

Arboricultural Assessment
(Tree survey)

To assess the trees

On the site at

White Heather Industrial Estate
South Circular Road
Dublin 8

July 2021
(Amended March 2022)

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PART ONE – ARBORICULTURAL ASSESSMENT

Introduction

The purpose of this report is to set out the findings following the inspection of trees on site at, **White Heather Industrial estate, south Circular Road, Dublin 8** and set out their condition. The survey work was undertaken 24th March 2021 by the undersigned a qualified arboricultural consultant. The term of reference for the report is a planning application on the site. The following categories have been used within the tree report tables and, where appropriate, the criterion used to define each category is defined.

- **Tree No.** : refers to the identification tag attached to a tree [also identified as such on the accompanying survey drawings]
- **Species** : refers to the common and scientific name given to the tree.
- **Stem diameter** : refers to the diameter of the tree stem in millimetres, as measured at 1.5 metres above ground level and above the root flare for multi-stemmed trees.
- **Height** : refers to the total height of the tree in metres. (Heights measured with a TruPluse® 200)
- **Crown spread** : refers to the width of the crown in metres, measured at each cardinal point on the compass. [Dimensions marked with # are estimates as per 4.4.2.6 c) – BS 5837:2012]
- **Condition** : refers to the physiological condition of the tree as a whole described as:
 - Good** – Full healthy canopy but possibly including some suppressed or damaged branches
 - Fair** – Slightly reduced leaf cover, minor dead wood or isolated major dead wood
 - Poor** – Overall sparse leafing or extensive dead wood
- **Age** An estimation of the age of the tree described as;
 - V- Veteran, trees, which by recognized criteria, show features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to individuals surviving beyond the typical age range for the species concerned.
 - OM – Over Mature, trees reaching the end of their life, in decline and senescent.
 - M – Mature, fully grown, with only small annual increments.
 - EM – Early Mature, one-third to two thirds of total life expired.
 - Y – Young, recent planting, with up to one third of total life expired.

- **Remarks:** Descriptive comments about the health (physiological) or form (structural) of the tree, its environment or external influences and may include preliminary management recommendations.

Category grade

- **U** -Those trees in such a condition that any existing value would be lost within 10years and which should be in the correct context, be removed for reasons of sound arboricultural management.
 - **A** -Those trees of a high quality and value in such a condition as to be able to make a substantial contribution.
 - **B** - Those trees of a moderate quality and value in such a condition as to be able to make a significant contribution.
 - **C**- Those trees of a low quality and value currently inadequate condition to remain until new planting could be established, or young trees with a stem diameter below 150mm
- **Estimated remaining contribution in years (ERC):** Expressed as less than 10, 10+, 20+, more than 40

Glossary of terms used:

Basal: The base of the tree close to the ground, (basal shoots are those emanating from the base).

Crown (canopy): The leaves and branches of a tree.

Co-dominant: Stems or branches of near equal diameter, often weakly attached.

Decay: Degradation of wood by fungi and/or bacteria.

Defect: Any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.

Dieback: The death of part of a plant, usually starting from a distal point and often progressing in stages.

Epicormic : Pertaining to shoots or roots, which are initiated on mature woody stems; shoots may form in this way from dormant buds or they may be adventitious.

Dysphotic zone : A zone within the canopy which does not have enough light to carry out photosynthesis.

Included Union: bark of adjacent parts of a tree (usually in forks, acutely angled branches or basal flutes), which is in face-to-face contact, so that there is weakness due to the lack of a woody union.

Lean: Departure of the trunk from the vertical.

Scaffold limbs: The branches, which form the main framework of the crown of a tree with a decurrent growth habit.

Shoot: A shoot derived from a dormant or adventitious bud on the main stem or branch.

Stub/peg: A short section of a branch, which may have, been left after previous pruning or storm damage.

Wound: Injuries on the surface of a trunk or branch.

Full: A canopy, which extends to the ground or nearly to the ground

Natural suppressed deadwood: Deadwood in conifers, which died as the crown height extended and the lower branch no longer have a function in the production of foliage.

