

Arboricultural Assessment Report

McHugh Components Ltd

89 Broomhill Rd

Tallaght Industrial Estate

Tallaght

Co. Dublin

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TREESPACE

Trees • Woodland • Urban Forestry

DOCUMENT CONTROL SHEET

PROJECT NAME: Arboricultural Assessment – *an assessment of trees in relation to development for planning purposes*

PROJECT LOCATION: McHugh Components, Tallaght Industrial Estate, Tallaght, Dublin

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1.0 INTRODUCTION

1.1 Brief

Tree-space has been instructed to carry out a tree survey and arboricultural impact assessment for a proposed extension to an existing warehouse on Broomhill Road, Tallaght. The proposed extension extends from the rear of the warehouse towards Mayberry Road. The field assessment was completed on the 16th of November 2021. The following documents were provided to Tree-space to inform the tree survey and report:

Document Title	Document/Drawing Number	Originator
Existing Site Plan	21-7-2-P5	IDS
Proposed Development Plan	21-7-2-P5	IDS

The report should be read in conjunction with the following plans:

- Arboricultural Implications Plan – TS_AIA_23_11_21
- Tree Removal Plan – TS_TRP_23_11_21

1.2 Aims and Approach

The purpose of this assessment is to quantify and categorise the arboricultural features on the site and assess the potential constraints to development. Trees are a material consideration for local authorities and whether they have statutory protection or not the potential impacts of construction must be considered. Construction activities often exert pressures on pre-existing trees and in some cases trees that have taken decades to mature can be damaged irreparably. The assessment and implementation of protection measures is therefore critical to mitigate against any potential negative impacts.

The arboricultural impact assessment was carried out in accordance with British Standard *BS 5837:2012 Trees in relation to design, demolition, and construction – Recommendations*.

Table 1: Arboricultural Impact Assessment Process

TASK	DESCRIPTION
Topographical survey	Record the position of all trees within the site with a stem diameter of 75mm or more, measured at 1.5m above highest adjacent ground level.
Tree survey	Collect relevant information on all trees included in the topographical survey, as well as any that might have been missed. The parameters of the tree survey are set out in BS5837:2012 section 4.4 and are described in more detail in appendix 3.
Tree categorization	Identify the quality and value of the existing tree population. The categorization method set out in table 1, BS5837:2012 allows informed decisions to be made concerning which trees should be

TASK	DESCRIPTION
	removed or retained in the event of a development occurring. The tree quality assessment table is appended at the back of the report.
Impact assessment	Identify the requirements for the successful retention of the retained trees and detail the measures necessary for protection during the development process. Root protection areas (RPA) are calculated in accordance with section 4.6, BS5837:2012. The RPAs of each categorised tree will be plotted on relevant scaled drawings.
Tree protection plan	The tree protection plan indicates the precise location of the protective barriers to be erected to form a construction exclusion zone around the retained trees. The plan will be superimposed on the layout plan, based on the topographical survey.
Arboricultural method statement	Address some or all of the following: Pre-development tree works, site supervision, protective fencing, ground protection, boundary treatments, services and drainage, and monitoring.

1.3 Limitations of the Report

- Only those trees specified in the scope of work were assessed. The observations that were made are limited to the requirements of planning and development. The survey is not a tree risk assessment.
- The trees were visually assessed from ground level only. No climbing inspections were carried out. No invasive or other detailed internal decay detection devices were used.
- The conclusions relate to the conditions found at the time of survey. Trees are living organisms that are subject to the stresses of climatic extremes, decay fungi and injurious diseases. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in question may not arise in the future.

2.0 SITE DESCRIPTION

The site is located in an industrial estate between Mayberry Road and Broomhill Road. The proposed development will affect the northern boundary of the site, on Mayberry Road. There are four mature trees and two hedge lines established along the northern boundary. The two hedge lines are separated by a security fence. The internal hedge is 10m in height and extends around the warehouse to the east and west. There is another line of semi-mature trees established in a grass verge between the footpath and Mayberry Road (see figure 1, pg3).



Figure 1: The northern boundary of McHugh Components from Mayberry Road.

3.0 ARBORICULTURAL IMPACT ASSESSMENT

3.1 Tree Loss to Facilitate Development

The table below describes the trees and hedges that will be directly affected by the proposed development.

