

BS5837:2012
Arboricultural Method Statement
For
The Grange Centre for People with Disabilities

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Arboricultural Method Statement (AMS)

assessed in accordance with

BS5837:2012

'Trees in relation to design,

demolition and construction

-Recommendations'

Contents

- 1.0 Introduction**
- 1.1 Client Instruction**
- 1.2 Documents Provided**

- 2.0 Arboricultural Method Statement (AMS)**
- 2.1 General Advice**
- 2.2 Specific Advice – Tree Protection Plan**

- 3.0 Site Monitoring**
- 3.1 Pre-commencement meeting**
- 3.2 On site supervision**

- Appendix 1 Diagram of BS5837:2012 recommended Tree protection fencing**
- Appendix 2 Fencing Notices**
- Appendix 3 Ground Protection Plan**
- Appendix 4 Tree Hoarding Specification**
- Appendix 5 Tree Compliance Form**
- Appendix 6 Tree Ground Protection and Fencing Plan**

1.0 Introduction

1.1 Client Instruction

1.1.1 Simon Ffoulkes Tree Consulting was instructed by The Grange Centre for People with Disabilities, to undertake an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) for the proposed Project of an Outdoor Learning facility. The assessment was to consider trees within the Proposal that will or maybe 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 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 proposed construction process.
- To provide a TPP showing where Protective fencing will be erected.

1.2 Documents Provided

1.2.1 Four plan views Scale 1:300 of the demolition, construction and landscaping phases, numbers 460 – PL- 11-14, from Matter Architects.

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.

2.2 Specific Advice - Tree Protection Plan

2.2.1 The trees T2 and the group T17 will not be directly affected by the construction process but the access roads and paths being built will need to take account of the tree RPA and the canopy of the trees whilst all the activities associated with the demolition and construction process are being carried out.

- 2.2.2 The trees T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14 and group G17 are in some way affected by the Project. The trees on the AIA that are to be removed must be removed before any of the main project of demolition is started.
- 2.2.3 The trees that are to remain whether regarded as worthy of retention or not must have suitable tree protection throughout the project, this will entail a Tree Protection Plan (TPP) with a fencing element and ground protection. The canopies of the trees will require suitable height barriers to stop plant hitting the canopies. The trunks of certain trees will require a cladding and protection for the trunk.
- 2.2.4 The first stage after the removal of the selected trees is to install the Tree Protection Fencing. The style is shown in the **Appendix 1 and 2**. The layout is shown in the TPP **Appendix 6**. The second stage is to construct the ground protection as specified in **Appendix 3**. This will require some form of arboricultural attendance to ensure compliance.
- 2.2.5 There must be ground protection for the trees as the rooting area will require protection from compaction and leaching from building processes. The details are shown in **Appendix 6**, The Ground Protection Plan.
- 2.2.6 There is a requirement to protect the trunks of the retained trees T2, T7 and T8 with hoarding, the style and process of constructing and implementing this can be found in **Appendix 4**
- 2.2.7 There will be a requirement to implement height barriers just under the canopies of the trees T2, T7 and T8. This will ensure that plant working around these trees will not accidentally damage the tree canopies.
- 2.2.8 The height barriers can be a simple scaffold construction that is fitted into the ground or erected as a free standing structure that in the case of the tree T2 is just under the canopy of the tree along the thoroughfare routes, but allows traffic to flow freely under it. The structure should be wrapped in yellow tape to signify that it is a hazard.
- 2.2.9 The height barriers around the trees T7 and T8 can be fitted on the East and South sides of the canopies.
- 2.2.10 If there is a requirement to sever any roots within the RPA of the trees the National Joint Utilities Guidelines 10 (NJUG), volume 4, must be observed. Roots over 25mm that are found require they are chased out with hand digging tools or an air spade. They can then be re-routed entirely or severed where they are 25mm or less and then re-routed. All exposed routes must be covered with hessian sacking until they are covered with soil after exposure.
- 2.2.11 It is assumed that all the underground facilities are in place for the buildings. If additional routing is required and excavation of the areas within the RPA is required, this will require some form of arboricultural monitoring, whilst it is being carried out. This must all be hand dug or an air spade used for the excavation process, with the NJUG 10, volume 4, being observed.

