



Additional Information- Tree report and survey

FOR

PROPOSED WAREHOUSE DEVELOPMENT

AT

MAGNA AVENUE

And MAGNA DRIVE, CITYWEST, DUBLIN 24

June 2022

ON BEHALF OF

Rockface Developments

Prepared by
Enviroguide Consulting
Dublin
30 Carrigrohane Road, T1, The Plaza,
Park West, Dublin 12

Kerry
19 Henry Street
Kearna, Co. Kerry

Wexford
M10, Wexford Enterprise
Centre, Straumell Business
Park, Rosslare Road, Wexford

www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730



DOCUMENT CONTROL SHEET

Client	Rockface Development Ltd.
Project Title	Proposed warehouse development at Magna Avenue and Magna Drive. Citywest. Dublin 24
Document Title	Tree report and survey

Rev.	Status	Author(s)	Reviewed by	Approved by	Issue Date
00	Final	Dara Hilliard <i>Senior landscape Architect. B.Ag Land Hort. MILI. Prof. Member of the International Society of Arboriculture</i>			08/06 / 2022

Report Prepared by

Dara Hilliard, B. Ag (Landscape Hort), MILI (Member of the Irish Landscape Institute), Professional Member of the International Society of Arboriculture who has over 25 years experience in the design, specification and management of soft and hard landscapes.

REPORT LIMITATIONS

Synergy Environmental Ltd. t/a Enviroguide Consulting (hereafter referred to as "Enviroguide") has prepared this report for the sole use of Rockface Development Ltd. in accordance with the Agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by Enviroguide.

The information contained in this Report is based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by Enviroguide has not been independently verified by Enviroguide, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by Enviroguide in providing its services are outlined in this Report.

The work described in this Report is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

All work carried out in preparing this report has used, and is based upon, Enviroguide's professional knowledge and understanding of the current relevant national legislation. Future changes in applicable legislation may cause the opinion, advice, recommendations or conclusions set-out in this report to become inappropriate or incorrect. However, in giving its opinions, advice, recommendations and conclusions, Enviroguide has considered pending changes to environmental legislation and regulations of which it is currently aware. Following delivery of this report, Enviroguide will have no obligation to advise the client of any such changes, or of their repercussions.

Enviroguide disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to Enviroguide's attention after the date of the Report.

Certain statements made in the Report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the date of the Report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. Enviroguide specifically does not guarantee or warrant any estimate or projections contained in this Report.

Unless otherwise stated in this Report, the assessments made assume that the site and facilities will continue to be used for their current or stated proposed purpose without significant changes.

The content of this report represents the professional opinion of experienced environmental consultants. Enviroguide does not provide legal advice or an accounting interpretation of liabilities, contingent liabilities or provisions.

If the scope of work includes subsurface investigation such as boreholes, trial pits and laboratory testing of samples collected from the subsurface or other areas of the site, and environmental or engineering interpretation of such information, attention is drawn to the fact that special risks occur whenever engineering, environmental and related disciplines are applied to identify subsurface conditions. Even a comprehensive sampling and testing programme implemented in accordance with best practice and a professional standard of care may fail to detect certain conditions. Laboratory testing results are not independently verified by Enviroguide and have been assumed to be accurate. The environmental, ecological, geological, geotechnical, geochemical and hydrogeological conditions that Enviroguide interprets to exist between sampling points may differ from those that actually exist. Passage of time, natural occurrences and activities on and/or near the site may substantially alter encountered conditions.

- 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.

Copyright © This Report is the copyright of Enviroguide Consulting Ltd. any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

TABLE OF CONTENTS

1	Introduction	1
1.1	Project objective	1
1.2	Project overview	1
2	Survey Methodology	2
2.1	Survey Key	2
2.2	Tree retention category	4
2.3	Root protection areas	4
3.0	Findings	5
4.0	Preliminary management recommendations	5
5.0	Site photographs	6
6.0	Arboricultural Impact of the New Development	9
6.1	Design Iteration	9
7.0	Arboricultural Method Statement	10
7.1	Tree Work Operations	10
7.2	Tree Protection Measures	10
8.0	Tree schedule	12

1 INTRODUCTION

Rockface Developments Limited intend to apply for permission for development at this 3.03 Ha site at Magna Avenue and Magna Drive, Citywest, Dublin 24. The lands are bounded to the south by Magna Avenue, to the north and west by Magna Drive and to the east by development within Magna Business Park.

The development will comprise the provision of a warehouse unit with ancillary office and staff facilities and associated development. The building will have a maximum height of 16.5 m with a gross floor area of 13,604 sq m including a warehouse area (12,568 sq m), staff facilities (498 sq m) and ancillary office area (538 sq m).

The development will also include: a vehicular and pedestrian entrance to the site from Magna Avenue, a separate HGV entrance from Magna Drive; 69 No. ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substation; sprinkler tank and pump house; and all associated site development works above and below ground.