Pathogens: Fungal and /or bacterial infections, which degrade the wood and render trees liable to failure

Wound wood: Wood with atypical anatomical features, formed in the vicinity of a wound or the occluding tissue around a wound

Hazard Limb: An upwardly curved part in which strong internal stresses may occur, cause wood to crack

Burr: Woody protuberances, especially those derived from the mass proliferation of adventitious buds.

Root protection area (RPA) : layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

Survey Results

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6138	Birch <i>Betula utilis</i>	11.2	200	N 3.0 S 4.0 E 3.0 W 3.0	Good	EM	40+	Located within a shrub bed this tree has good form, it has a single stem and appears free from defects.	B
6139	Birch <i>Betula utilis</i>	11.3	250	N 3.0 S 3.0# E 3.0 W 3.0	Good	EM	40+	Located within a shrub bed this tree has good form, it has a single stem and appears free from defects.	B
6140	Birch <i>Betula utilis</i>	9.0	200	N 3.0 S 2.0 E 2.0 W 2.5	Good	EM	40+	Located within a shrub bed this tree has good form, it has a single stem with bifurcates to form co-dominant leaders and appears free from defects.	B
6141	Beech <i>Fagus sylvatica</i>	13.2	700	N 6.0 S 6.0 E 6.0 W 5.0	Good	EM	40+	Located in an adjoining private garden, it has a main stem and a sub-dominant lateral. It has a dense branch structure and good form. Within in the garden is a mature hedge formed by seven Cypress, two Holly and a Cotoneaster. It is 8.0 meters tall and is well maintained.	B

**TREE SURVEY | SITE AT WHITE HEATHER INDUSTRIAL ESTATE,
SOUTH CIRCULAR ROAD. DUBLIN 8**

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
	Sycamore <i>Acer pseudoplatanus</i>	14.0	450	N 5.0 S 5.0 E 5.0 W 5.0	Fair	EM	20+	Just outside the site, a self-seeded tree on the canal bank, it has good vigour. The stem bifurcates and it has a crown with multiple scaffolds.	C
6142	Blackthorn <i>Prunus spinosa</i>	7.6	300	N4.0# S 4.0 E 5.0 W 5.0	Fair	M	20+	A multi stemmed bush with a dense canopy, it appears to be self-seeded, it is growing through the failing and has good vigour.	C
6143	Elm <i>Ulmus procera</i>	12.2	900	N 6.0 S 8.0 E 8.0 W 6.0	Fair	EM	20+	Growing on the canal bank, it is re growth from an old root stock, it over twenty stems. It has some scale insect, it appear to be free from Dutch Elm disease at this time. The canopy overhangs the canal.	C
6144	Elm <i>Ulmus procera</i>	10.3	900	N 5.0 S 8.0 E 2.0 W 7.0	Fair	EM	20+	Growing on the canal bank, it is re growth from an old root stock, it is suppressed by the adjoining Elm, it has multiple stems. It has some scale insect, it appear to be free from Dutch Elm disease at this time. The canopy overhangs the canal.	C

**TREE SURVEY | SITE AT WHITE HEATHER INDUSTRIAL ESTATE,
SOUTH CIRCULAR ROAD. DUBLIN 8**

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6145	Sycamore <i>Acer pseudoplatanus</i>	7.7	200	N 3.0 S 3.0 E 3.0 W 3.0	Fair	EM	40+	A self-seeded tree growing in the grass area, it has a well formed crown with foliage to near ground level (90cm). It has good form and vigour and no defects.	C
6146	Sycamore <i>Acer pseudoplatanus</i>	10.7	200	N 4.0 S 0.0 E 3.0 W 4.0	Poor	EM	20+	A self-seeded tree growing against a building, it has for form.	C
	Cherry <i>Prunus serrulata</i>	11.0	-	12.0	Poor	M	20+	Located in the adjoining garden, this tree has very dense ivy, It has multiple stem and a dense mid crown. The canopy on the garden side has been severely pruned leaving truncated branches. It has some infection with bacterial canker. The canopy extends into the site. By the gate in the next garden is a large Elder bush.	C
(1)	Lime <i>Tilia x europaea</i>	15.0	750	N 6.0 S 5.0 E 4.0 W 6.0	Good	M	40+	Located in the adjoining Church grounds, this tree has been topped, it has developed a new crown. It has epicormic shoots mid stem and at its base. The canopy of the site side has been tip pruned. It has a significant wound on its stem with good wound wood. It has the ground raised at its base.	B

