a regular and seasonal specific clear up regime for fallen leaves.

4.4.11 There is some space for skips, storage of materials and welfare facilities on the driveway or on the highway on Crediton Hill.

4.4.12 The likelihood of damage cause by the development to the retained trees is considered to be low and protection measures are provided in the AMS.

4.4.13 No pruning is anticipated to enable access and prevent damage to retained trees. However, if pruning is deemed necessary to the Cherry tree, within the footpath outside 32 Crediton Hill, the AC should be contacted so this can be planned, and details of pruning provided to the local planning authority.

4.4.14 No other tree works are required to reduce risk to suitable levels given the proposed land use, however it should be noted that the neighbouring trees have not been fully inspected in connection with this development. T008 is close to the development and the landowners should have the tree inspected by a suitably qualified and experienced arboricultural consultant if this has not been carried out within the last 2 years. This inspection should be carried out as soon as possible and prior to the completion of the development at the latest. This inspection can be carried out in conjunction with a site visit of the project arboricultural consultant (AC) or independently, with the results of the survey supplied to the project AC to check if any tree work is necessary given the change in land use.

4.5 Conclusions of AIA

4.5.1 There is no impact upon the landscape through tree losses, given the visual impact of the tree proposed for removal and the proposed replacement tree.

4.5.2 If the methodology and prohibitions in the AMS are followed, the likelihood of damage to the retained trees is considered very low. Therefore, it is considered the proposed development can be carried out successfully without adversely affecting the trees, in the short and long term.

4.5.3 It is considered the retained trees will not have adverse effects on the proposed development, both in the short and long term. However, it has been recommended that T008 is fully inspected to ensure its safety given the change in land use.

4.5.4 No alterations to the design have been recommended due to the Arboricultural Impact Assessment as it has been considered a low impact scheme.

4.5.5 Methodology and tree protection measures, including prohibitions and precautions with the RPAs of retained trees, have been provided in the AMS.

5. Arboricultural Method Statement (AMS)

5.1 Overview

5.1.1 The key protection issues associated with this project, in relation to the existing trees, in the short, medium, and long term are the requirement for:

- The protection of tree habitat
- The protection of the retained trees from damage to the above and below ground structures
- The protection of the soil structure and prevention of damage to tree root systems by chemicals and other noxious substances/materials
- The protection of the proposed built structures from impacts caused by the retained trees

5.2 Introduction

5.2.1 The AMS sets out the management and protection details in support of the planning proposal and must be implemented to ensure successful tree retention.

5.2.2 The AMS provides guidance on the typical range of processes that are involved during development and attempts to ensure that suitable methods of implementation are carried out.

5.2.3 The AMS also aims to provide an overview of the development process and attempts to address any potential issues and conflicts that may arise and provide acceptable solutions, resolving them in line with current industry best practices.

5.2.4 An arboricultural sequencing of events schedule is provided in the appendix of this report and is to be used in conjunction with the AMS to ensure continued tree protection, to avoid potential breaches of planning and delays to the development. The arboricultural sequencing of events and site monitoring should be integrated into the planning of the development.

5.3 Development methodology and mitigation

5.3.1 There is 1 individual tree - T009 (Plum) to be removed to enable the proposals. The loss of this tree will be mitigated and exceeded in value by the proposed new planting.

5.3.2 The risk of damage caused by development activities will be controlled by the erection and maintenance of tree protection fencing. This is specified in ***5.6 Tree Protection fencing and barriers*** and will control the most likely risk posed by compaction and damage through storage of heavy or hazardous materials, plant or equipment.

5.3.3 No service drawings have been provided and no new service installation within RPAs of retained trees are anticipated. If new service installations are required these should be carried out wherever possible outside of RPAs. If this is unavoidable and installations are required within RPAs, the method and final positions of any proposed services should be verified and approved by the AC before implementation. In planning such installations, the preference order for techniques used are: a) trenchless, b) Broken trench (hand-dug) and c) Continuous trench (hand-dug) as per the NJUG guidelines- *Volume 4, NJUG Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*. If trenchless methods are to be used, the starting and finishing pits at both ends of the service run needs to be outside RPAs. Where a hand dug option is agreed, any roots discovered during the excavations will be dealt with as described in *5.4 Prohibitions and precautions within RPAs*. Backfilling within RPAs should be carefully carried out to avoid direct damage to roots and excessive compaction of the soil around them.

