

Arboricultural Method Statement

Protected Status Of Trees

Trees may be legally protected, this may either be in the form of a Tree Preservation Order (TPO) or that the trees are located within a Conservation area. In addition some tree felling may require a felling licence from the Forestry Commission.

Potentially large penalties may be enforced for illegally carrying out works on protected trees. It is recommended that checks are made before any works are undertaken and no work should commence until permission has been granted. Please note that there are a number of exemptions from the requirement to obtain a felling licence including land on which full planning permission has been granted by the local authority, however this exemption does not cover land where only outline planning permission has been granted, or on land which has been allocated for residential development within local authority urban and local development plans.

AllAboutTrees has been able to ascertain with Durham County Council (the Local Planning Authority) on Tuesday 6th June 2023 that there are no restrictions protecting the trees on the site. The site is not within a conservation area and there are no TPOs imposed on any trees within the site.

Tree Works

The first arboricultural works on site will be the removal of all the conflicting vegetation:

- Trees 1, 5, 6, 8, 24, 25
- Groups 2 & 4-6
- A section of group 3 and
- A section of hedge 2

which are identified on the Tree Protection Plan (TPP) by the broken black ring surrounding the tree centre and referred to in appendix 1 of this report. The groups, and section of groups / hedgerows, to be removed have had the coloured infill hatch, and RPA removed / altered. The broken black ring has been placed around the coloured categorisation circle adjacent to hedge / group label.

It would be appropriate to remove trees 4, 13 and 15 at this time though this is to establish a higher level of arboricultural management and is not required to facilitate the development.

The stumps may either be ground out using a stump grinding machine or removed as part of the ground excavation works if not situated within the root protection area of trees to be retained.

Details of any prescribed pruning works are included within Appendix 1 of this report. The tree works should wherever possible be carried out in accordance with BS3998:2010 Tree Work - Recommendations.

Wildlife Habitats

Consideration must be given to wildlife when conducting tree works, particularly birds and bats.

Bats

All UK bats and their roosts are protected by law. The legislation protecting bats are:

- The Wildlife & Countryside Act 1981 (WCA)
- Conservation of Habitats and Species Regulations 2017

For all countries of the UK, the legal protection for bats and their roosts may be summarised as follows:

You will be committing a criminal offence if you:

1. Deliberately* capture, injure or kill a bat
2. Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
3. Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
4. Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
5. Intentionally or recklessly obstruct access to a bat roost

*In a court, 'deliberately' will probably be interpreted as someone who, although not intending to capture/injure or kill a bat, performed the relevant action, being sufficiently informed and aware of the consequence his/her action will most likely have.)

Penalties on conviction - the maximum fine is £5,000 per incident or per bat (some roosts contain several hundred bats), up to six months in prison, and forfeiture of items used to commit the offence, e.g. vehicles, plant, machinery.

No visual signs were found to indicate the presence of bats in the surveyed trees.

When carrying out tree works it is essential that the contractor or other competent person carries out a specific 'bats in trees risk assessment' which can be obtained from the 'Arboricultural Association' or the 'Bat Conservation Trust' (BCT). If evidence of bats is found work must stop immediately and Natural England Batline contacted (0845 1200 228). A further inspection may well be required by a licensed bat handler or roost visitor.

Birds

In the UK, all wild birds, their nests and their eggs are protected by law.

In England, Scotland and Wales the legislation that protects wild birds is:

- The Wildlife and Countryside Act 1981
- The Countryside (or CROW) Act 2000

Signs of past nesting activity were evident and as such caution must be exercised.

As with bats the contractor has an obligation to carry out visual checks prior to works. Where possible tree works should be carried out in the period from August to the end of February in order to avoid the bird nesting season.

Protective Barrier Erection

The protective barriers are to be erected prior to the commencement of site works including demolition, soil stripping or movement, bringing onto site of materials, supplies or machinery. Tree works can be undertaken prior to the erection of the barriers.

