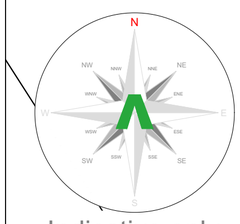
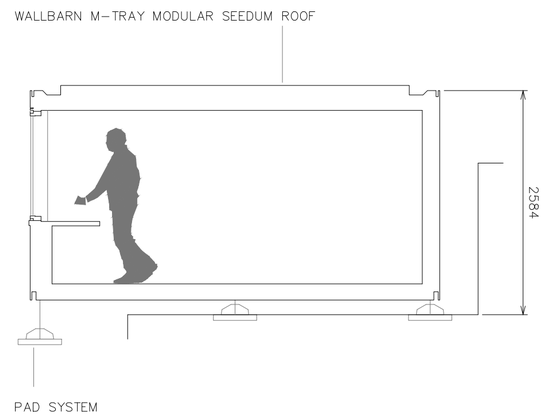


Indicative only

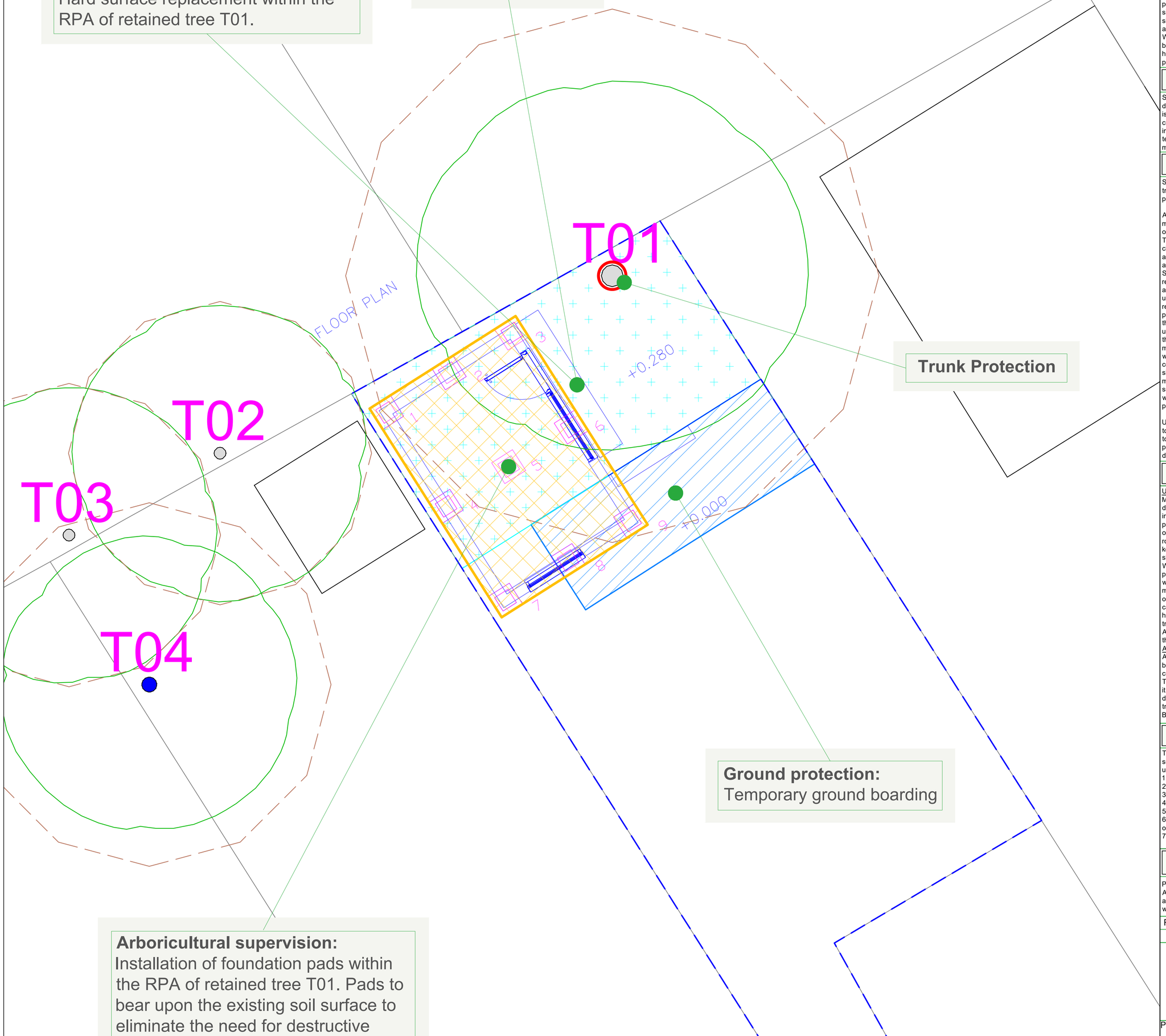
Arboricultural supervision:
Installation of foundation pads within the RPA of retained tree T01. Pads to bear upon the existing soil surface to eliminate the need for destructive excavation within the RPA. It may be possible to install individual pads below the surface level, this will be informed by site investigations detailing the presence/extent of roots. Suitability/feasibility for countersinking pads will be determined by the attending arboricultural consultant.