5.3.4 No landscaping or surface changes are required within RPAs therefore no methodology or mitigation is provided.

5.3.5.1 The size of new tree should be approximately the size of a heavy standard nursery stock, with a girth of 12-14cm at 1m above ground level. This, or a similarly sized tree, will provide a good balance between a tree with some instant presence and a tree that is more likely to establish more quickly than a larger specimen. The tree shall be planted in the first dormant season following the completion of the development and shall be replaced if for any reason the planted tree does not establish and subsequently dies.

5.3.5.2 The proposed Plum tree shall be planted a minimum of 1m away from the paved area to avoid or minimise the chance of direct damage. A full table providing minimum distances between new trees

and structures is provided in BS5837:2012- *Table A.1 Minimum distance between young trees or new planting to avoid direct damage to a structure from future tree growth*.

5.3.5.3 To maximise the chances of successful establishment, it is recommended that in addition to the tree being planted well and in accordance with the guidance in BS 8545:2014 *Trees: from nursery to independence in the landscape- Recommendations*, that adequate provision is made for watering and young tree maintenance following the tree being planted. Adding mulch when the tree is planted will provide favourable rooting conditions by increasing water availability in particular. This will also help minimise the risk of root surfacing. Well composted mulch should be added in a layer between 2 and 3 inches deep and not right up to the stem of the tree.

5.3.6 No methodology or mitigation has been provided in connection to shading as this is not considered a significant impact upon the development.

5.3.7 No pruning or other measures have been deemed necessary for encroachment reasons other than the minimum distance clearance between the proposed tree and the paved area provided in ***5.3.5.2***.

5.3.8 No pruning or other measures have been deemed necessary for allowing suitable future expansion growth other than the minimum distance clearance between the proposed tree and the paved area provided in ***5.3.5.2***.

5.3.9 The project engineer will provide specification to ensure that the foundations and engineering specifications for the basement, extension, and paved area foundations are adequate, given the soil type and risk of indirect damage.

5.4 Prohibitions and precautions within RPAs

5.4.1 No linear mechanical excavation without prior written agreement from the Arboricultural Consultant (AC).

5.4.2 No excavation, including soil displacement or hand digging without a written method statement from the main contractor having first been approved in writing by the AC.

5.4.3 No excavation without arboricultural site monitoring unless agreed by the AC.

5.4.4 No lowering of or raising of soil levels unless agreed in writing with the AC.

5.4.5 No construction of a sealed hard surface.

5.4.6 No storage of plant or materials, unless on ground protection. This permission excludes storage of potentially harmful substances which cannot be stored on ground protection unless with prior planning and agreement of further measures, such as bunded areas.

5.4.7 No storage or handling of any chemicals including cement washings, unless the AC approves site-specific protection and mitigation.

5.4.8 No fire lighting.

5.4.9 Although none is anticipated, if investigative excavation is required within or near to RPAs of retained trees, this should be planned and agreed with the AC. Trial excavations can be carried out through careful hand digging or soil displacement with an air spade. Exposed roots should be immediately wrapped with hessian to prevent desiccation or rapid temperature changes. Roots under

25mm may be pruned using a sharp hand tool following consultation with the AC. Roots over 25mm or equivalent sized clumps of roots require consultation with the AC who will be able to advise on whether the roots can be cut.

5.5 Further precautions when working near retained trees

5.5.1 Any mixing or storage of cement and other substances injurious to tree health, must be at least 10 metres from the RPAs unless specific mitigation is agreed before works go ahead.

5.5.2 All site operations shall be carefully planned to prevent any contact with any parts of the retained trees.

5.6 Tree Protection fencing and barriers

5.6.1 The proposed scheme involves construction activities near retained trees.

5.6.2 Tree protection fencing is required to create a construction exclusion zone and prevent damage to multiple trees. The specified type of fencing is shown in ***Figure 1*** in the Appendix. The fencing should be fixed together and positioned in the locations shown in the Tree Protection Plan, ref: 140- M03 in the Appendix.

5.6.3 Appropriate all-weather signage needs to be affixed to the tree protection fencing at intervals of 4 metres. An example of appropriate signage is shown in ***figure 2*** in the Appendix.

5.6.4 It is not practicable to install tree protection fencing around all trees, specifically the street tree within the footpath on Crediton Hill, however the same restrictions apply to all trees as set out in ***5.4 Prohibitions and precautions within RPAs*** of this report.

5.7 Ground protection measures

5.7.1 Ground protection has not been specified within the RPAs of retained trees as the area of ground containing RPAs is not deemed as being needed for construction activity. These areas have been fenced off to create a construction exclusion zone. If these areas are needed for development activities during the project, then the project AC should be notified to provide specification for suitable ground protection based upon the loading or storage requirements. No fencing shall be moved, or ground protection installed or used without written consent and if necessary, a site visit from the project AC.

