

Tree Work Schedule			
No.	Species	Works	Category
G02	Sycamore	Fell trees to ground level, grub out stump	B1
G03	London Plane	Fell trees to ground level, grub out stump	B1
G06	A Tree	Prune crown reduce overhanging to limit boundary overhangs to 3m	B12
H02	Leyland Cypress	Partial removal of ground level trees to ground level, remove stump	C12
H04	Leyland Cypress	Fell trees to ground level, grub out stump	C1
H04	Leyland Cypress	Fell trees to ground level, remove stump	C1
T05	Red Spruce	Fell tree to ground level, remove stump	B12
T08	Magnolia	Fell tree to ground level, remove stump	B1
T07	Whitebeam	Fell tree to ground level, remove stump	B1
T08	Horse Chestnut	Fell tree to ground level, remove stump	B1
T09	Horse Chestnut	Fell tree to ground level, remove stump	B1
T10	Norway Maple	Fell tree to ground level, remove stump	C1
T11	Norway Maple	Fell tree to ground level, remove stump	C1
T12	Thorn Apple	Fell tree to ground level, remove stump	C1
T13	Common Juniper	Fell tree to ground level, remove stump	C1
T14	Leyland Cypress	Fell tree to ground level, remove stump	B12

All tree work is to be undertaken in accordance with British Standard BS 3998:2010 Tree Work - Recommendations. All stumps 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.

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 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
SECTION 196(1) & (2)
ANY ACQUISITION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

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:

- For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, or as a suspended walkway, or on top of a compacted sub-base layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane.
- For protection of motorised plant up to a gross weight of 20 tonnes, proprietary reinforced ground protection placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane.
- For wheeled or tracked construction traffic, exceeding 21 gross weight, an alternative system (e.g. proprietary system or pre-cast reinforced concrete slabs) to an engineering specification designed in consultation with arboricultural advice, to accommodate the heavy 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 or experienced engineering specification in consultation with arboricultural advice, to be able to support the expected loading to the ground surface in the loading to which it will be subjected.

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

Ground protection (CellWeb)

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, installed using a proprietary cellular confinement system (CellWeb or similar) laid over a base of per-grit (limer ticks or similar). This may be laid over a base of per-grit (limer ticks or similar) or a base of per-grit (limer ticks or similar) or a base of per-grit (limer ticks or similar). The area of CellWeb 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 pipe driven into the ground, the outer edge of the supports may be banked up with clean top soil.

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 arboriculturist using a suitable hand saw or secateurs. The edge of all excavation closest to the retained tree trunk, wherever it is, shall be heeled to prevent drying out, and where necessary be shrouded to prevent soil collapse or compaction. The depth of the excavation may be sheet piling, lagged piling 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 it is a proposed foundation, hard surfacing or underground services. The soil is to be loosened with the use of a fork or pick and air-spade and then cleared with a shovel and 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 suitable sized bucket and a suitable sized boom. The excavator will be used to remove soil from the excavation, and the excavator operator will be instructed to clear the excavation of any roots. 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 excavator 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 work commencing.

Utility apparatus

Mechanical utility apparatus: Mechanical trenching for the installation of underground apparatus and drainage where 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 root and methods of installation of all underground apparatus. Whenever possible, apparatus should be routed outside of RPAs. Where this is not possible, it is preferable to keep apparatus together in a common duct, all inspection chambers should be sited outside of the RPAs.

Where underground apparatus does pass within the RPAs, detailed plans showing the proposed route should be drawn up in conjunction with the project arboriculturist. In such cases trenching methods should be used with entry and retrieval pits being located outside of the RPAs. If trenching is used, the trenching should be carried out using hand tools (air-spade, fork, shovel) 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 utility apparatus including CCTV cameras and lighting should be sited to avoid the need for detrimental tree pruning, as such the current and future size of the tree should be considered. Tree branches can be pruned back with care to provide space, though it is not appropriate for repetitive and significant tree work to be an initial design solution unless this is a suitable management outcome for the tree. Any pruning should be undertaken in accordance with BS3998:2010.

Soil Amelioration

To mitigate the impact upon retained RPAs of retained trees resulting from the installation of proposed structures/buildings to retained RPAs, affected trees will be subject to soil improvement, thereby improving the growing conditions.

To improve the soil structure within the remaining RPA, compressed air will be injected to a depth of 600mm at 1m spacings, by way of a well drilled soil aeration (e.g. Terramix, Vigor etc.) in close liaison with the soil profile. A mixture of Terramix and enriched biochar (or similar) will then be injected into the newly fractured soil, again using the same high-pressure system.

The Terramix will have the effect of physically holding open the new gaseous exchange pathways. Biochar is a very pure, high-carbon form of charcoal that improves the structure, water-holding capacity and nutrient retention of soils and substrates while providing permanent relief for beneficial microbiology. Enriched biochar has beneficial elements added to it including mycorrhizal fungi, Trichoderma, trace nutrients and beneficial bacteria.

Application rates will be determined by the specific equipment used and will be specified by the specialist.

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.
- Location of protective measures.
- Soil amelioration within the RPA of tree T23.
- Installation of 'No Dig' sub-base to act within the RPA of tree T23.
- 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.

