

Arboricultural Method Statement

Land at:
Yapton Road
Middleton-on-Sea
PO22 6SE

2nd September 2019



PJC ref: 5256/19-03 Rev -

This report has been prepared by
PJC Consultancy Ltd
on behalf of
Edmunds Williams Ltd

Prepared
by

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Lewis is an arboriculturist with several years' experience working within the arboricultural and forestry industry. He gained a foundation degree in arboriculture with distinction from the University of Brighton in 2017 and is a member of the Institute of Chartered Foresters.

Checked
by

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1 INTRODUCTION

1.1 This method statement is written in conjunction with arboricultural survey ref. PJC/5256/19-01 and arboricultural impact assessment ref. PJC/5256/19-02.

1.2 **Instruction:** PJC Consultancy has been instructed by Edmunds Williams Ltd to provide an arboricultural method statement in accordance with BS5837: 2012 '*Trees in relation to design, demolition and construction – Recommendations*', for proposed construction works at land at Yapton Road, Middleton-on-Sea.

1.3 **Objective of this report:** In order to safeguard retained trees on site during development works it is necessary to implement a tree protection strategy. The objective of the following arboricultural method statement is to provide protection methodology for retained trees throughout the demolition and construction period, including the above ground and below ground parts of the trees as well as their rooting medium. This report is concerned with the protection of all retained trees at the site.

1.4 **Limitations of report:** This document is based on the plans and information made available to the author on the date of the report. Updates to the arboricultural method statement and Tree Protection Plan may be required following detailed design stage of development including the routing of services and formation of a construction management plan.

1.5 **Contents of report:** This report includes the following:

- Arboricultural Method Statement
- Tree Protection Plan

2 ARBORICULTURAL METHOD STATEMENT

2.1 General requirements: The arboricultural method statement and Tree Protection Plan shall remain on site for the duration of demolition, construction and landscaping works and be available to site operatives at all times. All operatives at the site shall be briefed about tree related factors as part of their site induction.

2.2 Any variation from the methodology described in this method statement shall be discussed with the supervising arboriculturist and agreed with the local authority arboricultural officer.

2.3 Phasing of works: To ensure trees are protected throughout the development, the proposed development shall occur in the following order:

Table 1: Phasing of works

Works Order	Operation	Notes
1	Initial tree works.	The tree works contractor shall undertake the tree removals and access facilitation pruning specified in the arboricultural impact assessment. Completion of these works will be required to enable the installation of tree protection barriers.
2	Installation of tree protection barriers.	The tree protection fencing shall be installed in the locations shown on the Tree Protection Plan and to the specification described in this method statement.
3	Pre-commencement meeting.	The project arboriculturist shall attend a site meeting with the site manager. The local authority arboricultural officer shall be notified so they may also attend. The above pre-start arboricultural works shall be signed off by the project arboriculturist during the meeting. The meeting shall occur before any plant activity, ground works or demolition/construction activities begin.
4	Installation of new culvert and access road.	The new culvert and engineered road crossing solution shall be installed in a sensitive manner as described in this method statement, prior to the commencement of demolition/construction activities on site. To provide demolition/construction traffic access for the remainder of the project.
5	Demolition phase.	The tree protection barriers shall be maintained and the construction exclusion zones observed throughout the demolition phase. Once complete, the secondary tree protection barriers shall be installed in the locations shown on the Tree Protection Plan.
6	Construction phase.	The tree protection barriers shall be maintained and the construction exclusion zones observed throughout the construction phase.

Works Order	Operation	Notes
7	Soft landscaping phase.	The tree protection barriers shall be dismantled when external construction and hard landscape operations have been completed and plant machinery or excess construction materials have been removed from site. Soft landscape operations shall occur sensitively as described in this method statement.

2.4 Initial tree works: The tree removals and access facilitation pruning described in the arboricultural impact assessment shall be carried out as the first stage of development. Any requirements for access facilitation pruning which have not been anticipated on the date of this report shall be discussed at the pre-commencement meeting with the project arboriculturist and communicated to the local authority arboricultural officer.

2.5 Tree stumps and vegetation located within the root protection areas of retained trees shall be cleared with controlled hand tools (e.g. stump grinder/brush cutter). Plant machinery shall not be used to scrape vegetation or 'grub out' stumps within root protection areas or access the site until the tree protection barriers have been installed.

2.6 If bonfires are lit to dispose of arisings from the vegetation or tree clearance works, an assessment of wind direction and strength shall be made to ensure flames cannot extend within 5m of any part of a retained tree. No bonfires shall be lit within a root protection area.