5.7.2 If ground protection is added during the development, its loading capacities and storage capabilities should be carefully observed and not exceeded throughout the development.

5.8 Access pruning and other tree works

5.8.1 The tree removals are detailed in the appendix (***2.***) and are considered in ***4.4.1.***

5.8.2 No access pruning is anticipated. However, if pruning is deemed necessary to the street tree on the footpath outside 32 Crediton Hill, the project AC shall be contacted so this can be planned, and details of pruning provided to the Local Planning Authority.

5.8.3 Any other unplanned pruning that may be required, due to changes to the project or any other reason, may only be conducted following written consent from the AC. Tree work must be undertaken in accordance with BS3998:2010 and current best arboricultural practices.

5.8.4 Under no circumstances may the construction contractors prune any trees. All tree pruning must be undertaken by suitably qualified and insured arboricultural contractors, in accordance with BS3998:2010 and current best arboricultural practices, following consent of the AC.

5.9 Other precautions

5.9.1 None anticipated

5.10 Contingency plans

5.10.1 A general contingency plan for this project should be prepared by the main contractor for controlling such things as chemical/fuel spillage, runoff from cement washings, sewage or water leaks, site collisions and emergency access into or adjacent to tree protection areas. The plan must be agreed by the AC before commencement of works.

6. Enquiries

Any enquiries relating to this report should be addressed, in the first instance, to Ross Fountain, Piccards Farm, Sandy Lane, Guildford, GU3 1HD.

