

TREE SURVEY AND REPORT

FOR

THOMAS STREET ROUNDABOUT, DUNGANNON

FEBRUARY 2022

COMMISSIONED BY

MID ULSTER DISTRICT COUNCIL

Dr Philip Blackstock

PB

TREE SURVEY AND REPORT

On trees growing in the grounds of

Thomas Street Roundabout, Dungannon

For

Mid Ulster District Council

Terms of reference

This report was commissioned to record information on trees growing on or immediately adjacent to the above site (as defined in BS5837:2012). Obvious defects in these trees were noted, as were features that may create an impediment to a statutory provision or cause a nuisance. Recommendations for tree works that will eliminate, as far as is possible, the risk from dead or dangerous trees, abate nuisance and address the legal requirements of statutory providers have been included.

Methodology

Trees growing on the above site were subject to a visual inspection carried out from the ground. The base of each trunk was 'sounded' to identify significant basal decay and evidence of recent alterations to site conditions was noted. Measurements, distinguishing features and evidence of defects were collated electronically on site. No other methods for establishing the condition of these trees were used.

Site surveyed on

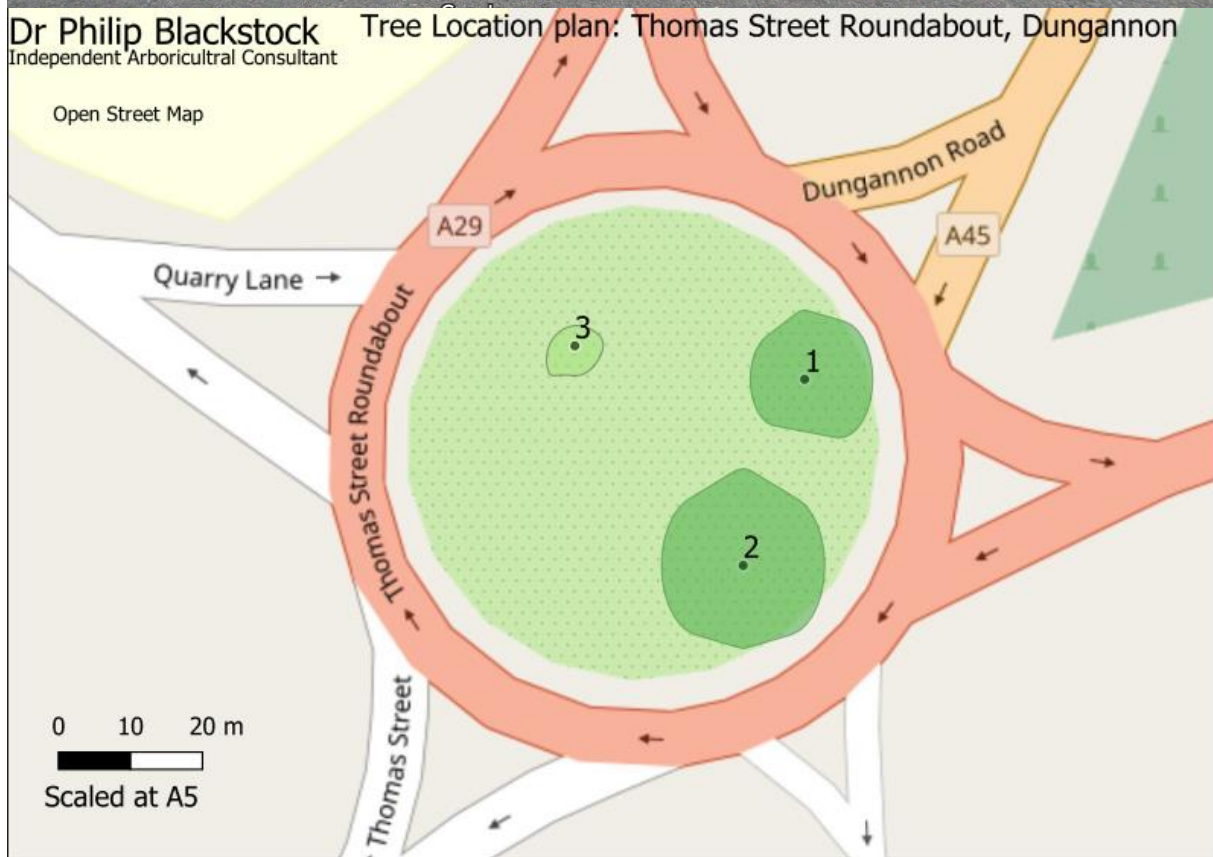
2020

(It is recommended that the trees reported on here are re-surveyed within five years of this report, or where significant deterioration has become evident, whichever is sooner)