2.7 Trees should be checked for protected species before works are undertaken. It is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations. Nesting birds are protected by the Wildlife and Countryside Act. If protected species are discovered, Natural England should be contacted for advice.

2.8 The tree works contractors should carry out all tree works to BS3998: 2010 '*Tree works – recommendations*' as modified by research that is more recent. They should also carry relevant, adequate and up to date insurance.

2.9 It is suggested that an Arboricultural Association approved contractor carry out all tree works. Approved contractors are expected to work to industry best standards. The Arboricultural Association website (www.trees.org.uk) contains contact details and information on engaging a suitable contractor.

2.10 Tree protection barriers: The root protection areas of retained trees must be left free from disturbance and protected from contamination or compaction during the proposed works. Protection shall comprise of tree protection fencing.

2.11 Tree protection fencing shall be installed in the primary locations shown in dark blue on the Tree Protection Plan (Appendix 1) following the initial tree works, prior to demolition/construction traffic entering the site. As soon as the demolition of the structures within the secondary construction exclusion zones is complete, tree protection fencing shall be installed in the secondary tree protection fencing locations as shown in cyan on the Tree

Protection Plan. They shall remain in place for the duration of remaining demolition, construction and hard landscaping works unless otherwise agreed with the project arboriculturist.

2.12 The specification for tree protection fencing shall be metal welded mesh panels (e.g. Heras panels), in concrete or rubber feet. The panels shall be supported by metal stabiliser struts mounted on either a base plate secured by ground pins, or in a block tray (refer to Appendix 2). Any variation from this specification for tree protection fencing shall be discussed with the project arboriculturist and agreed in writing with the local authority arboricultural officer.

2.13 Signs shall be affixed to the fencing as shown in Appendix 3 to explain its purpose. The signs shall be affixed at a reasonable size and frequency to ensure they are easily visible to operatives at the site.

2.14 The areas protected by tree protection fencing (highlighted in both yellow and orange on the Tree Protection Plan) shall be referred to as the construction exclusion zones. The following restrictions shall apply within the construction exclusion zones:

- No vehicular access shall be permitted.
- Regular pedestrian access shall be restricted unless on suitable ground protection measures agreed with the project arboriculturist.
- No storage of construction materials shall occur.
- No storage of building spoil or construction debris (including short-term temporary storage) shall occur.
- No harmful chemicals shall be stored or handled.
- No fires shall be permitted.
- No mechanical excavation including regrading of levels shall occur.
- There shall be no change in ground level unless undertaken under the supervision of the project arboriculturist.
- No construction activities including installation of new permanent hard standing shall be undertaken unless otherwise specified in this method statement.

2.15 **Storage and handling of harmful chemicals:** Provision must be taken to prevent the storage and handling of harmful chemicals within the root protection areas of retained trees. Harmful chemicals include fuels, oils, bitumen, builder's sand (which has a high salt content) and cement. Provision shall also be made to prevent the storage and handling of harmful chemicals in areas proposed for further planting if the existing soil is intended to be retained.

2.16 Cement mixing shall always occur outside the construction exclusion zones. If cement mixing is to occur close to the construction exclusion zones, or there is the potential for cement washings to leech into a root protection area, adequate, bunded ground protection measures must be used. This could comprise impermeable plastic sheeting under wooden boards (to prevent tears) surrounded by a raised lip.

2.17 All other chemicals that are harmful to trees must be stowed in suitable containers and stored away from the construction exclusion zones unless adequate, bunded ground protection measures are implemented to prevent spillages leeching into root protection areas.

2.18 Contractor facilities: A suitable location for site cabins, contractor parking and site facilities for operatives shall be agreed with the project arboriculturist during the pre-commencement meeting if not already specified in a construction management plan. These facilities must be located outside the root protection areas of all retained trees unless on adequate ground protection measures that have been agreed with the project arboriculturist (potentially including existing hard standing). Provision must be taken to prevent exhaust fumes or hot air from generators or kitchen facilities from damaging foliage within the crowns of retained trees.

2.19 New culvert and engineered access road: Following the completion of the initial tree works, installation of the tree protection barriers and prior to any demolition or construction traffic entering the site, the new culvert and engineered solution for the access road shall be installed.

2.20 The engineered solution for the access road has already been approved by West Sussex County Council. However, the details of materials to be used are to be agreed with the local authority at the technical approval stage. The new surface needs to be permeable to air and water. This is to allow roots to respire without there being a build-up of carbon dioxide, and to ensure the roots continue to receive the moisture and oxygen they require to function.