Table 2: Direct Loss of Trees & Hedges

Tree No	Tree Species	CAT BS5837	Description of Impact
T591	<i>Fraxinus excelsior</i> Ash	C2	The structural condition of the tree is poor. It is multi stemmed at the base with poor stem form. Approximately 25% of the RPA and a portion of the canopy will be disturbed by the proposed development. If the tree were to be retained there could be a potential tree safety issue with the proposed structure.
H2	<i>Cupressocyparis leylandii</i> Leyland cypress	C2	Direct conflict with proposed extension. An approximately 26m section will need to be removed to facilitate the proposed development.

3.2 Tree Pruning to Facilitate Development

Tree number 590, the early mature sycamore will need a portion of its crown pruned to prevent conflict with the proposed extension. The crown will need to be side pruned on the southern side of the canopy.

3.3 Construction Activities & Retained Trees

There are a number of boundary trees along Mayberry Road, labelled B1-B8 on the arboricultural implications plan. It is not expected that these trees will be impacted upon by the proposed development. However, it is important that all contractors involved during the construction phase are introduced to the arboricultural implications plan and made aware of the boundary tree's root protection areas (RPA), highlighted in pink on the drawings. The canopies, stems and RPAs of all boundary trees should be left undisturbed during the construction phase. If vehicles or construction materials are to enter the grass verge area along Mayberry Road temporary ground protection should be considered.

There is a minor incursion into the RPA of tree 590. The volume of root disturbance is considered acceptable.

3.4 Arboricultural mitigation

The recommendation is that two new trees are planted along the Mayberry Road boundary. There is sufficient space on the site for a tree species that is large in maturity. The replacement trees are to be established outside the existing security fence. The recommended species is *Quercus Rubra* (Red Oak). The recommended plant size is a standard, planted at a 10-12m spacing.

The species is relatively fast growing, partially shade tolerant and matures into a large ovoid crown with medium foliage density. The foliage of red oak turns an attractive red colour in autumn which would provide an interesting contrast with the yellow of the sweet chestnuts. It is expected that the newly established trees will act as a natural visual barrier to the new development as they mature.

4.0 CONCLUSIONS

- The tree loss on the site is not significant.
- There are a number of boundary trees that will need to be considered during the construction phase.
- The retained trees and hedges on the site are an adequate visual barrier to the existing warehouse. They will continue to provide visual amenity after the new extension has been built.
- Two new trees are to be established after the construction phase which will complement the existing tree line and add further visual amenity.

Appendix 1

Arboricultural Method Statement

Tree Works

- The necessary tree works to facilitate the proposed development are described in the tree works schedule (appendix 2).
- The tree works schedule should be presented to the tree owner prior to any works being carried out. The tree owner must agree to the proposed works.
- All tree works will be carried out in accordance with the recommendations given in BS 3998 (2010).
- Prior to the commencement of any tree works, the trees and their surroundings should be assessed for the presence of any seasonal nesting sites, potential roost features or protected species.

Protective Fencing

- No protective fencing has been specified for the construction phase. However, contractors should be made aware of the root protection zones, the pink circle highlighted on the arboricultural implications plan (drawing number: TS_AIA_23_11_21).
- If construction traffic is expected to impact the boundary trees, then temporary ground protection should be installed.

Monitoring

- No monitoring is necessary during the construction phase.

