

Protective Fencing

To be erected prior to the commencement of all works on site, and retained in place throughout construction.

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-lamper 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".

Ground protection

The existing hard surface within RPAs will be retained to act as passive ground protection for the duration of the development process. When removed this will be done under direct arboricultural supervision and replaced immediately with the new surface treatment or new temporary ground protection.

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 2t 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.

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 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 Excavation

All excavations within and immediately adjacent to RPAs are to be undertaken under direct on-site arboricultural supervision.

Any roots that are to be cut will be clearly severed by the project arboriculturalist 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. If appropriate soil beneath the depth of the excavation may be sheet piled, regular piled or have individual piles installed.

Manual excavation: 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 arboriculturalist), whether it is for proposed foundations, hard surfacing or underground services. 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.

Mechanical excavation: Excavation within the RPAs will consist of a mixture of mechanical and manual excavation.

Where an excavator is used it will be fitted with a suitably sized toothless grading bucket, using a grading / scraping motion rather than digging. During each motion the excavator will not be permitted to remove no more than 10 - 20mm deep of soil in any one pass. If any roots are discovered, mechanical excavation will immediately be stopped and manual excavation will take over to expose the root. Upon the root being uncovered and either severed or protected the excavations can then continue.

Any excavator or other machinery that is to be used will be situated outside of the RPAs of all retained trees or on top of a suitable ground protection.

Where an excavator or any other machinery is to be used within RPAs or beneath canopies the project arboriculturalist will clearly instruct the operator about what they want and expect to happen prior to any works may commence.

'No Dig' Surfacing

Multi-dimensional 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-axial geo-grid (tensar TriAx or similar). Prior 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.

NOTE: 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:

1. Pre-commencement site meeting.
2. Location of protective measures.
3. Relocations of tree protective measures from demolition to construction phase.
4. Pre-commencement site meeting (construction phase).
5. Supervised excavations for installation of foundations within the RPA of tree T01.
6. Installation of 'No Dig' hard surfacing within the RPA of tree T01.
7. Any demolition and or excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services (a non-exhaustive list).
8. Arboricultural sign off and removal of protective measures.

Arboricultural Method Statement

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

Arboricultural supervision:
Manual excavation for the installation of foundations within the RPA of offsite tree T01.

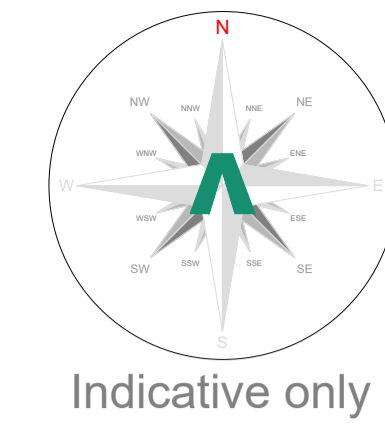
Arboricultural supervision:
The 'no dig' sub-base, e.g. CelliWeb™, will be installed in line with manufacturers guidelines for expected loading. The final surface treatment will be porous.

Ground protection:
Temporary ground boarding

Protective fencing

Ground protection:
The existing hard surface will be retained to act as ground protection within the RPAs of offsite trees T02 for the duration of the development. If removed this should done under direct arboricultural supervision and replaced with temporary ground boarding.

NOTE:
The RPA shapes of trees T01 & T02 have been manipulated to consider the adopted highway surface as a barrier to root development from 1.5m from the curb edge. Its considered that capillary action and diffusion through the shallow some root development beneath the surface.



Tree Work Schedule			
No.	Species	Works	Category
G01	Various	Partial removal of group: Fell trees to ground level; grind out stumps	C12

All tree work is to be undertaken in accordance with British Standard BS 5998:2010 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.

Rev:	Date:	Notes:
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https://arltech.co.uk, 01244 661170

Project:
Treetops, Hillcrome Road, Sutton, Surrey SM2 5EL

Client:
TAG Homes Ltd.

Drawing:
Tree Protection Plan

Based on:
SMA/904/100

Drawing No:
Arbtech TPP 02 Con

Date:
April 2021

Scale:
1:100 @ A1

Drawn:
JCH

Key:

Tree Canopies: T01	Tree Canopies: G01	Trunks: (circle)
RPAs: (red outline)	Category 'B' trees: (blue circle)	Category 'C' trees: (grey circle)
Category 'C' groups: (green outline)	Trees to be removed: (red outline)	Existing site plan: (white)
Proposed site plan: (pink outline)	Incursion - Structures: (purple outline)	Incursion - Hard surfacing: (blue outline)
Protective fencing: (red line)	Ground protection: (blue hatched)	Arboricultural supervision - Excavations: (yellow hatched)
Arboricultural supervision - 'No Dig' HS: (green hatched)		

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. Please verify all of any discrepancies found. Arltech Consulting Ltd. cannot be held responsible 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 design 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 colour - a monochrome copy should not be relied upon.

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