**TREE SURVEY | SITE AT WHITE HEATHER INDUSTRIAL ESTATE,
SOUTH CIRCULAR ROAD. DUBLIN 8**

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
(2)	Lime <i>Tilia x europaea</i>	15.0	700	N 4.0 S 6.0 E 4.0 W 6.0	Good	M	40+	Located in the adjoining Church grounds, this tree has been topped, it has developed a new crown. It has two main stems. It has epicormic shoots mid stem and at its base. The canopy of the site side has been tip pruned.	B

Assumptions and Limitations

This tree survey was carried out from the ground, no invasive or destructive evaluation techniques were used; all findings observations and recommendations are based on the knowledge and experience of the undersigned a qualified Arboriculturalist. Information contained in this report covers only those items that were examined and reflects the condition of those items at the time of the inspection.

Findings are based on a visual report from ground level only and it should be borne in mind it is subject only to faults visible at the time of inspection, certain pathogens only produce seasonal fruiting bodies and consequentially may not have been noted during this assessment. All trees should be monitored on a regular basis for signs of defects and should be reported to a person qualified to diagnose them and to recommend treatment.

In the event of adverse weather conditions, there is the possibility of any tree, despite having a good report, falling over or suffering crown damage. In the event of a falling tree causing damage to residential or non residential buildings in their proximity, or to any person, any property public or private, or any mechanical vehicle or otherwise no liability will attach to this firm.

There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in question may not arise in the future. The author takes no responsibility for any actions taken by the landowner or their agents by reasons of this report unless subsequent contractual arrangements are made.

This report is intended solely for the benefit of the parties to whom it is addressed and no responsibility is extended to any third party for the whole or any part of its contents. All trees mentioned in this report should be subject to reassessment every two years to assess physiological and environmental changes.

PART TWO - ARBORICULTURAL IMPACT ASSESSMENT

General Description of Site and Surroundings

The site is comprised of an industrial complex of warehouses, to the north, east and west of the site are residential properties, the South Circular Road to the north, Priestfield Drive to the east and James's Terrace to the west. The boundary to the south is the Grand canal.

Description of Proposed Development

The development comprises a Strategic Housing Development at the White Heather Industrial Estate, South Circular Road, Dolphin's Barn, Dublin 8 and No. 307/307a South Circular Road, Dublin 8 and an industrial building at 12a St James's Terrace. The 1.535ha site is bounded by the Grand Canal to the south; Our Lady of Dolours Church and residential dwellings on the South Circular Road to the north; Priestfield Cottages to the east; and residential dwellings at St James's Terrace to the west.

A new residential neighbourhood development of 335 no. units is proposed to make efficient use of this residentially zoned site, which benefits from high-quality amenity space along the Grand Canal and access to high-quality transport links. The site benefits from the opportunity to access the existing Dolphins Barn neighbourhood facilities, as well as enhancing the connectivity of the area for the Dublin 8 community as a whole. A core principle of the proposed residential scheme is to put residential amenity and recreation to the fore, opening up the site and the local area to the Grand Canal.

The proposed development is intended to provide for a vibrant and diverse community, while delivering a connected residential neighbourhood which knits in to both the established and the emerging residential developments in the area. High-quality landscaping and public realm, with a focus on the creation of distinctive character areas is proposed. A new street will run east-west across the north of the site and the creation of a new public space at the heart of the proposed scheme will connect to a publicly accessible linear park along the canal to the south. Permeability is a key feature of the proposed pedestrian realm, including a mix of dedicated and shared surface areas through the site with a c. 190 m continuous amenity strip along the Grand Canal Linear Park.

