

CONSTRUCTION PHASE

GENERAL PRINCIPLES TO AVOID DAMAGE TO TREES.

1. A position for tree Protection Fences is indicated on Tree Protection Plan
2. An indicative list of recommended practices during construction phase is listed below:
3. Once installed tree protection must remain in place and be observed at all times.
4. No fires within 10m of the crown of any retained trees.
5. Soil levels in rooting areas to be retained with minimal level changes, no greater increases than 300mm from existing levels.
6. No cement mixing/washout to take place within 15m of any retained trees.
7. No chemicals, bitumen etc. to be stored within 10m of any retained trees.
8. Any spillage of fuel, chemicals or contaminated water occurring within 2m of the root protection areas to be reported to project supervisor.

A. ALL HAND DIG AREAS (YELLOW/CYAN)

Basic principles.

New structures and compaction of soil in RPAs are potentially damaging to trees because they may disturb the soil and disrupt the existing exchange of water and gases in and out of it. Mature and over mature trees are much more prone to suffer as a result of these changes than young and maturing trees.

1. Installation of the tree protection fencing at the location shown in TPP.
2. Marking of the edges of the hand excavation areas with securely driven posts or steel road pins and site barrier mesh.
3. Remove the surface vegetation using appropriate hand held tools or herbicide*. Remove any surface rocks, debris and organic material. Create a level surface by filling any hollows with clean angular stone or sharp sand. Do not level off high spots or compact the soil through rolling.

*Note: Extract from BS5837:2012 "The use of herbicides in the vicinity of existing trees should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from the manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained, species to be introduced, and existing sensitive habitats, particularly those associated with aquatic or drainage features.").

B. NO DIG ACCESS CONSTRUCTION (CYAN SHADING)

1. The creation of an access route (cyan shading) a will require work within the RPA of T4
 2. Construction into established root zones may be achieved without significant harm to retained trees if appropriate construction methods are used. In this instance we recommend that a 'no dig' construction based upon the commonly used method of a geocell grid infilled with porous material and retained by surface mounted edging is used.
 3. Tree protective fencing must be in position at locations on the TPP prior to commencement of the construction of the reduced areas. The area of reduced dig construction must be marked by securely driven road pins / posts and barrier mesh. This must stay in place throughout the construction of the access / parking area.
 4. Remove the surface vegetation using appropriate hand held tools or herbicide*. Remove any surface rocks, debris and organic material. Create a level surface by filling any hollows with clean angular stone or sharp sand. Do not level off high spots or compact the soil through rolling.
- *Note: Extract from BS5837:2012 "The use of herbicides in the vicinity of existing trees should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from the manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained, species to be introduced, and existing sensitive habitats, particularly those associated with aquatic or drainage features.").
5. We recommend that the edges be created using surface mounted wooden edging in the form of pre-treated landscaping poles or similar. This edging may be securely fastened in position with steel road pins or similar. Alternative edging must not require excavation of over 150 mm in depth.
 6. Once the edging is in place surfacing of the parking area and access route should consist of porous material e.g. gravel, porous tarmac or porous block pavers. This Porous material should be used in conjunction with a surface mounted cellular containment system e.g. Geosynthetic Cellweb TRP or equivalent product. This containment system must be installed to the relevant manufacturer guidelines. See attached Appendix 2 for manufacturer installation guide of the above system.
 7. In all instances the installation of the cellular containment system base must be installed prior to any access into the RPA of T4.
 8. Construction of the continuation of the access route should take place from the standard construction method access route outwards in a linear manner with no incursions into the line of the protective fencing
 9. Upon completion of the access route tree protection fencing must remain in place until the completion of the development.