The site itself has no trees on it but trees do exist close to the site boundaries and so this report has been commissioned to provide an arboricultural assessment of the adjoining trees to input into the design and layout of the project and to form part of the planning package for the project.

1.1 Project Objective

The overall objective of this tree report is to carry out a Tree Report 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 this 3.03 Ha site at Magna Avenue and Magna Drive, Citywest, Dublin 24.

1.2 Project Overview

Rockface Developments Limited intend to apply for permission for development at this 3.03 Ha site at Magna Avenue and Magna Drive, Citywest, Dublin 24. The lands are bounded to the south by Magna Avenue, to the north and west by Magna Drive and to the east by development within Magna Business Park. The building will have a maximum height of 16.5 m with a gross floor area of 13,604 sq m including a warehouse area (12,568 sq m), staff facilities (498 sq m) and ancillary office area (538 sq m).

The development will also include: a vehicular and pedestrian entrance to the site from Magna Avenue, a separate HGV entrance from Magna Drive; 69 No. ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substation; sprinkler tank and pump house; and all associated site development works above and below ground.

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

Offsite trees and shrubs were assessed during a site visit on the 3rd February 2022. The field data for the trees is contained in the accompanying Tree Survey Schedule. Tree location, BS5837 category, RPA and approximate crown shape are shown on the Tree Survey Drawing.

Full details of the individual trees assessed on the site are listed in the Tree Survey Schedule in the appendices of the report. A total of 61 lime trees, 8 pine and 1 leylandii cypress and a number of cherry laurel shrubs were assessed off site.

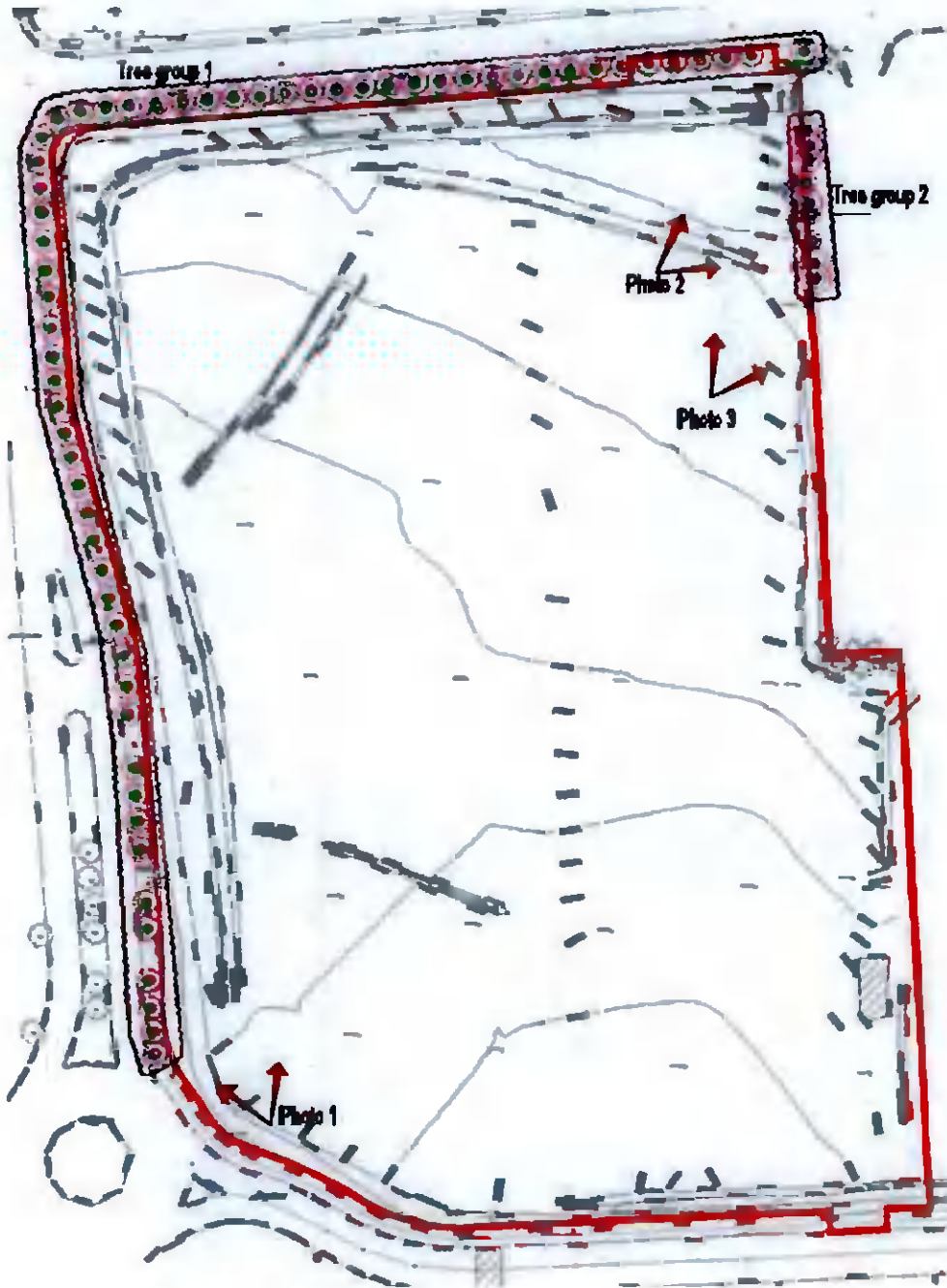
The 61 lime trees (Tree group 1) were classed as of moderate value as they appear to not be growing vigorously and suffering from the harsh conditions of the surrounding environment and /or poor ground conditions. They do provide landscape value as a soft edge to the west and north boundaries.