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

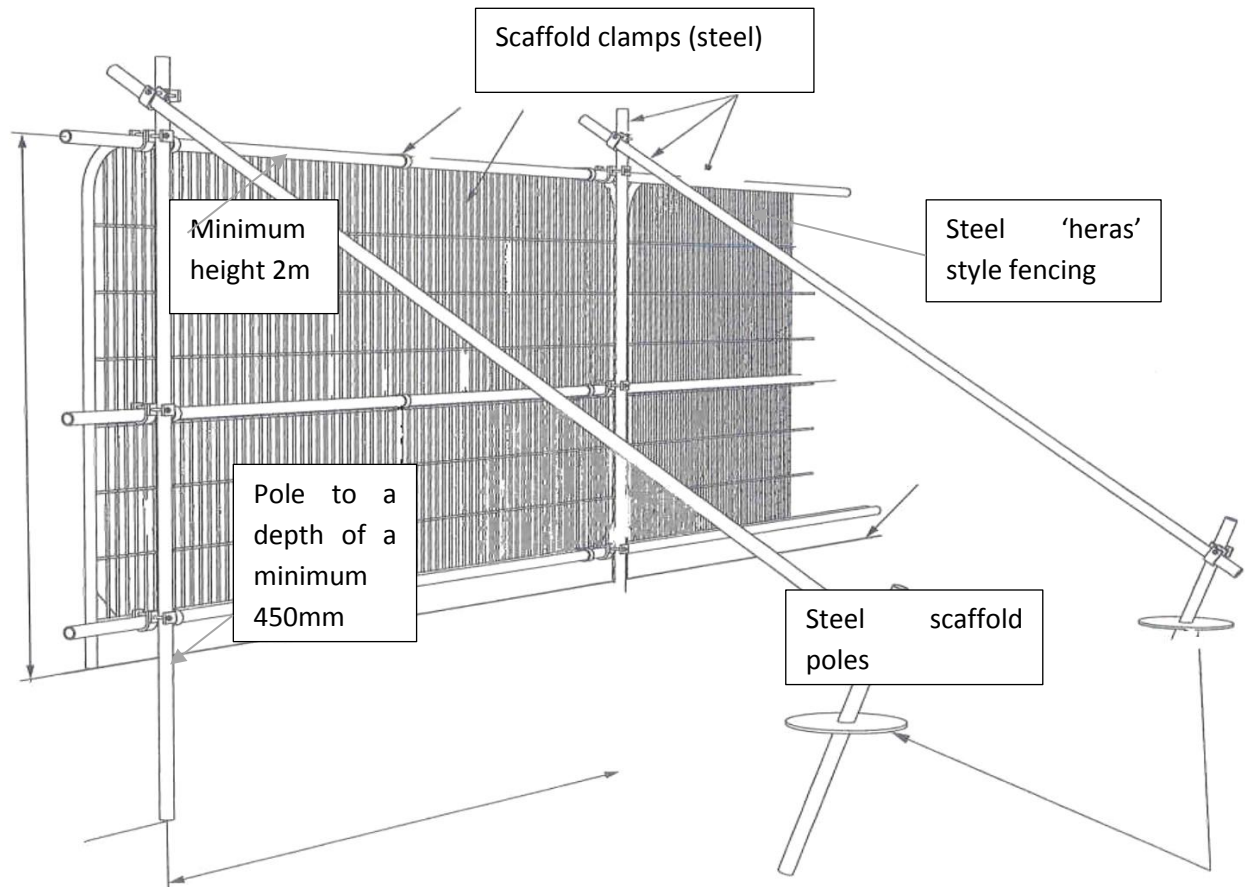
3.2.1 To ensure that the Tree protection barriers and Ground protection are installed correctly a suitable arboricultural attendee will be required. To ensure all the procedures are followed and observed during construction, photographic dated records of all the processes involved during construction must be taken. 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 5** 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.

3.2.4 It is easy to undo all the protection measures during the landscaping stage so whilst this happens the minimal amount of plant use, soil grading and moving of machinery across the RPA must be observed.

