



Tree Report and Survey

FOR

PROPOSED WAREHOUSE DEVELOPMENT

AT

Kingswood Road and Kingswood Avenue, Citywest
Business Campus, Dublin 24


June 2022

ON BEHALF OF

Rockface Developments

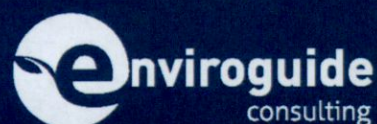
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- The inspection has been carried out from ground level using visual observation methods only.
- Trees are living organisms whose health and condition can change rapidly. Trees should be checked on a regular basis, preferably once a year. The conclusions and recommendations of this report are valid for one year.

- The fruiting bodies of some important species of decay fungi only emerge at certain times of the year and may not have been visible during this inspection.
- There is no such thing as a 100% safe tree in all conditions, since even perfectly healthy trees may fall or suffer branch break.
- Climbing plants such as Ivy can obscure structural defects and some symptoms of disease, where such plants prevent a thorough examination it is recommended that the climber be cut at ground level and the tree re-inspected when it has died back.
- Some of the trees included in the survey drawing originate outside the boundary fence of the site; these trees were not fully accessed, and so the condition assessments are preliminary and the tree dimension measurements are estimated.

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1 INTRODUCTION

Rockface Developments Limited intend to apply for permission for development at a 2.56 Ha site at Kingswood Road and Kingswood Avenue, Citywest Business Campus, Dublin 24. The lands are generally bounded to the south-east by Kingswood Avenue, south-west and north-west by existing built development and to the north-east by Kingswood Road.

The development will comprise the provision of a warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 18 metres with a gross floor area of 11,691 sq m including a warehouse area (10,604 sq m), ancillary staff facilities (499 sq m) and ancillary office area (588 sq m).

The development will also include: a vehicular and pedestrian entrance to the site from Kingswood Road, a separate HGV entrance from Kingswood Avenue; 64 No. ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; hard and soft landscaping; canopy; lighting; boundary treatments; ESB substation; plant; and all associated site development works above and below ground.

1.1 Project Objective

To carry out a Tree Survey and prepare an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan compliant with BS5837: Trees in relation to design, demolition and construction (2012) of the trees and hedges located on and around the property at Magna Avenue and Magna Drive, Citywest, Dublin 24.

2 SURVEY METHODOLOGY

The significant individual trees inside and adjacent to the site were assessed from ground level using Visual Tree Assessment (VTA) techniques and relevant observations and findings were recorded in compliance with the industry standard document BS5837: Trees in relation to design, demolition and construction (2012).

2.1 Survey Key

Tree Numbers

As the trees inspected are not on the site individual trees, hedges and shrub groups were not allocated numbers.

Tree Species

Common and botanical names of the tree species were recorded.

Tree Crown Dimensions

Tree height (Ht), crown clearance (Cl) and crown-spread (NESW cardinal points) measurements are in metres and are estimated.

Stem Diameter (Dbh)

Measurements are in millimetres and taken at 1.5m from ground level, multiple stems (St) are recorded as a function of the BS:5837 RPA formulae described below.

Tree age classes

Age classes were recorded as:

Y	Young	Recently planted (with 5 years or so)
SM	Semi-Mature	Well established young tree
EM	Early Mature	Established tree not yet fully grown
M	Mature	Full or near full grown tree
LM	Late Mature	Older specimen in full maturity
OM	Over Mature	Reached full maturity now declining through natural causes
Vet	Veteran	Notable due to large size, old age, ecological importance

Tree Physiological and Structural condition

Tree condition was graded as

- Good: No obvious defects visible, vigour and form of tree good.
- Fair: Tree in average condition for its age and the environment.
- Poor: Tree shows signs of ill health/structural defect
- Bad: Tree in seriously bad health/major structural problem

Work Recommendations

Preliminary management recommendations are made where necessary and pertain to current site conditions unless otherwise stated.

Estimated Remaining Contribution (ERC)

The approximate number of years that a tree should continue to live and contribute amenity, conservation or landscape value to the site under current site conditions.