7. Appendix

1. Tree Survey data

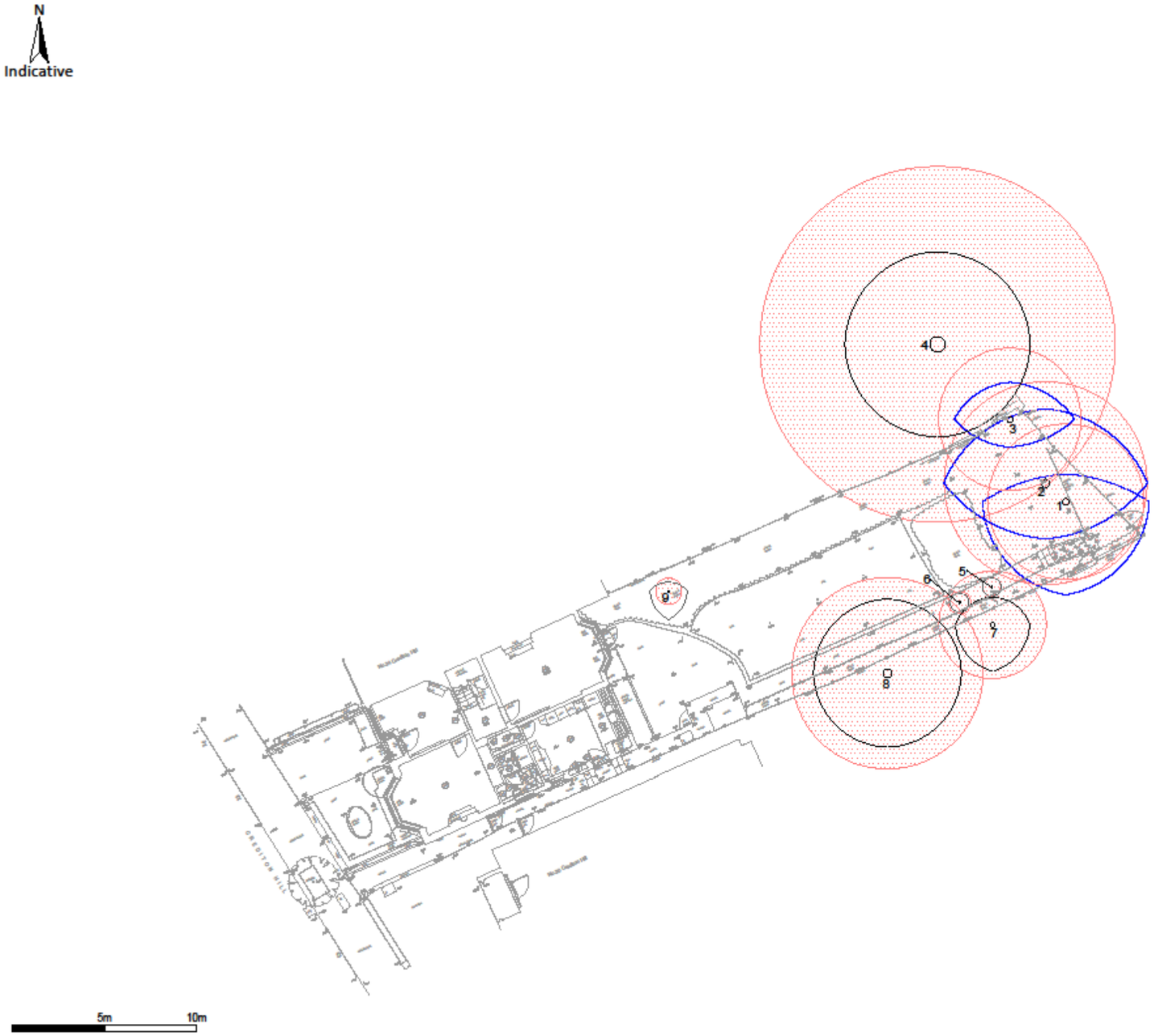
Ref	Species	Measurements	Combined Stem Diam	General Observations	RPA	Physiological Cond	Structural Cond	Retention Category
T001	Elm (Ulmus sp.)	Height (m): 10 Stem Diam (mm): 350 Spread (m): 1.5N, 4.5E, 5S, 4.5W Crown Clearance (m): 1 Lowest Branch (m): 2.5(SW) Life Stage: Mature Rem. Contrib.: 20+ Years	350	Asymmetric crown distribution due to neighbouring Ash tree. Previously reduced.	Radius: 4.2m. Area: 55 sq m.	Fair	Fair	B2
T002	Ash (Fraxinus sp.)	Height (m): 12 2 stems, diam(mm): 360, 280 Spread (m): 4N, 5.5E, 3S, 5.5W Crown Clearance (m): 4.5 Lowest Branch (m): 4.5(SW) Life Stage: Mature Rem. Contrib.: 20+ Years	456	Twin stemmed tree. Cavity at 2.5m agl on larger stem with remnants of indistinguishable fungal fruiting body. Ivy covering stem and crown break of smaller stem. Previously pollarded.	Radius: 5.5m. Area: 95 sq m.	Fair	Fair	B2
T003	Oak (Quercus sp.)	Height (m): 10 Stem Diam (mm): 320 Spread (m): 2N, 3.5E, 1.5S, 3W Crown Clearance (m): 3.5 Lowest Branch (m): 3.5(N) Life Stage: Early Mature Rem. Contrib.: 30+ Years	320	Organic material build-up at base. Previously reduced. OPM nest in lower canopy.	Radius: 3.8m. Area: 45 sq m.	Fair	Fair	B2
T004	Oak (Quercus sp.)	Height (m): 15 Stem Diam (mm): 800 Spread (m): 5N, 5E, 5S, 5W	800	Mature oak in neighbouring land. Dbh estimated. Has been repeatedly reduced	None - no Retention Category specified.			NotRecorded