The entrance to the scheme will be from the existing junction at the South Circular Road, which will be reconfigured and upgraded. The existing access road at St James's Terrace will provide pedestrian access only to the development. Car parking is proposed at undercroft and at surface levels, with a number of dedicated car sharing spaces in convenient locations. Covered and secure bicycle storage facilities are located at undercroft and at surface level, adjacent to block entrances. A sustainable travel approach has been adopted, particularly with regards to access to Dublin City Centre, with the Luas (850m) and Dublin Bus stops adjacent to the development site. The City Centre area is also accessible by bicycle and walking, at approximately 10 and 30 minutes respectively.

The proposed residential mix includes a combination of studio units, 1-bedroom apartments, 2-bedroom apartments units within 7 no. blocks and a terrace of 3-bedroom townhouse units. A change of use of an existing residential building at 307/307a South Circular Road to be used as a shared workspace. The proposed Part V social housing requirement is provided at 10% in 2 no. discrete blocks within the proposed scheme. This high-quality Build to Rent scheme will also include 2 no. cafés and a 2-storey creche unit, while the residents will also have access to residential amenity areas at ground floor level and at fifth floor level with access to a roof terrace area overlooking the canal. A landscaped square will be accessible to the public, with private open space and amenity areas for the residents also provided including children's play areas and roof level terraces. Building heights range from 2 no. to 10 no. storeys, with finger blocks arranged in a north-south direction and height tapering down from the centre of the site to the boundary.

Designations Relating to Trees

There are no Tree Preservation Orders on the site. There is an no objective in the City Development plan to protect and preserve trees and Woodlands at locations within the site.

Implications of Proposed Development

The current proposal under consideration has the following impact on the existing trees.

(1) Direct Loss of Trees

The following trees will have to be removed due to a direct impact; 6168, 6140, 6141, 6142, 6145, 6146

Summary Table of survey trees

Grade	Total No.	No. to be removed	% of all trees (13)
U (worst – remove)	0	0	0

Grade	Total No.	No. to be removed*	% of grade	% of all trees (13)
'V' Veteran	0	0	0	0
'A' (best quality)	0	0	0	0
'B' (moderate quality)	6	4	66%	30.7%
'C' (low quality)	7	2	28.58%	15.39%
Total	13	6		46.09%

(2) Indirect Impacts

Changes in Ground Level / Changes in Ground Surface within Root protection area (RPA).

Two retained trees are outside the site and separated by boundary walls and therefore will not be impacted by the proposed development. Tree 6139 is planted close to an existing car park, the proposals provide for an increase in the soft landscaping at the base of the tree and the new path is outside the RPA.

Services

Retained trees are not impacted by proposed services.

Condition

No trees need to be removed due to their condition.

Change in Site Use and Tree Management Implications

Above ground constraints

The retained trees are in locations where they will not be affected by the proposed buildings.

Potential Root Damage to Infrastructure

Modern construction techniques, soil types together with the species and age of the retained trees and their location make damage to infrastructure unlikely.

Potential Nuisance

there will no risk of potential nuisance from retained trees that might cause concerns and a requirement to remove them as they are set back from buildings.

Construction Implications

General precautions in storage or mixing of materials that may be injurious to trees will need to be taken. All toxic materials, (cement, mortar, bitumen, diesel, bonding agents, etc) will be stored 10m from root protection areas. No wash out facilities will be provided for ready mix concrete/mortar deliveries. All fuels stored on site will be bunded to prevent spillage or leakage.

Proposals for tree management

All retained trees will have necessary remedial tree surgery to ensure there are no hazard branches, deadwood and weak limbs. All retained trees will be subject to regular inspections.