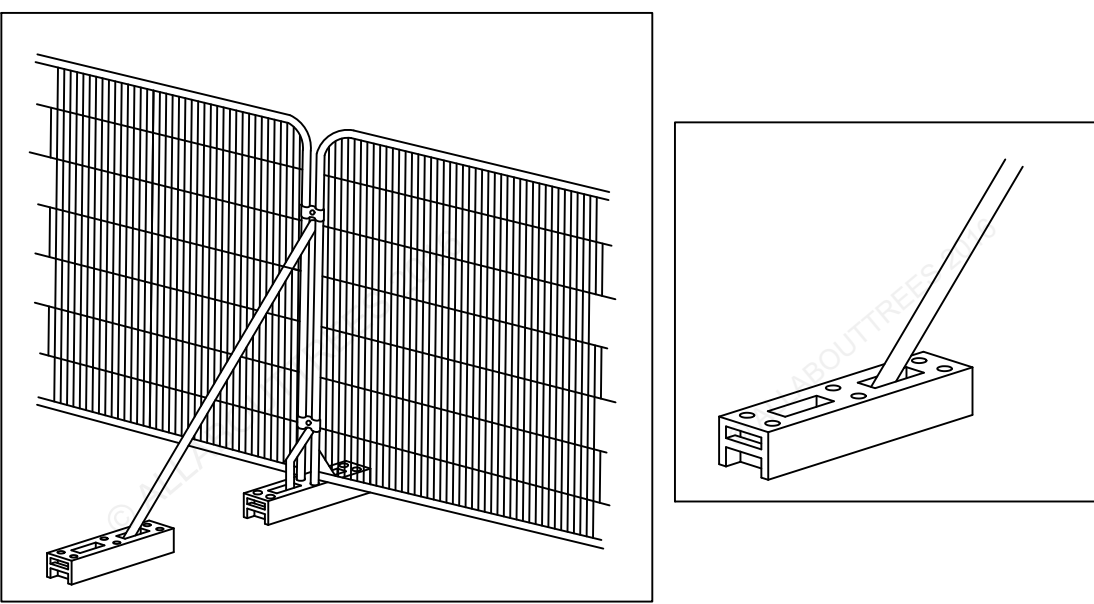
The barriers must be erected in the position indicated on the Tree Protection Plan (TPP) by the dark blue line and be constructed as per the following specification.

The barriers should be considered essential and should not be removed or altered without prior recommendation by an Arboriculturalist and approval of the local planning authority.

The barrier should consist of proprietary 2m tall welded mesh panels mounted on rubber or concrete feet. The panels must be joined together with a minimum of two anti-tamper couplings situated at least 1m vertically apart and installed uniformly throughout the barrier so that they can only be removed from inside the barrier. The panels must be supported by stabilising struts mounted on a block tray.

No fixing shall be made to any tree and all possible care must be taken to prevent damage to tree roots when locating the posts.

All types of barriers must be firmly attached to prevent movement by site personnel or vehicles and all-weather signs with the wording 'Construction exclusion zone- keep out' should be attached.