Appendix 1 – Diagram of BS5837:2012 recommended Tree Protection fencing



Fencing description:

All the supporting frameworks 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- Ground Protection Plan

4.0 Ground Protection Plan

- 4.1.1 Tree protection for the retained trees will be installed before any of the construction process work is undertaken. This must ensure that the movement of plant and machinery on site pre-construction does not take place before the tree protection measures are in place.
- 4.1.2 Tree protection shall include protection for the trees which require tree surgery management, before any construction work begins. This is to ensure that the ground is not compacted, and no other trees are damaged by the tree surgery.
- 4.1.3 Normally the RPA must be regarded as unavailable for use during the development process and access within the RPA is to be strictly limited. In the case of this project to allow the building process to work access within the RPA of the trees T4 to T14 will be required so ground protection measures within the RPA will be required
- 4.1.4 Trees that are to be retained should be protected in a manner consistent with that indicated in the British Standard 5837:2012 to protect the RPA to the end of the project. The protection area is known as the Tree Protection Plan (TPP) and will need to be implemented when the scheme is finalised.

- 4.1.5 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. No fires within 10m of the RPA
- 4.1.6 Where root severance is required, roots up to 25mm in diameter can be severed and larger roots should follow the NJUG 10, volume 4, with arboricultural supervision.
- 4.1.7 The area that requires ground protection must be treated with a Glyphosate herbicide and any small mounds must be levelled off using hand tools
- 4.1.8 The ground protection for the working area will consist of a permeable black membrane being placed onto the ground and then a 150mm layer of composted bark will be laid onto this. The outer edges of the ground protection will be contained by suitably strong wooden boards (6"x2") to contain the wood mulch. A double layer of overlapping scaffold style wooden boards will be used to resist any compaction of the soil and allow weight distribution. This level of protection will be enough to protect against soil compaction for the labour force using the site and any plant moving over the site that is under 1.5t in weight. If there is to be plant access required over 1.5t weight the scaffold boards will need to be replaced with steel plates or a suitable tracked system will be required to be installed. Any scaffolding that is supported by the ground must be on steel feet to spread the load of the scaffolding structure.
- 4.1.9 Changes to any of the original soil levels can have a dramatic effect on existing trees weather these include mounding of soil or trenching and soil removal even if only temporary.
- 4.1.10 Changes to any soil levels should be discussed before the final plans are decided upon.
- 4.1.11 Tree protection includes protection to the canopy of the trees and where the canopy of a tree extends beyond the RPA this area should be included as part of the tree protection zone.
- 4.1.12 Intrusion into any of the tree canopies must be discussed with the arboricultural consultant before any access within the canopies is permitted.

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.

