

FIGURE 1 - Tree protection fence  
Examples of above-ground stabilizing systems

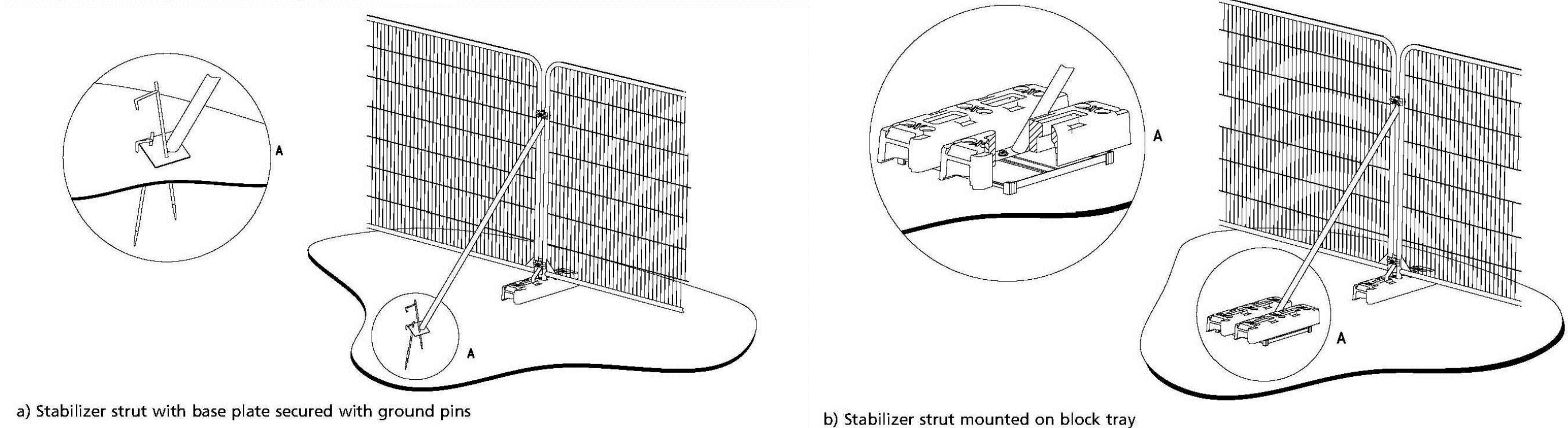


FIGURE 2 - Tree protection fence near buildings

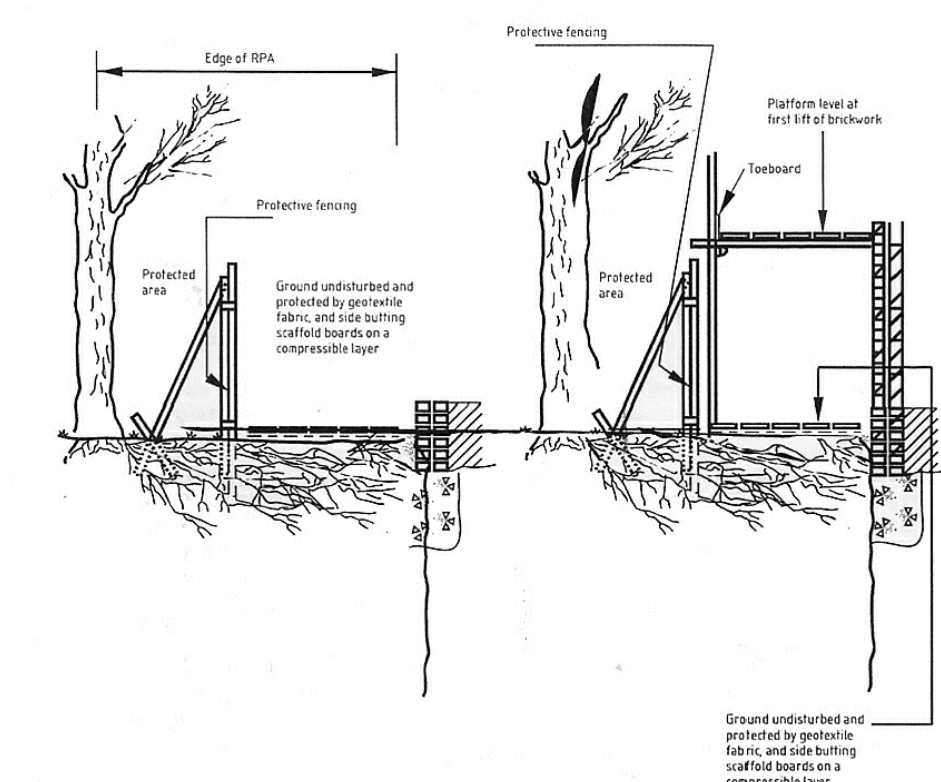
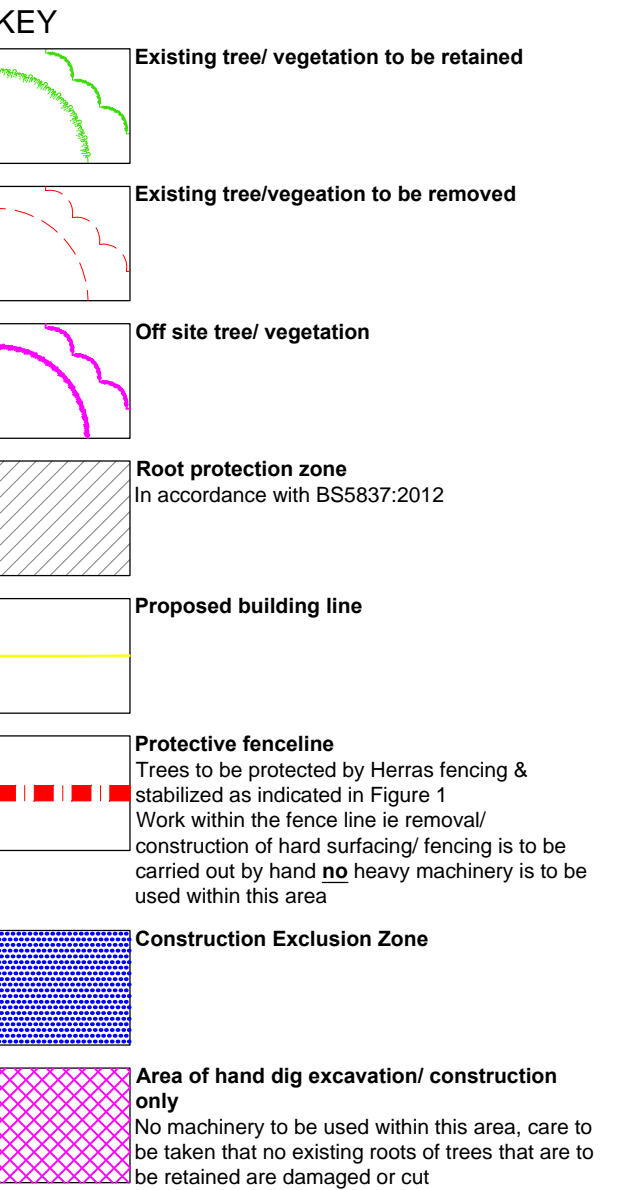


FIGURE 3 - Tree Protection Sign



## ARBORICULTURAL METHOD STATEMENT

### SITE OFFICES/ WELFARE FACILITIES & COMPOUND

Site offices, welfare facilities and compound should be set up away from the trees and associated Root Protection Areas RPA's. There should be no discharge of effluent into the RPA's and the site should be arranged so that there is no run off into the trees or any chance of hazardous substances leaching into the ground. This drawing must be used by the appointed contractor to work up a site works drawing which shows the position of the temporary site office, welfare facilities, storage compound, temporary hard standing and site access for vehicles and pedestrians. From commencement of the development the following methodology shall be implemented in the manner & sequence described below.