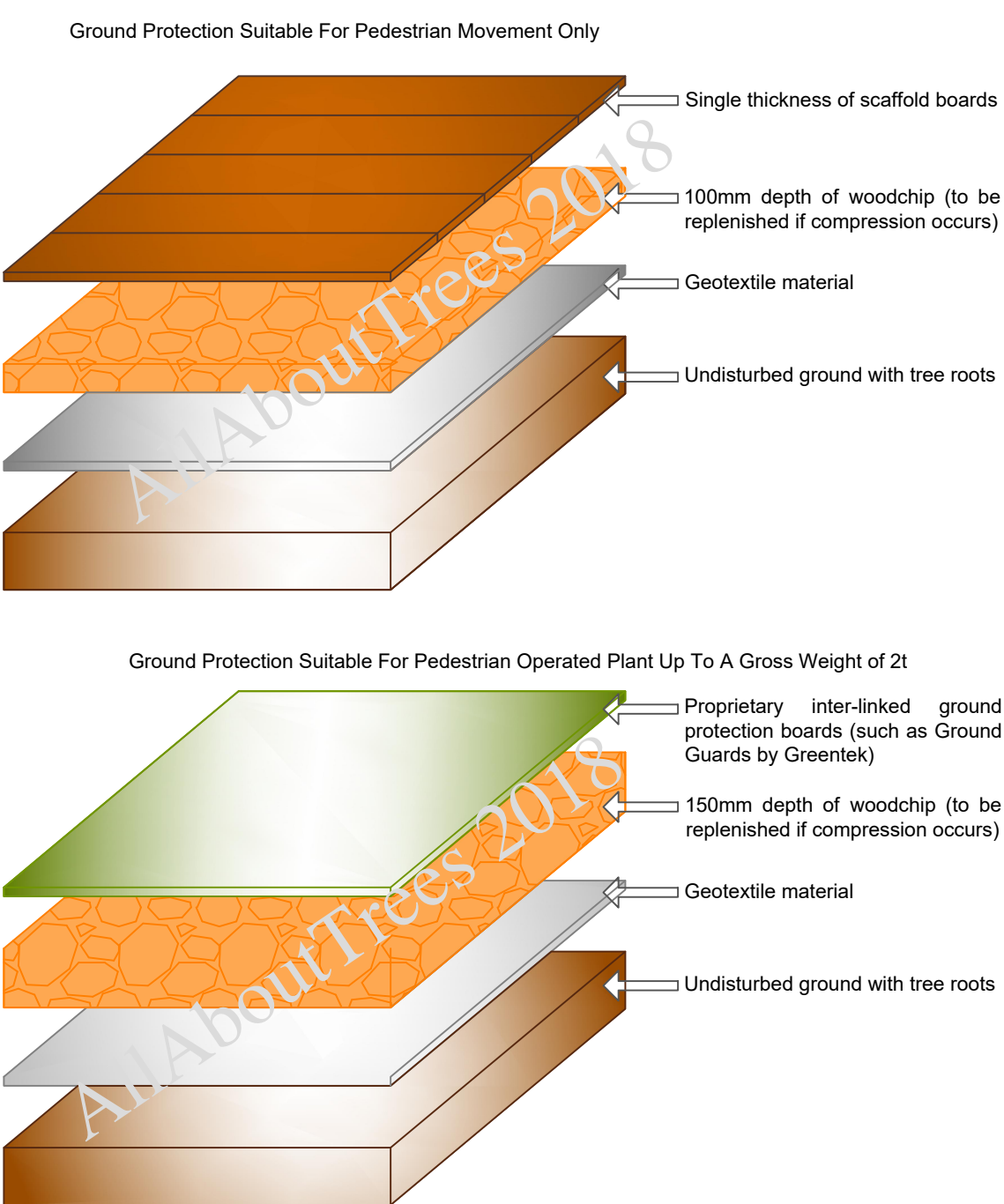
Ground Protection Within Root Protection Areas

In some cases it will be necessary to provide access within the RPA of tree 21. To minimise disturbance to the rooting area it will be necessary to provide ground protection measures in the area indicated by the orange hatching on the TPP.