Response to queries raised by Dublin City Council Parks

Point 41

The Lime trees located in the adjoining Church grounds are at a different ground level than the site. The ground level is 1.25 metres above the site ground level at Lime Tree 1 and 1.85 metres above site ground level at Lime trees no. 2

This change in ground level means that there are no roots extending from the church grounds into the site and consequential no requirement for a root protection area with the site at this location. The proposals are for a play area within the site adjoining the trees, the canopy will not be impacted.

The Cherry tree at No.7 St. James's Terrace is on private property and the applicant has no control over the tree and cannot do any work to it.

Point 42

The proposed new building for a block of apartments will have a direct impact on the trees, especially the beech tree. It is early mature, the building will have a negative impact on the existing roots, and the canopy of the tree. The proposed landscape scheme has a significant increase in the tree cover and number of trees by comparison to the existing tree cover on the site. The cypress hedge is not suitable for retention at the entrance plaza. There will be an increase in suitable trees to replace this section of hedge.

There are two large Elms outside the site on the canal bank. If a cycle /green way is constructed along the canal bank they will have to be removed. They are currently free from Dutch Elm Disease, however they may become infected. As they are outside of the applicant site they have been shown to be retained.

PART THREE - ARBORICULTURAL METHOD STATEMENT

Introduction

This document sets out the methodology for all proposed works that affect trees on and adjacent to the site. Compliance with this method statement will be a requirement of all relevant contractors associated with the development proposals.

Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

The contractor shall take all precautions to ensure that any trees, which are to be retained, shall remain undisturbed and undamaged.

All works to trees and all operations adjacent to trees should be undertaken in accordance with the Method Statement. The contractor shall undertake no works to trees unless instructed by the Contract Administrator. All works within or close to the protected tree zones are to be supervised by the appointed Consultant Arboriculturalist. Two working days notice of intention to undertake such works to be given prior to any works commencing.

Root Protection Area

In accordance with the Method statement and as per the issued drawings protective fences shall be erected before the commencement of building works any works on site (other than remedial tree works and erection of the boundary fence). The area within the tree fencing should be clearly identified with signage as the 'Protected Tree Zone'. The local planning authority will be notified in writing once the fencing is in place. Strictly no access should be permitted to this zone unless instructed by the CA. The appointed Consultant Arboriculturalist should be

notified of any works or access to this zone. The fencing will remain in place until completion of the main construction phase and then only removed with the consent of the local planning authority to permit completion of the scheme. Other than works detailed within this method statement or approved in writing by the local planning authority, no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing. No fires should be lit close to or within 20 metres of the trunk of any tree that is to be retained. No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.

Code of Practice for the preservation of trees

The following code of practice is intended for the preservation of existing trees. These guidelines will help sustain vigour and minimise adverse growing conditions, for trees set out for retention.

This code will be brought to the attention of all site personnel including Main Contractor, sub-contractors and engineering specialists associated with the project. As appropriate this method statement should be translated. All operations are to be in accordance with BS 5837: 2012, *Trees in relation to design, demolition and construction*. The main contractor should purchase and make available on site a copy of the above.

Prior Notice and Tree removal

All necessary tree works are to be undertaken prior to the commencement of any other works on site. Trees must only be removed with the necessary licenses (*Forestry Act 2014*)¹ or permits. All necessary licenses and permits should be inspected by the appointed Consultant Arboriculturalist prior to commencement of works.

The Arboricultural Consultant will:

- Liaise with the relevant authorities during the project.
- Constantly monitor the project with regard to tree health to ensure that no damage is caused to the subject trees during the operational works.
- Report any negligent damage to trees, which will prejudice their health.
- Monitor works carried out by the Arboricultural Contractor and Main Contractor within the 'Root Protection Area'.

¹ Note that under the Forestry Act 2014, no felling licence will be required on receipt of planning permission.

Guidelines for demolition and site clearance

Demolition of buildings within the recommended RPA (Root protection area) should be undertaken inwards, within the footprint of the existing building, removal of below ground elements should be undertaken with appropriate machinery, under supervision, and with care. The area should be checked for possible root encroachment during operations. Any roots exposed should be treated in accordance with section 11.3 of BS 5837 : 2005. No stockpiling of spoil will be allowed and it will be removed off site as it is generated.