### SEQUENCE OF WORKS

1. Pre-contract site meeting
2. Tree removal & pruning
3. Erection of 'tree protection barriers'
4. Main construction phase
5. Removal of 'tree protection barriers'
6. Landscape Works

#### 1. PRE-CONTRACT SITE MEETING

To outline working methods in relation to trees, a site meeting of the following shall take place prior to commencement of any demolition or construction activity on site:

- Client
- Main contractor
- Site Agent
- Project arboriculturalist / tree surgeon

Before the site meeting, existing incoming services & drainage shall be accurately located both on site & on a copy of this drawing

#### 2. TREE REMOVAL & PRUNING

- a. All trees works are to be carried out inline with good arboricultural practice inline with BS3998:2010 by competent and where applicable certified personnel and outside of the bird nest season (31st March-31st August) or following a bird nest inspection by a qualified ecologist. Any works to trees off site require the approval of the landowner.
- b. Every effort shall be made to prevent damage to retained trees, shrubs & hedges
- c. All tree stumps shall be removed by mechanical stump grinder & shall not be excavated in their entirety by mechanical excavator
- d. All operatives shall be equipped with & shall use personal protective equipment in accordance with current Health & Safety Executive guidance or current industry codes of practice
- e. Systematic herbicides shall not be used in the poisoning of the stumps of felled trees
- f. Performance of all arboricultural operations & use of equipment shall be in accordance with current directives of the Health & Safety Executive & current industry codes of practice

#### 3. ERECTION OF TREE PROTECTION MEASURES

- a. The main contractor shall erect 'tree protection barriers' or Ground Protection to protect any retained trees/ vegetation before any demolition work, materials or machinery is brought onto site. Please refer to drawing for location of the Tree Protection Fence, Figures 1 and 2 for fence erection methods and specification below:  
The 'tree protection barriers' shall be 2m high Herras fencing as shown in Figure 1  
The weldmesh panels should be 2m tall & mounted on rubber or concrete feet.  
The panels should be joined together using a minimum of 2 anti-tamper couplers, installed so as they can only be removed from the inside of the fence  
The distance between the couplers should be at least 1m & should be uniform throughout the fence.  
The panels should be supported on the inside by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 1a).  
Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, eg. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 1b).
- b. All weather notices should be attached to the Tree Protection Fences which read "TREE PROTECTION AREA-KEEP OUT!" Please refer to Figure 3.
- c. The Project arboriculturalist / tree surgeon shall inspect installation of the 'tree protection barriers' prior to commencement of any demolition or construction works, site preparation, excavation or delivery of plant & materials.

#### NOTE

Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed. This temporary ground protection should look to fulfil the following:  
a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane  
b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane  
c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an agreed specification to accommodate the likely loading to which it will be subjected.

#### 4. MAIN CONSTRUCTION PHASE

- a. There shall be no storage of construction equipment, machinery or materials within any of the following designated areas:
  - i) within the RPA (root protection area) of trees to be retained
  - ii) areas indicated for hand dig excavation/ formation or construction
- b. No heavy machinery is allowed within any of the following designated areas to reduce the risk of unwanted soil compaction:
  - i) within the RPA (root protection area) of trees to be retained
  - ii) areas indicated for hand dig excavation/ formation or construction
- c. No storage or tipping of any materials & substances which, if accidentally spilled would cause damage to a tree by contaminating the soil ie. Diesel oil and vehicle washings should not be discharged within 10m of the tree stem.  
Toxic substances such as fuels, oils, additives & cement shall not be stored within 5.0m of any RPA
- d. Fires on sites should be avoided if possible where there are existing trees/ vegetation. Where they are unavoidable, they should not be in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location, and it should be attended at all times until safe enough to leave.
- e. Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus necessitating access facilitation pruning.
- f. Excavation shall not occur at a distance of less than 300mm from 'tree protection barriers'
- g. The integrity of the 'tree protection barriers' shall be maintained for the duration of the main construction phase
- h. Any damage occurring to the 'tree protection barriers' during the main construction phase shall be immediately made good by the main contractor
- i. Site drainage & washings from concrete & mortar mixings shall be directed away from all 'construction exclusion zones' & trees to be retained
- j. The area of ground identified by cross hatching on this drawing shall be excavated down to formation level by hand. All such works shall be carried out in accordance with requirements of section 7.2 of BS5837:2012
- k. Notice boards, telephone cables or other services should not be attached to any part of trees that are indicated to be retained.
- l. The site manager is responsible for general daily observations of the fence and trees throughout the length of the build. Any damage to the fence should be rectified immediately or concerns about the trees reported back to the Arboricultural Clerk of Works.

