

**Protective Fencing**

To be erected prior to the commencement of all works on site, and retained in place throughout construction.  
**Default Specification:** To comprise either 2.4m wooden site hoarding, or a 2.3m high scaffolding framework comprising of vertical and horizontal framework, well braced to resist impacts, with uprights to be spaced at a maximum of 3.0m intervals and driven into the ground by a minimum of 600mm. On to this, standard anti-climb welded mesh panels are to be securely fixed to each other with at least two scaffold clamps and to the scaffolding framework with wire.  
**Secondary Specification:** To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabilizer struts, which should be attached to a base plate and secured with ground pins.  
 All weather notices should be erected at regular intervals on the weld mesh panels with words such as "Construction exclusion zone - Keep out".

**Tree Protection Area**  
**KEEP OUT**

Do not move this fence

(TOWN & COUNTRY PLANNING ACT 1990)  
 TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECT 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



**Ground boarding**

New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

Note the ground protection might comprise one of the following:

- a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;
- b) for pedestrian-operated plant up to a gross weight of 2t, proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm 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 system or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

**Manual Excavation**

Excavation within the RPAs will be initially undertaken by hand under direct on-site arboricultural supervision, whether for proposed foundations, hard surfacing or underground services. The soil is to be loosened with the use of a fork or pick and then cleared with the aid of an air-spade and air-vac. All roots to be cut will be cleanly severed with the use of a hand saw or secateurs. The edge of the excavation closest to the retained trees will be covered over with damp hessian to prevent drying out, and where necessary be shuttered to prevent soil collapse or contamination by concrete.

**Tree Categories**

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2005 'Trees in relation to construction - Recommendations'

Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

**Root Protection Area**

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and C trees. This is a minimum area in m<sup>2</sup> which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

The calculated RPA is capped to 707m<sup>2</sup>, which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

**Arboricultural Impacts Addressed**

No.	Species	Proposed structure	Incursion
T1	Sycamore	Fencing & car parking space	RPA
T2	Sycamore	Fencing	RPA

**Arboricultural Supervision**

The arboricultural consultant will be required to attend site to directly supervise all demolition and construction works that have to be undertaken within the root protection areas. This will include:

1. Pre-start meeting.
2. Location of protective measures.
3. Manual excavation for fence posts and car parking space within RPAs of trees T1 and T2.
4. Any excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services.

**Arboricultural Method Statement**

Please refer to Arbttech Consulting Ltd. Tree Schedule and Arboricultural Method Statement, for full details on all surveyed trees and how all aspects of the development may be implemented without detriment to retained trees.

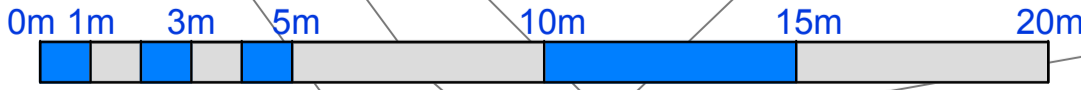
Manual excavation of fence posts under arboricultural supervision.

Manual excavation of parking space sub base under arboricultural supervision.

Protective fencing

Ground boarding

**Note:** No unauthorised excavations are to be carried out within the RPAs of any retained trees. Any level changes must form part of a construction method statement & must protect the rooting environments of all retained trees.



Project:  
 Hardy & Hanson,  
 Longlands Road,  
 Dewsbury,  
 Yorkshire,  
 WF13 4AB

Client:  
 Whitby & Chandler Ltd.

Drawing:  
 Tree Protection Plan

Based on:  
 Developed Design Rev E

Drawing No:  
 Arbttech TPP 01

Rev:  
 B

Date:  
 Mar 2017

Scale:  
 1:150 @ A1

Drawn:  
 AST

Key:

Tree Nos.:	T4	Tree Canopies	Trunks
RPAs:	Category 'B' trees	Category 'C' trees	
Protective Fencing:	Ground boarding	Manual excavation	

All dimensions should be checked on site. No dimensions are to be scaled from this drawing.  
 Please refer to any discrepancies found. Arbttech Consulting Ltd. cannot be held responsible for inaccuracies in this drawing in which this plan is based.  
 This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of retained trees.  
 This drawing is not to be read as a definitive part of the engineering or construction design or method statement.  
 An architect or structural engineer should be consulted over any matters of construction, loading or specification for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.  
 This drawing was produced in colour - a monochrome copy should not be relied upon.  
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