Prior to and during all construction works on site, no spoil or construction materials etc. are to be stored within the tree protection zone, even if proposed development is an area outside the site.

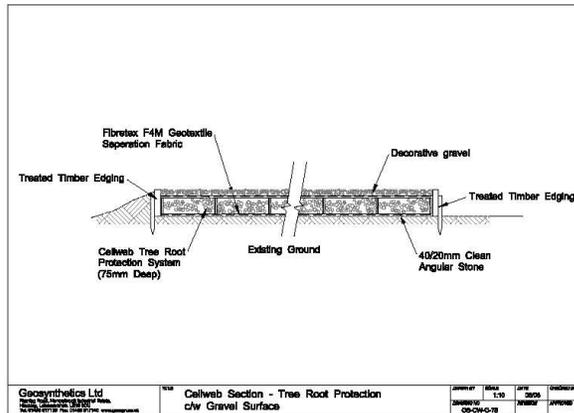
Before commencement of the piling works a piling mat will be required. This will require the existing ground level to be reduced by up to a metre depending on site conditions.

This will then be replaced by a hardcore to create a hard standing for the piling rig. The final one metre of this site clearance to the protective fence will be excavated by hand so that any roots encountered greater than 50mm diameter can be dealt with as detailed by the Arboriculturalist.

Construction access

In areas where there is site access (scaffolding), permanent car parking and access for construction near trees, the ground shall be covered with Fibertex or similar geo textile fabric and a three dimensional cellular confinement system such as geoweb should be laid over the fabric. Where access is required within the root protection area of trees a cellular confinement system shall be put in place prior to use of the area. See construction detail attached.

**TREE SURVEY | SITE AT WHITE HEATHER INDUSTRIAL ESTATE,
SOUTH CIRCULAR ROAD, DUBLIN 8**



Soft Landscaping within Exclusion Zones

Preparation of ground in these areas will be carried out under the supervision of the arboricultural consultant.

Guidelines for Root Pruning:

- Roots smaller than 25mm diameter may be pruned back, roots with a diameter greater should only be cut following consultation with an arboriculturist.
- Roots should be cut cleanly after excavation to promote callus formation and wound closure.
- Exposed roots to be protected where an area of work is to be left open, particularly along the face of the excavation for the underground car parking. In winter, exposed roots are to be wrapped with dry sacking overnight.
- In summer, exposed roots are to be covered with damp sacking at all times. A suitable irrigation / drip feed system should be installed to keep sacking wet at all times.
- Back filling materials used around roots are to be of a fine granular material with no toxins and not susceptible to frost heave.

Offences and Penalties

Any damage whatsoever, caused to the protected trees shall be notified to JM McConville + Associates, so that the damage can be assessed and rectified and the main contractor subject to financial penalty as per the Conditions of Contract. Value of damaged tree will be assessed using the 'Helliwell System'.

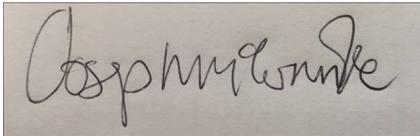
Supervision and Monitoring

The arboricultural consultant will be responsible for monitoring of all arboricultural works and issuing a certificate of practical completion. In addition, the arboricultural consultant will inspect the protective fencing and monitor any works within exclusion zones.

A record of site visits will be maintained for inspection on site and copies forwarded to the developer / agent and to the local planning authority. The Contractor shall not fell any trees under any circumstances. All works within the protected tree zones are to be supervised by the arboricultural consultant.

Tree Protection Barrier Fencing

Tree protection barriers are to be in accordance with BS 5837:2012, trees being retained on the north side of the site are outside the site boundary and separated from the site by existing boundary wall, which prevent access to the trees. Trees on the canal bank are not affected by the proposed development.



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July 2021
(amended March 2022)