

Arboricultural Method Statement
Glyndwr University, Creative Industries Building

1. Sequence of Works

From commencement of the above development, the following methodology shall be implemented in the manner and sequence described:

- (a) Pre-contract meeting
- (b) Arboricultural works
- (c) Underground services
- (d) Main construction phase

1.1 Pre-contract site meeting

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

- (a) Client
- (b) Architect/Planning Consultant
- (c) Structural Engineer
- (d) Main Contractor
- (e) Arboriculturist
- (f) Site Agent

2. Arboricultural Works

- 2.1 All work will be carried out in accordance with BS 3998 Recommendations for Tree Work, industry best practice and in line with any works already agreed with the Council.
- 2.2 The Tree Surgeon shall ideally be chosen from The Arboricultural Association's Approved Contractor list. Proof of experience and insurance provision will be required. All work shall be undertaken at the appropriate time and with the consent and approval of the Site Agent.
- 2.3 The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from The Countryside Council for Wales and any recommendations adhered to.

- 2.4 The stumps of any trees removed from within the Construction Exclusion Zone (CEZ) or the Root Protection Areas (RPA) of retained trees will be either; cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out or excavated with a back hoe
- 2.5 All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

3. Underground Services

- 3.1 Although every effort has been made to ensure the routing of services does not encroach into Root Protection Areas, if for whatever reason installation within Root Protection Areas is required the project arboriculturist and local authority must be notified prior to any tree protection barrier removal and the following details adhered to.
- 3.2 Trenching for the installation of underground services severs any roots present and may change the local soil hydrology in a way that adversely affects the health of the trees. For this reason particular care will be taken in the routing and methods of installing underground services. Wherever possible, they should be kept together and arboriculturally sensitive methods of excavation used. At all times where services are to pass within the Root Protection Area, detailed plans showing the proposed routing will be drawn up in conjunction with an Arboriculturist. These plans and a specification for the works shall be submitted to the Local Planning Authority's Arboricultural officer for approval prior to such works being commenced. Such plans will also show the levels and access space needed for installing the services.
- 3.3 The preferable method for trenching within Root Protection Areas to avoid damage is via excavation using an 'air spade' or similar. This tool utilises compressed air to remove soil from around tree roots causing minimal damage. This approach will be utilised whenever possible.
- 3.4 Trench-less technology, such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will be located within the Root Protection Areas of the subject trees, the need for arboricultural supervision is limited.
- 3.5 Reference can be made to National Joint Utilities Group publication Volume 4 (NJUG Vol. 4) for guidance, but any approach must be approved by the Project Arboriculturist and brought to the attention of the Local Authority Tree Officer. Unless an emergency arises, there shall be no new excavation for the installation, renewal, or repair of underground services within any area designated as a Root Protection Area and Construction Exclusion Zone and enclosed by Temporary Protective Fencing (unless very low root volume is established beforehand).

4. Main Construction Phase

4.1 Tree Protection Measures

- 4.1.1 No construction or groundwork's shall be begun until the temporary protective fence has been erected to the satisfaction of the local planning authority and the project arboriculturist. It shall be inspected on a monthly basis thereafter by the project arboriculturist and any defects noted to the site agent and local authority arboriculturist.
- 4.1.2 The fence shall be secure and able to withstand accidental contact with construction equipment. A suggested design for this is attached at Appendix 1. The fence will remain in situ until all construction works are finished on site. The purpose of this fence will be discussed within site induction courses so that all persons on site are aware of why it is important to retain its integrity during the construction phase. At Appendix 2 is a suggested sign design to place on the fence. Appendix 3 is the Tree Protection Plan agreed with the Council
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- 4.1.3 There shall be no storage of construction materials, site parking, site accommodation or equipment in any area designated as a Root Protection Area (RPA). There will be no alteration to ground levels within the RPA of any tree on site.
- 4.1.4 No fires shall be lit within 15m of any tree
- 4.1.5 The Site Agent shall supervise deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees and /or hedgerows are not at risk of damage.
- 4.1.6 Care shall be taken when planning site operations in proximity of retained trees 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 injury to them and might make their safe retention impossible.
- 4.1.7 Consequently, any transit or traverse of plant in proximity of trees shall be conducted under the supervision of a 'banksman', to ensure that adequate clearance from trees is at all times maintained. In some circumstances, it may be impossible to achieve this without pruning works known as 'access facilitation pruning'. The Local Planning Authority's Arboricultural officer should be informed well in advance of any proposed access facilitation pruning, as there are trees on site that are protected by a Tree Preservation order and permission may be required to undertake such pruning works
- 4.1.8 Access facilitation pruning shall be kept to the barest minimum necessary to facilitate development and shall be carried out in strict accordance with

BS3998 Under no circumstances shall construction personnel undertake any tree pruning operations. Only qualified and insured contractors should undertake these works when approved.

4.2 **Site storage, parking, welfare facilities etc.**

- 4.2.1 The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop off points etc.
- 4.2.2 None of the above provisions will be sited within the Root Protection Areas of retained trees without the input of the Project Arboriculturist and the consent of the Local Planning Authority.