Arboricultural Method Statement

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

Rev.	Date	Notes
A	30/09/21	Amended proposal drawing
B	07/09/21	Installed underground services added; Tree protection amended around T23 for access; Soil amelioration at T23 added; amended RPA damage; removal of T07 (in decline) added.
C	12/10/21	Amended tree protection fencing T15-T18.
D	20/10/21	Amended tree protection fencing T15, T20-22, G01

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Client: Ben & Emma Wilkin

Drawing: Tree Protection Plan

Based on: 242 / 3.004 / Rev.01

Drawing No: Arbtech TPP 01

Date: Oct 2023

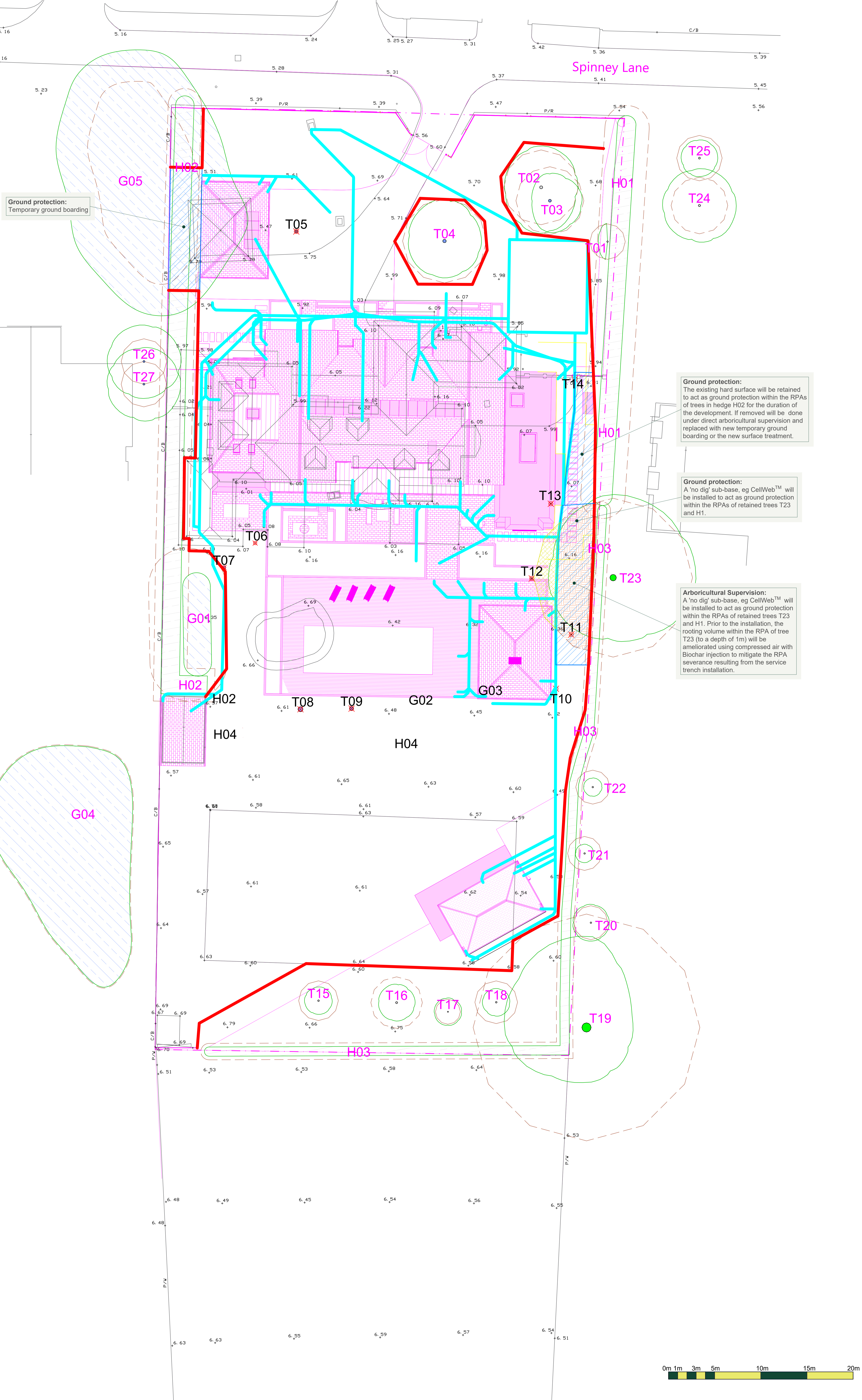
Scale: 1:150 @ A0

Drawn: JCH

Key:

- Tree No: T01 Tree Canopies
- RPAs: Category 'A' trees, Category 'B' trees, Category 'C' trees
- Category 'B' groups, Category 'C' groups
- Trees to be removed: Existing Site (Top), Proposed Site Plan
- Protective Fencing: Ground Protection, Underground service area
- RPA test in installation: Soil amelioration

0m 1m 3m 5m 10m 15m 20m



Ground protection: Temporary ground boarding

Ground protection: The existing hard surface will be retained to act as ground protection within the RPAs of trees in hedge H02 for the duration of the development. If removed will be done under direct arboricultural supervision and replaced with new temporary ground boarding or the new surface treatment.

Ground protection: A 'no dig' sub-base, e.g. CellWeb™ will be installed to act as ground protection within the RPAs of retained trees T23 and H1.

Arboricultural Supervision: A 'no dig' sub-base, e.g. CellWeb™ will be installed to act as ground protection within the RPAs of retained trees T23 and H1. Prior to the installation, the rooting volume within the RPA of tree T23 (to a depth of 1m) will be ameliorated using compressed air with Biochar injection to mitigate the RPA severance resulting from the service trench installation.