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 South Tyneside Council (the Local Planning Authority) on Wednesday 26th October 2022 that there are restrictions protecting some of the trees on the site. Trees 1 and 2 are protected by TPO (no.6) 1976 and tree 4 is protected by TPO 136. It is an offence to carry out any tree work to these individuals unless permission is granted by the Local Planning Authority.

The site is not within a conservation area.

Trees 3, 5 and 6 are not protected by Tree Preservation Orders at the time of enquiry.

Tree Works

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

- Trees 2 & 3

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 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 though the larger individuals may have 'bat-friendly' features in the aerial portions not visible from ground level - as such caution must be exercised.

When carrying out tree works it is essential that the contractor or other competent person carriers 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 1300 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

No nesting birds were present at the time of inspection though 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.

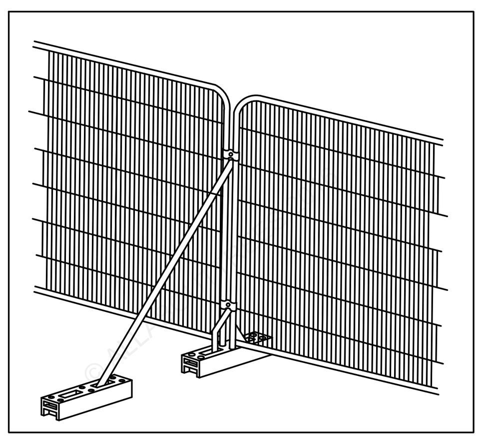
The barriers must be erected in the position indicated on the Tree Protection Plan (TPP) by the dark blue line and be constructed as per the following specification.

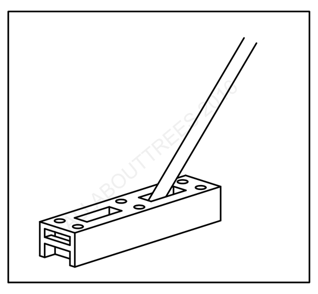
The barriers should be considered essential and should not be removed or altered without prior recommendation by an Arboriculturalist and approval of the local planning authority.

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.







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.

Foundation Design

The position of the proposed garage is within the RPA of trees 4-6. To avoid damage to the root plate of the trees it will be necessary to construct the building in a more tree friendly manner than in a conventional build (in accordance with section 7.5.5 of BS 5837: 2012). In essence this means that traditional strip footing foundations cannot be used as they would sever a proportion of the roots and instead the building should be constructed on piles (either end bearing or friction piles) with a pier beam grid or a cast slab (either pre-cast or cast in situ) placed on top of the piles. The grid or slab should be laid at or above ground level but should be ground bearing to avoid any compaction of the ground overlying the roots.

By using pile foundations only a limited number of needle piles will be required which will be drilled on site by a specialist mini rig. The holes for the piles will be small in diameter and damage (if any) to underlying tree roots will be extremely localised. The piles should be sheathed to prevent the phytotoxic effects of the concrete contaminating the nearby soil and roots.

The piles will be positioned some distance from the tree stems meaning that the larger tension roots will have declined in diameter significantly, intimating that no large structural roots should be encountered. Ground compaction will be absolutely minimal and gaseous exchange will continue to take place unimpeded. The root system of the tree is dynamic in nature producing a mass of new roots throughout the growing season which grow and survive to a varying extent. It is estimated that some species of hardwood trees lose up to 90% of the absorbing roots during winter and produce new rooting during the next season. As the shape and size of the root system is not immutable and is adventitious in form, the root system will adapt to the position of the new building over time and respond to the changing conditions without adversely affecting the tree.

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 bentinite) should be avoided.

Trenchless Solutions For Installation Of Underground Services

Method	Accuracy (MM)	Bore (A) diameter (MM)	Maximum subterranean length (M)	Applications	Not suitable for
Microtunnelling	<20	100 to 300	40	Gravity-fall pipes, deep apparatus, watercourse/ roadway under crossings	Low-cost projects due to relative expense
Surface - launched directional drilling	≈100	25 to 1200	150	Pressure popes, cables including fibre optic	Gravity fall pipes, e.g. drains and sewers **(B)**
Pipe ramming	≈150	150 to 2000	70	Any large-bore pipes and ducts	Rocky and other heavily obstructed soils
Impact moling (C)	≈50 **(D)**	30 to 180 **(E)**	40	Gas, water and cable connections, e.g. from street to property	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 compaction 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 is the preservation and protection of the retained trees during all aspects of the proposed development.