2.21 The existing ground vegetation shall be removed by using either a suitable herbicide (to be provided by a specialist to ensure it does not harm retained tree roots) or by using controlled hand tools such as a spade or turf cutter. Plant machinery shall not scrape vegetation or grub out tree stumps within root protection areas.

2.22 The existing top tarmac surface should be broken up by either using controlled hand tools (pneumatic drill) or with plant machinery operated under the supervision of the project arboriculturist. If plant machinery is used to carefully pull debris out of the root protection area, it must be fitted with a grading bucket without teeth. Debris shall be stockpiled outside the root protection area. Vehicular access on exposed ground across the root protection area shall be prohibited between the time the existing surface is removed and the new surface is installed.

2.23 Plant machinery must be operated from outside the root protection area. A banksman must be used to spot overhanging branches or shallow roots that may not be visible from within the cabin of the excavator.

2.24 Any excavation required for the road support pads or culvert head wall in this area shall occur by hand, under the supervision of the project arboriculturist, with care taken to avoid damaging or severing roots with a diameter greater than 25mm (potentially requiring the position of the pads to be altered slightly) to the necessary depth (up to 600mm unless significant roots are being revealed near the base of the excavation).

2.25 Roots revealed shall be cleanly pruned using secateurs to leave the smallest feasible wound. Small clean pruning wounds require less energy from the tree to heal and reduce the chance of infection by tree pathogens.

2.26 Roots that are revealed during the excavation works that are to be retained shall immediately be wrapped in hessian cloth or a thin layer of damp soil shall be placed over them. This will help protect the delicate root bark during remaining excavation operations

and help prevent desiccation or frost damage if the excavation is left exposed for prolonged periods. The hessian cloth shall be removed when the excavation is backfilled.

2.27 When the excavation is backfilled, roots that are retained shall be surrounded by a small amount of inert granular material mixed with sharp sand or topsoil. This will help prevent damage to the roots if the soil is compacted during surfacing works.

2.28 The installation of the new access road shall occur above ground level supported by four pads, as specified by a structural engineer. Their size and location will depend on soil conditions and the maximum size of vehicle for which the road will be used.

2.29 Traditional kerbing requires excavation to install and will therefore not be acceptable within the root protection areas of retained trees. As an alternative, haunched kerbing, treated timber edging, aluminium L-shaped edging, galvanised metal edging or no fixed edging shall be used.

2.30 The finished level of the new no-dig access road surface will be higher than the surrounding un-surfaced ground. To mitigate this, clean-screened topsoil may be banked around the edge of the surface. It is recommended that no less than a gradient of 1:3 be used as increasing the ground level within a root protection area can disrupt root function. It is also necessary to avoid banking soil around the buttresses or buttress roots of retained trees.

2.31 If access is required onto the new access road before the final wearing course is installed, a temporary sacrificial surface shall be installed to prevent soil and other building debris blocking the airspaces in the final wearing course, which could otherwise reduce the porosity of the completed surface.

2.32 **Constructing new surfaces within root protection areas:** Within the root protection areas of T4 and T5, the new car park shall be constructed to the basic specification described in the arboricultural impact assessment. The detailed specification (including levels) shall be provided by an engineer but shall be signed off by the project arboriculturist to ensure compliance with arboricultural requirements.

2.33 Prior to construction of the car park, the existing ground vegetation shall be removed by using either a suitable herbicide (to be provided by a specialist to ensure it does not harm retained tree roots) or by using controlled hand tools such as a spade or turf cutter. Plant machinery shall not scrape vegetation or grub out tree stumps within root protection areas.

2.34 If access is required onto the cellular confinement systems before the final top surfaces are installed, a temporary sacrificial surface shall be installed above the Treetex Geotextile separation fabric to prevent soil and other building debris blocking the airspaces in the cellular confinement system, which could otherwise reduce the porosity of the completed surface.

2.35 The finished level of the no-dig surface will be higher than the surrounding un-surfaced ground. To mitigate this, clean-screened topsoil may be banked around the edge of the surface. It is recommended that no less than a gradient of 1:3 be used as increasing the ground level within a root protection area can disrupt root function. It is also necessary to avoid banking soil around the buttresses or buttress roots of retained trees.