2.2 Tree Retention Category (Cat) (BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations)

The tree retention category system grades a tree's suitability for retention within a development:

- A** Indicates a tree of high quality and value. These are trees that are particularly good examples of their species, which also provide landscape value. These trees are in such a condition as to be able to make a substantial contribution. (A minimum of 40 years is suggested)
- B** Indicates a tree of moderate quality and value. Trees that might be included in the high category, but are downgraded because of impaired condition. These trees are in such a condition as to make a significant contribution. (A minimum of 20 years is suggested)
- C** Indicates a tree of low quality and value - trees with an estimated remaining life expectancy of at least 10 years, or younger trees with a stem diameter of below 150mm and/or <10m in height.
- U** Trees that are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

Sub Categories

Tree categories may be further categorised using the following sub-categories (e.g. C1, C2 or C3) - 1 mainly Arboricultural qualities, 2 mainly landscape qualities, 3 mainly cultural values.

2.3 Root Protection Area

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is recorded as a radius in metres measured from the tree stem and is shown on the tree survey/constraints drawing as a circle with the tree stem in the centre.

For single stem trees, the root protection area (RPA) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

For trees with more than one stem, one of the two calculation methods below should be used.

The calculated RPA for each tree should be capped to 707 m².

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2)}$$

b) For trees with more than five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{mean stem diameter})^2 \times \text{number of stems})}$$

3.0 Findings

The trees on site for this report have been broken into 9 groups for clarity due to the number of individual tree growing very close together. A total of 278 tree were counted on site. The boundaries along Kingswood Road and Avenue allow partial views in to and across the site and many appear to be grown as multistemmed ornamental varieties.

The south west and north west boundaries have a mix of species along them. There are a number of larger trees, but the majority of trees are suffering from competition from not being thinned out and they are showing signs elongated and poor growth that will be subject to wind throw in the future if not managed properly.

4.0 Preliminary Management Recommendations

Preliminary management recommendations are included in the Tree Schedule.

5.0 Site Photographs



Fig. 1. Looking towards the south west boundary.



Fig. 2. From the south west boundary looking north east.



Fig. 3. From the south west boundary looking north east.



Fig. 4. Looking along the south west boundary from the southern corner of the site.



Fig. 5. Looking along the south east boundary from the southern corner of the site.

6.0 Arboricultural Impact of the New Development

The planned development of the site requires the removal 78 trees with stem diameter of more than 100mm. It is proposed to plant 113 semi mature trees of 4.5m in height and 1600 understory woodland trees and 420m of native hedgerow.

There are approximately an additional 200 trees of diameter below 100mm on site. These trees were not individually surveyed due to access issues with briar growth. These trees are also showing signs of needing to be thinned as their growth is elongated and weak. Their removal will also help to facilitate the good growth of the retained trees and proposed planting.

The redevelopment of the site includes a major new landscape scheme that will see significant new tree shrub and perennial planting in and around the site. The existing retained trees on site will be added to by a high quality new planting stock in a far more coherent landscape layout that will create a marked improvement in the arboricultural value of the site, especially as the planting scheme matures.

Quantity surveyed	Existing tree population within and adjacent to the red line boundary	Total to be retained	Total to be felled	Total proposed	Variety
278	278	200	78	1713	Mixed
		200	78	1713	TOTALS
		72%	28%	616% increase in number of trees	

Table 1. Summary of tree population and quantification of impacts/losses/gains.

Quantity surveyed	Number of trees to be removed
Tree Group 1	35
Tree Group 2	0
Tree Group 3	25
Tree Group 4	0
Tree Group 5	5
Tree Group 6	0
Tree Group 7	13
Tree Group 8	0
Tree Group 9	0
Total	78

Table 2. Summary of trees to be removed.

7.0 Arboricultural Method Statement

7.1 Tree Work Operations

The existing trees and shrubs on the site will be felled and the stumps removed. Specialist tree workers will not necessarily be required for this site clearance operation.

All arisings (cordwood and brash) will be processed and either disposed of in an appropriate green waste facility or recycled as mulch on-site.

7.2 Tree Protection Measures

Sturdy tree protection fencing or site hoarding will be erected along the lines shown on the Tree Protection Plan Drawing to prevent construction work encroaching into the root protection areas of the trees and scrub in the neighbouring property. The tree protection measures will be put in place *before* demolition or construction work commences and should remain in place until their removal or re-location is authorised by a qualified arborist.

Tree Protection on Construction Sites – General Recommendations

Trees being retained should be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the Construction Exclusion Zone (CEZ). Sturdy protective fencing will be erected along the points identified in the Tree Protection Plan **prior** to any soil disturbance and excavation work starting; this is essential to prevent any root or branch damage to the retained trees. The British Standard BS5837: *Trees in relation to design, demolition and construction (2012)* specifies appropriate fencing; see figure 1 below.

