

**ARBORICULTURAL ASSESSMENT
&
IMPACT REPORT**

**FORGEFIELD
STOCKING LANE
FIRHOUSE
NEWTOWN
DUBLIN 16**

Project No.	Project name	Date	Revision
TFOR001	Forgefield	22/08/23	

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Summary

This report is designed to provide a response to an RFI from SDCC regarding a proposed development at Stocking Lane, Dublin 16. An assessment undertaken by Ciaran Keating (CMK Hort & Arb Ltd) on the 1st of March 2023 identified a total of 33 trees and 2 tree groups within the site. The trees were assessed according to the recommendations within BS5837 (2012) with supporting drawings illustrating the current quality of the trees (TFOR001 101), the impact on trees of the proposed development (TFOR001 102) and measure designed to protect trees during construction works (TFOR001 103).

The quality of the trees is generally good with a relatively high percentage within the moderate to high categories (Table 1).

The proposed development will necessitate the removal of 6 trees (table 2) within categories B & C which equates to 18% of the total trees on the site. An additional 1 tree will be removed due on its condition.

The landscape / arboricultural impact is considered to be low. The important mature boundary trees will be retained. There will be a requirement to manage the canopies of trees #109 & 110 (sycamore) to facilitate the construction of the building. This is considered to be achievable without having a detrimental impact on the trees.

The filtration system which will be set at 300mm above existing ground levels will be in close proximity to trees #102, #103 & #104 and the Leyland hedge on the eastern boundary. As the system will be above existing tree roots and runoff should not have a significant impact on the trees it is not considered that there will be a negative impact on the trees from the system.

Proposed planting as shown within the landscape proposals included within the overall submission are considered to be positive in terms of the increased diversity they bring in species within the site and the overall age profile which at present is tending toward older trees.

Tree protection measures are outlined on drawing TFOR001 103 Tree Protection and are designed to ensure that tree management is conducted in an appropriate way over the course of the project. It is recommended that a suitably qualified arboriculturist is employed to ensure appropriate management of retained trees is undertaken for the duration of the development.

CATEGORY	NO	% of Total
A	1	3
B	23	70
C	8	24
U	1	3

Table 1. Tree categories

CATEGORY	NO REMOVED	% of Total
A	0	0
B	4	12
C	2	6
U	1	3

Table 2. Arboricultural Impact

1. Client Brief & Methodology

This tree survey report with accompanying drawings was commissioned by Frank & Roslain Norton to provide a response to Item 6b (SD22A/0367) which states that the applicant shall submit 'b). Tree Survey

The applicant is requested to submit a comprehensive Tree Report to the SDCC Public Realm Section. This shall comprise of a detailed Tree Survey and Arboricultural Impact Assessment, Tree Constraints Plan, Tree Protection Plan and Arboricultural Method Statement, all in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction – recommendations. The report shall be carried out by an independent, qualified Arborist'.

This report details the nature and condition of existing trees at the site (image 1) and the impact of the proposed development on existing trees.

The fieldwork was undertaken on the 1st of March 2023.

This report is supported by the following drawings:

- TFOR001 101 Arboricultural Assessment & Constraints
- TFOR001 102 Arboricultural Impact
- TFOR001 103 Tree Protection

The survey methodology, supporting drawings and documentation follow the recommendations contained within BS 5837 (2012). The analysis of the trees was undertaken using the VTA methodology as developed by Mattheck and Breloer (1994).

General description of trees

The site is located within the lands surrounding an existing property (image 1). Trees

form a prominent feature and are mainly located on the boundaries. There are two distinct tree types ie a large Leyland cypress

(*xCupressocyparis leylandii*) hedge with a small number of deciduous trees on the eastern boundary and a mixed species deciduous tree population on the northern, southern and western boundaries (images 2 & 3).