2.36 Demolition of existing structures within root protection areas: As far as is reasonably practicable, the demolition of the buildings located within the secondary construction exclusion zones (highlighted orange on the Tree Protection Plan) should be performed by hand. Plant machinery must be operated from outside the primary construction exclusion zone and perform the demolition in a “top down, pull back” manner i.e. inwards within the footprint of the existing structure and away from the neighbouring trees. A banksman must be used to spot overhanging branches or shallow roots that may not be visible from the cabin of the excavator.

2.37 The removal of existing concrete bases within the demolished buildings should be completed using controlled hand tools (pneumatic drill) or with plant machinery operated under the supervision of the project arboriculturist. If plant machinery is used to carefully pull debris out of the root protection areas, it must be fitted with a grading bucket without teeth. Debris shall be stockpiled outside the root protection areas. If roots are revealed during this process, the plant machinery must stop work immediately and the remainder of work shall be completed by hand until the project arboriculturist confirms that the use of plant machinery may continue. Any root growth uncovered must not be left exposed. A thin layer of damp soil shall be placed over the roots to prevent desiccation.

2.38 Installing new permanent fencing within root protection areas: Installation of permanent fencing within root protection areas will require access into the construction exclusion zones. Only pedestrian access will be permitted into the construction exclusion zones and scaffold board pathways shall be used in wet weather conditions. Ideally these works shall occur during the soft landscaping phase of development when it is safe to dismantle the tree protection fencing.

2.39 The specified fencing will consist of steel hoop-top and wooden closed board fencing. The levels of the fences must also consider existing ground levels as there should be no re-grading of levels within root protection areas.

2.40 The postholes shall be hand excavated with care taken to avoid damaging or severing roots with a diameter greater than 25mm (potentially requiring the position of the fence posts to be altered slightly). The postholes shall be sleeved with impermeable sheeting before any concrete is added to prevent alkaline burn to retained roots. Cement mixing shall occur outside the construction exclusion zones.

2.41 Soft landscaping within root protection areas: Soft landscaping within the root protection areas of retained trees shall occur as the final phase of development, when all other construction activities in the vicinity have been completed and it is safe to dismantle the tree protection barriers. The detailed specification for soft landscaping is yet to be confirmed but will potentially include turfing and tree/shrub planting within root protection areas.

2.42 All planting stock, topsoil and other soft landscaping materials shall be stockpiled outside the root protection areas of retained trees. When the tree protection barriers have been dismantled, the extents of the root protection areas shall be made clear to operatives at the site by other means (e.g. ground marker paint or similar). The standard restrictions to works within the construction exclusion zones will still apply during the soft landscaping phase of development.

2.43 Where new turf is to be laid within the root protection areas of retained trees, topsoil will likely need to be imported. The existing soil may be lightly tilled by hand but use of rotavators or plant machinery will be prohibited. A maximum increase of 150mm of topsoil should be introduced to a root protection area to avoid suffocating existing root growth. Care must be taken to prevent soil being piled against tree buttresses or buttress roots.

2.44 When soil or other materials are transported across a root protection area, scaffold board pathways must be used to prevent compaction of the rooting medium. It should be noted that even pedestrian traffic can compact the soil, particularly in wet conditions.

2.45 All planting pits within root protection areas shall be individually hand excavated (no trench planting). Care must be taken to avoid severing or damaging roots with a diameter greater than 25mm.

2.46 **Arboricultural supervision:** Arboricultural supervision will be required for the following stages of development:

- Prior to commencement of works, the project arboriculturist shall review and where necessary provide input into the construction management plan. Where necessary, this arboricultural method statement and tree protection plan shall be updated to accommodate the construction management plan.
- Prior to commencement of works, the project arboriculturist shall review the routing of new services and either confirm there will be no encroachment into root protection areas or provide an arboricultural method statement detailing how the services can be installed sensitively. It will be the responsibility of the contractor to provide the details of new services to the arboriculturist.
- A pre-commencement meeting shall be held between the contractors and the project arboriculturist. The local authority arboricultural officer shall be given reasonable notice of the pre-commencement meeting so they may also attend. The purpose of the pre-commencement meeting shall be:
 - To clarify the tree protection methodology with the site manager.
 - To sign off that the pre-commencement tree works have been completed as specified in the arboricultural impact assessment, and to agree any requirements for access facilitation pruning which have not been anticipated prior to the meeting.
 - To sign off that the tree protection barriers have been installed in the correct locations and to the agreed specification.
- Prior to implementation, the project arboriculturist shall sign off that the detailed specification for the new car park surface to be installed within root protection areas of T4 and T5 complies with recommendations in the arboricultural impact assessment.
- The project arboriculturist shall sign off that the prescribed methodology is followed for the installation of the new culvert and access road, including supervision of soil stripping within root protection areas.
- The project arboriculturist shall supervise the demolition and removal of concrete bases from demolished farm buildings within root protection areas of T4–T6, T9, T10 and T12.

