

BS 3998:2010 Tree work - Recommendations. All arising s are to be removed and the site is to be left as found. Care is to be taken of the ground around retained trees to make sure that it does not become compacted as a result of tree surgery operations. No equipment or vehicles such as timber lorries, tractors, excavators or cranes shall be parked or driven beneath the crowns of any retained trees, to prevent subsequent compaction and root death.

## 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 scaffold 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 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

Do **not** move this fence

ES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITION 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 Protection

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likely loading for the site.

The existing hard surfacing within the RPA of retained trees G05 and T01 as depicted on the Tree Protection Plan (Arbtech TPP 01) provides passive protection against compaction to the underlying soil and therefore must be retained for the duration of the project. If this is removed, it shall be done so under direct arboricultural supervision and replaced with suitable ground protection, suitable of withstanding the

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:

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

a) for pedestrian movements only, a single thickness of scaffold

For situations other than those described in a) or b), the ground boarding is to be designed by a suitably qualified person to an engineering specification in conjunction with arboricultural advice, to be

loading to which it will be subjected.

able to support the expected loading to be placed upon it.

In all cases, the objective of the ground boarding is to avoid compaction of the soil beneath, so that tree root function remains unimpaired.

Supervised Decking Excavation The decking framework and posts within G05 and T32 are to be designed so that all the framework is situated entirely above the existing soil level and individual posts may be movable to prevent damage of roots 25mm or greater in diameter.

Any roots that are to be cut will be cleanly severed by the project arboriculturist using a suitable hand saw or secateurs. The edge of all 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.

Manual excavation: Post excavations within the RPAs will be initially undertaken by hand under direct on-site arboricultural supervision to a minimum of 600mm deep (to be confirmed by the project arboriculturist). The soil is to be loosened with the use of a fork or pick and or air-spade and then cleared with a shovel and or the aid of an air-spade and air-vac.

## The use of traditional strip foundations can result in excessive root loss and as such should be avoided. Designs for foundations that would minimize the adverse impact upon trees soul include particular attention to the existing levels, proposed

Foundations within RPAs

finished levels and cross sectional details. Site specific and specialist advice should be sought from the project engineers and arboriculturist. Root damage can be minimized by using: Piles with site investigation used to be determined their optimal

location whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm; Beams, laid at or above ground level, and cantilevered as necessary to avoid tree roots identified by site investigation.

Where a slab for minor structures (e.g. shed base) is to be formed within the RPA, it should bear on the existing ground level, and should not exceed an area greater than 20% of the existing unsurfaced

Slabs for larger structures (e.g. dwellings) should be constructed with a ventilated air space between the underside of the slab and the existing soil surface (to enable gas exchange and venting through the soil surface. In such cases, a specialist irrigation system should be employed (e.g. roof run-off redirected under the slab). The design of the foundation should take into account of the effect on the load bearing properties of the underlying soil from the redirected roof run-off. Approval in principle for a foundation that relies on topsoil retention and roof run-off under the slab should be sought from building control authority prior to this approach being relied upon.

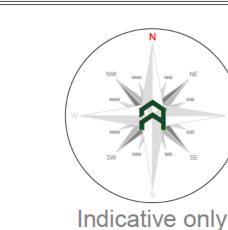
Where piling is to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots, and reduces the size of the rig required to sink the piles. If a piling mat is required, this should conform to the parameters for ground boarding. Use of the smallest practical piling rig is also important where piling within the branch spread is proposed, as this can reduce the need for access facilitation pruning. The pile type should be selected bearing in mind the need to protect the soil and adjacent roots from the potentially toxic effects of uncured concrete,

This information is compliant with British Standard BS5837 2012 Trees in relation to design demo ition and construction - Recommendations, section 7.5 Special engineering for foundations within the RPA.

## 'No Dig' Surfacing

e g. sleeved bored piles or screw piles.

Multi-dimmensional confinement system Existing vegetation may be removed with hand tools or sprayed with an approved non residual herbicide such as 'Glyphosate'. The new hard surfacing will be constructed using a 'No Dig' surfacing situated entirely above the existing soil surface and where needed using a proprietary cellular confinement system (GeoWeb or similar) laid over a bi-axel geo-grid (tensar TriAx or similar). Proir to this any small hollows on the surface may be filled with clean sharp sand (not builders sand) to a maximum depth of 150mm. The 'GeoWeb' is to be back filled by hand with a no-fines aggregate of 20mm - 30mm. The area of 'GeoWeb' will be covered with a permeable geotextile fabric and the finished wearing course laid on top. Edge supports of an appropriate size and strength should be set above ground level and secured with haunching or steel pins driven into the ground. the outer edge of the supports may be banked up with clean top soil. NB: The use of a multi-dimensional confinement system will affect the finished level of the hard surfacing by raising the levels and needs to be taken into consideration when designing foundations and setting the finished floor levels of adjacent buildings.



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: Pre-commencement site meeting. 2. Location of protective measures. 3. Installation of replacement hard surfacing within the RPAs of tree nos. G05, T02, T09, T16, T58, T66, T67, T69 and T70.

4. Installation of 'No Dig' hard surfacing within the RPAs of tree nos.

Arboricultural Method Statement

Arboricultural Method Statement, for full details on all surveyed trees and how all aspects of the the development maybe implemented

G05, T34, T43, T61 and T66. . Supervised excavations for pile foundations for G02, G05, T32, T33 6. Supervised excavations for decking posts for G05 and T32. Any demolition and or excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services (a non-exhaustive list). . Arboricultural sign off and removal of protective measures.

Please refer to Arbtech Consulting Ltd. Tree Schedule and

without determent to retained trees.





Rev: Date: Notes:

AL4 OPB

Colney Heath Hertfordshire

Mar	nor Coliving L	imited		
Drawing:				
Tr	ree Protection	Plan		
Based on:				
775CDA2	ZZ00DRA000	100 Re	v11	
Drawing No: Arbtech TPP 01		Rev:		
Date:	Scale:	Drawn:	Drawn:	
Dec 2024	1:250 @ A0	A	AOJ	
Key:				
Existing Site	Proposed	Tree	ТО	

Layout:		Site Layout:		Numbers:	10
Tree Canopies:		Trunks:	0	RPAs:	
Category 'A' trees:		Category 'B' trees:		Category 'B' groups:	
Category 'C' trees:		Trees to be Removed:	T0 <b>1</b> €	Ground Protection - Boarding:	
Ground Protection - Passive:	+ + +	Ground Protection- Passive:		Arboricultural Supervision - Excavations	
Arbor cultural Supervision - Decking excavations:		Arbor cultural Supervision - Hard Surface Replacement	+ + + + + + + + + + + + + + + +	Arboricultural Supervision - 'No Dig' HS:	
Protective					

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. 
Please notify us of any discrepancies found. Arbtech Consulting Ltd. cannot be held respons ble for inaccuracies in the base 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 designs or method statement. 
An architect or structural engineer should be contacted over any matters of construction, detailing or specification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services. This drawing was produced in color - a monochrome copy should not be relied upon.

C Arbtech Consulting Ltd, 2024