LONG SECTION

Arboricultural supervision:
Hard surface replacement within the RPA of retained tree T01.

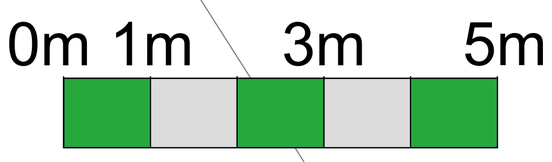
Ground protection



Trunk Protection

Ground protection:
Temporary ground boarding

Arboricultural supervision:
Installation of foundation pads within the RPA of retained tree T01. Pads to bear upon the existing soil surface to eliminate the need for destructive excavation within the RPA. It may be possible to install individual pads below the surface level, this will be informed by site investigations detailing the presence/extent of roots. Suitability/feasibility for countersinking pads will be determined by the attending arboricultural consultant.



Trunk Protection

Protective trunk Wrapping:
To be attached to the trunks of retained trees prior to the commencement of all works on site, and retained in place throughout construction. To comprise of a minimum of three wrappings of clean dry hessian around the trunk from ground level up to 2.3m high and held in place using sisal. Onto the hessian a minimum of three wraps of chestnut pailing and is to be held in place by 2.50mm mild steel galvanized wire in three locations and fixed into place using fencing staples fixed into the chestnut pailing.
Protective hoarding:
To be erected prior to the commencement of all works on site, and retained in place throughout construction. To comprise of 2.4m wooden site hoarding constructed upon a timber frame work situated around the outside of the planting pit. Where the timber frame is constructed around the tree trunk a minimum of 4 layers of clean dry hessian is to be wrapped around the trunk to protect the bark.
All weather notices should be erected at regular intervals on the weld mesh panels with words such as "Construction exclusion zone - Keep out".

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-resisiatnt 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.

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

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

Supervised demolition

Hard surfacing:
Removal of and or replacement of hard surfacing situated either partially or completely within the RPAs of retained trees shall be undertaken with care and under the direct on-site arboricultural supervision as these areas are likely to contain roots.
Where this is necessary the wearing course will be broken up using a hand held pneumatic breaker, hand tools and a wheel barrow to break up and remove the surfacing. If it is necessary to remove the sub base this is to be undertaken using hand tools such as a fork to loosen the material and removed using shovels and wheels barrows.
In some situations and at the discretion of the arborist it may be possibly to use an excavator using a hydraulic breaker and suitably sized toothless grading bucket. If an excavator is to be used it must be situated outside of the RPAs, on top of the hard surfacing working away from the RPAs or from ground boarding.
Which ever system is used the is to be **NO** disturbance of the soil beneath. If roots are found they are to be covered over with damp hessian and a layer of either sharp sand, wood chip or top soil to prevent desiccation.

