

BS5837:2012
Arboricultural Method Statement
For
East Grinstead Sports Club,
Salt Hill Road,
East Grinstead, West Sussex,
RH19 4JU

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Arboricultural Method Statement (AMS)

assessed in accordance with

BS5837:2012

‘Trees in relation to design,

demolition and construction

-Recommendations’

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1.0 Introduction

1.1 Client Instruction

1.1.1 Simon Ffoulkes Tree Consulting was instructed by Les Humphrey Associates, Architects, to undertake an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) for the proposed site at East Grinstead Sports Club. The assessment was to consider trees that are to be retained along a strip of verge between the Sports Club and The Hockey pitches. that will be affected by the build. The survey was carried out in accordance with BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations.

1.1.2 The requirement of this survey was;

- To record relevant information showing the Root Protection Area (RPA) on the trees around the proposed build.
- Provide information to show how mitigation measures within the Arboricultural Method Statement (AMS) will be put in place to provide suitable protection for trees affected by the proposed construction process.
- To provide a TPP showing where Protective fencing will be erected.

1.2 Documents Provided

1.2.1 A topographical plan, Job No 181121 Drg 001 Scale 1:100@A1

1.2.2 A Site plan Drg No: 220214-01, scale 1:500

2.0 Arboricultural Method Statement (AMS)

2.1 General Advice

2.1.1 The AMS is a set of instructions that will be used to allow development or construction within the Root Protection Area (RPA) of a tree or trees whilst managing the trees canopy, structure and root system to minimise any health effects on the trees by the building process either short term or for the foreseeable future.

2.1.2 The AMS will provide a clear pattern of what the process of how the work will be carried out.

2.1.3 There will be the requirement for a Tree Protection Plan (TPP) that will show where the protective fencing will be erected and where ground protection will be incorporated.

2.1.4 There will be the requirement to construct a wooden protective hoarding around each of the trees that will remain, to protect the trunks up to the crown break.

2.1.5 There will be the requirement to fit height barriers at just below the height that the tree canopy starts, to allow protection from Plant on site and delivery vehicles.

2.2 Specific Advice - Tree Protection Plan

- 2.2.1 The trees T1, T4, T5, T6, T7, T9 and T10 will all be removed before the process development takes place as they have a limited life span and it will be prudent to remove them now before they represent a Health and Safety issue for cars parked under the canopies of the trees.
- 2.2.2 The trees T2, T3 and T8 are all to remain as their arboricultural value is such that their retention has significant value. This will entail a specific method of protecting the canopies, trunks and root system of the trees, to ensure their survival for the foreseeable future.
- 2.2.3 The tree trunks of each tree will require a wooden self-standing hoarding to be constructed that surrounds the trunk from the base to the tree canopy, **Appendix 1**
- 2.2.4 Each tree will require the Tree Protection Fencing (TPF) to surround the tree in a square format allowing it to be 1.5m from the tree trunk. This will be the limit of the car parking. This is to allow protection for the surface roots. This area is to be unavailable to the development work force. The TPF will be constructed as per **Appendix 2**.
- 2.2.5 To protect the rooting area of the trees a specific 'No-Dig' construction process will be required to ensure that no roots are damaged during the development stage and to stop damage by physical damage or by soil compaction of the rooting area of the trees within their RPA.
- 2.2.6 The 'No-Dig' process is set out within **Appendix 3**
- 2.2.7 Building materials must not be stored within the RPA during the construction process. No vehicles are permitted within the RPA. No washings should be allowed to soak into the RPA and any fires or cement mixing should be at least five metres from any tree.
- 2.2.8 There will be no fuelling of vehicles or plant within the RPA of the trees.

3.0 Site Monitoring

3.1 Pre-commencement meeting

- 3.1.1 The Local Planning authority may require a pre-commencement meeting. This maybe a face to face on site meeting or a telephone conference meeting of interested parties.

3.2 On site supervision

- 3.2.1 To ensure that the Tree protection barriers and Ground protection are installed correctly and left in place during construction will be achieved by a photographic dated record of all the processes involved during construction. The photographic evidence will be sent to the consultant as a record of proof of compliance.
- 3.2.2 There is a signing off form in **Appendix 4** that ensures all on site have agreed the compliance measures for protecting the trees and these have been carried out and the monitoring of the site has been carried out as instructed.