2.47 In addition to the above, the site manager shall provide a monthly update to the project arboriculturist including photographic evidence that the tree protection barriers are intact and that the construction exclusion zones have been observed.

2.48 If significant root growth is disturbed during construction activities that are not within the scope of this report, the work shall cease until the project arboriculturist has been consulted. Roots greater than 25mm in diameter or dense/matted fibrous roots shall be considered significant root growth. It should be remembered that whilst root protection areas are part of industry best practice, tree root growth is influenced by a number of factors and may not conform to expected ideals.

2.49 If at any time during the construction process, damage is inadvertently caused to a tree, the project arboriculturist shall be notified to assess the likely implications and to prescribe potential remedial measures to be implemented. Damage can be in the form of chemical or fuel spillage, mechanical damage to either the above ground parts of the tree or the roots, fire or any other unforeseen circumstance.

2.50 The supervising arboriculturist shall be appointed by the contractor. It will be necessary for the arboriculturist to report to the local planning authority on the outcome of the site visits as well as any unforeseen tree related issues.

Contact details

Sussex office:

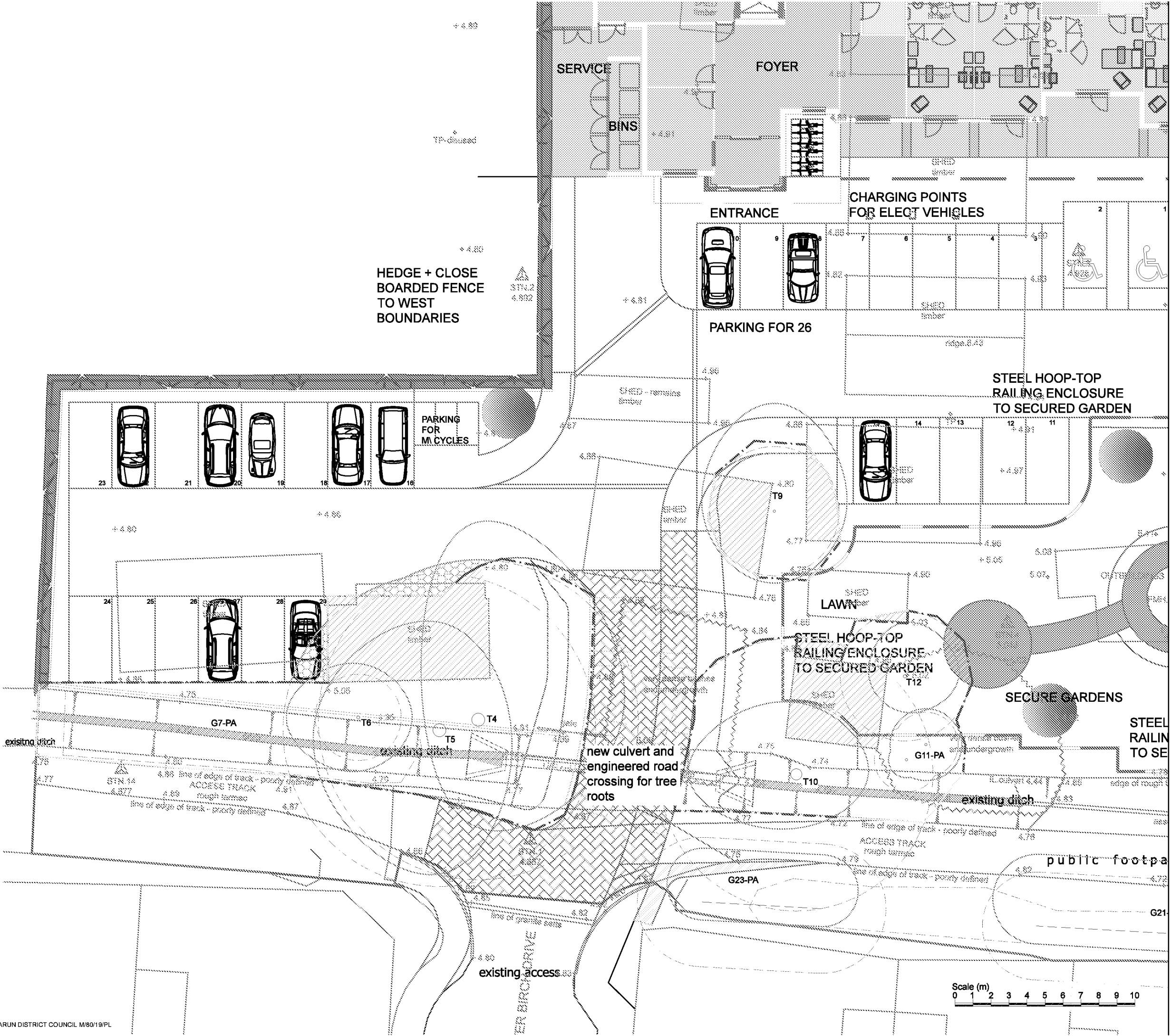
Rocks Yard
Victoria Road
Herstmonceux
Hailsham
East Sussex
BN27 4TQ

