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-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 "Tree Protection Area - 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

Arbtech Consulting Limited.
Unit 3, Well House Barn, Chester Road, Chester, CH4 0DH
https://arbtech.co.uk - 01244 661170

Ground protection

Ground protection will consist of a mixture of new temporary ground boarding and the no-dig sub-base for new hard surfaces.

The no-dig sub-base will be installed within the RPAs of retained trees following the demolition phase of the project and ahead of any further construction. If this s not to installed until later in the schedule of works, new temporary ground boarding will be installed in the interim.

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 wood chip), 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 wood chip), 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 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 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.
Structures:
Demolition of existing structures and foundations situated either partially or completely within 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 it is necessary for the foundations to be removed they are to only be removed where critical to the proposed development and to the minimum depth required. The foundations will be broken up using a hand held pneumatic breaker, hand tools and a wheel barrow to break up and remove the surfacing. 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. If it is likely that there will be any collapse of the soil within the rooting environment excavation is to be stopped immediately and the trench is to be shored up to prevent loss of the rooting environment.
Which ever system is used there is to be **NO** disturbance of the soil on the tree side of the foundations. 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.

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 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.
If appropriate soil beneath the depth of the excavation may be sheet piled, tegular 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 arboriculturist), whether its 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 / scrapping motion rather than digging. During each motion the excavator will not be permitted to removing no more than 10 - 20mm deep of soil in any 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 arboriculturist will clearly instruct the operator about what they want and expect to happen prior to any works may commence.

'No Dig' Surfacing

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.
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.