- 3.2.3 On completion of the building work, pre-landscaping photographs are required to show the process of the tree protection fencing removal and ground protection removal. The process of removal is to be carried out by hand. No machinery will be involved in the removal within the RPA of the trees. A photographic record must be taken by the site manager, to be dated and sent to the arboricultural consultant before the landscaping process is started to confirm the processes of compliance.

Appendices 1 - Tree Trunk Hoarding



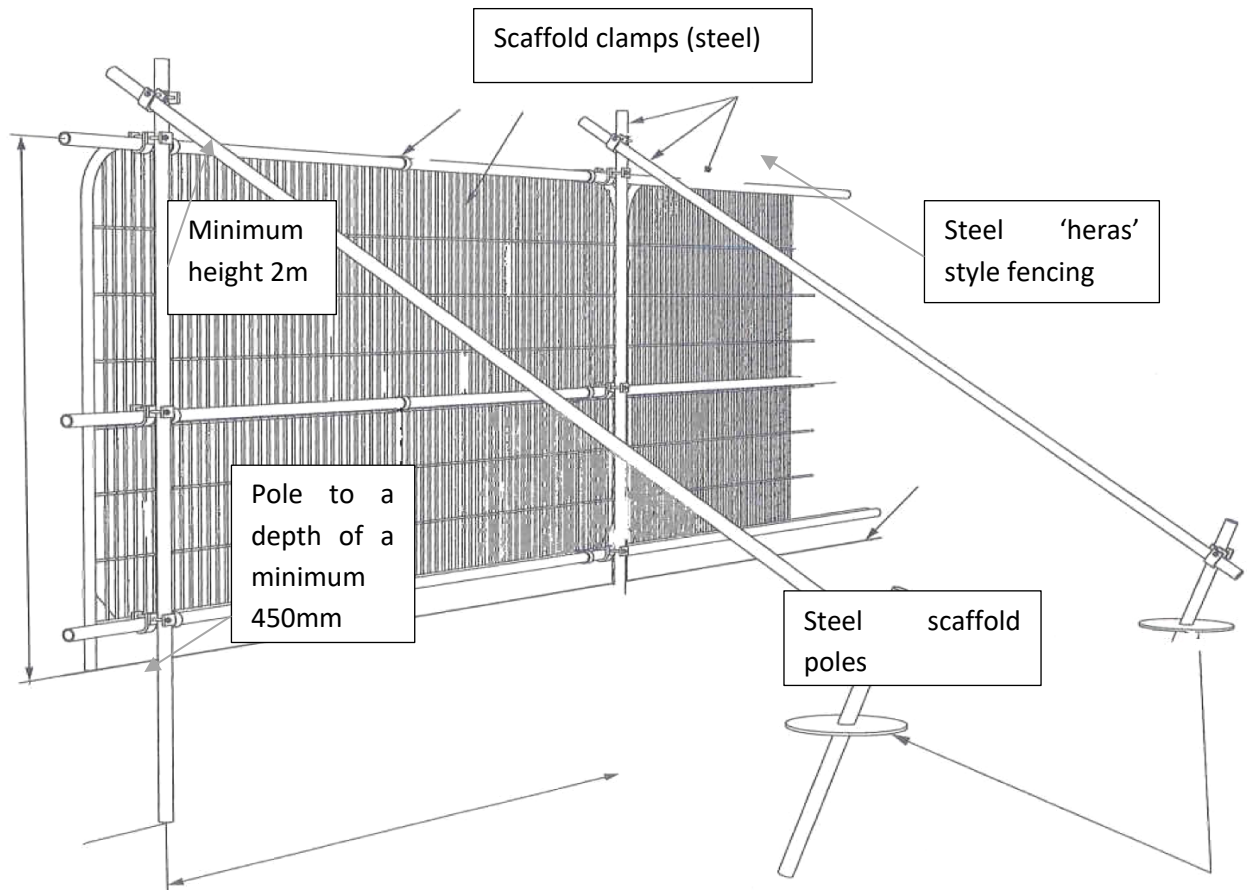
The tree trunk protection system must be similar in construction to the image above.

The trunk must initially be hessian wrapped and the hoarding constructed around it. The ground fixing for the hoarding can either be steel rods or timber posts. The post holes must be hand dug and avoidance of any roots is paramount. No concrete is to be used to support the posts holes, just back fill with the excavated soil and tamp down.

The hoarding must be constructed of a suitable water resistant boarding a minimum of 15mm thick. This will be fixed in place to just below the first branch union.