Survey carried out and report compiled by

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TREES AT THOMAS STREET ROUNDABOUT, DUNGANNON



Top; Google Streetview Screenshot of trees growing on the above site and, bottom, sketch plan indicating location of trees

**REPORT ON TREES GROWING AT THOMAS STREET ROUNDABOUT,
DUNGANNON
FEBRUARY 2022**

- 1. Location & visual impact of the trees.** The trees reported on here are growing in a busy, well-managed suburban roundabout in Dungannon. As such, these trees are seen by thousands of drivers every day. As such, these trees have some significance in the local landscape.
- 2. Historical development of the site.** The two trees reported on here were probably planted about forty years ago as part of a larger landscape effort. The Cabbage pals are younger and seem to have grown from a coppiced stump, or stumps within the last ten years or so.
- 3. Tree condition & recommendations.** Both trees reported on here are of average quality and have a fairly limited life expectancy. The Norway maple has a weak fork and is vulnerable to crown failure if it is not pruned. The alder is nearing the end of its normal life expectancy and has probably less than ten or fifteen years left. It is understood that plans are being considered for the development of the above site. To ensure that trees to be retained are not damaged during construction, the Arboricultural method statements (that are included in this report) relevant to this project should be adopted.

All other recommendations are as per attached tree survey report sheets.

Dr Philip Blackstock

ARBORICULTURAL METHOD STATEMENTS

Protection of trees. A protective barrier, 2.3m high and comprising a vertical and horizontal framework of scaffolding, well braced to resist impacts and securely supporting weldmesh panels, (as illustrated in Figs 2 & 3 of BS5837:2012) shall be erected around the base of all trees to be retained on site. This barrier shall be clearly identified on site by the attachment of all-weather signs of suitable dimension stating: 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS'. The line of this fence shall be at least the distance defined in the attached plan, or as otherwise directed by Dr Philip Blackstock. No construction traffic, materials or debris will be permitted within this zone of protection.

Access facilitation pruning. If it is deemed appropriate to trim back retained trees to provide adequate access to approved construction works, all such tree works should be undertaken by a competent and suitably qualified tree surgeon (will associated support, as defined in the Health and safety section of this report). Such works shall remedy any tree related conflict with proposed structures or access in a way that ensure that not less than 70% of live buds are retained within the tree canopy. The aim of the tree works shall be to retain the general form of the tree by a combination of crown thinning, reduction of end weight (tipping back of outermost branches) and the re-forming of the trees crown to create a pleasing and balanced crown. No branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.

Temporary surfaces within zone of protection. Where temporary access is to be established within the 'zone of protection' surrounding retained trees, (for example, during demolition of existing buildings), ground surfaces will be protected by a layer of sharp sand, approx. 50 mm thick, overlaid with a geotextile membrane on which a temporary surface of no fines granular material, at least 150 mm thick, (as detailed by a competent Civil or Structural Engineer) is laid. Where traffic is turning on these surface, stout planks will be laid over the geotextile membrane and below the granular material. The trunks of adjacent trees shall be suitably protected as indicated on site by Dr Philip Blackstock.

Demolition within the zone of protection. If it is deemed necessary to carry out demolition works within a construction exclusion zone surrounding retained trees, (for example, to remove existing paths), or kerbs, only pedestrian operated plant, or low ground pressure plant that is less than 2 tonnes gross weight fully loaded, shall be permitted. Such plant shall only be operated on existing hard surfaces, or where temporary surfaces have been established. In any case, no excavations within the root protection zone of these retained trees shall be permitted, except only, under close supervision, with the use of an 'Air Spade' or by the careful use of hand tools in a way that retains, without damage, all exposed roots with a diameter greater than 25mm.