C. DECKING INSTALLATION WITHIN RPAs (YELLOW SHADING)

1. Installation of supports within the RPA identified in the TPP shall at all times be by hand methods with no use of heavy plant and machinery.
2. The limited scope of works within the RPA mean that no additional ground protection measures are required.
3. The location of post positions within the RPA should be clearly marked out on site to avoid unnecessary digging within the RPA.
4. Post installation locations should be carefully hand dug to final installation depth to establish the presence of any significant root structures.
5. If roots over 25mm are encountered they should ideally be relocated to the outside of the excavated hole, if necessary by the enlargement of the excavated hole. These roots should be covered with moist topsoil. If relocation is not possible then they shall be pruned to a lateral root branch, pruning will use an appropriate hand tool i.e. bypass loppers or pruning saw. Any tools shall be disinfected prior to use for pruning.
6. Any roots below 25mm in diameter may be either relocated to the outside edge of the excavation or if this is not possible then pruned back with disinfected secateurs.
7. On completion of the excavation then the hole will be lined with an impermeable material i.e. 'Visqueen' to prevent leaching of cement products into the root zone.
8. All concrete mixing will take place outside the RPA and will be transported into the RPA for final use. A similar impermeable sheet should be placed around the hole prior to pouring of any concrete to prevent ground contamination from spillages of wet concrete mixes

TREE WORKS REQUIRED.
Boundary groups may require pruning back of branches which are in conflict with individual lodge locations. All pruning works to reduce canopies / branches should be undertaken to BS3998:2010 with pruning cuts to a suitable lateral branch or union.

TREE REMOVALS REQUIRED FOR COMPLETION OF DEVELOPMENT
As detailed on plan

TREE REMOVALS REQUIRED IRRESPECTIVE OF DEVELOPMENT
As detailed on plan

TREE PROTECTION PLAN



Summary:

20'x44'

16'x44'

20 No. 20' x 44' plots
36 No. 16' x 44' plots

Total 56 Plots

All roads shown at 4.5m (14' 6")
Minimum 6.0m (20') between all homes
Lodges have 7.0m (23')

Tree Protection Plan / AMS

Project - Three Rivers West Bradford, Clitheroe, Lancashire

Leisure development

Survey Date - 23/9/15

Scale 1:500

Version - 1 Created - A.W.