Author: Lewis Rumsey

Date: 29th August 2019

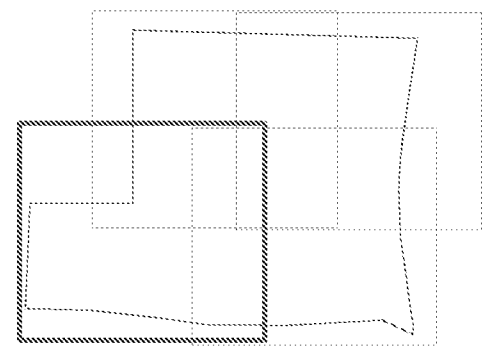
APPENDIX 1

Tree Protection Plan

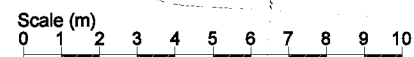


- Key:**
- Root protection area for tree to be retained
 - Canopy of tree to be retained
 - Tree protection fencing
 - Secondary tree protection fencing
 - Construction exclusion zone
 - Secondary construction exclusion zone
 - No-dig surface
 - Specialised engineering solution

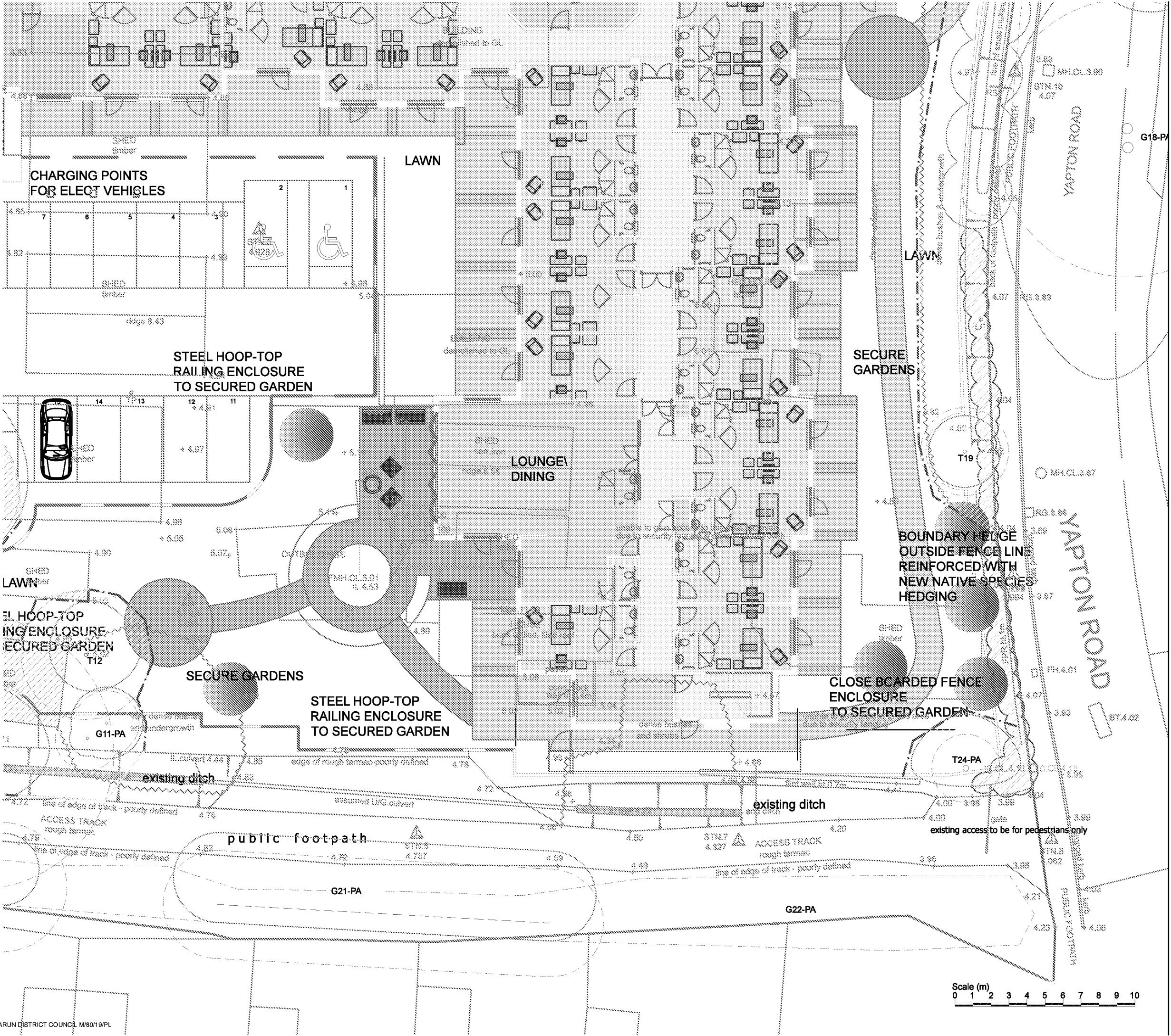
Appendix 2, (Tree Survey Schedule) contained within the arboricultural report ref. PJC/5256/19-02 contains further information for each tree.
This drawing should be viewed in colour.