Scaffolding within zone of protection. Where scaffolding is to be established within the 'zone of protection' surrounding retained trees, the existing undisturbed ground surfaces shall be protected by a layer of sharp sand, approx. 50 mm thick, overlaid with a geotextile membrane. Stout planks, such as closely side-butt scaffold boards, will be laid over the geotextile membrane and scaffolding will be constructed on these planks with additional stays, as directed by a competent person. Adequate protective fencing, as Illustrated in Figs 2 & 3 of BS5837:2012, will be maintained between scaffolding and adjacent trees.

Construction of hard surfaces close to retained trees. Where permanent surfaces are to be constructed close to retained trees, within the zone of protection as defined by BS5837: 2012, carefully remove accumulated organic material and loose soil, leaving existing topsoil in situ. Protect root zone with a layer of sharp sand and, on this, establish a firm sub-base of no-fines granular material supported on a geotextile membrane and a three-dimensional cell product (as defined by a competent Civil or Structural Engineer). Construct the paved area on this sub-base using established design guidelines (and no-fines granular material) with a porous surface finish such as pavers or porous bitmac.

Alterations of levels on lands adjoining construction exclusion zones. Where it is deemed appropriate to lower ground levels on land adjoining a root protection zone established around a retained tree, all excavations and the subsequent construction of supporting structures shall be managed in a way that excludes access by construction traffic to the construction exclusion zone. Where such alterations result in the lowering of existing surfaces, the existing ground water environment within the root protection zone shall be maintained by the insertion of a root barrier behind proposed supporting structures. This shall consist of a non-porous barrier carefully inserted in a way that maintains the existing soil moisture regime surrounding the retained tree. Where alterations result in the raising of levels, these shall be designed and detailed by a competent Civil or Structural Engineer to ensure no alterations to ground conditions within the root protection zones.

Landscaping within the root protection zone. If it is deemed necessary to carry out landscaping, planting or re-instatement works within a construction exclusion zone surrounding retained trees, only pedestrian operated plant, or low ground pressure plant that is less than 2 tonnes gross weight fully loaded, shall be permitted. Such works should be supervised by competent Horticulturalists and be timed and designed to ensure that no soil compaction occurs. In any case, no excavations within the root protection zone of these retained trees shall be permitted, except only, under close supervision, with the use of an 'Air Spade' or by the careful use of hand tools in a way that retains, without damage, all exposed roots with a diameter greater than 25mm.

Construction of garden walls within the root protection zones of retained trees. No trench foundations are to be permitted within the root protection area of a retained tree. If walls, railings or other light structures are to be constructed within the root protection area of retained trees, these structures should be supported on point foundations excavated using a 300mm diameter drill or augur. (If in situ concrete foundations are to be constructed, the sides of the foundation pit, to 1.0m deep, should be lined with a non-porous lining.) In any case, no excavations for point foundations are to be permitted within 1.5m of a retained mature or semi mature tree. Excavations for these point foundations should be more than 2.0 apart and the wall or railings should be supported on a beam, or similar, constructed so that its underside is at least 50mm above existing topsoil level. As the roots of large, retained trees may cause some movement within the top 1.0 m of the soil profile, all foundations should be designed by a competent Structural or Civil Engineer and be constructed to account for this.

HEALTH AND SAFETY

Working with trees is a hazardous occupation. It is important that competent tree surgery contractors are employed to carry out tree works. These contractors should carry all relevant insurance cover and should comply with the recommendations outlined below.

Notwithstanding the following recommendations, all tree surgeons and accompanying staff should comply with all the requirements contained in the Health and Safety at Work (NI) Order 1978 and all subsequent legislation made thereunder.

Staff qualifications, experience and training

Only skilled operatives should be employed for tree work identified as appropriate in the attached tree condition report sheets. These skilled operatives should have a proven expertise and experience in the areas of work specified and should hold all relevant certificates of competence.

Operatives using chain saws to fell trees must have National Proficiency Test Council certificate of competence Units CS 30, 31*, 32*, 33* (* whichever is appropriate for the size of tree being felled) if they are working from the ground and, in addition, Units CS 38, 39, 40 & 41 if they are climbing.