T005	Yew (Taxus sp.)	Height (m): 2.5 Stem Diam (mm): 40 Spread (m): 0.5N, 0.5E, 0.5S, 0.5W Life Stage: Young	40	Young Yew tree	Radius: 0.5m. Area: 1 sq m.	Fair	Fair	C
T006	Yew (Taxus sp.)	Height (m): 2.5 Stem Diam (mm): 50 Spread (m): 0.5N, 0.5E, 0.5S, 0.5W Life Stage: Young	50	Young Yew tree	Radius: 0.6m. Area: 1 sq m.	Fair	Fair	C

Ref	Species	Measurements	Combined Stem Diam	General Observations	RPA	Physiological Cond	Structural Cond	Retention Category
T007	Damson (Prunus domestica ssp. insititia)	Height (m): 7 2 stems, diam(mm): 210, 120 Spread (m): 1.5N, 2E, 2.5S, 2W Crown Clearance (m): 2 Lowest Branch (m): 3(W) Life Stage: Mature	242	Tree in neighbouring land. Ivy clad tree with sparse canopy and deadwood. Ivy preventing thorough inspection of main stem and base.	None - no Retention Category specified.			Not Recorded
T008	Birch (Betula sp.)	Height (m): 17 Stem Diam (mm): 430 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 5 Life Stage: Mature	430	Tree in neighbouring land. Main stem is clad in ivy. Ivy preventing thorough inspection of main stem and base.	None - no Retention Category specified.			Not Recorded
T009	Plum (Prunus domestica)	Height (m): 4 3 stems, diam(mm): 40, 30, 30 Spread (m): 0.5N, 1E, 1.5S, 1W Crown Clearance (m): 1 Lowest Branch (m): 1(S) Life Stage: Young Rem. Contrib.: 10+ Years	58	Multi stemmed plum tree. Close to fence	Radius: 0.7m.Area: 2 sq m.	Fair	Fair	C