All hoarding is to stay in place until the final landscaping faze has been completed.

Appendix 2 – Diagram of BS5837:2012 recommended Tree Protection fencing



Fencing description:

All the supporting framework will be made of scaffold poles. The upright supports will be high enough to allow a 450mm fixing into the ground with an exposed upright height of a minimum of two metres. The supports will be either dug in or hammered in and no concrete will be used to retain the supports. All the pole clamps will be suitable scaffold clamps that are fixed using a nut and bolt system.

The fencing supports will be scaffold poles positioned at an angle of 45 degrees to the uprights. They will be secured into the ground at a depth of 450mm.

The fencing used to cover the framework of scaffold poles will be a typical galvanised steel 'heras' fencing, secured in place either by welding to the poles or with suitable retention clamps so that it cannot be easily removed. The fencing will be a minimum of 2.0m in height.

Appendix 2 - Fencing Notices



Appendix 3- 'No-Dig' Construction Method

A No-Dig driveway construction is implemented to avoid damage to tree roots within the Root Protection Areas (RPA) of the retained trees, the driveway within those areas will be constructed using a No-Dig methodology.

Most tree roots that are involved with the function of a tree are present in the upper 100mm of soil, they grow more-or-less parallel with the soil surface and radiate widely, usually to a distance at least equal to the height of the tree.

The soil provides for:

- the inflow of oxygen to the soil
- the outflow of carbon dioxide from the roots
- water and minerals in soil water

- supports root taper quickly as they grow away from the tree and most tree roots which are beyond 3m from the tree are often of 25mm diameter or less. It is the mass of small fine roots upon which a tree depends.

Damage to trees during construction may be caused by:

- Direct root severance.
- Indirect damage from soil compaction.
- Changes in the levels of the ground. Damage to tree roots, and other major environmental changes, may lead to the long-term decline of the tree, and decay organisms can gain entry to the tree through wounds. The supporting roots and the stem base may be exposed to severe long-term degradation because of wounds to roots of greater diameter >25mm.

The Process:

Initially ground vegetation will be killed off using a sprayed translocated herbicide (eg. Glyphosphate). Once dead all organic material, rocks, etc, will be removed. Hollows will be filled in using sharp sand. This process will be carried out by hand.

Where the boundaries of the car park are to be within the RPA of the trees, these will need to be constructed using either 100mm deep flexible timber fixed vertically in place with steel reinforcing pins hammered into the ground to support these upright panels. 3mm thick steel plate of 100mm depth can be used as an alternative as it is more flexible and mouldable than timber. This will require the same steel reinforcing rods to secure in place.

The No-Dig driveway will need to seamlessly blend into the original and newly laid car parking area to ensure the two types of parking area do not unduly wear at the configuration points.

Where the car parking area is out of the RPA traditional excavation and infill can be applied.

The area within the RPA will have geotextile membrane laid on the surface. This has to allow water drainage and gaseous exchange but stop the intermingling of the soil and construction materials.

A three-dimensional Cellular Confinement System (CCS), such as Cellweb, will be used as an integral component of the sub-base, to act as a suspension layer by creating cells into which recommended material is contained. This will be fixed into place with steel pins to cover the area to be protected.

The CCS will be filled with a no-fines aggregate (granular) sub-base layer which when compacted is free draining and allow gaseous. Type 1 road stone will not be used due to its high fines content. Clean angular stone 4-20mm or 20-40mm in diameter, or angular gravel over 4mm in diameter and able to create a positive interlock with the CCS is acceptable.

This can be vibrated into place with a vibrating plate.

The Final surface (Wearing-course) will then be applied. This can be washed gravel or permeable block paving edging where applicable. There are some cold laid permeable resin bonded wearing courses now available, but any solutions will require a road engineer to ensure that they suitably support the traffic and are long lasting.

No excavation, soil stripping, site grading, lowering or raising of soil levels or digging will take place within the BS 5837:2005 prescribed Root Protected Zone, as shown on the plan. A method of working is to be used to prevent the passage of vehicles and/or machinery across unprotected soil surface within the Root Protection Zone prior to, during and post construction.

Ideally construction will begin at the boundaries and 'rollout' the driveway in front of the machinery that remains on the sub-base.