Foundations within RPAs

Swift Plinth foundation pads will be installed so that the the bear directly upon the existing soil level without the need for excavation. If it is required to install a 'reinforced grid filled with pea gravel' below the current soil level, this will be informed by site investigations. The immediate footprint will be excavated using 'manual excavation' techniques under under direct arboricultural supervision in line with manufacturers guidelines.

Site investigations

Site investigations are to be undertaken within the RPAs of retained trees to determine the size, depth and location of any roots that may be present for the purpose of informing foundation design.

All excavation within the RPAs are to be initially undertaken to a minimum depth of 800mm deep for any excavation or to the full depth of the 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 using a specialist arboricultural contractor; If an air-spade is not used and all excavations are to be undertaken using hand tools (forks, shovel, trowel, brush). Soil will be loosened with the aid of a fork or trowel and the spoil removed from with the aid of a shovel. Where an air spade or specialist arboricultural contractor is not employed, all excavations are to be undertaken under direct arboricultural supervision. All roots are to be retained in situ and the project arborist will visit the site to recorded and photograph the depth, location, and size of any roots present; during this visit the project arborist may be able to cut specific roots with the use of a hand saw or secateurs. The edge of the excavation closest to the retained trees and all uncovered roots will be covered over with a minimum of two layers of damp hessian to prevent drying out, and where necessary be shuttered to prevent soil collapse or contamination. If appropriate soil beneath the depth of 800mm may be sheet piled with any deeper excavations being undertaken by a machine with an appropriate bucket under direct arboricultural supervision. If a decision is made for a machine to be used it must work form outside of the RPA or have appropriate ground protection in place to move and work upon.

Upon the completion of the site investigations all trial excavations are to be back filled with the original material or inert fill. It may be suitable to insert a root barrier in locations where the proposed roots are not present or are beginning to enter to prevent root activity within areas deemed to be root free.

Utility apparatus

Underground utility apparatus
Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the rout and methods of installation of all underground apparatus. Wherever possible, apparatus should be routed outside of RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts, all inspection chambers should be sited outside of the RPAs.
Where underground apparatus is to pass within the RPAs, detailed plans showing the proposed route should be drawn up in conjunction with the project arboriculturist. In such cases trenchless insertion methods should be used with entry and retrieval pits being located outside of the RPAs. If this option is not feasible and providing roots can be retained and protected excavations should be undertaken using hand held tools (air-spade, forks, shovels) or a combination of trenchless and manual excavation (broken trench).
Any design and installation should be undertaken in accordance with the National Joint Utilities Guidelines (NJUG).
Above-ground utility apparatus
Above-ground apparatus(including CCTV cameras and lighting) should be sited to avoid the need for detrimental tree pruning, as such the current and future crown size of the tree should be assessed.
Tree branches can be pruned back with care to provide space, though it is not appropriate for repetitive and significant tree work to bean initial design solution unless this is a suitable management outcome for the tree. Any pruning should be undertaken in accordance with BS3998:2010

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. Supervised demolition of the surfacing within RPA of tree T01;
4. Supervised replacement of the surfacing within RPA of tree T01
5. Manual excavation of site investigations within the of tree T01;
6. Any excavations within RPAs, including foundations, hard surfacing or underground services;
7. Removal of protective measures and sign off.

Arboricultural Method Statement

Please refer to Arbtech 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 determent to retained trees.

Rev:	Date:	Notes:

ARBTECH
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https://arbtech.co.uk, 01244 661170

Project:
1st & 2nd Floor,
107 Chetwynd Rd,
London
NW5 1DA

Client:
Shakeel and Verena Khan

Drawing:
Tree Protection Plan

Based on:
001; 002

Drawing No:	Rev:
Arbtech TPP 01	

Date:	Scale:	Drawn:
May 2019	1:50@ A1	JCH

Key:

Tree Nos.:	T01	Tree Canopies:		Trunks:	
RPAs:		Category 'B' trees:		Category 'C' trees:	
Existing Site Plan:		Proposed Site Plan:		Foundation Pad Plan:	
Protective fencing:		Ground boarding:		Arboricultural supervision - Demolition:	
Arboricultural supervision - Foundations:		Arboricultural supervision - Site invgtns.:			