

Arboricultural Impact Assessment & Method Statement Tree Protection Plan

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 tree is T2 of Tree Preservation Order reference TPO 290. It is an offence to carry out works to this tree unless permission is granted by the Local planning Authority.

The site is not inside a Conservation Area.

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.

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

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.

The Project Ecologist should be contacted for any further information required to ensure compliance with legal requirements.

Order Of Operations

The following is provided as to the optimal order of operations from an arboricultural perspective:

- Site to be managed as per the guidance in section 5.2 of this document.
- Establish site compound and storage in accordance with section 5.3 of this document.
- Erect protective barrier in the position indicated by the blue line on the TPP and as per the specification which forms section 5.4 of this document.
- Undertake construction works.
 - Mark out footprint of the conservatory and remove paving slabs by hand. Paving beyond footprint to be retained during works to act as ground protection for any underlying roots.
 - All excavation within the area indicated by magenta hatching to be done so in accordance with the guidance in section 5.5.
 - Guidance for installation of services within RPAs (if required) is provided in section 5.6 of this document.
- Following completion of construction work the protective barrier can be removed.

Site Management

It will be the responsibility of the site manager (or appointed person) to brief and induct all personnel entering site, particularly those who will conduct work in proximity of retained trees. A copy of this document and the associated Tree Protection Plan must be available and readily accessible to all entering the site.

The site manager (or appointed person) will be responsible for daily management of the site and protection of retained trees. The site manager will liaise with the project arborist as required for all tree related matters. Prior notice of any activity which has potential to impact on the retained trees must be made to the project arborist.

Any damage incurred to retained trees, or to tree protection measures, will be documented by the site manager (or appointed person) and reported to the project arborist. Works must cease in the affected area until the project arborist has been able to assess the situation and appropriate recommendations implemented (if required).

If the need for additional arboricultural works are identified beyond those approved during the planning process the project arborist must be informed as soon as practicable. Appropriate advice will be provided as to the suitable course of action, dependent upon the additional works required.

It is the responsibility of the site manager (or appointed person) to ensure all planning conditions are adhered to. A programme of arboricultural monitoring is provided in section 6 of this document.

Location of Site Compound & Storage Areas

The contractor's site compound, storage & parking areas must be either outside of the RPA or on existing hard surfacing.

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.

Protective Barrier Erection

Trees on development sites are prone to damage during the course of demolition and construction works. Retained trees need to be protected in line with British Standard 5837-2012 Trees in relation to design, demolition & construction.

This usually involves identifying a construction exclusion zone around the tree which should remain undisturbed with appropriate protective barriers preventing access to this Root Protection Area for the duration of the project.

The minimum root protection areas (measured in a radius from the centre of the tree to the protective barrier) are outlined for each individual tree and the barrier layout is indicated on the plan.

The exact root spread of an individual tree is difficult to quantify, but in general, the bulk of a trees roots are situated in the upper 600mm of the soil with the finer absorbing roots prevalent in the upper 250mm.

Dependant on soil conditions and the species of the tree, the root plate may extend radially for distances in excess of the height of the tree.

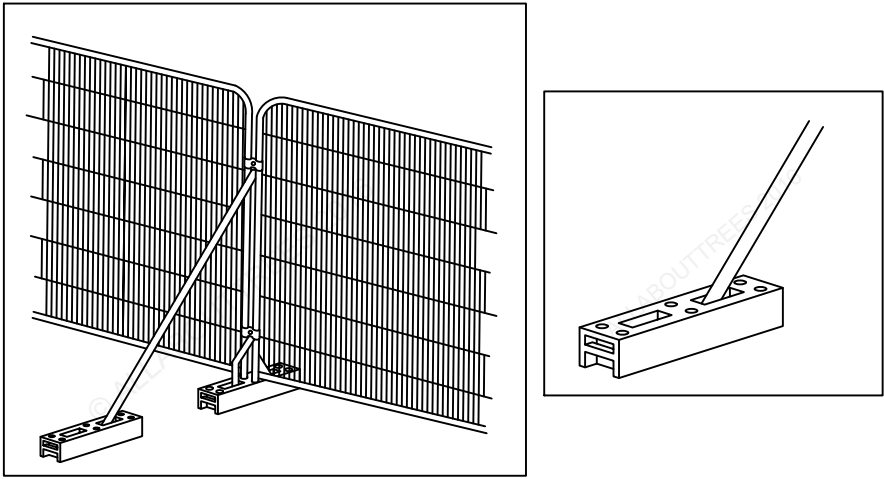
In the case of development sites, the root protection area is designed to prevent any significant long-term damage to the tree by protecting the root plate and to some extent the lower branches of the tree.