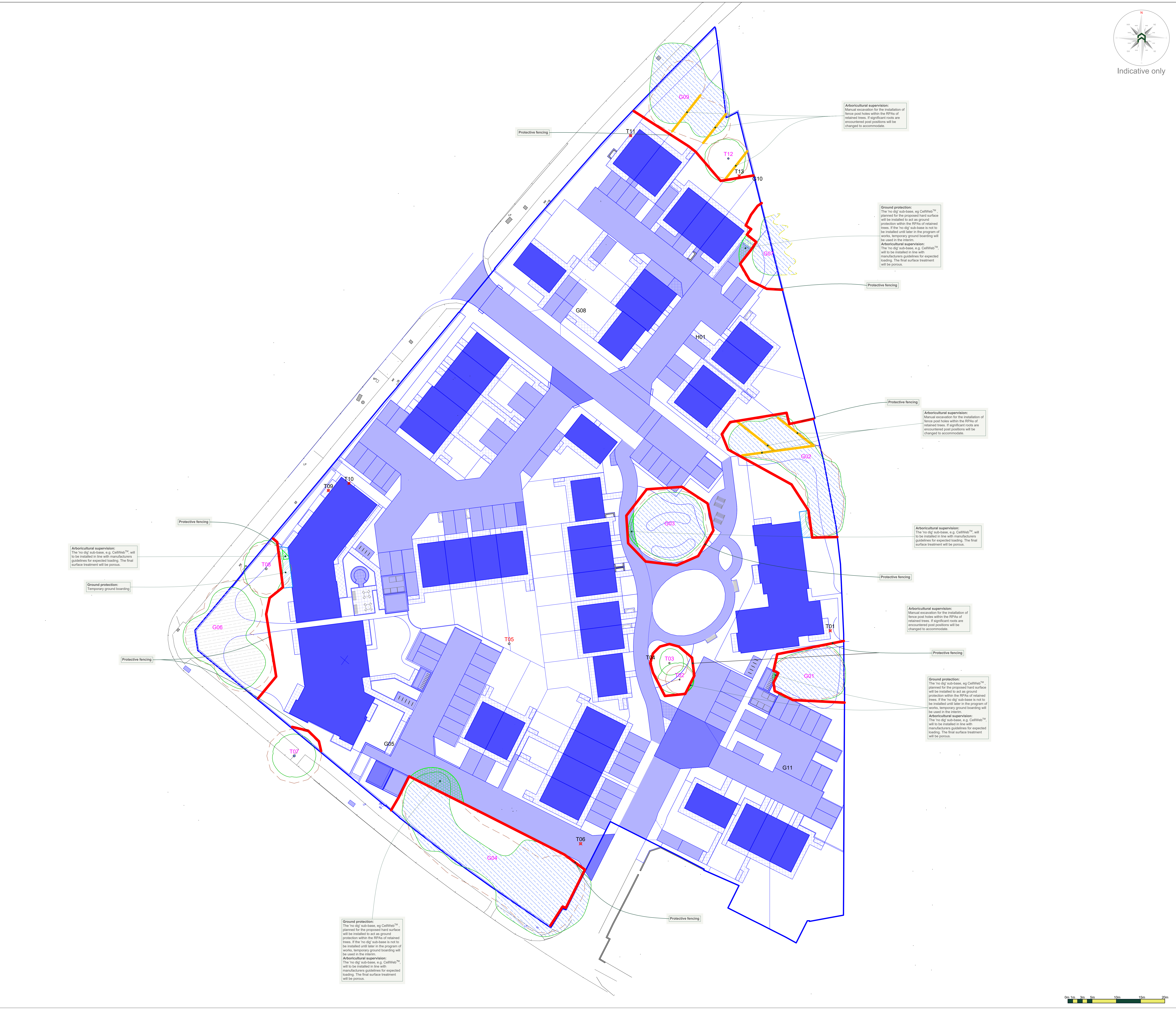
Arboricultural Supervision

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. Supervised demolition of hard surfacing and kerb edging within RPAs of trees G04, G06, G07, T02, T03 & T08.
4. Supervised demolition of structure and foundations within RPAs of trees G04.
5. Relocation of tree protective measures from demolition to construction phase.
6. Pre-commencement site meeting (construction phase).
7. Installation of 'No Dig' hard surfacing within the RPAs of trees G03, G04, G07, T02, T05 & T08.
8. Supervised excavations for installation of fence posts within RPAs of trees G02, G09, T05 & T12.
9. Any demolition and or excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services (a non-exhaustive list).
10. Arboricultural sign off and removal of protective measures.

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.



Protective fencing

Arboricultural supervision:
Manual excavation for the installation of fence post holes within the RPAs of retained trees. If significant roots are encountered post positions will be changed to accommodate.

Ground protection:
The 'no dig' sub-base, eg CellWeb™ , planned for the proposed hard surface will be installed to act as ground protection within the RPAs of retained trees. If the 'no dig' sub-base is not to be installed until later in the program of works, temporary ground boarding will be used in the interim.
Arboricultural supervision:
The 'no dig' sub-base, e.g. CellWeb™, will to be installed in line with manufacturers guidelines for expected loading. The final surface treatment will be porous.

Protective fencing

Protective fencing

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Ground protection:
Temporary ground boarding

Protective fencing

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Protective fencing

Tree Work Schedule

No.	Species	Works	Category
G02	Various	Prune: Crown lift locally to allow installation of the boundary fence.	B2
G04	Various	Prune: Crown lift the northern most tree to achieve 4m clearance over the proposed hard surface.	B2
G05	Common Ash	Fell trees to ground level; remove stumps.	C2
G09	Common Ash	Prune: Crown lift locally to allow installation of the boundary fence.	B2
G10	Various	Fell trees to ground level; remove stumps.	C2
G11	Various	Fell trees to ground level; remove stumps.	C2
H01	Common or Black Elder	Fell trees to ground level; remove stumps.	C2
T01	Cherry	Fell tree to ground level; remove stump.	C1
T04	Cherry	Fell tree to ground level; remove stump.	C1
T06	Cherry	Fell tree to ground level; remove stump.	C1
T09	Common Ash	Fell trees to ground level; remove stumps.	C1
T10	Common Ash	Fell trees to ground level; remove stumps.	C1
T11	Common Ash	Fell tree to ground level; remove stump.	B1
T12	Common Ash	Prune: Crown lift locally to allow installation of the boundary fence.	B1
T13	Silver Birch	Fell tree to ground level; remove stump.	C1

All tree work is to be undertaken in accordance with British Standard 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.

Rev:	Date:	Notes:
A	27/09/24	Tree T05 shown as removed post survey

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Project:
Gaywood Green,
Liverpool,
L32 6RD

Client:
Ridge and Partners LLP

Drawing:
Tree Protection Plan-Construction Phase

Based on:
(529)2316-GWP-01-01-D-A-(PA)-0010-P08

Drawing No:	Rev:
Arbtech TPP 01 Con	A

Date:	Scale:	Drawn:
Aug 2024	1:250 @ A0	JCH

Key:

Tree Nos.:	T01	Tree Canopies:	◯	Trunks:	○
RPAs:	◌	Category 'B' trees:	●	Category 'B' groups:	▨
Category 'C' trees:	●	Category 'C' groups:	▨	Trees to be removed:	T01 ⊗
Existing Site (Topo.):	—	Proposed site plan:	—	Protective fencing:	▬
Ground protection:	▨ ⬡	Arboricultural supervision - HS removal:	⊞	Arboricultural supervision - Demolition:	⊞
Arboricultural supervision - Excavations:	▩	Arboricultural supervision - 'No Dig' HS.:	⬡	Tree removed post survey:	T05

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 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 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 colour - a monochrome copy should not be relied upon.

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