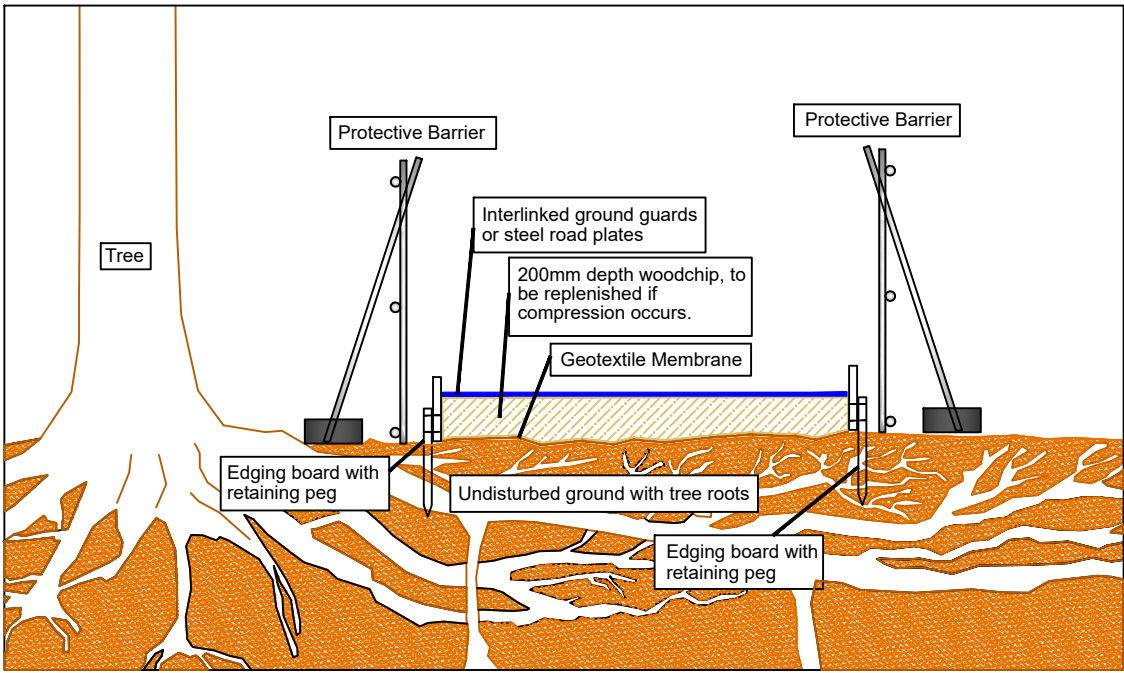
The following diagrams visualise the layout requirements. By sufficiently protecting the rootplate of the tree, the access and associated working area can be placed within the RPA. There is no limitation as to the size of the ground protection area, but we would advise that it is at least 0.5m from the trunk of any tree.

Temporary ground protection should be tailored to the likely load it will be subjected to. The following diagrams indicate the acceptable techniques for:

- Pedestrian
- Plant and vehicle access up to 2 tons gross weight
- Plant and vehicle access up exceeding 2 tons gross weight



If the likely loading is to exceed 21 tons gross weight it will be necessary to produce an engineered solution with arboricultural advice to accommodate the likely load safely. One such example is shown below. In some cases it may be necessary to install a temporary road using a 3D cellular confinement system (such as Cellweb by Geosynetics Ltd).



Location of Site Compound & Storage Areas

The contractor's site compound, storage & parking areas must be located outside of the root protection areas (RPAs) of the retained trees. This includes any trees which are located outside of the study area but not included within the survey.

All site storage areas, especially cement mixing and washing points for plant and vehicles must also be situated outside of the root protection areas (RPA). Where there is a possible risk of polluted water runoff heavy duty plastic sheeting and sand bags must be used to contain spillages and contamination.

Demolition

The demolition work near the trees must be undertaken with great care with every effort made to avoid damage to aerial and underground portions of the tree. Roots frequently grow adjacent to, and underneath structures and surfacing and damage can occur when the roots are physically disturbed or the soil around them is compacted from the weight of machinery or material.

When demolishing structures near to trees the machine should ideally break the walls and roof into the footprint of the building (top down pullback methodology) and avoid any debris falling into the root protection area. If this is not possible the section of the building adjacent to the tree will need to be demolished by hand.

Existing surfacing should be carefully lifted using either a long reach machine positioned outside of the root protection area or manually using hand tools. Surfacing is broadly defined as any hard surfacing used for vehicular access, parking or pedestrian pathways. Including tarmac, crushed stone, solid stone, compacted aggregate, concrete and timber decking, but excluding compacted soil with no hard covering.