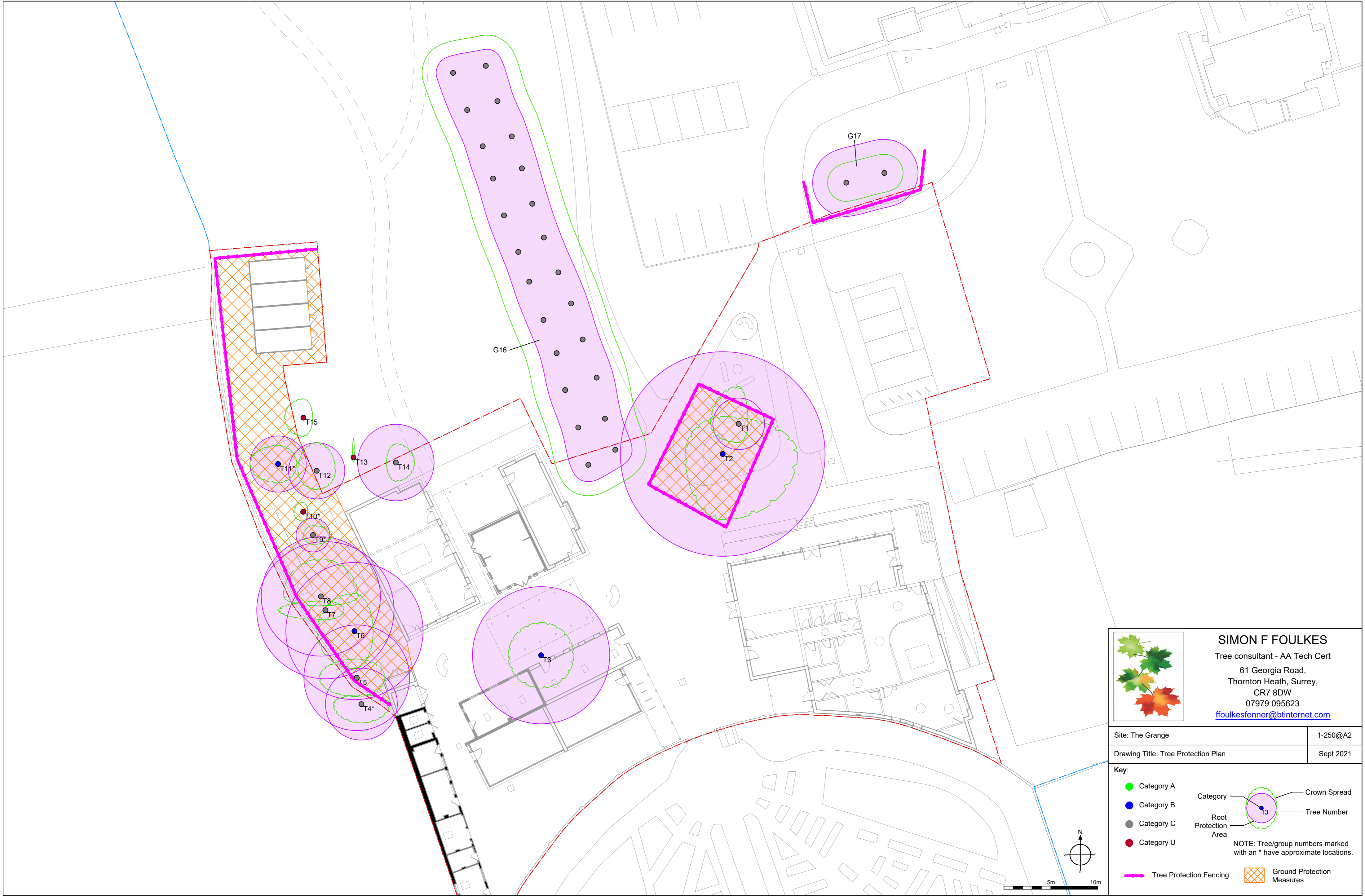
The hoarding must be constructed of a suitable water resistant boarding a minimum of 15mm thick. This will be fixed in place to just below the first branch union.

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

Appendix 5 – Tree Protection Compliance Form**Tree Protection Compliance Form**

Work Specification	Site signature	Approval signature
Tree Surgery Works <ul style="list-style-type: none"> • Work carried out as specification. • Completed to BS 3998 Tree Recommendations 	Tree Surgeon sign/date	Consultant sign/date
Tree Protection Fencing <ul style="list-style-type: none"> • Installed as per TPP • Tree Trunk Hoarding installation 	Site foreman sign/date <ul style="list-style-type: none"> • Photos to be taken 	Consultant sign/date
Ground Protection Plan <ul style="list-style-type: none"> • Installed as per the AMS 	Site foreman sign/date <ul style="list-style-type: none"> • Photos to be taken 	Consultant sign/date
Foundation excavation within the RPA's of trees <ul style="list-style-type: none"> • Work carried out as specification requirement 	Site foreman sign/date	Consultant sign/date
Ground Protection and Tree Protection Fencing Removal	Site foreman sign/date <ul style="list-style-type: none"> • Photos to be taken 	Consultant sign/date
Landscaping Compliance	Site foreman sign/date <ul style="list-style-type: none"> • Photos to be taken 	Consultant sign/date

Appendix 5 – Tree Protection Plan



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Site: The Grange	1-250@A2
Drawing Title: Tree Protection Plan	Sept 2021

Key:

- Category A
- Category B
- Category C
- Category U

Category

Root Protection Area

Crown Spread

Tree Number

NOTE: Tree/group numbers marked with an * have approximate locations.

- Tree Protection Fencing
- Ground Protection Measures