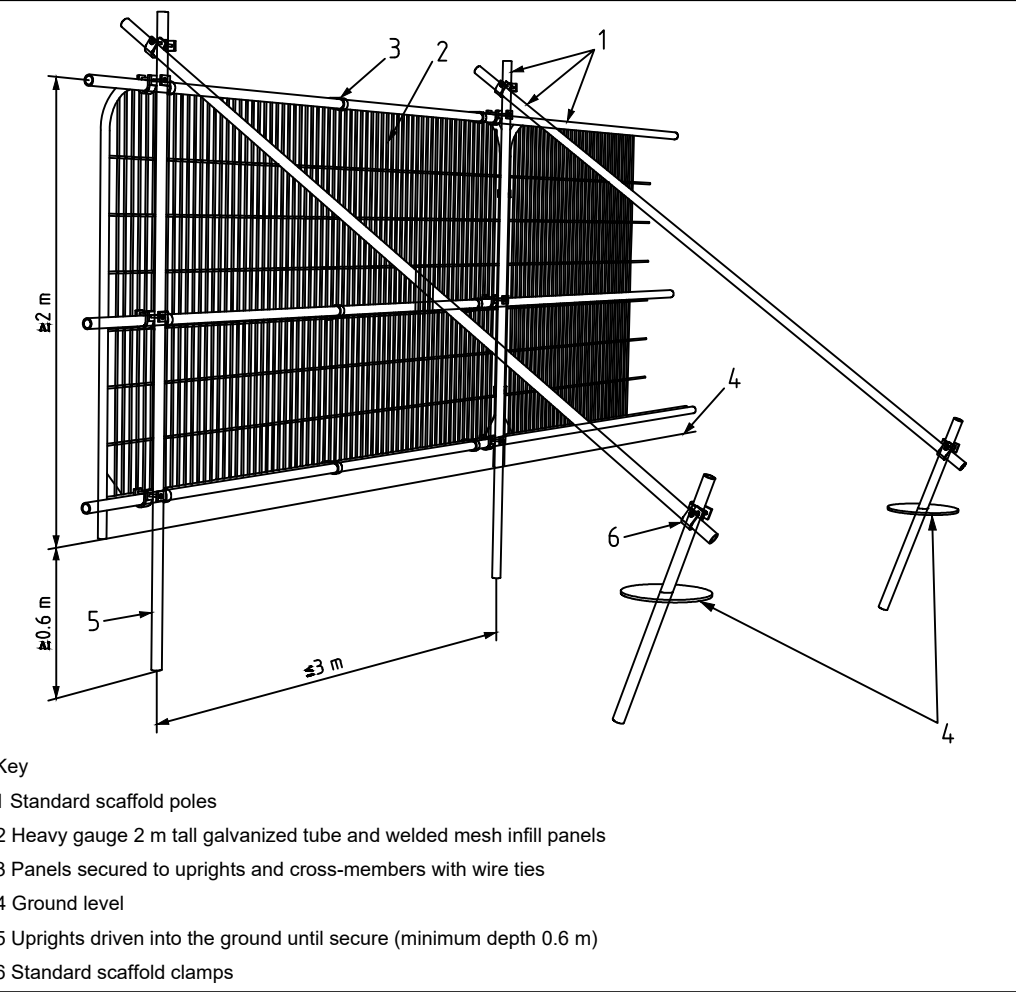
Appendix 4 – Tree Protection Compliance Form

Tree Protection Compliance Form

Work Specification	Site signature	Approval signature
Tree Surgery Works • Work carried out as specification. • Completed to BS 3998 Tree Recommendations	Tree Surgeon sign/date	Consultant sign/date
Install tree trunk Hoarding	Site foreman sign/date • Photos to be taken	Consultant sign/date
Tree Protection Fencing Installed as per TPP	Site foreman sign/date • Photos to be taken	Consultant sign/date
Ground Protection Plan • Installed as per the AMS	Site foreman sign/date • Photos to be taken	Consultant sign/date
• Ground Protection and Tree Protection Fencing Removal	Site foreman sign/date • Photos to be taken	Consultant sign/date
Landscaping Compliance	Site foreman sign/date • Photos to be taken	Consultant sign/date