In summary:

- Machines with long reach may be positioned outside of the root protection area (RPA) and used to demolish the building or carefully remove debris providing this does not disturb the RPA or the aerial portion of the tree
- Appropriate hand tools for manual removing debris include pneumatic or powered breaker, sledgehammer, crow or prying bar, pick, mattock, spade, shovel, trowel, fork or wheelbarrow. Secateurs and hand saw should be available to cut any exposed roots. The debris must be moved across existing hard surfacing or temporary ground protection thereby avoiding compaction of the soil.
- If appropriate the below ground structures should be left in place if their removal was to cause excessive root disturbance

Drainage Runs/ Underground Services

It is assumed that the existing service runs will be exploited where possible, but if new works are required it is important that they comply with the National Joint Utilities Group (NJUG) Guidelines for the planning, installation, and maintenance of utility services in proximity to trees' and BS 5837:2012. The excavation of open trenches by machine will be unacceptable within the protective zone of any of the retained trees.

Wherever possible, services should be routed outside of any retained trees RPA. When this is not possible apparatus should be routed together in a common duct and any inspection chambers sited outside the RPA.

Acceptable techniques for the laying of services in order of preference are:

- **Trenchless**- by use of thrust boring or similar techniques. The pit excavations for starting and receiving the machinery should be located outside of the root protection area. To avoid root damage, the mole should run at a depth of at least 600mm.
- Use of external lubricants on the mole other than water (eg oil or bentonite) should be avoided.

Trenchless Solutions For Installation Of Underground Services				
Method	Accuracy (MM)	Bore (A) diameter (MM)	Maximum subterranean length (M)	Applications
Microtunnelling	<20	100 to 300	40	Gravity-fall pipes, deep apparatus, watercourse/roadway under crossings
Surface launched directional drilling	<100	25 to 1200	150	Pressure pipes, cables including fibre optic
Pipe ramming	<150	150 to 2000	70	Any large-bore pipes and ducts
Impact moling (C)	<50 (D)	30 to 180 (E)	40	Gas, water and cable connections, e.g. from street to property
				Not suitable for
				Low-cost projects due to relative expense
				Gravily fall pipes, e.g. drains and sewers (B)
				Rocky and other heavily obstructed soils
				Any application that requires accuracy over distances in excess of 5m.

- (A) Dependant upon strata encountered
(B) Pit-launched directional drilling can be used for gravity fall pipes up to 20m in subterranean length
(C) Impact moling (also known as thrust-bore) generally requires soft, cohesive soils.
(D) Substantial inverse relationship between accuracy and distance
(E) Figures given relate to single pass: up to 300mm bore achievable with multiple passes

If trenchless insertion is not feasible the alternatives are detailed below in order of preference.

- **Broken trench**- by using hand dug trench sections together with trenchless techniques. It should be limited to practical access and installation around or below the roots. The trench must be dug by hand (see following comments re continuous trenching) and only be long enough to allow access for linking to the next section. The open sections should be kept as short as possible.
- **Continuous trench**- the trench is excavated by hand and retains as many roots as possible. The surface layer is removed carefully and hand digging of the trench takes place. No roots over 2.5cm diameter or clumps of smaller roots (including fibrous) should be severed. The bark surrounding the roots must be maintained. Cutting of roots over 2.5cm diameter should not be attempted without the advice of a qualified Arboriculturalist.

If roots have to be cut, a sharp tool (defined as spade, narrow spade, fork, breaker bar, secateurs, handsaw, post hole shoveller, hand trowel) should be used.

Backfilling

Reinstatement of street works must comply with the code of practice New Roads and Streetworks Act 1991 (Specification for the reinstatement of openings in highways), but where tree roots are involved backfilling should be carefully carried out to avoid direct damage to retained roots and excessive compaction of the soil around them.

The backfill should incorporate an inert granular material mixed with top soil or sharp sand (not builders sand) around the retained roots. This will allow a measure of compensation for resurfacing whilst creating an aerated zone around the roots.