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Client and site: Edmonds Williams Ltd		
Yapton Road Middleton-on-Sea PO22 6SE		
Drawing title: Tree Protection Plan		
Date drawn: 28/08/2019		
Scale: 1:200 at A3		
Drawn by: LR	Checked by: PD	



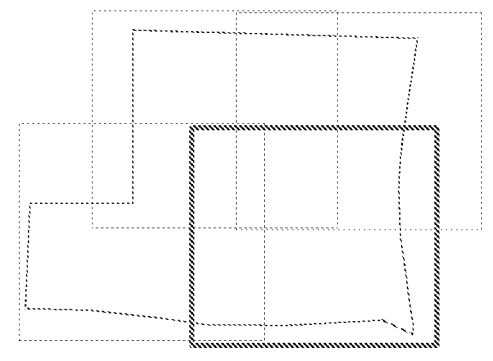
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Hailsham, East Sussex, BN27 4TQ.
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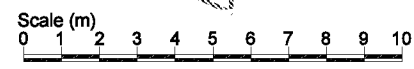
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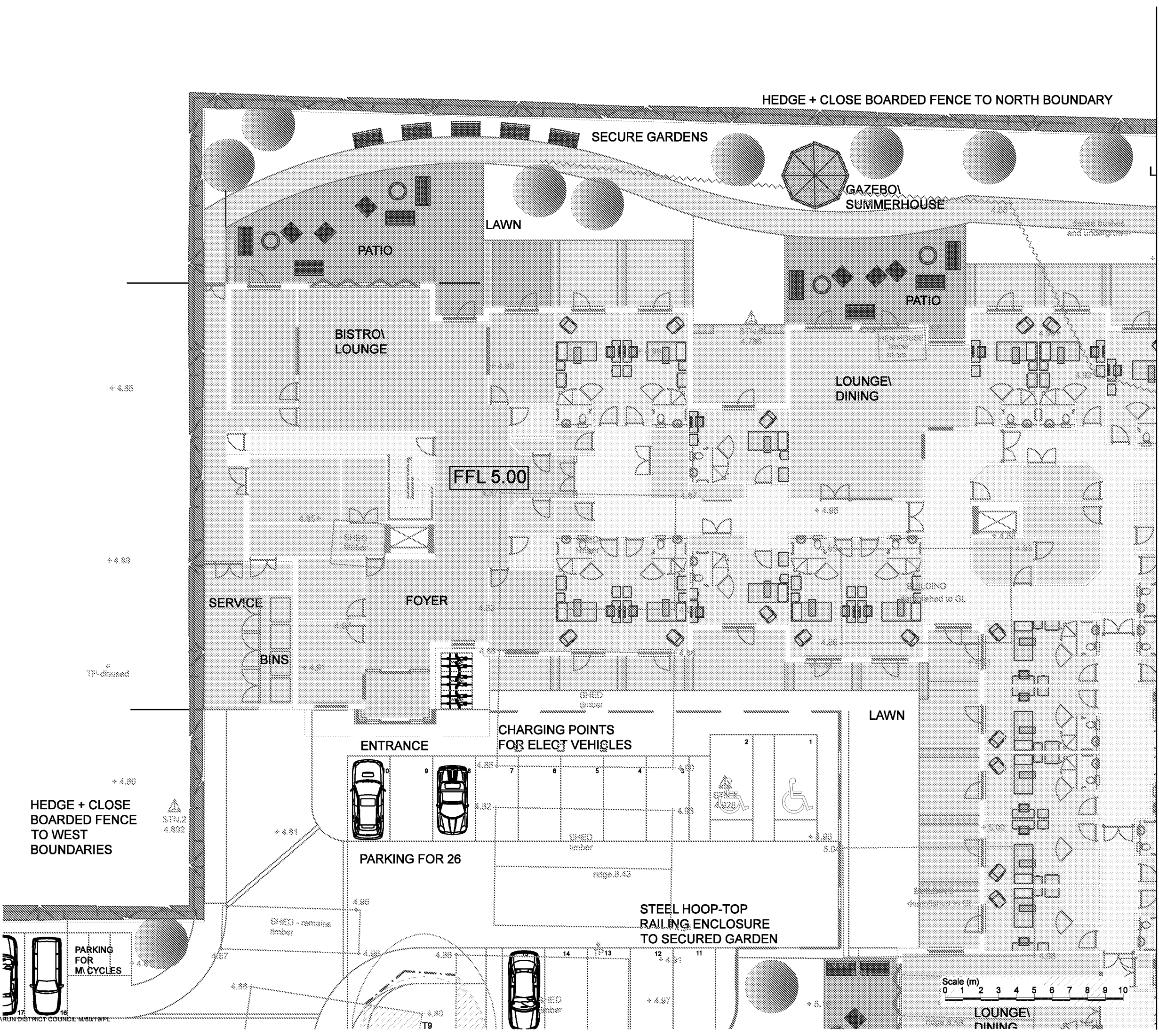
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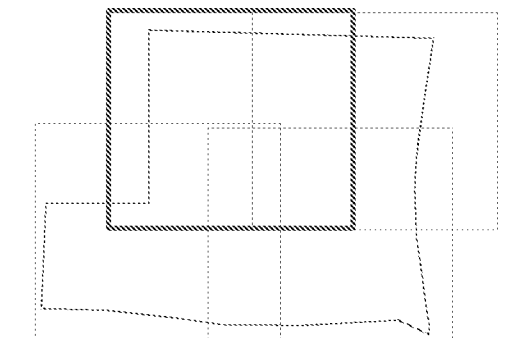