2 - Trees Tree removals necessary to enable the development

Ref	Species	Measurements	Combined Stem Diam	General Observations	RPA	Physiological Cond	Structural Cond	Retention Category
T009	Plum (Prunus domestica)	Height (m): 4 3 stems, diam(mm): 40, 30, 30 Spread (m): 0.5N, 1E, 1.5S, 1W Crown Clearance (m): 1 Lowest Branch (m): 1(S) Life Stage: Young Rem. Contrib.: 10+ Years	58	Multi stemmed plum tree. Close to fence	Radius: 0.7m.Area: 2 sq m.	Fair	Fair	C

3. Tree constraints plan- 140-M01



Note

- This drawing was produced in colour, a monochrome copy is not to be relied upon.
- Read drawings in conjunction with arboricultural report.
- All dimensions must be checked on site and not scaled from this drawing.
- Topo based on CadPlan drawing number 12477_01_01.

Legend

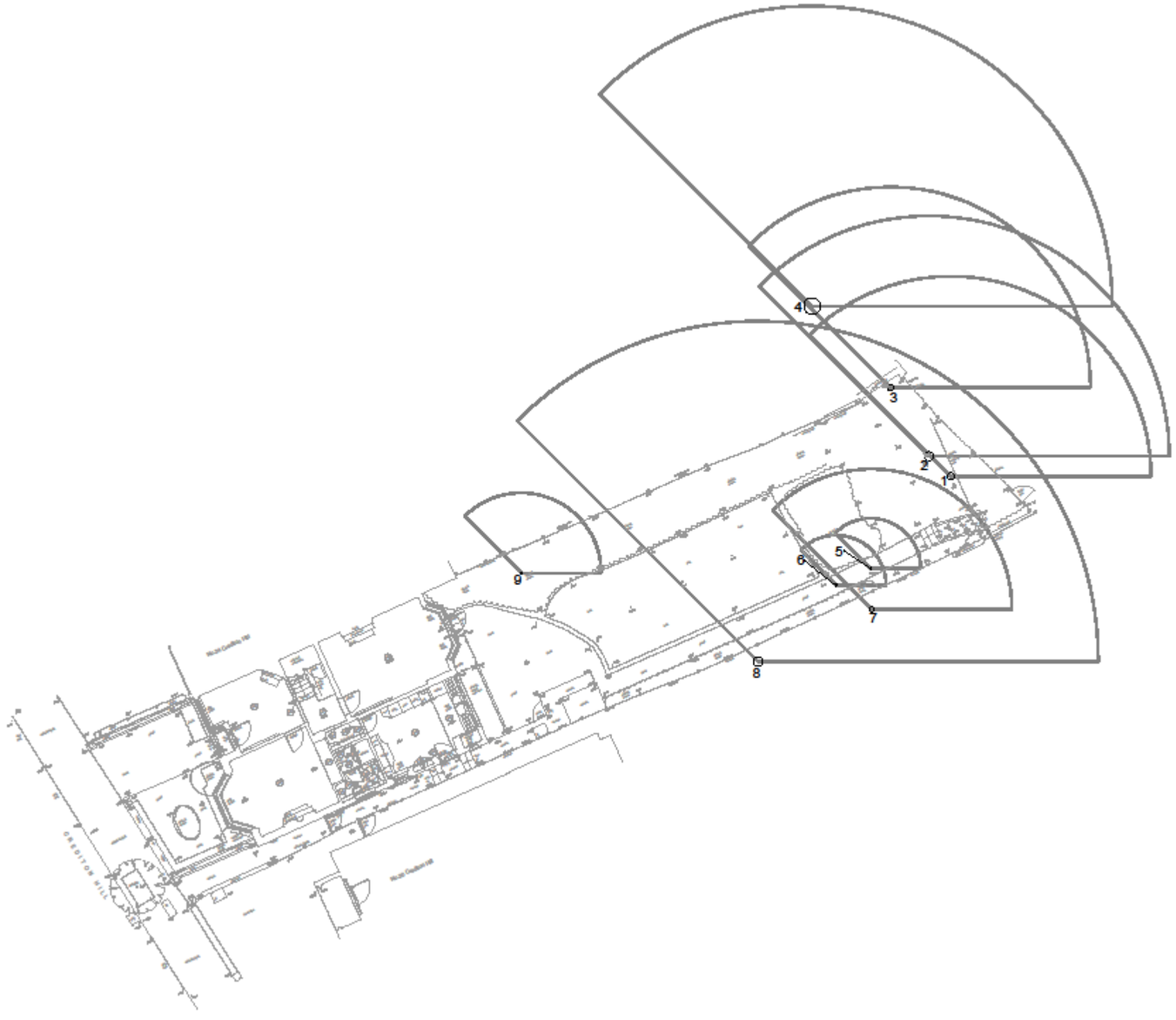
- Category A tree canopy
- Category B tree canopy
- Category C tree canopy
- Category U tree canopy
- Uncategorised tree
- Root Protection Area
- 01 Tree number
- Existing site features