Roots and in particular fine roots, are vulnerable to desiccation on exposure to air. The roots are at greatest risk when there are rapid fluctuations in the air temperature around them (especially winter diurnal temperatures). It is vitally important that the roots are covered with sacking whilst the trench is open. The sacking should be removed once the trench is backfilled.

Arboricultural Supervision

The following programme of supervision is proposed to assist in the preservation and protection of the retained trees during all aspects of the proposed development.

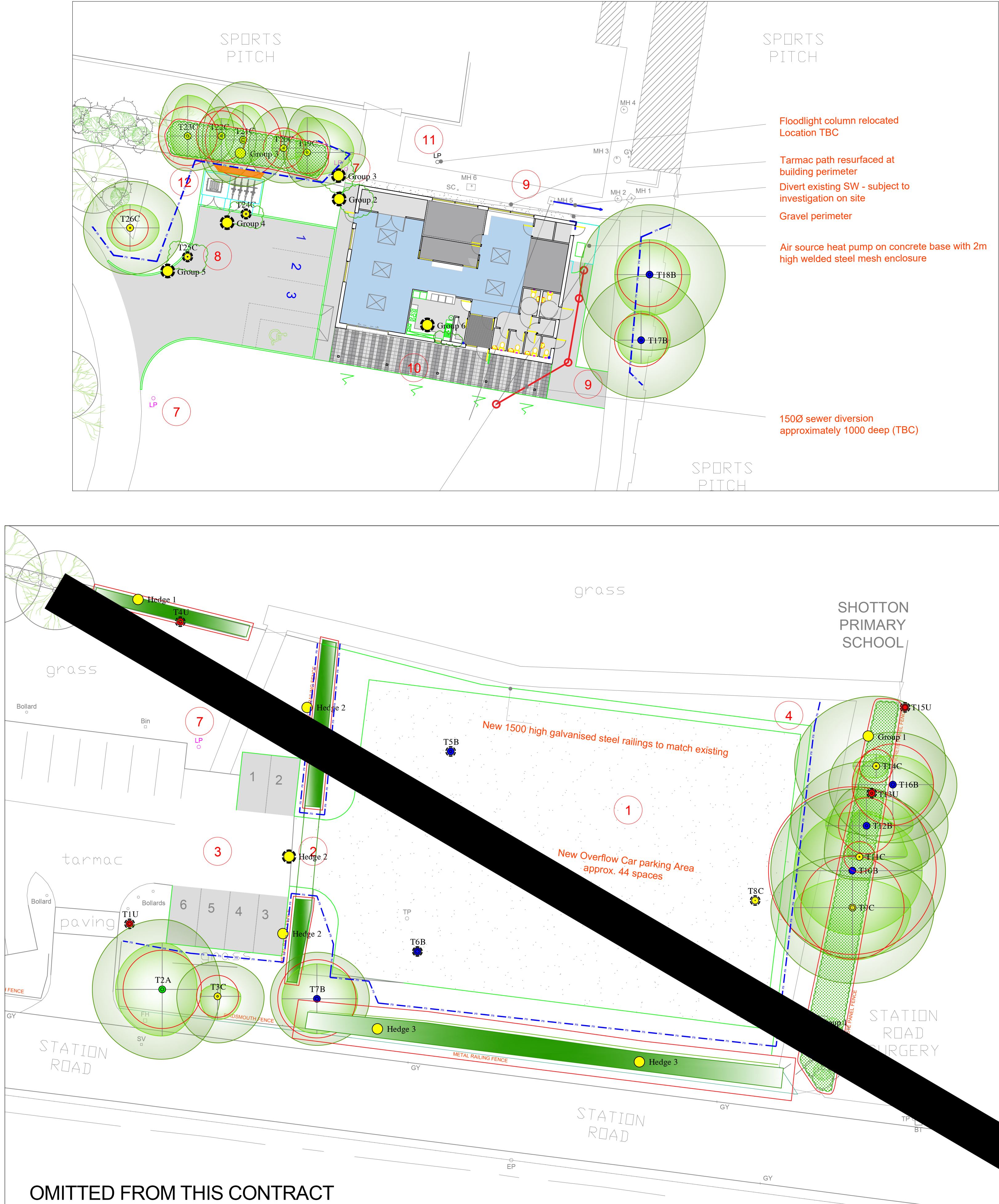
The supervision arrangements must be sufficiently flexible to allow for the supervision of all sensitive works as they occur. The Arboricultural Consultant's initial role is to liaise with the developer and the council to ensure that the appropriate protective measures are in place before any works commence on site and once the site is active monitor compliance with the Arboricultural conditions and advise on any tree problems that may arise.