Appendix 5 – Tree Protection Plan

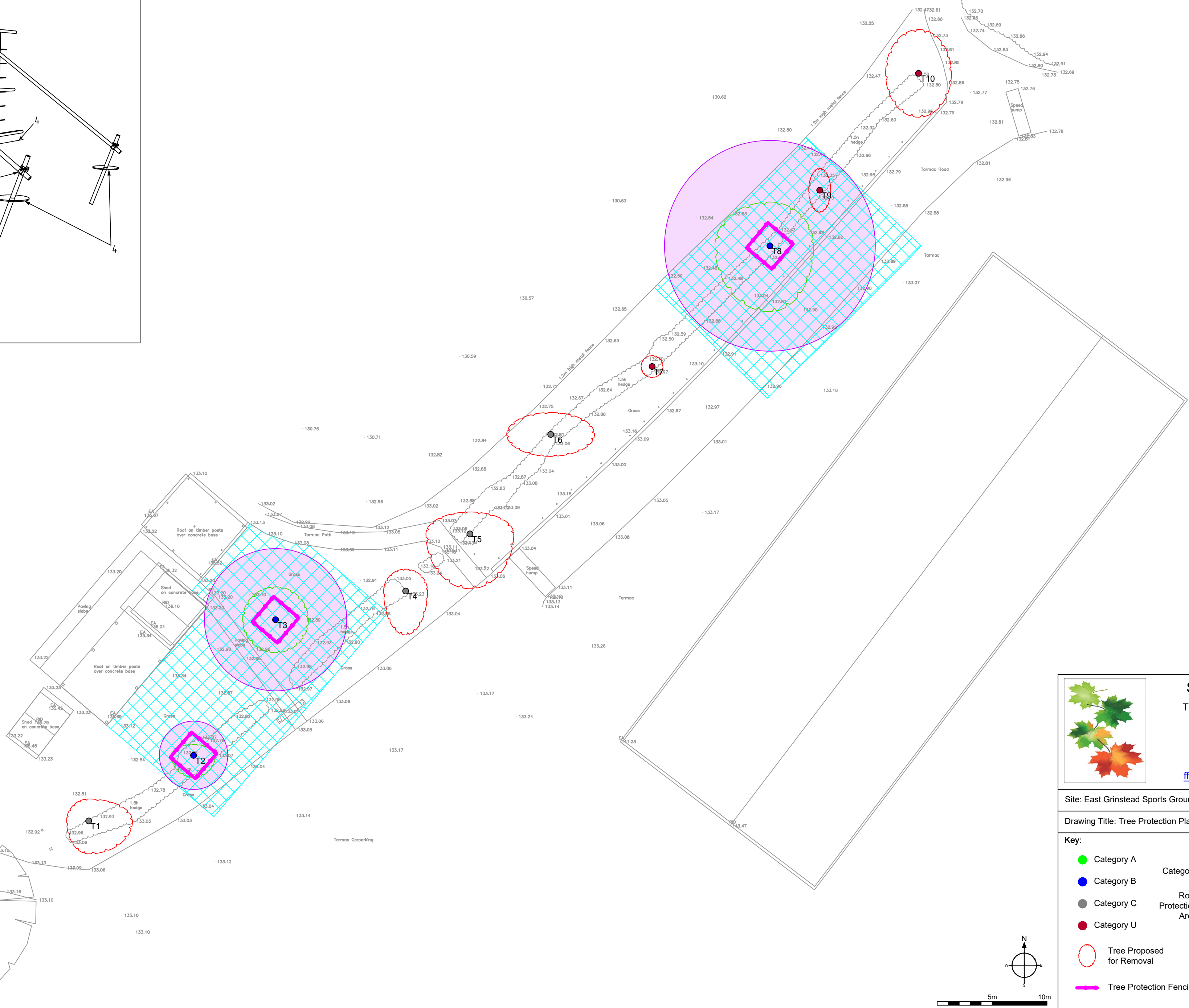
Figure 2 Default specification for protective barrier



Appendices 4 - Tree Trunk Hoarding



The tree trunk protection system must be similar in construction to the image above. The trunk must initially be hessian wrapped and the hoarding constructed around it. The ground fixing for the hoarding can either be steel rods or timber posts. The post holes must be hand dug and avoidance of any roots is paramount. No concrete is to be used to support the posts holes, just back fill with the excavated soil and tamp down. The hoarding must be constructed of a suitable water resistant boarding a minimum of 15mm thick. This will be fixed in place to just below the first branch union. All hoarding is to stay in place until the final landscaping faze has been completed.



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Site: East Grinstead Sports Ground 1-250@A2

Drawing Title: Tree Protection Plan Dec 2024

Key:

Category A

Category B

Category C

Category U

Tree Proposed for Removal

Tree Protection Fencing

Category

Root Protection Area

Crown Spread

Tree Number

'No-Dig' Solution to Car Park