Reeves Arboricultural Services
Piccards Farm, Sandy Lane, Guildford, GU3 1HD

Map Name: Tree Constraints Plan	
Project/Site: Crediton Hill, London, NW6 1HP	
Client: Mrs Lauren Matus	
Map Number: 140-M01	Revision:
Date: August 2021	Scale: 1:200@A3
Drawn by: MJE	Checked by: RF

T. 01483 497 218 / 07899 860 180
E. info@reevesarbservices.com
W. reevesarbservices.com

4. Shade constraints plan- 140-M02



Note

- This drawing was produced in colour, a monochrome copy is not to be relied upon.
- Read drawings in conjunction with arboricultural report.
- All dimensions must be checked on site and not scaled from this drawing.
- Topo based on CadPlan drawing number 12477_01_01.

Legend

- Category A tree canopy
- Category B tree canopy
- Category C tree canopy
- Category U tree canopy
- Root Protection Area
- 01 Tree number
- Existing site features
- Area of shade

Reeves Arboricultural Services
Piccards Farm, Sandy Lane, Guildford, GU3 1HD

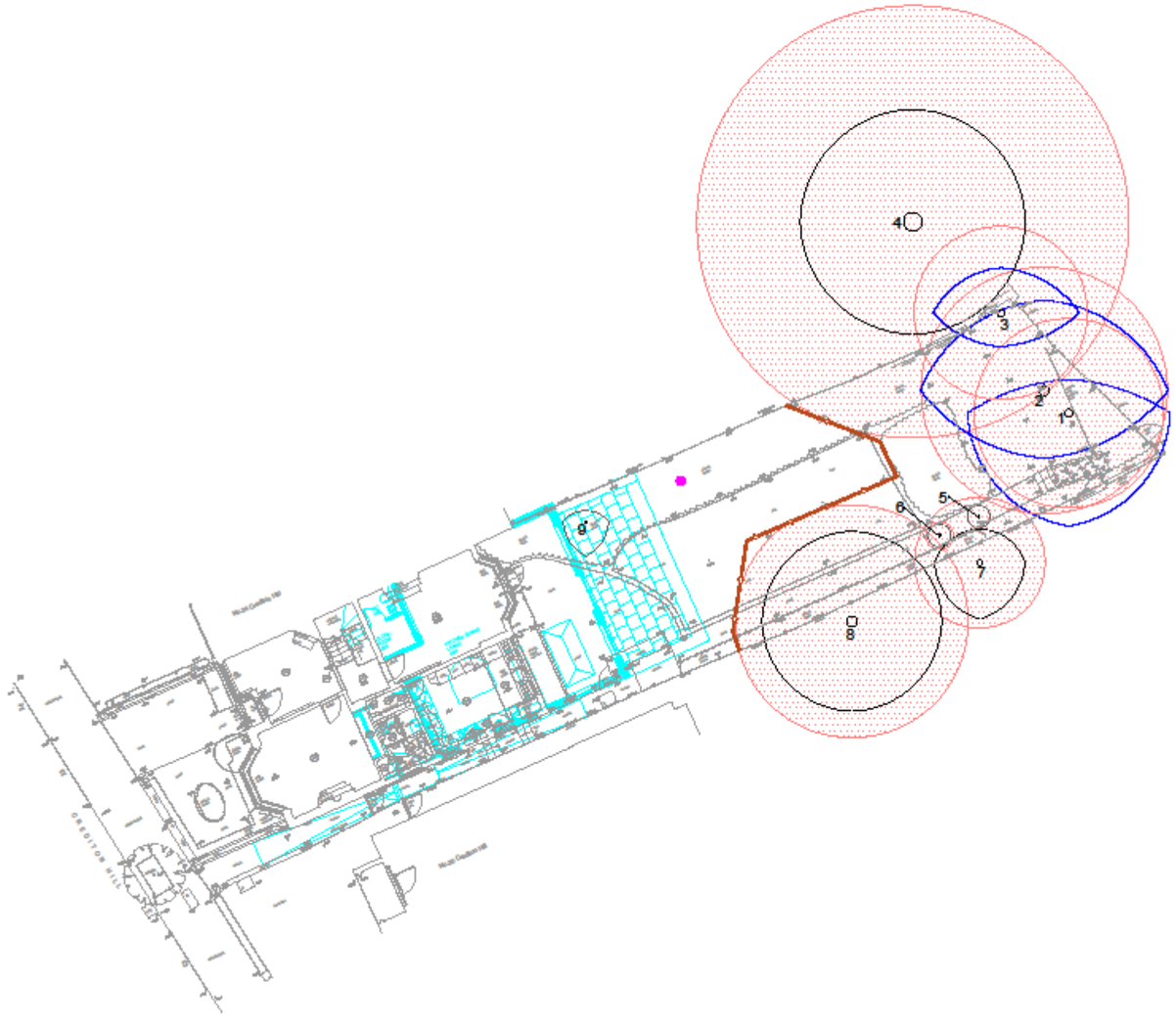
Map Name: Shade Constraints Plan	
Project/Site: Crediton Hill, London, NW6 1HP	
Client: Mrs Lauren Matus	
Map Number: 140-M02	Revision:
Date: August 2021	Scale: 1:200@A3
Drawn by: MJE	Checked by: RF

