

APPENDIX A

Arboricultural Assessment

(Tree survey)

To assess the trees

On the site at

Fonthill Road South
Clondalkin
Dublin 22

November 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, **Fonthill Road South, Clondalkin, Dublin 22** and set out their condition. The survey work was undertaken 4th October 2022 by the undersigned a qualified arboricultural consultant. The term of reference for the report is a response to Item 1 of a further information request as part of a Section 254 Licence 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 10 years 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 in 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
6651	Birch <i>Betula pendula</i>	14.0	140	N 0.0 S3.0 E0.5 W0.5	Poor	EM	10+	A tree with a tall drawn up, one sided crown and a leaning stem, which has a co-dominant lateral branch.	C
6652	Birch <i>Betula pendula</i>	7.2	200	N 0.0 S3.0 E1.0 W1.0	Poor	EM	10+	A tree with dense ivy cover it is suppressed by tree 6653, it has a one sided crown.	C
6653	Birch <i>Betula pendula</i>	9.5	260	N 3.0 S3.0 E 3.0 W 3.0	Poor	EM	10+	This tree has a weak upper crown with significant crown die back. It has dense ivy cover.	C
6654	Birch <i>Betula pendula</i>	5.1	140	N 0.0 S3.0 E1.0 W1.0	Fair	EM	20+	A tree with a leaning stem and one sided crown, it is suppressed by the adjoining trees and has very dense ivy cover.	C
6655	Birch <i>Betula pendula</i>	9.7	210	N3.0 S3.0 E3.0 W3.0	Fair	EM	20+	A tree with a single stem with a high crown, it has very dense ivy cover.	C

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6656	Elder <i>Sambucus nigra</i>	-	-	-	Poor	M	10+	A large bush, it appears to be self-seeded.	C
6657	Birch <i>Betula pendula</i>	7.9	140	N3.0 S3.0 E3.0 W3.0	Fair	EM	20+	This tree has a single leaning stem with a high crown, it has very dense ivy cover.	C
6658	Elder <i>Sambucus nigra</i>	-	-	-	Poor	M	10+	A large bush, it appears to be self-seeded	C
6659	Birch <i>Betula pendula</i>	7.8	110	N1.0 S1.0 E1.0 W1.0	Fair	EM	20+	A tall drawn up stem with a high crown.	C
6660	Birch <i>Betula pendula</i>	8.1	150	N0.0 S4.0 E1.0 W1.0	Poor	EM	10+	This tree has very dense ivy cover, its canopy is suppressed by the adjoining trees, it has a one sided crown.	C
6661	Birch <i>Betula pendula</i>	8.2	130	N1.0 S1.0 E1.0 W1.0	Fair	EM	10+	A tree with a single drawn up distorted stem, it is suppressed by the adjoining trees.	C

TREE SURVEY | SITE AT FONTHILL ROAD, CLONDALKIN, DUBLIN 22

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6662	Birch <i>Betula pendula</i>	9.7	250	N2.0 S4.5 E5.0 W2.0	Fair	EM	20+	A tree with a single leaning stem with dense ivy cover. It has a high crown.	C

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 a grass verge along side the northside of Fonthill Road South, the grass verge is a narrow and the area is planted about twenty years ago, it has been planted with Birch with some Elder and has dense Bramble. The area appears to used a drinking den as there large amount bottles and cans in the corner of the site.

Description of Proposed Development

The development comprises an 18m Alpha 3.0 Streetpole solution with antennas and ground equipment cabinet.

Designations Relating to Trees

There are no Tree Preservation Orders on the site. There is no objective in the County 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

No trees need to be removed to installed the proposed facility.

Summary Table of survey trees

Grade	Total No.	No. to be removed	% of all trees (12)
U (worst – remove)	0	0	0

Grade	Total No.	No. to be removed*	% of grade	% of all trees (12)
'V' Veteran	0	0	0	0
'A' (best quality)	0	0	0	0
'B' (moderate quality)	0	0	0	0
'C' (low quality)	12	0	0	0
Total	12	0		

(2) Indirect Impacts

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

The enclosure is located at the edge of the root protection area of Trees 6662. This is a early mature tree with good vigour, it will be able to accommodate minor disturbance to its root zone.

Services

The ground equipment cabinet is services and will require an underground duct to be installed. It is proposed to install the duct beneath the path or adjacent to it in the grass verge. Precautions set out in part there will be adhered to.

Condition

There is one tree, which is dead and needs to be removed irrespective of the proposed development..

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 infrastructure, with the exception of tree 6662 which will require some minor pruning of its crown to facilitate the pole.

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

The proposed development is being constructed the public realm there will no risk of potential nuisance from retained trees that might cause concerns and a requirement to remove them. All retained trees will have appropriate remedial tree surgery works, to remove all deadwood and potential hazard branches from their canopies prior to the development being occupied and will have normal ongoing arboricultural management.

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 banded 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.

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 installation of services

Where it is proposed to route underground services near trees all works shall be carried under the supervision of the consultant Arboriculturalist. Guidelines set out in the NJUG (National Joint Utilities Group) Volume 4, Guidelines for the planning, installation and maintenance of utility services in proximity to trees – 2007 will be followed together with section 7.7 Underground and above-ground utility apparatus.

Mechanical trenching for the installation of underground apparatus and drainage sewers any roots present and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the routing and methods of installation of all underground apparatus. Wherever possible, apparatus should be routed outside RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts. Inspection chambers should be sited outside the RPA.

7.7.2 Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routing should be drawn up in conjunction with the project arboriculturist. In such cases, trenchless insertion methods should be used (see Table 3), with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected in accordance with **7.2.2**, excavation using hand-held tools (see **7.2.1**) might be acceptable for shallow service runs.

NOTE : The suitability of these for differing applications is summarized in Table 3. (BS 5837 : 2012)

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, clause 6.2. Barrier fencing to be 2.0 m high, comprising of 'Herras' style fence, each panel to be secured to the adjoining panel fixed to scaffold poles in with a minimum of 2 anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels are to be supported by stabilizers struts on the inside. Barrier fencing is to be installed to an agreed alignment. The Alignment is to be marked out on site and approved by the arboricultural consultant prior to erection of the barrier fencing. 'Construction Exclusion Zone' signage to be securely attached to the fence. Barrier fencing is to be maintained by the main contractor for the duration of the contract. All damage to be reported immediately to the Arboricultural consultant. Damaged fencing is to be repaired within 2 hours of the damage occurring to the satisfaction of the Arboricultural consultant.

All site operations in the vicinity of the damaged fencing are to be suspended until the fencing is repaired. During site inspections the Arboricultural consultant reserves the right to authorise the cessation of all works in proximity to the protected zones with immediate effect. A breach of such an instruction will be deemed to be a dismissible offence for the employee. As contract work progresses the protective barrier fence can only be adjusted under the supervision of the arboricultural consultant.



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