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 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 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

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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.

Manual Excavation

Excavation within the RPAs will be initially undertaken by hand under direct on-site arboricultural supervision to a minimum of 600mm deep of any excavation, 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. If appropriate soil beneath the depth 600mm may be sheet piled, tegular piled or individual piles. Any deeper excavations may be undertaken by a machine provided it works form outside of the RPA or has appropriate ground protection in place to move and work upon.

Foundations within RPAs

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 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 ground.

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 practicle 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, e.g. sleeved bored piles or screw piles.

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

Arboricultural Supervision

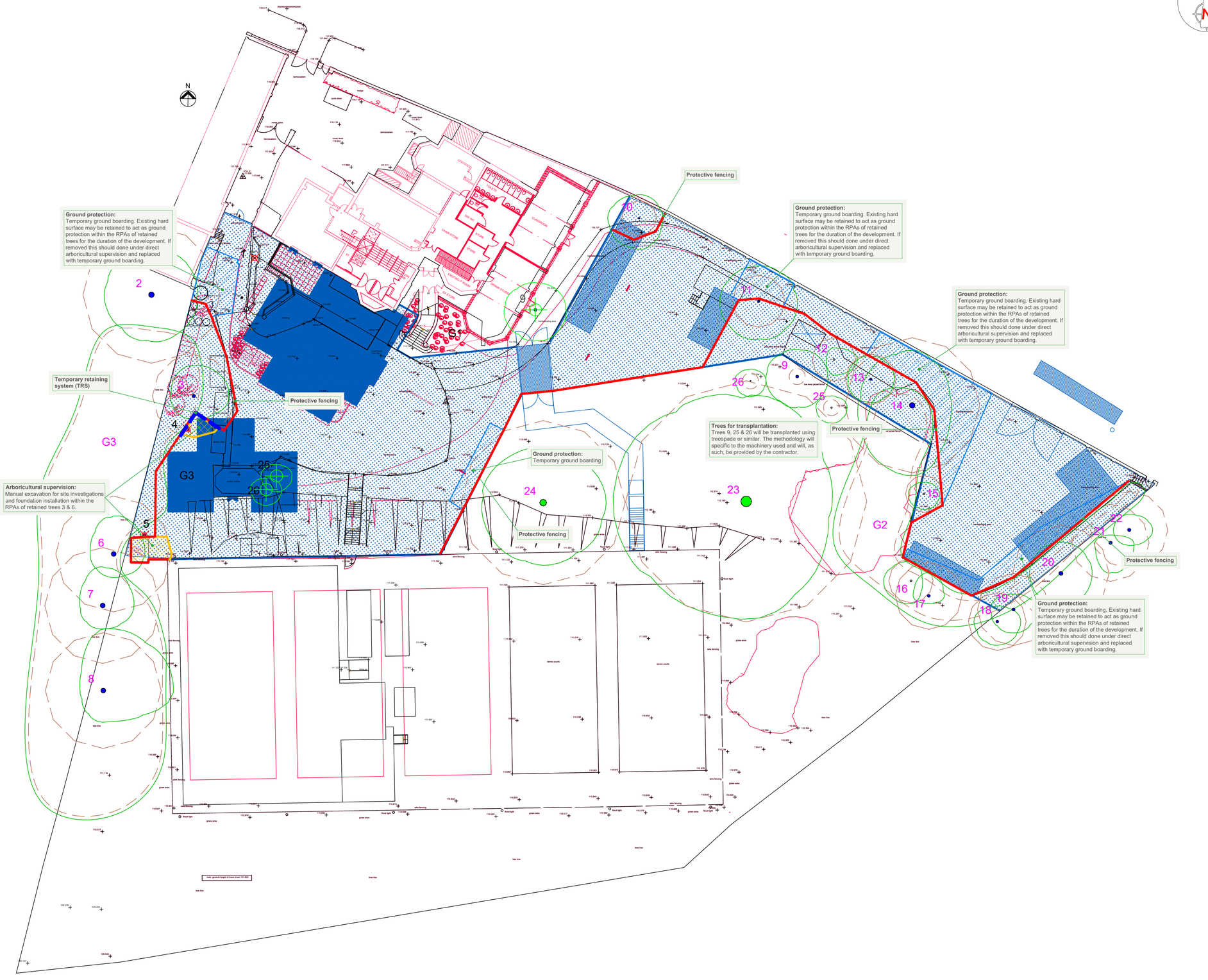
The arboricultural consultant will be required to attend site to directly supervise all demolition and construction works that have to be undertaken within the root protection areas. This will include:
1. Pre-commencement site meeting.
2. Location of protective measures.
3. Manual excavation for site investigations and any subsequent root pruning within RPAs of tree nos. 3 & 6.
4. Any excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services.
5. 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 detriment to retained trees.

Trees for transplantation

No.	Species	Trunk Diameter	Physical Condition
9	Norway maple	340mm	Good
25	Mountain ash	179mm	Fair
26	Whitebeam	120mm	Good



Tree Work Schedule

No.	Species	Works	Category
G1	Various	Fell trees to ground level, grind out stumps.	C12
G3	Various	Partial removal of group: fell trees to ground level, grind out stumps.	C12
1	Pittosporum	Fell tree to ground level, grind out stump.	B1
3	Common yew	Root pruning: Roots will be exposed using manual excavation technoques. Prune roots inline with the orange hatch .	B1
4	Common yew	Fell tree to ground level, grind out stump.	B1
5	Common yew	Fell tree to ground level, grind out stump.	B1
6	Common lime	Crown lift to achieve 2m clearance over proposed structure.	B1
9	Norway maple	Relocate tree using tree spade. Initial pruning of roots to be undertaken within the season prior to tree relocation.	B1
10	Common ash	Prune: crown lift south side to achieve 4m ground clearance.	B1
11	Common ash	Prune: crown lift north & northeast side to achieve 4m ground clearance.	B1
12	Common holly	Prune: reduce all growth on northeast side to a height of 4m to allow for installation of site hoarding.	C1
13	Common holly	Prune: reduce all growth on northeast side to a height of 4m to allow for installation of site hoarding.	B1
25	Mountain ash	Relocate tree using tree spade.	C1
26	Whitebeam	Relocate tree using tree spade.	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	22/01/18	Inclusion of phased site set up plans & temporary construction access from Highgate Hill
B	16/03/18	Amended site set up to retain trees 10, 11, 12 & 13; transplanting of trees 9, 25 & 26.
C	04/10/18	Amended proposal requiring the removal of tree 1

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Project:
Channing Junior School,
Fairseat,
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Client:
Channing School

Drawing:
Tree Protection Plan

Based on:
17-282-003-A; 17282-004-B;
343.36/PLA54; CA1272/CT005/A

Drawing No:	Rev:
Arbtech TPP 01 Phase 1	C

Date:	Scale:	Drawn:
Jan 2018	1:250 @ A1	JCH

Key:

Tree Nos.:	2	Tree Canopies:		Trunks:	
RPAs:		Category 'A' trees:		Category 'B' trees:	
Category 'C' trees:		Trees to be removed:	4	Incursion - structure:	
Topo. survey:		Proposed LGF:		Phase 1 Site Setup	
Trees to be relocated:	9	Protective fencing:		Ground boarding:	
Manual / Supervised excavation:		Temp. retaining system:			

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 requirments relating to proposed structures, hard surfacing or underground services.
This drawing was produced in colour - a monochrome copy should not be relied upon.