Appendix 2

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)				Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Observations	RPA(M ²)	RPR (M)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	E	S	W									
590	1	<i>Acer pseudoplatanus</i> Sycamore	12	1	400	4.5	4.5	5	5	3	Early-mature	Fair	Structural condition-fair, irregular shaped trunk heavily obscured by ivy. Branch structure in the crown is obscured by ivy. Medium crown size, leaves have tar spot.	72	4.8	10-20	C	2
591	1	<i>Fraxinus excelsior</i> Ash	14	4	580	3.6	6.4	4	6.4	4	Mature	Fair	Structural condition-poor, multi-stem @ base of trunk, trunk has poor form and is heavily obscured by ivy.	152	6.96	10-20	C	2
H1	n/a	<i>Crataegus monogyna</i> Hawthorn	2	n/a	30					0	Semi-mature	Fair	Structural condition - fair	0.4	0.36	10-20	C	2
H2	n/a	<i>Cupressocyparis leylandii</i> Leyland cypress	10	n/a	100					3	Early-mature	Fair	Structural condition - fair	5	1.2	10-20	C	2
B1	1	<i>Castanea sativa</i> Sweet chestnut	4	1	150	1.8	1.8	1.8	1.8	1.5	Semi-mature	Good	Structural condition - good.	10	1.8	40+	A	2
B2	1	<i>Castanea sativa</i> Sweet chestnut	4	1	150	1.8	1.8	1.8	1.8	1.5	Semi-mature	Good	Structural condition - good.	10	1.8	40+	A	2
B3	1	<i>Castanea sativa</i> Sweet chestnut	4	1	150	1.8	1.8	1.8	1.8	1.5	Semi-mature	Good	Structural condition - good.	10	1.8	40+	A	2
B4	1	<i>Castanea sativa</i> Sweet chestnut	4	1	150	1.8	1.8	1.8	1.8	1.5	Semi-mature	Good	Structural condition - good.	10	1.8	40+	A	2
B5	1	<i>Fraxinus excelsior</i> Ash	15	2	650	7	7	7	7	3	Mature	Fair	Structural condition - fair	191	7.8	10-20	B	2
B6	1	<i>Fraxinus excelsior</i> Ash	15	2	525					3	Mature	Fair	Structural condition - fair	124	6.3	10-20	B	2
B7	1	<i>Prunus</i> Cherry	5	1	225					1.5	Early-mature	Fair	Structural condition - fair	23	2.7	20-40	B	2
B8	1	<i>Prunus</i> Cherry	5	1	225					1.5	Early-mature	Fair	Structural condition - fair	23	2.7	20-40	B	2

H: Hedge, B: Boundary tree, S: Shrub

McHugh Components - Proposed Tree works to Facilitate Development

Tree No	Tree Species	CAT	Tree Work Spec
		BS5837	
T591	<i>Fraxinus excelsior</i> Ash	C2	Direct conflict - Fell at ground level and grind stump.
H2	<i>Cupressocyparis leylandii</i> Leyland cypress	C2	Direct conflict - Remove an approximately 26m section shown on the tree removal plan.
T590	<i>Acer pseudoplatanus</i> Sycamore	C2	Canopy conflict - Reduce the limbs in the southern portion of the canopy extending over the boundary fence.

Appendix 3

Tree Schedule Key

Tree/Group number	Reference number for individual trees or groups of trees, prefixed by T (Tree), G (Group), W (Woodland), H (Hedge) or S (Shrub) to indicate the type of feature
Tree Count	Number of trees of a particular species recorded within a group feature, with the default value of 1 for single trees.
Species	Scientific name followed by common name
Height (m)	Tree height to the nearest metre, measured with a Haglofs Clinometer or estimated.
Stem Count	Number of stems. Stem count indicates whether the tree is single-stemmed or multi-stemmed and informs the RPA calculation.
Stem Diameter	Stem diameter measured at 1.5m above ground level in accordance with Annex C of BS5837:2012.
Crown Spread	Distance from the stem position to crown periphery in the four cardinal directions, estimated to the nearest half metre.
Crown Clearance Height (m)	Distance between the ground and the lowest point of the crown periphery, estimated to the nearest half metre.
Lowest Branch Height (m)	Distance between the ground and lowest significant branch.
Life-stage	Young, Semi-mature, Early mature, Mature, Late Mature, Ancient or Veteran
Physiological Condition	Good, Normal, Fair, Poor, Dead
Observations	General description of the tree or tree group, including basic features and morphology, structural and physiological condition, growing conditions and surroundings.
Recommendations	Management recommendations for tree works to address immediate unacceptable risks, or to facilitate development proposals.
RPA (m³)	Root protection area calculated from the stem diameter according to the formula in BS5837:2012. The RPA is the minimum area required to maintain tree viability.
RPR (m)	Radius of the RPA, in metres, when this is plotted as a circle around the tree stem
Estimated Remaining Contribution (years)	Estimated number of years for which the tree will continue to make a positive contribution to the site, banded as <10yrs, 10-20yrs, 20-40yrs, 40+.
Retention Category	Quality and value category as defined in table 1 of BS5837:2012 (see following page for full description)
Retention Sub-category	One or more sub-categories as defined in table 1 of BS5837:2012 (see following page for full description)

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those 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	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Appendix 4