The barriers should be erected prior to work commencing on site and should remain until construction activities have been completed. The root protection area 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 stabiliser 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.



Excavation For Foundations

It will not be acceptable to excavate with the use of a machine in the area indicated by the magenta hatching due to potential for tearing and ripping roots. All excavation in this area must be done so by hand with roots pruned as required. The following principles must be followed:

- Protective barrier to be in place prior to commencement of excavation.
- Paving beyond conservatory footprint to be retained during works to act as ground protection for any underlying roots.
- All excavation to be carried out with the use of hand tools. This can include spade, pick, mattock, fork, etc.
- If appropriate any below ground structures should be left in place if their removal was to cause excessive root disturbance.
- It is likely roots will be encountered. A pair of secateurs and a hand saw must be available to cut any exposed roots. The root must be cleared of excess soil for the cut to be made and should, where possible, be cut off back to sound root material with a clean cut. Where possible the root should be cut back to a root branch point.
- No roots above 25mm diameter to be severed without prior removal by AllAboutTrees.
- Following any pruning the exposed roots must be wrapped in clean and dry hessian sacking to prevent desiccation and to protect them from rapid temperature changes. Prior to backfilling (which should take place as quickly as possible all hessian sacking must be removed).
- If at any time the contractors require further assistance our office can be contacted on 01388 710481. If the issue cannot be solved over the phone an AllAboutTrees representative will attend site.

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	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 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.

- (A) Dependent 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, hand saw, 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 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.

Prestart Arboricultural Supervision

- Meeting on site to discuss the proposals.
- All interested parties to attend as deemed necessary - landscape officer, tree officer, county ecologist, project engineer, site manager etc.
- Any alterations or changes to the scheme to be discussed.
- Any further issues to be discussed as required.
- Results of meeting documented and distributed to relevant parties.

Midway Arboricultural Supervision

- Meeting on site to assess progress.
- All interested parties to attend as deemed necessary.
- Any arboricultural issues identified during works to be discussed and strategy decided upon.
- Any alterations or changes to the scheme to be discussed.
- Any further issues to be discussed as required.
- Results of meeting documented and distributed to relevant parties.

Upon Completion Arboricultural Supervision

- Meeting on site to assess completed project.
- All interested parties to attend as deemed necessary.
- Trees to be assessed. Any inadvertent damage to be documented and remedial strategy decided upon.
- Any further arboricultural issues identified to be discussed and strategy decided upon.
- Any further issues to be discussed as required.
- Results of meeting documented and distributed to relevant parties.

Conclusion

It will not be necessary to remove or prune the tree to facilitate the proposals. A protective barrier will be used to exclude the unmade ground during construction and existing surfacing will act as ground protection.

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)
- 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)
- Excavation By Hand Tools Only

Institute of Chartered Foresters
Registered Consultant

Arboricultural Impact Assessment & Method Statement
Tree Protection Plan (AIA & AMS TPP)
Retained Trees Shown On Proposed Layout With Protective Measures Indicated

6 The Leas,

Whitburn

For

Andrew Mackenzie

AllAboutTrees Ltd
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-Arboricultural Consultants
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-Urban Forestry
-Ecological Consultants

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Revision -