All operatives undertaking work near underground or over-head electric cables must have attended a Northern Ireland Electricity Safety Awareness course. They must comply with the guidelines laid down in AFAG Safety Guide 804: Electricity at work; Forestry and Arboriculture. Where there is a risk of a climber, equipment or parts of a tree touching or coming close to overhead cables, the advice of Northern Ireland Electricity must be sought, and adhered to, before work commences.

Work wear

All operatives should wear the appropriate safety clothing for the task being performed as specified in the relevant safety codes. Where operatives are employed on tree work near public roads, or when the available lighting is poor, they should wear high visibility 'florescent' jackets or waistcoats

Tools and Equipment

Tree surgeons should use such tools and equipment deemed suitable to complete the specified task. All bladed tools should be sharp and in a serviceable condition. All plant and machinery operated by the tree surgeon should be tested and certified to comply with all current legislation. All vehicles should be taxed and roadworthy. Machinery and vehicles should carry operational fire extinguishing equipment to the standards required by insurers.

All machinery should be used in accordance with the manufacturers' instructions. These machines should carry warning notices as specified by the relevant AFAG safety guide.

Climbing equipment for tree work is subject to the Provision and Use of Work equipment regulations (NI) 1998 (PUWER), the Lifting Operations and Lifting Equipment Regulations (NI) 1998 (LOLER) and is also subject to the Personal Protective Equipment at Work regulations (NI) 1992 (PPE Regs). Operatives using climbing equipment should be familiar with, and comply with, these and all other relevant regulations.

First aid

All chain saw operatives should have a current First Aid Certificate. No chain saw operative should be left working on site without an additional first aider present. These operatives should be familiar with AFAG Safety Guide 802: Emergency Planning and First Aid.

All operatives should have immediate access to a first aid kit conforming to SI 1981 No 917 and FSC 34, and, in addition, carry a personal first aid kit which includes a large sterile wound dressing.

Site organisation

Tree surgeons should ensure that a team of at least three people carry out all tree climbing, pruning and tree felling operations. When undertaking tree climbing work, one of the grounds staff must be competent to perform aerial rescue and be conversant with AFAG Safety Guide 401: Aerial Tree Rescue. In addition, one of the ground staff must be made responsible for ensuring that there is no trespass into the working zone when tree pruning, or felling operations are taking place. Adequate staff should be available during tree work operations to ensure that no un-authorised persons or livestock enter the working area.

Tree surgeons should provide and constantly maintain all necessary warning and direction notices, cones and barriers when carrying out tree works that are adjacent to a road or footpath used by the public. These should conform to the recommendations and directions given in;

- Chapter 8 of the Traffic Signs Manual 1993, published by DRD
- Section 174 of the NI orders of the Highways Act
- Section 65 & 142 of the New Roads and Street Works Act
- Safety at Street Works and Road Works code of practice 1993
- Any other relevant legislation

Where tree works are to be carried out over or adjacent to, public roads, the contractor should arrange the work to avoid traffic congestion and public inconvenience. They should make arrangements with the Police Service of Northern Ireland and the Department for Regional Development Roads Service as may be found necessary.

Where tree works are to be carried out over, or adjacent to, railway lines, the contractor shall liaise with Translink, informing them of the tree works to be carried out and complying with any requests made by Translink or its agents in relation to timing of operations, safety, staffing levels and competence or any other reasonable request.

