

BS5837:2012
Arboricultural Method Statement
For
East Grinstead Sports Club,
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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 retrospective construction of a suitable car parking area within the extended staff car park. The assessment was to consider trees on the boundary of the woodland that may be affected by the construction process. 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 were;

- 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 retrospective construction process.
- To provide a Tree Protection Plan (TPP) showing where the Ground protection will be installed.

1.2 Documents Provided

1.2.1 A plan drawing Job No 24092520-01 Drg 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 (TPP) that will show where the ground protection and the tree protection will be implemented.

2.2 Specific Advice - Tree Protection Plan

- 2.2.1 The first step is to carry out the Tree surgery to the trees with dead wood and hanging branches.
- 2.2.2 The excavation of the current wearing course of Limestone scalpings and any membrane acting as a separation layer from the RPA area of the parking area will then be carried out. This can be carried out by plant machinery working from the existing car park and working from the furthest point backwards.
- 2.2.3 The area to be excavated will have to be pulled back further than the RPA to allow for a shallow gradient that will be required to install the No Dig construction process that will be 400mm above the original ground level. A 1:100 gradient will suffice to allow a seamless transition from the old car parking area to the new one.
- 2.2.4 The installation of the No Dig construction is set out within **Appendix 2**. The area to have the TPP installed is in **Appendix 4**.
- 2.2.5 The tree trunk wooden hoarding will need to be applied to the trees T11, T12 and T13 before construction begins. The style and construction are detailed in **Appendix 1**.
- 2.2.6 There is no requirement for Tree Protection Fencing as the work is to be moving away from the woodland not around it.

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 3** 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.

Appendix 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 and no part of the hoarding is to be able to touch the structure of the tree.

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

Appendix 2 – No Dig construction process

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

Most tree roots are present in the upper 100cm 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 of 25mm diameter or less. It is the mass of small 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 No-Dig Construction process is a three-dimensional Cellular Confinement System (CCS), such as 'Cellweb' or similar 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. A geotextile layer will be installed between the ground and the cells to prevent mixing and the cellular materials being pressed into the ground. Infill materials will include 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.

Final Surfaces (Wearing-course) are to be washed gravel, permeable block paving edging where applicable and permeable block paving between highway and gate. 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.

Once the wearing course and the membrane has been removed, the soil bund can either be incorporated back onto the ground or removed to another location.

The plant undertaking this process must not drive over the RPA of the trees unless there is suitable temporary ground protection.

The No Dig construction will begin from the existing car park and it will be constructed via this area in a fashion that does not involve any plant transgressing the uncompleted parking area.

The edging for the new car parking area will be made of wooden tanalised boards that will be at the height of the wearing course (400mm) in height and at least 15mm thick. These will be secured in place with 10mm diameter steel reinforcing rods at suitable placements to ensure there is no bulging of the boards. Half metre spacing is suitable. The boards should be level and secured to each other with angular brackets and screws.

There will need to be edging around the wooden hoarding as the base of the tree must not be covered with the infill. The edging will be half a metre from the tree trunks.

The ground between the edges will be covered with a permeable geotextile membrane and then 400mm honeycomb cellular confinement system will be laid on top and secured with steel pins.

The infill will be a 'No fines' angular stone to allow water and air movement that will be vibrated in place to 320mm leaving 80mm for the wearing course.

The wearing course will be either 20mm gravel or angular Limestone as per the infill.

The No Dig construction will be higher than the surrounding, existing car park, so this will need to be blended into the car park on a 1:100 slope. This will ensure that the two differing forms of the car park/road allow for traffic movement with the minimum of disturbance to the differing car park styles of construction.

The No Dig construction must remain half a metre away from all the tree trunks to ensure there is no changes to the levels close to the trunks.

Once the car parking area has been completed the wooden hoarding can be removed.

Appendix 3 – 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
Installation of Trunk Hoarding • Installed as per the AMS	Site foreman sign/date • Photos to be taken	Consultant sign/date
Excavate existing wearing course. Remove the soil bund and incorporate. • Work carried out as specification requirement	Site foreman sign/date • Photos to be taken	Consultant sign/date
Install the ground protection as per instructions in the AMS	Site foreman sign/date • Photos to be taken	Consultant sign/date
Remove the hoarding	Site foreman sign/date • Photos to be taken	Consultant sign/date

Appendix 4 – Tree Protection Plan