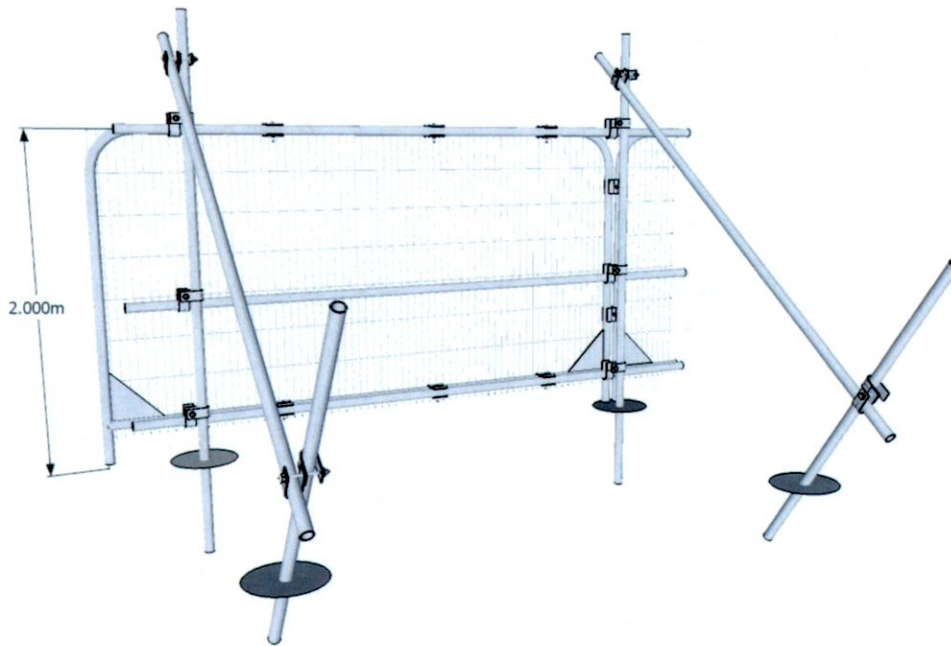


Figure 1. Protective fence specification

For light access works within the CEZ the installation of suitable ground protection in the form of scaffold boards, woodchip mulch or specialist ground protection mats/plates may be acceptable.

All weather notices will be erected on the fence with words such as: "Tree Protection Fence — Keep Out". When the fencing has been erected, the construction work can commence. The fencing will be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work has finished and its removal is authorised by a qualified arborist.

Trench digging or other excavation works for services etc. will not be permitted in the CEZ unless approved and supervised by a qualified arborist using methods outlined in BS5837: *Trees in relation to design, demolition and construction (2012)*.

Care will be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible.

Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, will not be discharged within 10 m of a tree stem.

Fires will not be lit in a position where their flames can extend to within 5 m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.

Notice boards, wires and such like will not be attached to any trees. Site offices, materials storage and contractor parking will all be outside the CEZ.

Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Branch Spread (m)	Age Class ¹	Physical Condition ²	Structural Condition Other Comments visual defects	Preliminary Recommendation	Remain Contribution in yrs	Cat. Grade
Tree Group1	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Preliminary Recommendation Clear off ivy growth and thin out weaker trees as necessary. Some pruning needed on some trees	See left	<10 10+ 20+ 40+	A high qty min 40yrs B mod qty min 20yrs C low qty min 10yrs U less than 10yrs C
Tree Group2	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Clear off ivy growth and thin out weaker trees as necessary. Some pruning needed on some trees	See left	20+	C
Tree Group3	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Clear off ivy growth and thin out weaker trees as necessary. Some pruning needed on some trees	See left	20+	C
Tree Group4	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Clear off ivy growth and thin out weaker trees as necessary. Some pruning needed on some trees	See left	20+	C
Tree Group5	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Formative pruning needed	See left	20+	B
Tree Group6	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Formative pruning needed on trees under site ownership	See left	20+	B
Tree Group7	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	To be removed	See left	20+	B

Tree Group 8	Mixed species	10 15m	mixed	mixed	EM to M	Fair to good	Formative pruning needed on trees under site ownership	See left	20+	B
Tree Group 9	Mixed species	10 15m	mixed	mixed	EM	Fair to good	Formative pruning needed on trees under site ownership	See left	20+	B