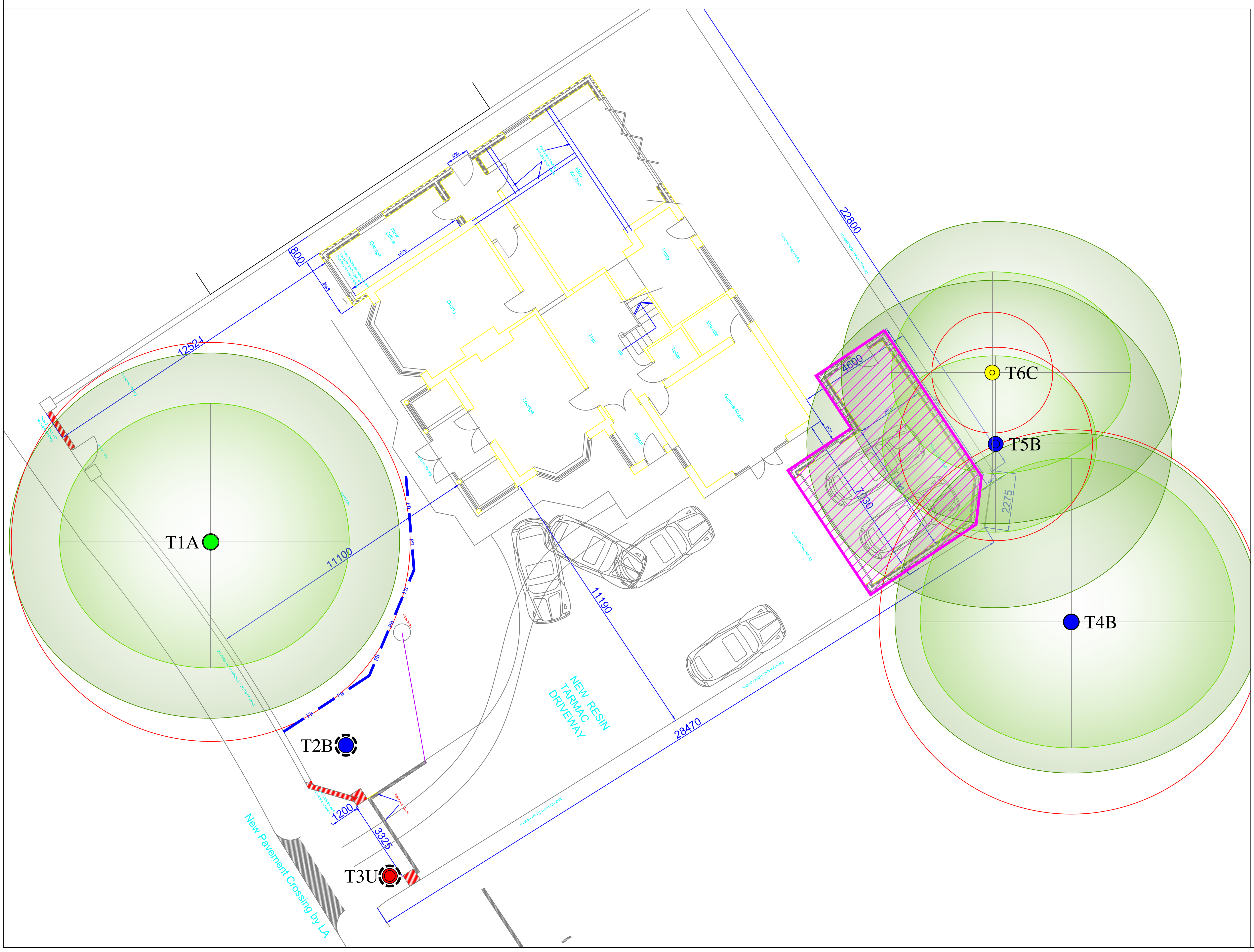
The supervision arrangements must be sufficiently flexible to allow for the supervision of all sensitive works as they occur. The Arboricultural Consultant's initial role is to liaise with the developer and the council to ensure that the appropriate protective measures are in place before any works commence 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 Review any updates to the proposal Confirm extent of tree works and protective barrier position.	Site meeting & letter or email confirming results of meeting distributed to relevant parties.
Tree works undertaken Finalising tree protection barrier installation	Before any plant enters site or demolition/construction work commences.	Confirm position of the protective barriers have been installed and comply with the Tree Protection Plan (TPP) Provide photographs indicating completed tree protection	Site meeting & letter or email confirming results of meeting distributed to relevant parties.
Installation of services within root protection areas (if required)	Prior to installation of surfacing or services & during installation of surfaces 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	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 monochrome copy 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
- Position Of Protective Barrier - Dashed Blue Line With Letters PB (Protective Barrier)
- Pile Foundations Required

Institute of Chartered Foresters
Registered Consultant

Arboricultural Method Statement
Tree Protection Plan (AMS TPP)

Retained Trees Shown On Proposed Layout With Protective Measures Indicated

215 Sunderland Road,

South Shields

For

AJ Design NCL

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Scale 1:100 at A1 | Date 16.11.22

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-Urban Forestry
-Ecological Consultants

Drawing Ref.	Revision
AMS TPP	-