Action	Programming	Extent of supervision	Nature of supervision
Pre-commencement meeting with site manager & Council tree officer	Before any site activity commences	Meeting on site	Site meeting & letter or email confirming results of meeting distributed to relevant parties.
Tree works undertaken	Before any plant enters site or demolition/construction work commences.	Confirm extent of tree works and protective barrier position	Confirm position of the protective barriers and other tree protection measures have been installed and comply with the Tree Protection Plan (TPP)
Finalising tree protection barrier installation and other tree protection measures		Provide photographs indicating completed tree protection	
Installation of services within root protection areas (if required)	Prior to installation of surfacing or services & during installation of surfacing and services	Meeting with contractor prior to installation and during installation of surfacing and services to ensure compliance with AIA	Site meeting & letter or email confirming results of meeting distributed to relevant parties.
Removal of protective barriers and other tree protection measures	Once construction activities have finished	Meeting with contractor for briefing before removal commences	Site meeting & letter or email confirming results of meeting distributed to relevant parties.

Site Management

It is the developer's responsibility to ensure that the details of the Arboricultural method statement and any agreed amendments are known and understood by all relevant site personnel. Copies of the agreed documents must be kept on site at all times and the site manager or other appropriate person must brief all personnel who could impact the trees on the specific tree protection requirements.

This should form part of the site induction procedure and be written into the appropriate site management documents.



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The original of this drawing was produced in colour - a photocopy should not be relied upon.

Key:

- Tree Number
- Tree Crown True Shape (Shaded Light Green)
- Predicted Future Growth Of Canopy (Shaded Dark Green & Surrounding Current Crown Shape)
- Trees To Be Removed (Broken Black Ring Surrounding Centre)
- Tree Quality Assessment (Centre Colours As Below)
- Green Centre = High Quality (Denoted By Letter A)
- Blue Centre = Moderate Quality (Denoted By Letter B)
- Yellow Centre = Low Quality (Denoted By Letter C)
- Red Centre = Unsuitable To Retain (Denoted By Letter U)
- BS Root Protection Area As Shown By The Red Circle Around The Tree
- Tree / Woodland Groups (Root Protection Area Shown By Red Outline Surrounding Group)
- Removed Tree / Woodland Groups (Hatch Fill And Root Protection Area Removed)
- Hedgerows (Root Protection Area Shown By Red Outline Surrounding Hedge)
- Removed Hedgerows (Hatch Fill And Root Protection Area Removed)
- Position Of Protective Barrier - Dashed Blue Line With Letters PB (Protective Barrier)
- Ground Protection Required (Areas Indicated By Orange Hatching)

Institute of Chartered Foresters

Registered Consultant

Arboricultural Method Statement

Tree Protection Plan (AMS TPP)

Retained Trees Shown On Proposed Layout With Protective Measures Indicated

Shotton Community Hub,

Shotton Colliery

For

D3 Associates Ltd

AllAboutTrees Ltd

Arboricultural & Ecological Consulting
Chartered Arboriculturalists & Environmentalists

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Scale 1:200 at A0 Date 06.06.23

-Registered Chartered
-Arboricultural Consultants
-Planning & Development
-Urban Forestry
-Ecological Consultants

Drawing Ref. **AMS TPP** Revision -

OMITTED FROM THIS CONTRACT