#### 5. REMOVAL OF TREE PROTECTION BARRIERS

'Tree protection barriers' shall be removed only upon completion of site construction works & in compliance with all relevant planning conditions

#### 6. LANDSCAPE WORKS

- a. All hard & soft landscaping works shall be implemented in accordance with the project architect drawings
- b. No rotover of ground within any area designated as a 'construction exclusion zone' or otherwise protected on this drawing
- c. Sandy topsoil may be spread within the RPA to a depth of no more than 150mm to facilitate establishment of new vegetation. No other addition of soil or other material shall be carried out within these areas without prior consultation with the LPA

#### WORKS WITHIN THE ROOT PROTECTION AREAS (RPA)

Site clearance, excavation and construction works on the edge or within the RPA's of retained trees as shown on this plan must be supervised by an Arboriculturalist, the contractor must give the Arboriculturalist min 7 days notice prior to the start date of these works. For further information and guidance on works within the RPA please refer to the notes below:

#### EXCAVATIONS

Excavations should be undertaken carefully, using the smallest possible mechanical bucket. The ground should be excavated working backwards (from within the building) over the area, so that the machine is not moving over the exposed ground or under the trees. If any tree roots are encountered during the excavation works which are unavoidably cut or damaged they must be treated inline with 'Method for Cutting Tree Roots' notes below. Prior to backfilling retained roots which have been exposed should be surrounded with topsoil or un-compacted sharp sand (builders' sand should not be used because of its high salt content, which is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.

#### PROPOSED FENCES

Post holes should be dug using the smallest possible mechanical bucket with machinery sat outside of the RPA or hand dug if close to the tree trunk. The posts should be positioned at different spacing's if necessary so as to avoid any structural roots.

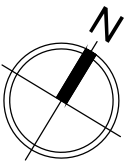
#### PROPOSED DRAINAGE

New drains and services should look to be routed away from the RPA's of the trees to be retained to avoid digging trenches through roots of the retained trees and avoiding future problems with tree roots damaging drains. NB: For all of the works described above any tree roots encountered that require cutting must comply with the method statement below. If large structural roots are encountered that require cutting then the Arboriculturalist MUST BE CONSULTED prior to any further works being carried out in this area. At NO point should site works render any trees structurally unsound or be detrimental to the future health of these trees.

#### METHOD FOR CUTTING TREE ROOTS

Water the tree a few days before works are carried out, making sure the ground is moist within the drip line of the tree (only required during the growing season). Make sure the cuts are done with hand tools that will make clean, quick cuts (i.e. chain saw or axe), do not use large mechanical equipment. Make sure cut roots are covered with soil and woodchips as soon as possible, DO NOT LEAVE EXPOSED. If roots are going to be exposed for more than an hour cover with a damp cloth. Water the tree thoroughly when job is done (only required during the growing season).

IF IN DOUBT ON ANY ISSUES CONCERNING THE TREES PLEASE CONSULT THE PROJECT ARBORICULTURALIST



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| Project Title<br><b>Saw Mills, New Mills</b> |
| Drawing Title<br><b>Tree Protection</b>      |
| Status<br><b>PLANNING</b>                    |

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|---------------------------|--------------------------|---------------------|---------------------|
| Scale @ A1                | Drawn By<br><b>KAS</b>   | Checked By          | Authorised By       |
| 1:200                     | Date<br><b>Sept15</b>    | Date<br><b>xxxx</b> | Date<br><b>xxxx</b> |
| Project No.<br><b>062</b> | Drawing No.<br><b>02</b> | Revision            |                     |