

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.

It is understood the surveyed trees are subject to a Tree Preservation Order. It is an offence to carry out any tree work to protected trees unless permission has been granted by the Local Planning Authority.

Tree Works

The first arboricultural works on site will be the pruning works required to facilitate the development:

Tree 2 - Sympathetic reduction of west flank of canopy required to establish 2.5m offset from the canopy and the proposed building (required for the rear bedroom extension)

Tree 8 - Sympathetic reduction of south west flank of canopy required to establish 2.5m offset from the canopy and the proposed building (required for the two storey off shoot extension).

Crown lift to provide 2.5m clearance above the single storey elements of the proposed development.

Further works have been recommended though these are to establish a higher level of arboricultural management and are not required to facilitate the development.

Tree 1 - Remove deadwood over 25mm - recommended due to position of canopy overhanging road and access.

Tree 3 - Remove as part of site management - recommended due to basal cavities and position within falling distance of the property.

The tree works should 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:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- 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 confirm the presence of bats in the surveyed trees though a number of the mature trees within the site display characteristics found favourable to bats and as such caution must be exercised.

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 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 seen at the time of inspection though given the scope of the site, and the extent of vegetation, potential exists for birds to nest 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 barrier is 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.

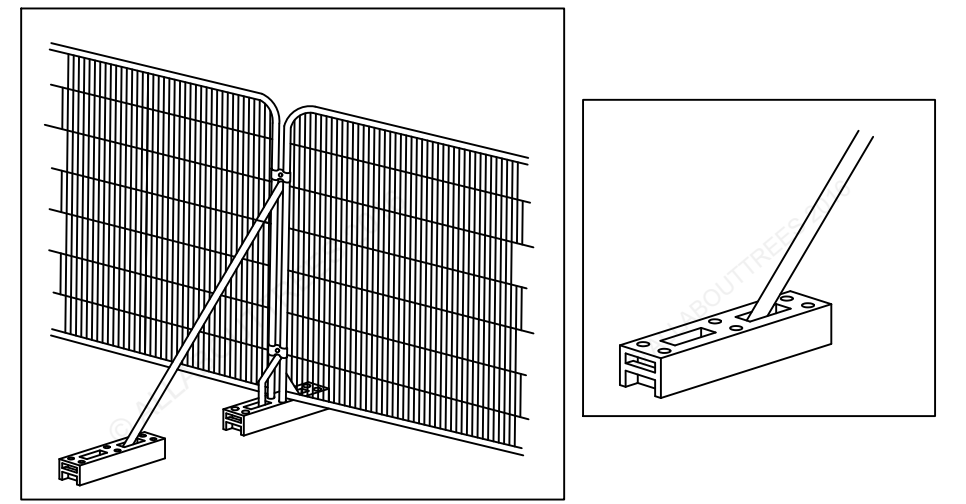
The barrier must be erected in the position indicated on the Tree Protection Plan (TPP) by the dark blue line and be constructed as per the following specification.

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 on the inner side 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

Site storage and parking must be limited to the lower levels where the ground is already compacted.

The cement mixing area must also be located on the lower flat ground. A contained area should be created for this with the use of heavy duty plastic sheeting and sandbags 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 the garage the machine should ideally break the walls and roof into the footprint of the building (top down pullback methodology) taking utmost care to remain aware of the adjacent trees and avoiding inadvertent damage.

If this is not possible the garage will need to be demolished by hand.

If removal of the foundation were to cause excessive disturbance to the ground it should be left in situ though it is appreciated the intention is to landscape this area and retained foundations are not ideal. If it were necessary to leave the foundation in situ, dependent upon its construction, it may be possible to fragment the upper portions and remove pieces by hand. Topsoil could then be placed over the retained lower sections before landscaping.

Path Construction

It is proposed to form a path from the new garage back to the dwelling. This will be a lined with bark chippings and be bound by a timber edge held in place with ground staples. This is a low impact path and will be acceptable within the RPAs, with the following two provisions.

- There must be no excavation to accommodate the path - it will be necessary to work with the existing ground levels.
- When installing the timber edge, operatives must remain mindful of root systems. Obviously below ground roots cannot be seen without excavation, but surface roots can be easily avoided. If excessive resistance is met when hammering the staples, the staple must be relocated elsewhere.

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.

Method	Trenchless Solutions For Installation Of Underground Services			Applications	
	Accuracy (MM)	Bore (A) diameter (MM)	Maximum subterranean length (M)	Not suitable for	Not suitable for
Microtunneling	<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 pipes, 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.

- Dependant upon strata encountered
- Pit-launched directional drilling can be used for gravity fall pipes up to 20m in subterranean length
- Impact moling (also known as thrust-bore) generally requires soft, cohesive soils.
- Substantial inverse relationship between accuracy and distance
- 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.

