

# **TREE SURVEY REPORT**

FOR

**LANDS AT BELGARD ROAD, DUBLIN**

NOVEMBER 2018

COMMISSIONED BY

**JOHN FLEMMING ARCHITECTS**

Dr Philip Blackstock



*PB*

# **TREE SURVEY AND REPORT**

On trees growing in the grounds of

**Lands at Belgard Road, Dublin**

For

**John Fleming Architects**

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

**27<sup>th</sup> November 2018 & 22<sup>ND</sup> July 2019**

**(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

**Dr Philip Blackstock, 26 Tullynahinnion Road, Portglenone BT44 8EL  
Telephone 02825 821202, Fax 02825 821295, Mobile 07767 393075,  
Email: [trees@philipblackstock.com](mailto:trees@philipblackstock.com)**

**TREES AT LANDS AT BELGARD ROAD, DUBLIN**



Two views of trees growing on the above site, taken from Belgard Road

## **REPORT ON TREES GROWING AT LANDS AT BELGARD ROAD, DUBLIN July 2019**

- 1. Location & visual impact of the trees.** The Belgard Road, in Dublin is characterised by a mix of retail centres, industrial units and housing. The site reported on here consists of an unused industrial unit. It is surrounded by a belt of maturing trees that help to screen and shelter the buildings. These belts extend into adjoining lands and help 'Green' this part of Dublin. As such, they have some significance in the local landscape.
- 2. Historical development of the site.** Most of the trees reported on here are now nearing forty years old and were planted to provide shelter and screening to the existing buildings. There are also a couple of clumps of much younger saplings that have grown from root suckers within the last ten years.
- 3. Tree condition & recommendations.** Because of their age, most of the trees reported on here are still in a fairly good condition. Some of the Norway maples have developed narrow forks. As this species is prone to crown failure, it is recommended that the affected trees be pruned hard to ensure single dominant leaders. There is a group of hybrid poplar trees growing along the back of the site. These trees have developed heavy crowns that are also prone to failure. While it is recommended that these trees be trimmed, consideration may be given to their replacement, as they only have a limited useful life expectancy. 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-butted 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.

## **HEALTH AND SAFETY**

Working with trees is a hazardous occupation. It is important that competent tree surgery contractors are employed to carry out the tree works recommended in the attached tree survey report sheets. 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 Safety, Health and Welfare at Work Act 1989 (SHWW Act, 1989) and the Safety, Health and Welfare at Work (General Applications) Regulations, (GAR Regs, 1993) for forestry operations, Part 4 – work at height of the Safety, Health and Welfare at Work Regulations (2007), the Code of Practice for Managing Safety and Health in Forestry Operations and all subsequent legislation made thereunder.

### **Staff qualifications, experience and training**

Only skilled operatives should be employed for all the work specified in the attached tree survey 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 (NPTC) 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 overhead electric cables must have attended an Electricity Safety Awareness course. They must comply with the guidelines laid down in the Guidelines for Safe Working near Overhead Electricity lines in Agriculture (2010, published by the Health and Safety Authority), Code of Practice for Avoiding Danger from Overhead Electricity Lines (2019, published by ESB). Where there is a risk of a climber, equipment or parts of a tree touching or coming close to overhead cables, the advice of ESB 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 Health and safety guide.

Climbing and lifting equipment for tree work is subject to the provisions outlined in Chapter 2, Part 2 (updated 2010) of the Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007. Operatives using climbing or lifting 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 FASTCo 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 Organization**

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 FASTCo 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 unauthorized 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,
- Temporary Traffic Management Design Guidance 2019
- Temporary Traffic Management Operations Guidance 2019 (all published by Department of Transport, Tourism and Sport)
- Safety at Street Works and Road Works- a code of practice 2013
- Any other relevant legislation and guidance

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 Garda Siochana and the local County Council as may be found necessary.

## 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; ' <b>T</b> ' (tree), ' <b>G</b> ' (group of trees) and ' <b>W</b> ' (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 <b>Y</b> = young (vigorous growth, non-flowering), <b>YM</b> = young-mature (vigorous growth, some flowering, maturing crown), <b>EM</b> = early mature (vigorous growth; mature crown), <b>M</b> = mature (slowing growth, full crown, flowering) and <b>OM</b> = 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 <b>Good</b> (near perfect form and condition), <b>Fair</b> (normal form, sometimes requiring remedial works), <b>Poor</b> (significant weakness or rot, requiring substantial remedial works or felling) and <b>Dead</b> (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
Priority (if given)	An assessment of the priority of recommended tree works, based on the likelihood of tree failure and described as <b>urgent</b> (immediate action is required, often entailing control of access until work is completed), <b>3 months</b> (work to be completed within the existing budget year; and before expected autumn or winter storms), <b>1 year</b> (work to be included in the next budget year) and <b>routine</b> (non-urgent tree work)

## **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 ESB and must conform to their recommendations and advice. All operatives undertaking work near underground or overhead electric cables must have attended an Electricity Safety Awareness course. They must comply with the guidelines laid down in the Guidelines for Safe Working near Overhead Electricity lines in Agriculture (2010, published by the Health and Safety Authority), Code of Practice for Avoiding Danger from Overhead Electricity Lines (2019, published by ESB) and any other relevant guidelines. Where there is a risk of a climber, equipment or parts of a tree touching or coming close to overhead cables, the advice of ESB must be sought, and adhered to, before work commences.

### **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

## **Any other terms used**

If there is any doubt, the tree surgeon should contact Dr Philip Blackstock on 02825 821202 or 07767 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:

24<sup>th</sup> July 2019

### **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**