T. 01483 497 218 / 07899 860 180
E. info@reevesarbservices.com
W. reevesarbservices.com

5. Tree protection plan- 140-M03

N

Indicative



Note

- This drawing was produced in colour, a monochrome copy is not to be relied upon.
- Read drawings in conjunction with arboricultural report.
- All dimensions must be checked on site and not scaled from this drawing.
- Topo based on CadPlan drawing number 12477_01_01.
- Proposed based on P330-32CH- Existing & Proposed ground extension Rev005 - SUBMISSION -CONTEMPORARY 21-07-22.dwg

Legend

- Trees retained
- Root Protection Area
- Tree number
- Existing site features
- Area of works
- Tree Protection Barrier (TPB)
- Proposed new trees

Reeves Arboricultural Services
Piccards Farm, Sandy Lane, Guildford, GU3 1HD

Map Name:	Tree Protection Plan
Project/Site:	Crediton Hill, London, NW6 1HP
Client	Mrs Lauren Matus
Map Number: 140-M03	Revision:
Date: August 2022	Scale: 1:200@A3
Drawn by: MjE	Checked by: RF

T. 01483 497 218 / 07899 860 180
E. info@reevesarbservices.com
W. reevesarbservices.com

6. Tree Protection fencing and signage

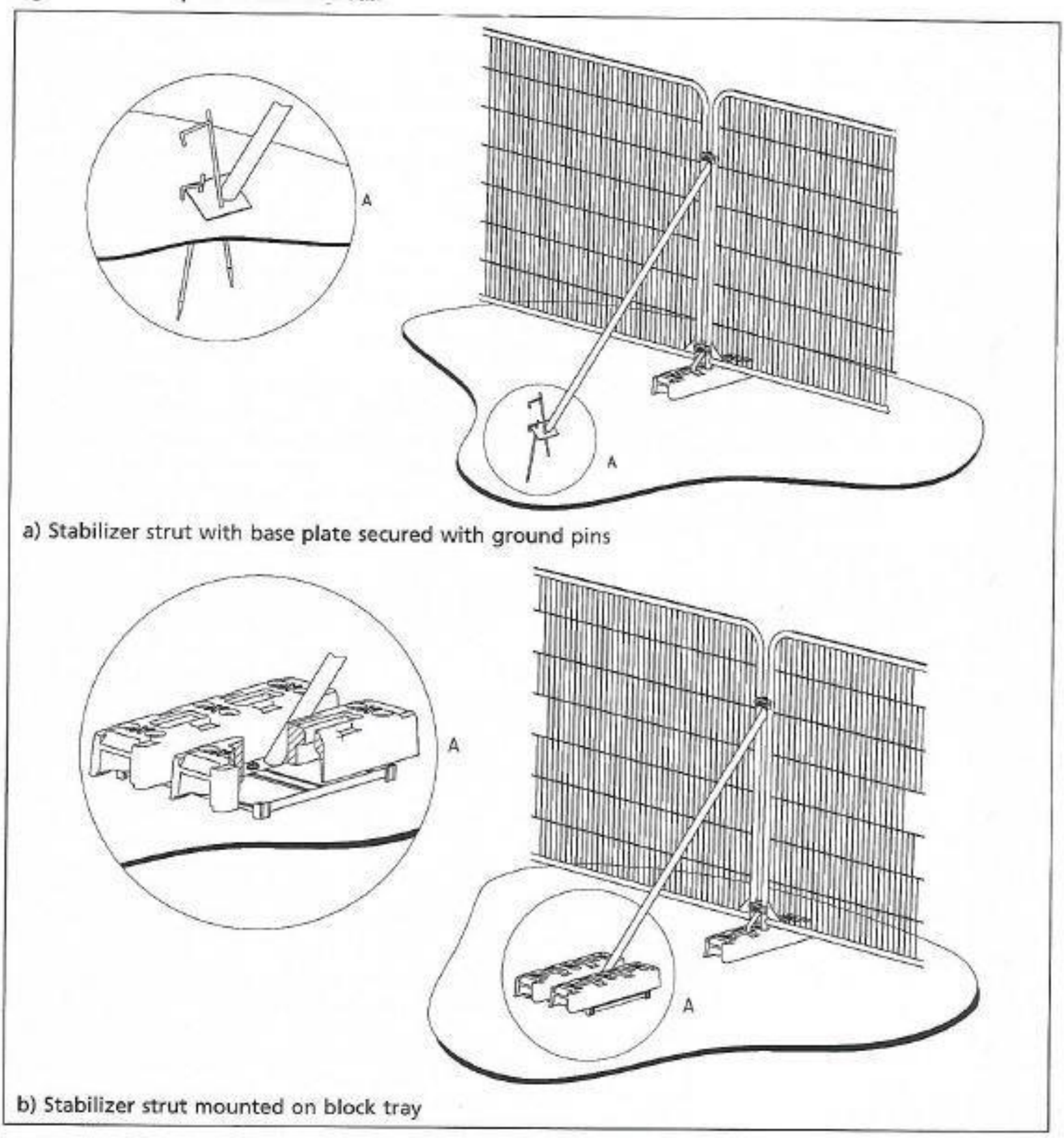


Figure 1- type of tree protection fencing required (from BS5837:2012 – 6.2.3) and shall remain in place until completion of the project.

Tree Protection Area Keep Out!

This fence must be maintained in accordance with the approved plans and drawings for this development

Figure 2- Example of signage to be affixed to the tree protection fencing at intervals of 4 metres and shall remain in place until completion of the project.

7. Arboricultural sequencing of events and site monitoring

Stage	Event
Stage 1	Project arboricultural consultant (AC) appointed
Stage 2	Main contractor supplied with this arboricultural report (ASIAMS149.2). Main contractor to supply report to secondary contractors and brief as necessary. Main contractor to prepare contingency plan and provide to AC
Stage 3	Site set-up as per tree protection plan 140 M-03. A copy of the TPP should be available on site for the reference of all contractors
Stage 4	Once tree protection measures are in place, and prior to works beginning, a site visit by the AC is required. This site visit and any subsequent AC site visit should use an auditable system of site monitoring for submission to the LPA or retained as required.
Stage 5	Following the site visit by the AC works can commence. Main contractor to brief all other contractors on tree protection and methodology of works. Following the commencement of works an AC site visit is required for key stages involving tree protection and approximately every 2 months until completion of the project. This is to ensure continuous tree protection, avoid potential breaches of planning and delays to the development.
Stage 6	When works are complete, and machinery and stored materials are removed the AC should be contacted. On approval from the AC the tree protection measures can be removed.
Stage 7	Final visit from AC to provide final audit and sign off project.

Note: If at any point during the development any changes to the project involving the trees and woody plants is proposed, consultation must be made with the AC in writing. These changes may include, but are not limited to; tree protection measures, pruning, excavation within or near to RPAs. The AC will advise on the matter and a site visit to oversee operations may be required.

8. Reference material

BS5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations.

BS3998:2010 Tree work. Recommendations.

BS8545:2014 Trees: from nursery to independence in the landscape- Recommendations

Tree Preservation Orders: A Guide to the Law and Good Practice.

NJUG 10 - Guidelines for the planning, installation and maintenance of Utility Services in relation to trees.

BS8206: Part 2: 2008 Code of Practice for Daylighting.

Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice.

CIBSE: Daylighting and window design, lighting guide LG 10: 1999.

Site Guidance Notes- Barrell tree consultancy