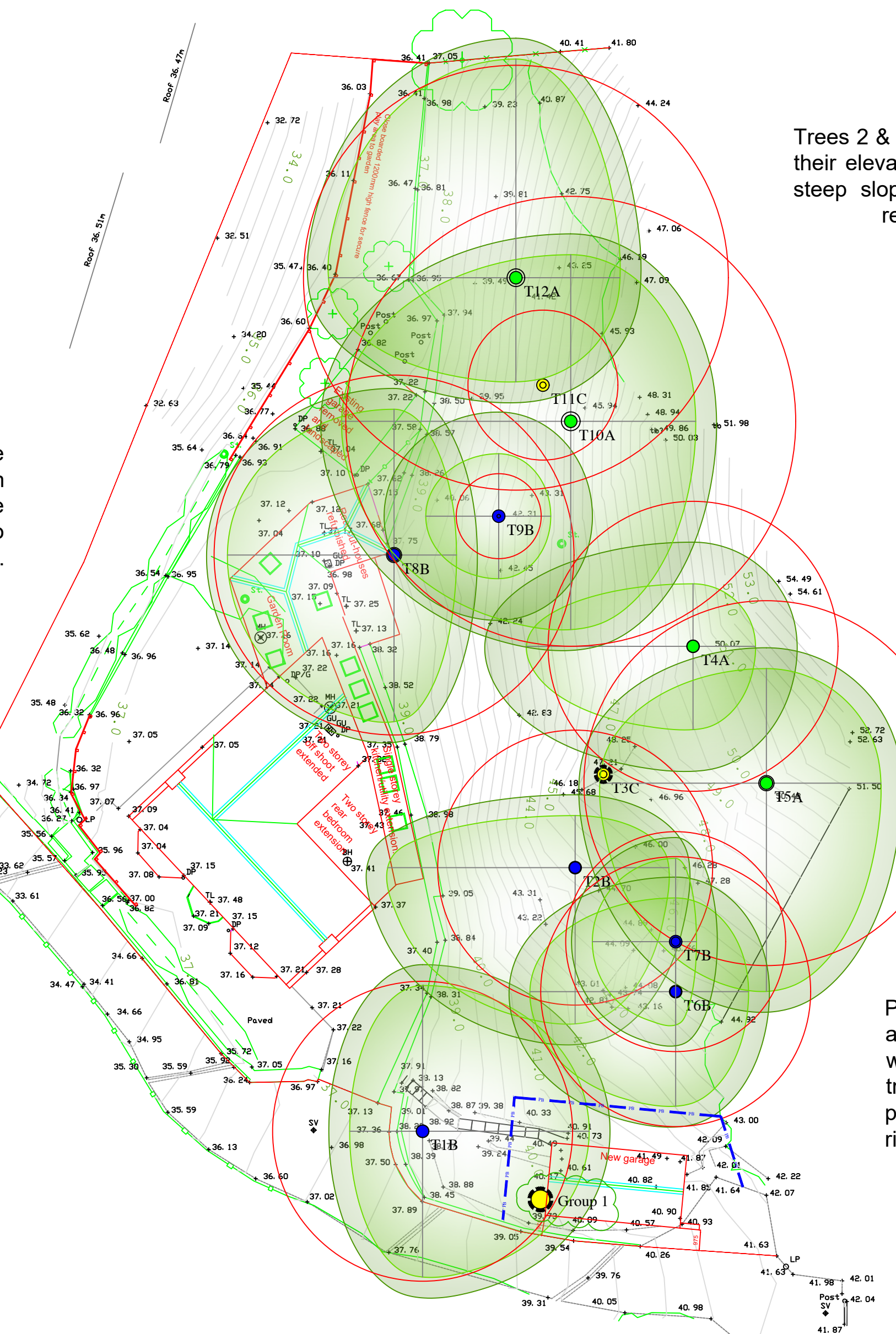
Backfilling

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.

Tree 8 is extremely close to the development area - as tree protection cannot be installed here it is imperative that site operatives take utmost care to avoid any inadvertent damage to this tree.



Trees 2 & 4-12 are afforded protection by their elevated position and the extremely steep slope. No additional barriers are required in this location.

Protective barrier to be erected adjacent to trees 1 and 6. Access within exposed RPA associated with tree 1 and 6 must be limited to pedestrian only. Access for the piling rig must be limited to the areas outside of the adjacent RPAs.

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.	Site meeting & letter or email confirming results of meeting distributed to relevant parties.
Finalising tree protection barrier installation	Prior to installation of services & during installation of surfaces and services	Confirm position of the protective barriers have been installed and comply with the Tree Protection Plan (TPP)	Client to provide photographs
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.

The table above indicates the 4 key stages where supervision is recommended. Additional supervision can be provided at any time to address any arboricultural concerns that may arise. Our contact details are provided in the legend below for this reason.

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
- Removed Tree / Woodland Groups (Hatch Fill And Root Protection Area Removed)
- Position Of Protective Barrier - Dashed Blue Line With Letters PB (Protective Barrier)

Institute of Chartered Foresters
Registered Consultant

Arboricultural Method Statement
Tree Protection Plan (AMS TPP)

Retained Trees Shown On Proposed Layout With Protective Measures Indicated

Eden House,

Stocksfield

For

Doonan Architects

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Chartered Arboriculturalists & Environmentalists

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Scale 1:200 at A1 Date 23.03.23

-Registered Chartered -Arboricultural Consultants -Planning & Development -Urban Forestry -Ecological Consultants	Drawing Ref.	Revision
	AMS TPP	-