Appendix 2

Arboricultural Implications Assessment

Extended Plot 19 Victoria Business Park, Biddulph May 2013

Root Protection Areas

The RPA's have been calculated in accordance with the methodology set out in BS5837:2012,.

It is unlikely that any major roots will be found within site margins.

Tree Protection & Method Statement

Tree Protection Plan

All trees to be retained as part of the redevelopment proposals will be protected from unnecessary damage during the construction process. Tree protection on development sites is of paramount importance if they are to be retained successfully. The inevitable stress caused by development near existing trees can, if provision for adequate protection is not made, be a strain that can severely damage the trees or even result in their death.

Purpose of a Method Statement

The purpose of an Arboricultural Method Statement (AMS) is to safeguard the retained trees on Site during the construction process. The following information sets out the methodology and approach for all proposed works that could affect such trees.

Compliance with this AMS will be a requirement of all relevant contractors associated with the development, including initial groundworks and landscaping.

Copies of this report will be available for inspection on Site and all personnel shall be made aware of the key implications of the AMS.

Site Preparation

Firstly, the trees and/or vegetation agreed for removal should be removed and remedial works carried out in accordance with the 'advance works' provisions set out above and in line with BS 3998:2010.

Care should be taken during the removal vegetation to minimise damage to retained trees and disturbance to Root Protection Areas (RPA's). An appropriate precaution would be to dismantle any dead or dying trees by lowering removed limbs to the ground, thus reducing the risk of accidental damage. Ground protection should also be used to avoid compaction if machinery or excessive pedestrian movements are expected within RPA's. Tree stumps should be carefully ground out rather than dug or pulled out.

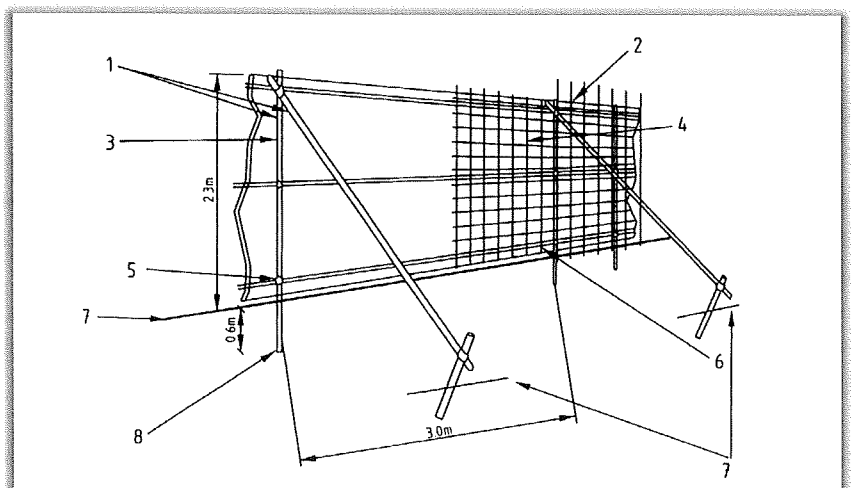
General Site Precautions

The following points must be observed during both advanced works and the construction process:

- *No fires will be lit on Site;*
- *No access will be permitted inside tree protection / non-intervention areas (unless authorised);*
- *No materials, equipment or debris will be stored within the tree protection fencing;*
- *Notice boards, telephone wires or other services must not be attached to any part of retained trees; and*
- *Materials which will contaminate the soil (e.g. concrete, diesel oil and vehicle washings) must not be permitted to enter the RPA of retained trees.*

Protection Barriers

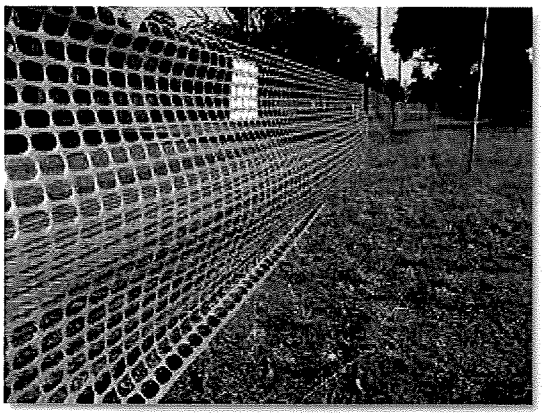
Protective fencing should be erected in line with BS 5837:2012. The fencing consists of a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum of 3m to add further stability. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps (see extract of BS 5837:2012 – Figure 2 below).



