Arboricultural Method Statement - Rev A

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 Barnsley Council (the Local Planning Authority), on Tuesday 30th August 2016 that there are no Tree Preservation Orders protecting the trees on the site. The study area abuts the Darfield Conservation Area which affords group 31 and tree 32 protection. Six weeks' notice must be supplied to the Local Planning Authority for any proposed tree work not otherwise approved by any existing relevant planning permission. It is an offence to carry out any tree work without giving the required notice.

Tree Works

The first arboricultural works on site will be the removal of all the conflicting trees 6-10, 18, 21-23, 25, 27, 29 and groups 26 & 27 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.

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 Recommendations for tree work.

Protective Barrier Erection

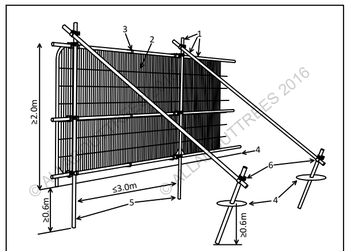
A standard barrier must be erected to protect trees 6 & 42-44. Tree 5 will be protected by a box style barrier.

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 specifications.

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 a vertical and horizontal framework of scaffold tubing which is adequately braced to resist impacts. The vertical scaffold tubes need to be placed at a distance not exceeding 3m apart. The weldmesh or Heras panels need to be 2.3m tall and are securely attached to the scaffold framework with wire or scaffold clamps. The wire or scaffold clamps should be secured on the inside of the barrier to avoid easy dismantling. Panels on rubber or concrete feet are not resistant to impact and should not be used.



1 - Standard scaffold poles
2 - Heavy gauge 2.0m tall galvanized tube and welded mesh infill panels
3 - Panels secured to uprights and cross members with wire ties
4 - Existing (unaltered) ground level
5 - Uprights driven into the ground until secure (minimum depth 0.6m)
6 - Standard scaffold clamps



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.

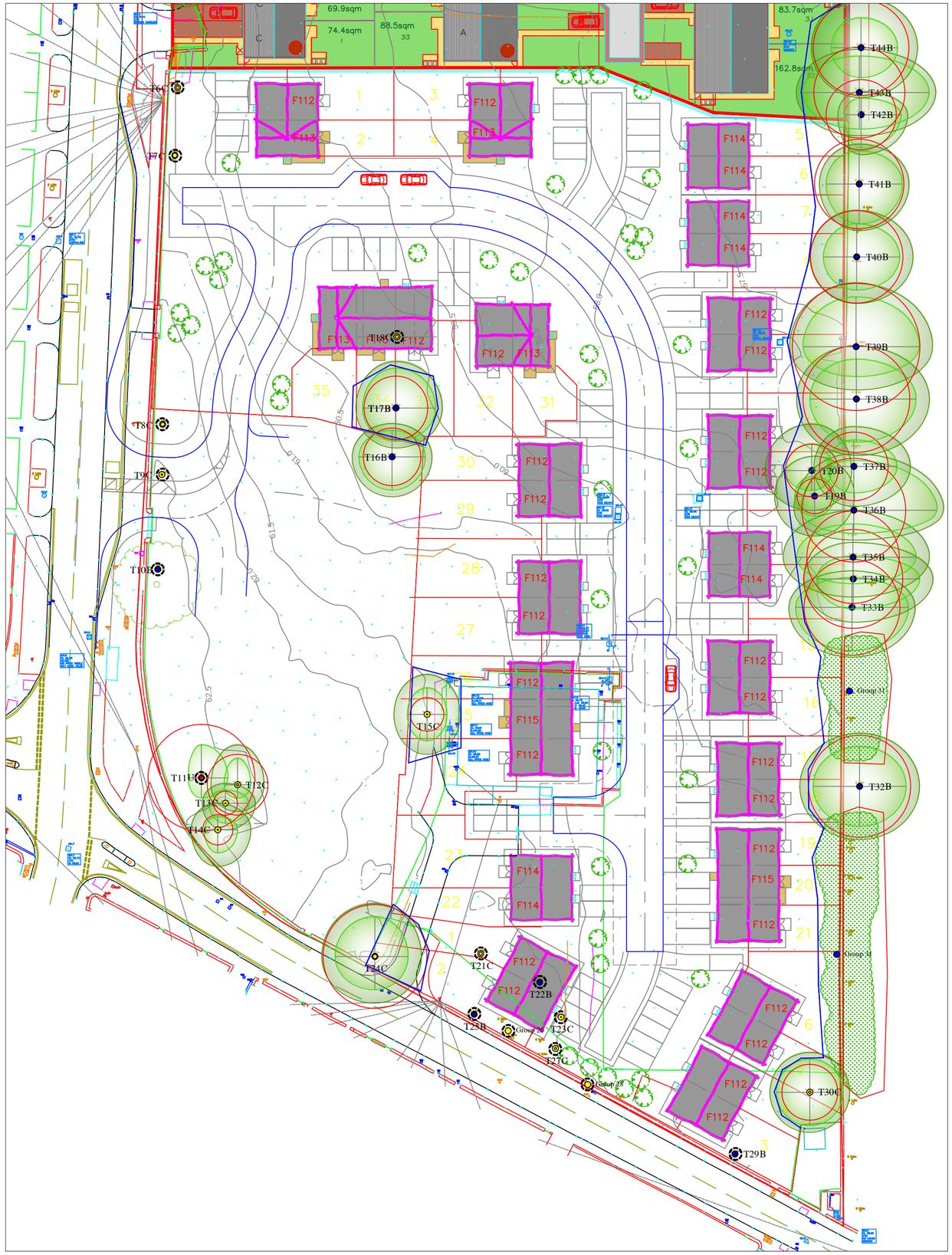
The supervision arrangements must be sufficiently flexible to allow for the supervision of all sensitive works as they occur. The Arboricultural Consultant's initial role is to liaise with the developer and the council to ensure that the appropriate protective measures are in place before any works commence 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 o fficer	Before any site activity commences	Meeting on site Revie wany updates to the proposal Confirm extent of tree works and protective barrier position	Site meeting & letter or email confirming results o f meeting distributed to relevant parties.
Tree works meeting with tree works contractor	Prior to commencement of tree works	Meeting on site to confirm tree works specification and method of working	Site meeting & letter or email confirming results o f meeting distributed to relevant parties.
Tree works undertaken Finalising tree protection barrier installation and other tree protection measures	Before any plant enters site or demolition/construction work commences.	Confirm position of the protective barriers and any other tree protection measures have been installed and comply with the Tree Protection Plan (TPP) Provide photographs indicating completed tree protection	Site meeting & letter or email confirming results o f meeting distributed to relevant parties.
Installation of no dig porous surfacing within root protection areas Installation of services within root protection areas	Prior to installation of surfacing or services & during installation o f 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 o f 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 o f 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
- Tree / Woodland Groups
- Hedgerows
- Position Of Protective Barrier (Continuous Blue Line)

Institute of Chartered Foresters
Registered Consultant

Arboricultural Impact Assessment
Tree Protection Plan (AMS TPP Rev A)
Revision A
Retained Trees Shown On Proposed Layout With Protective Measures Indicated

The Former Foulstone School,

Nanny Marr Road, Darfield,

Phase 2

For

Partner Construction

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Scale 1:500 at A2 Date 06.03.19

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Drawing Ref. AMS TPP

Revision A