KEY TO SURVEY SHEETS

TITLE	DESCRIPTION
Tree No	The identification number of the tree, as indicated on site by a metal identification tag attached to the tree and defined with the prefixes; 'T' (tree), 'G' (group of trees) and 'W' (area of wood)
Species	The common English name of the tree, as used by Alan Mitchell in 'A field Guide to the trees of Britain and Northern Europe' (Collins, London, 1974)
Age	The life-cycle age of the tree, described as Y = young (vigorous growth, non-flowering), YM = young-mature (vigorous growth, some flowering, maturing crown), EM = early mature (vigorous growth; mature crown), M = mature (slowing growth, full crown, flowering) and OM = over-mature (Little growth, heavy flowering, thinning crown or dieback)
Condition	The condition of the tree, as assessed by a visual inspection on site and described as Good (near perfect form and condition), Fair (normal form, sometimes requiring remedial works), Poor (significant weakness or rot, requiring substantial remedial works or felling) and Dead (dead standing tree or stump)
Height	The height of the tree, given in metres
Crown spread	The radial crown spread of the tree for each of the four cardinal points, given in metres
DBH	The diameter of the tree trunk, measured at approximately 1.3 metres above ground level and given in centimetres
Tree form	A general description of the tree as seen on site, including distinguishing features
Defects	The presence of weakness, rot or infection within the tree. This supports the recommendations given for appropriate tree works
Obstacle	The presence of a manmade structure that is, in some way, being affected or obstructed by the tree
Recommendations	An outline tree management plan identifying the level and type of tree works that would be appropriate to ensure that the site remains safe and that the tree develops in a safe and satisfactory manner
Category	A categorisation of each tree, based on its arboricultural qualities and following Table 1 of BS5837:2012; with A ; denoting trees that are particularly good examples of their species, B ; denoting a tree of moderate quality, C ; denoting a tree of low quality or limited life expectancy and U ; denoting trees that cannot realistically be retained
Priority (if given)	An assessment of the priority of recommended tree works, based on the likelihood of tree failure and described as urgent (immediate action is required, often entailing control of access until work is completed), 3 months (work to be completed within the existing budget year; and before expected autumn or winter storms), 1 year (work to be included in the next budget year) and routine (non-urgent tree work)
Target (if shown)	The structures and uses put to ground that could be affected if the tree fails and described as High (including vehicular access, buildings and play areas), Medium (footpaths and maintained grass) and Low (un-occupied or un-maintained lands)

ARBORICULTURAL TERMS

The following interpretation of the terms used in the attached tree survey report sheets should be adopted when fulfilling their recommendations.

Crown clean

The removal of broken, diseased, dying or dead branches or snags that are either over 50 mm in diameter or are more than 200 mm in length.

Remove ivy

The cutting of ivy stems at their point of entry into the soil, taking care not to damage the tree. All branches, stalks and creepers of both alive and dead ivy should be removed from the crown of the tree.

Trim or remove branch stumps

The cutting of all branch stumps or snags back to just outside the branch collar and branch bark ridge.

Remove swing / tree hut / sign etc.

The removal of structures within the crown or attached to the tree, including nails or other fastenings.

Trim / tidy / remove epicormics

The removal of all soft growth or epicormics growing from the trunk of the tree, up to a height of 2.4 m.

Crown lift to above eye level / over footpath.

The removal of all soft growth, including epicormics and all lateral branches, up to a height of 2.4 m above ground level. When lifting the crown, upright laterals may be retained.

Crown lift over carriage / driveway etc

The removal of all lateral branches and soft growth that are overhanging, or within 1.0 m of, a road or lane, up to a height of 5.1 m.

Trim back from building

The removal of all lateral branches and soft growth growing within 2.0 m from the wall and from within at least 3.0 m from a window and above the roof of a building.

Clear overhead cables

The removal of all branch growth from within, or likely to come within, 1.0 m from overhead telephone cables.

Where overhead electric cables are encountered, the tree surgeon must liaise with engineers from Northern Ireland Electricity and must conform to their recommendations and advice. All staff undertaking work near underground or overhead electric cables should have attended a Northern Ireland Electricity Safety Awareness course and must comply with the guidelines laid down in AFAG Safety Guide 804: Electricity at work; Forestry and Arboriculture.

Reduce / remove competing leaders

The trimming back or removal of all but one dominant, upright stem in a way that creates an apical crown angle of less than 90°. Competing stems should be trimmed well back to a side branch showing strong horizontal growth patterns or should be removed to just above the branch collar and branch bark ridge.