The 8 pine, 1 leylandii cypress and 4 cherry laurel are offset approximately 2 to 3m along a c. 45m section of the boundary of the site in the north east corner. This planting is essentially an over grown evergreen screen between the two sites and is classed as low value due to the very tight spacing of the individual trees, their deformed growth and also given their location on a steep level change. They are positioned directly on top of a 3 to 4 m high gabbion retaining wall in the adjoining site. Their long term suitability and safety for this location is questionable given the proximity to the retaining structure and their eventual expected size.

4.0 Preliminary Management Recommendations

There are no preliminary management recommendations as all trees are outside the control of the owner.

5.0 Site Photographs



Picture Location Key



1. Tree group 1 forming soft landscape edge outside the site.



2. Tree group 2 outside north east corner of the site.



3. Tree group 2 outside north east corner of the site.

6.0 Arboricultural Impact of the New Development

The planned development of the site requires the removal of 5 lime trees in the north east to facilitate a vehicular access to and from the site. The rest of the proposed site works all lie outside the root protection zone of the offsite vegetation. In addition, it is likely the majority of the roots of Tree Group 2 (8 pine, 1 leylandii cypress and a number of cherry laurel) have grown down through the back fill behind the gabion wall and not into the poor soil conditions of the subject site.

The redevelopment of the site includes a major new landscape scheme that will see significant 224 new trees, 615m of native hedgerow and 622m² of pollinator friendly shrub and perennial planting in and around the site. The existing tree or shrub cover adjacent to the site will be added to by high quality new planting stock in a 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
61	Lime	56	5	82	Lime
8	Pine	8	0		-
1	Leylandii cypress	1	0		-
4	Chery laurel	4	0		-
				44	Scot's Pine
				98	Birch
74		69	5	224	TOTALS
		93%	7%	303% increase in number of trees	

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

6.1 Design Iteration

In order to achieve an optimal solution that meets South Dublin County Councils Tree Strategy and its Development Plan standards in respect of tree preservation and tree retentions, through out the design process the design team worked in conjunction with each other so as to minimise impacts to trees on and off the site in line with BS5837 Trees in relation to design, demolition and construction (2012). The only minor design change of note during the process was the slight moving of the northern site entrance further to the west to keep it away from the root protection zone of neighbouring trees in that area.

7.0 Arboricultural Method Statement

7.1 Tree Work Operations

The 5 lime trees will be felled and the stumps removed. Specialist tree workers will not be necessarily be required for this site clearance operation. All arisings will be processed and either disposed of in an appropriate green waste facility or preferably recycled as mulch on site.

7.2 Tree Protection Measures

Sturdy tree protection fencing (see figure 1 below) 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 SURVEY SCHEDULE

Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Branch Spread (m)	Clear Crown Height (m)	Age Class ¹	Physical Condition ²	Structural Condition Other Commercial visual defects	Preliminary Recommendation	Retention yrs <10 10+ 20+ 40+	Cat. Grade A high qty min 40yrs B mod qty min 20yrs C low qty min 10yrs U less than 10yrs
Tree Group 1	<i>Tilia sp.</i> X 61	10m	200 to 350mm	N 2 S 2 E 1 W 2	2m	EM	Fair	Weak tree growth likely due to nutrient deficiency and poor soils	N/A as not in owners control	20+	B
Tree Group 2	Mixed species 8 x pine, 1 x leylandii cypress and	5 to 8m	100 to 300mm	0.5 to 3m	From 0.5m	EM	Fair	Evergreen screen on top of gaggion wall. High possibility of wind throw due to position	N/A as not in owners control	20+	C

¹Age Class: Y=Young (less than 10yrs) SM=Semi mature (1/3rd height) EM=Early mature (1/3-2/3 Ht) M=Mature (expected Ht) OM=Over mature (end of life cycle)

²Physical Condition: Good - no major defects Fair - minor defects Poor - lots decay/dangerous