Key:

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Drawing no: PJC/5256/19/C Rev: - Sheet number: 3 of 4

Client and site:
Edmonds Williams Ltd

Yapton Road
Middleton-on-Sea
PO22 6SE

Drawing title: Tree Protection Plan

Date drawn: 28/08/2019

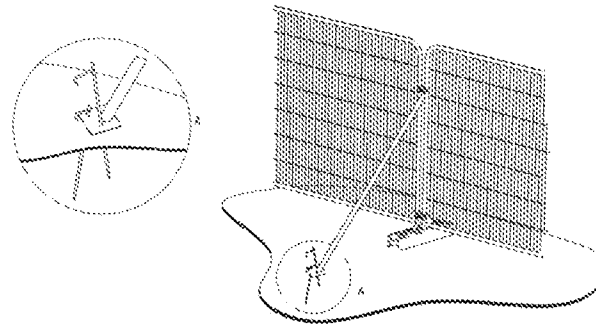
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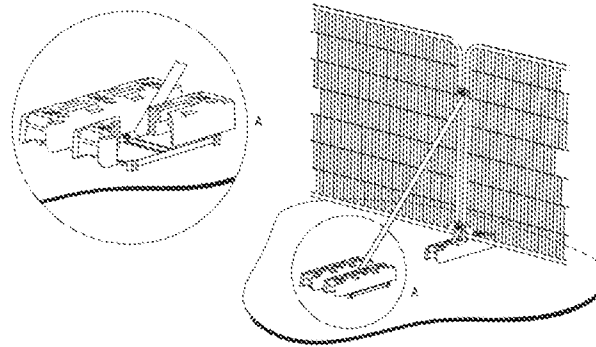
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APPENDIX 2

Tree Protection Fencing Specification



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on black tray

APPENDIX 3

Example Protective Fencing Sign