Reduce end weight

The reduction of the crown of a tree by trimming back the branch tips by the described amount. Branch tips should be trimmed back to a suitable lateral twig or branch (in strict accordance with the recommendations contained in BS3998:2010, Tree Work, in a way that maintains the general crown characteristics of the tree and its species. **In all cases, no branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.**

Re-form Crown

The carrying out of such trimming and branch removal as is necessary to create (or recreate) a tree crown architecture capable of supporting additional tree growth and that complies with the normal crown form for that species. **In all cases, no branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.**

Topping, Re-Pollarding, Re-Coppicing

The removal of all growth back to the required height. In most circumstances, it will not be possible to trim back to a suitable lateral branch and, because of this; cuts should be cleanly executed and should produce a sloping surface that will not collect water.

Prune as per Belfast Street Tree

The complete pruning of a tree, which is a combination of crown reduction, crown lifting and crown thinning in a way that preserves the characteristics of the tree and its species. All growth removed during pruning must be taken back to an appropriately sized lateral branch, twin or bud to leave an acceptable crown form. **In all cases, no branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.**

Retrenchment Pruning

The phased reduction of the crown of veteran and old pollarded trees, removing or reducing end weight in the upper crown and spreading branches to emulate the natural decline of tree crowns with age. In most circumstances, it will not be possible to trim back to a suitable lateral branch and, because of this; cuts should be cleanly executed and should produce a sloping surface that will not collect water.

Fell

The complete felling of a tree in a safe manner, leaving a smoothly surfaced stump that is cut as close to ground level as is possible.

Apply cable brace

Supply and attached a restraint system to support a suspect fork or excessive end weight. The restraint system should comply with the recommendations contained in Annex D of BS3998:2010 and should be located; and be of sufficient robustness, to perform its function. If wire ropes and associated fittings are used, these should conform to the recommendations contained in BS462:1983.

Thin stems as appropriate

Thin out re-sprouting coppice, groups of trees or areas of wood by felling damaged, weak or suppressed stems; or stems that are not likely to form part of a dominant canopy in five years. These thinning operations should not, generally, remove more than 20% of the dominant canopy of the coppice, group or wood. Care should be taken to ensure that retained stems are not damaged and that all cut stumps are smoothly surfaced and as close to the ground as is possible.

Any other terms used

If in any doubt, the tree surgeon should contact Dr Philip Blackstock on 00442825 821202 or 00447767 393075 for clarification of these or any other terms used in the attached tree survey report sheets.

Statement of truth

I Dr Philip Blackstock confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

Signed:



Date:

3rd February 2022

QUALIFICATIONS

National Diploma of Horticulture (R.H.S) Inter.

Diploma in Industrial Management

M.Sc. in Environmental Management (A Field Survey of Unmanaged Roadside Cuttings in South Antrim)

D.Phil. in Forestry (Broad-Leaved Tree and Shrub Invasion of Conifer Plantations in Ireland)

Professional member of the Arboricultural Association

Registered Forestry Consultant with the Irish Forest Service

EMPLOYMENT

1996 to present

Arboricultural and Woodland Consultant

Duties include carrying out tree and vegetation surveys and providing tree and woodland management plans, completing reports and liaising with clients, providing court appearances etc. for public and private clients.

ARBORICULTURAL AND FORESTRY EXPERIENCE AND EXPERTISE

I have carried out surveys and produced reports on the health, condition, amenity value and landscape value of more than 250,000 trees since 1983. Since 1996 I have been fully employed as an Arboricultural and Forestry Consultant. Clients have now included most of the Local Authorities, Health Trusts and Government Departments within Northern Ireland. Private clients have included Solicitors, Architects and Developers. I have also lectured, to foundation degree level, on arboriculture and forestry.

I have provided expert opinion (including Court appearances) for many clients involved in litigation or in planning appeals since 1996. Topics covered by these opinions have included the predictability of failure in trees, amenity and financial evaluation of damage to trees, evidence of subsidence caused by trees, evidence of unsafe tree surgery practices leading to injury, and tree related evidence in boundary and planning disputes.

I have maintained a research interest in the effects of environmental influences on tree and shrub regeneration in Ireland and on the development of woody biodiversity in recently planted woods. I have also a research interest in the distribution of and environmental influences on deciduous tree diseases, tree stability and in the incidence of dangerous roadside trees.

Dr Philip Blackstock