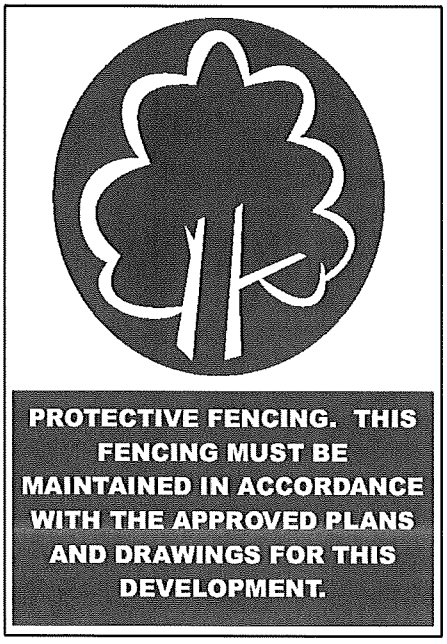
1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to allow easy dismantling
7 Ground level
8 Approx 0.6 m driven into the ground

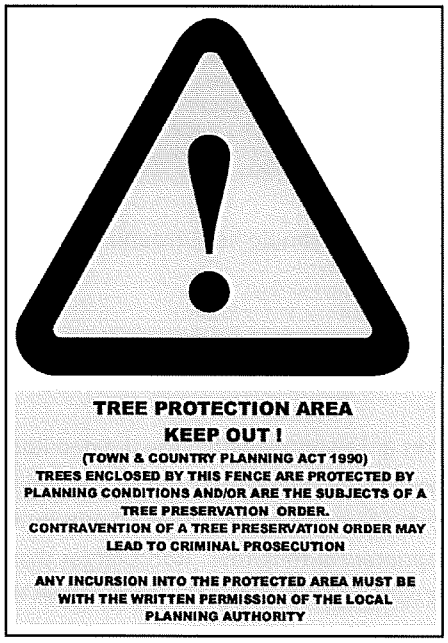
Figure 2 - Protective barrier

The trees should be highlighted on Site using secured plastic mesh fencing. This will still offer protection and a visual barrier to any construction works (see photographic example below) and is acceptable in association with the revised BS5837:2012.



All-weather notices should be attached to the barriers with words such as 'Construction Exclusion Zone – Keep Out' (see signage examples). Other signage should be poisoned to alert plant operators about any sensitive tree canopies.





If during construction, excessive levels of dust build-up on retained trees, it may be necessary to undertake remedial measures such as hosing down immediately with a clean water supply.

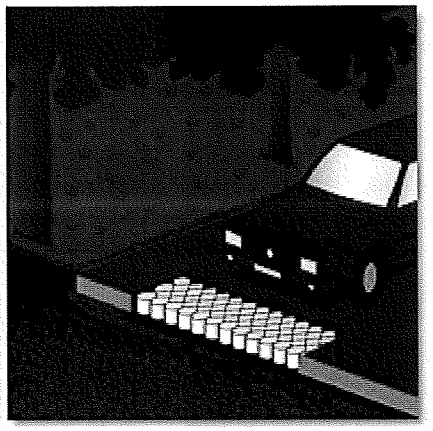
The protective fencing will remain in position for the duration of the construction activities.

This protective fencing will be as an extension to that already on-site in reference to the other unit under construction.

Proposed Surfaces

Should any of the retained trees require the movement of construction vehicles within the outer limits of defined RPA's. The working methods related to this are set out below.

Once the tree protection fencing has been implemented, a three dimensional 'Cellular Confinement System' (CCS), such as CellWeb or Bodcel should be placed within a shallow surface excavation. It will provide a load-bearing and permeable structure suitable for vehicular movements. The cellular design and perforated cell walls, reduces the vertical load pressure on sub soils to tree roots and prevents damage. Clean granular material should be used as infill (sub-base), so that air and moisture can reach the roots to encourage healthy prolonged growth of any retained trees. See diagrams below. The maximum area excavated shall not exceed 20% of the RPA.



Any excavated roots should be surrounded with sharp sand (not builders sand) before the granular material is added.

Special Working Methods

Where works are required within the defined Root Protection Area any excavation should be undertaken by hand, to avoid any damage to the protective bark covering any larger roots. If necessary, any roots encountered which are smaller than 25mm in diameter can be pruned back, preferably to a side branch using a proprietary cutting tool. Roots larger than 25mm diameter should only be severed following on-Site agreement with an arboricultural consultant, as they may be essential to the tree's health and stability.

Excavated Material

The excavation and ground re-profiling required will generate a stockpile of material. All material will be removed from Site.

Amendments

Issues sometimes arise on development Sites which require amendments to the previously agreed tree protection details. Any amendments to the AMS will be discussed with the Arboricultural Consultant and agreed in writing with the LPA prior to being implemented. Copies of paperwork relating to any amendments shall be attached to the Site AMS to provide a definitive record of what has been approved.