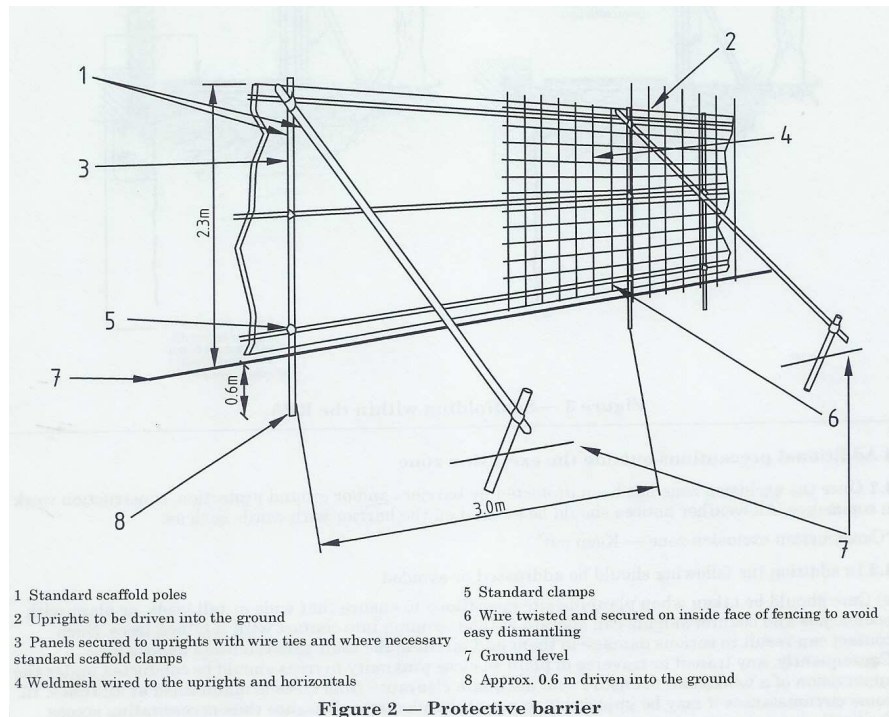
4.3 **Proposed temporary car park**

- 4.3.1 As this is a temporary car park the use of geogrids and cellular confinement systems to construct a no dig surface within the Root Protection Areas of the trees is considered excessive. It is more expedient and cost effective to lose the car spaces and erect a temporary fence line that excludes excavation and construction of a hard surface beyond this point.
- 4.3.2 I have measured the largest diameter tree @ 900mm and used this as an average to secure an area of 12m in depth from the line of the trees. I have taken into consideration the hard surface car park at the rear of the trees and the species involved Lombardy Poplars. With these factors in mind the area protected will be sufficient to retain the trees while the car park is in use. The fence will be erected prior to commencement of any ground works in this area and be under the same inspection regime as the main construction area. The fence will remain in situ until the car park is no longer needed to prevent cars being parked off the hard surface and compacting the ground beneath the trees. A tree protection plan is attached to this method statement at Appendix 3 showing the location of the fence.
- 4.3.3 The project arboriculturist and the Local Authority's Arboricultural Officer shall be informed of any roots exposed by ground excavations discovered that exceed 75 mm in diameter. On no account shall these roots be severed without taking arboricultural advice.

A L Smith M Arb CEnv MICFor F Arbor A

Chartered Arboriculturist

Appendix 1 Fence Design



1) Suggested design of protective fence

Appendix 2 Sign Design



**TREE PROTECTION AREA
KEEP OUT !**

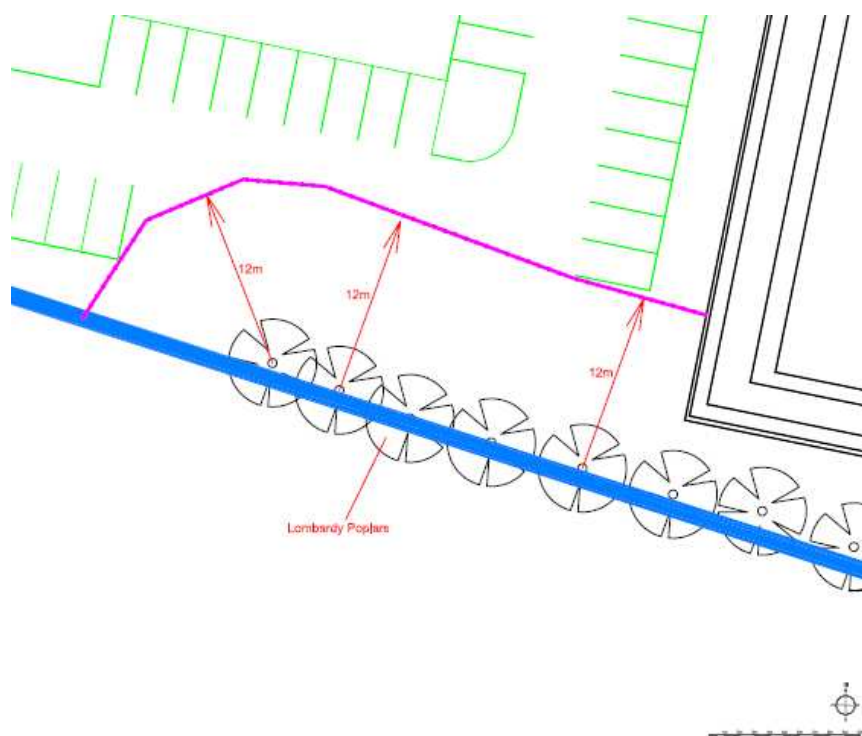
(TOWN & COUNTRY PLANNING ACT 1990)

**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.**

**CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**

1) Tree Protection Plan for construction site*



2) Tree protection plan for car park*

**Electronic versions available for both plans*