File date - 23/11/17

File amends - 14/12/17 base file

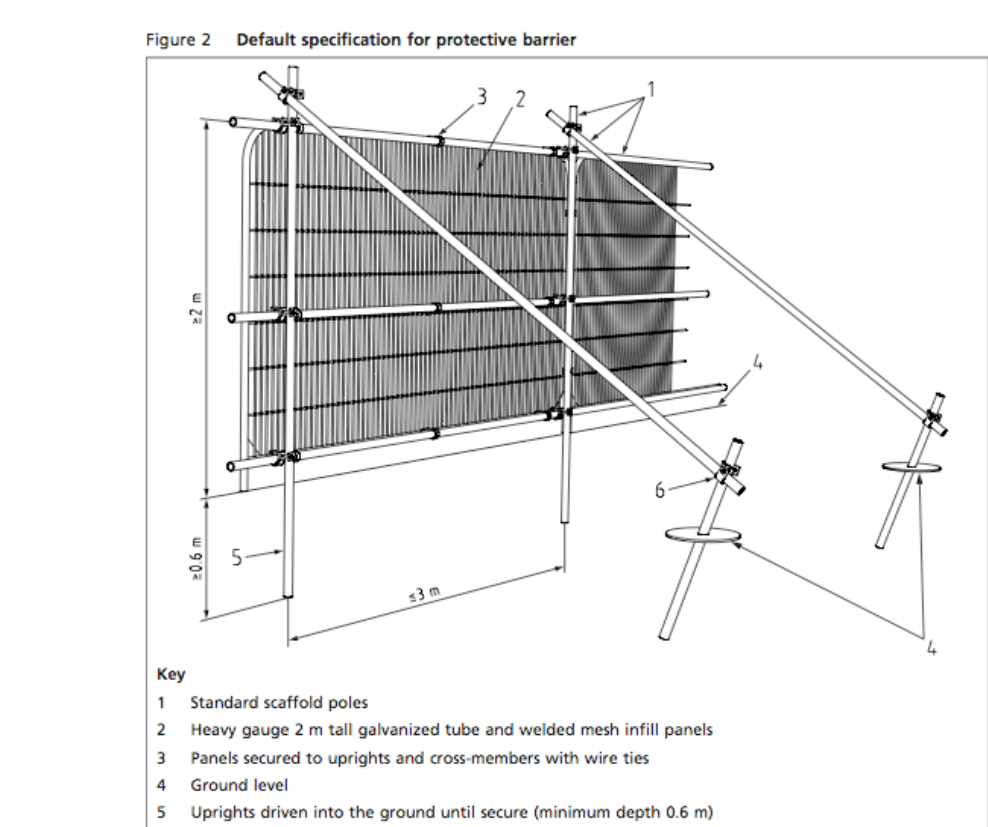
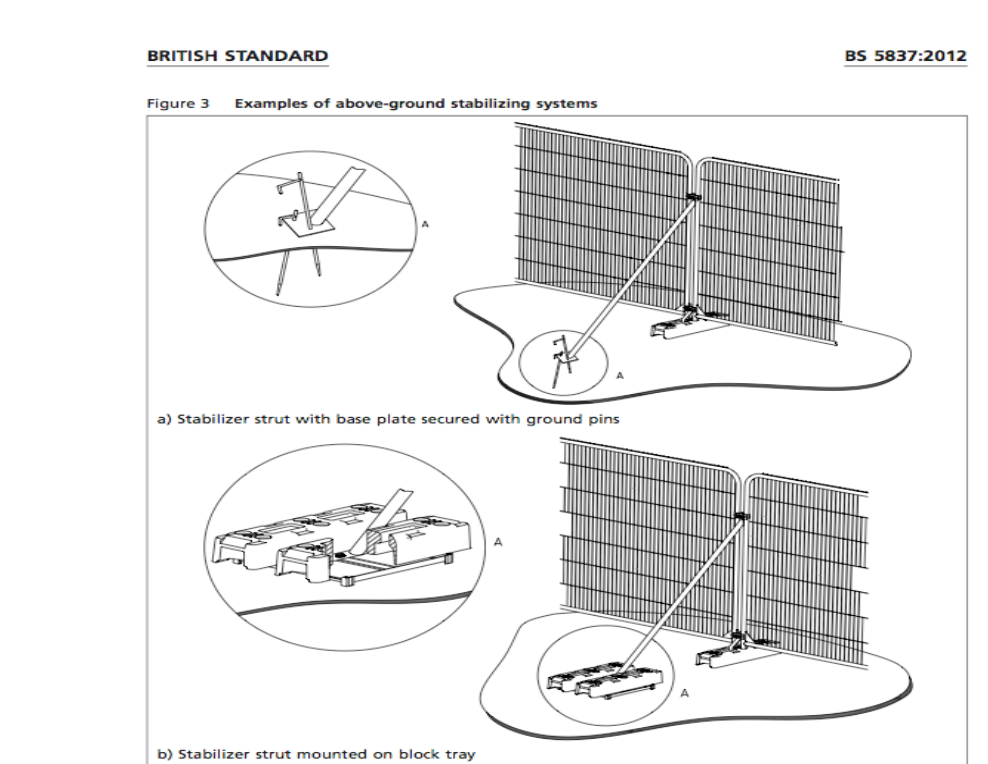
Yew Tree and Garden
Yew Tree House
Hale
Milnthorpe
Cumbria
LA7 7BJ

015395 63527/07813 897631
info@yewtreegardens.co.uk

D. PROTECTIVE FENCING

1. Once erected all protective fencing will be regarded as sacrosanct and will remain in place until the completion of the construction phase. It shall not be removed, relocated or breached at any time without consultation with the project arboriculturalist.
2. Protective fencing will be constructed of barriers fit for the purpose of excluding construction traffic from root protection areas. Details of appropriate fencing types are detailed below.
3. Signs will be affixed to every third panel of Type A fencing stating 'Tree Protection Area Keep Out'. See illustration for example of signage.
4. All fencing will be securely affixed to avoid movement of fencing during the construction phase.
5. For the sections marked in solid magenta on the Tree Protection Plan as 'Type A' Fencing fences will be constructed of site fencing of 'Heras' type which must be securely braced with additional measures to prevent movement of the fence during construction. These sections are to provide protection for significant mature trees within the site.
6. For sections marked in dash dot magenta line then 'Type B' fencing may be used. This should consist of securely driven posts or steel road pins used in conjunction with pedestrian barrier mesh. This fencing is intended to prevent unnecessary incursions by machinery into the retained boundary tree groups. It does not need to be permanently installed around all boundary groups but should be in position prior to any ground works being undertaken at individual lodge locations.
6. All fencing should remain in position until completion of all phases up to and including landscaping of the site

Protective fencing specifications Type A



Signage specification