The eastern boundary cypress 'hedge' is very large and has probably outgrown the aims of the planting however it does provide an effective screen and wind barrier. The birch (*Betula pendula*) group are of moderate quality however the rowan (*Sorbus aucuparia*) and cherry (*Prunus cv*) on this boundary are of lower quality only.

The tree group which forms the northern and western boundaries are largely primarily



mature sycamore (*Acer pseudoplatanus*) and beech (*Fagus sylvatica*). These trees form a cohesive group and a strong screen to the site (images 2 & 3) and are well developed overall. There is strong competition between individual specimens with decay and defects consistent with their age and proximity prevalent.



Image 2. Western boundary trees



Image 3. View of southern boundary trees from Stocking Lane



Image 4. Hop hornbeam with hawthorn hedge on eastern boundary to rear of image

Internal trees include more ornamental plantings such as birch (*Betula* spp) and hop hornbeam (*Ostrya carpinifolia*, image 4). A cotoneaster hedge forms a low but effective screen along the access road to the golf course (image 5).



Image 5. Cotoneaster hedge on boundary with access road to golf course

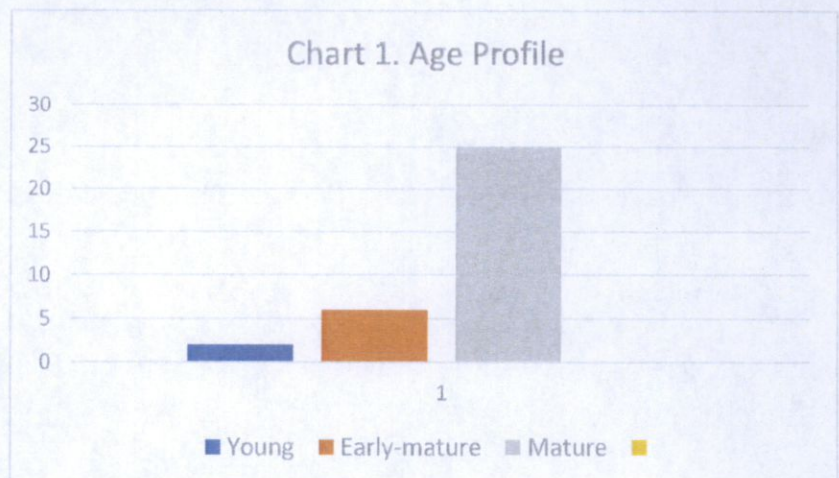
A total of 33 individual trees and 2 tree groups were identified and assessed (refer to Appendix i Arboricultural Assessment & Preliminary Recommendations for individual tree descriptions and evaluations).

The overall structural quality of the existing trees is good with a relatively high percentage within category B with one particularly high value beech tree (A) identified on the northern boundary with Stocking Lane (table 1).

The age profile of the trees is relatively well structured (chart 1) though the addition of new plantings will improve this by increasing young tree numbers.

CATEGORY	NO	% of Total
A	1	3
B	23	70
C	8	24
U	1	3

Table 1. Tree categories



3. Impact of the proposed development & Tree Protection

3.1 Development description

The impact of the proposed development on existing trees is based on tree condition, suitability of trees relative to the location of the proposed development and the direct impact of the proposed development.

The direct impact of the building and infrastructure will necessitate the removal of

The proposed development will consist of the construction of a new single storey detached sheltered dwelling (108sq.m) in the existing garden;

Accommodation includes 1 bedroom, bathroom, living, kitchen / dining rooms with storage and utility spaces all at one level; Adjustment to the existing landscape layout to allow for 1 additional parking space, accessed using the existing vehicle entrance; Removal of the existing on-site septic tank and the installation of 2 new proprietary wastewater treatment units and new surface water soakways.

The development includes landscape architecture design proposals. (refer to drawings provided by Murphy Sheahon Landscape Architects).

3.2 Arboricultural Impact

The proposed development will necessitate the removal of 6 trees (table 2) within categories B & C which equates to 18% of the total trees on the site. An additional 1 tree will be removed due on its condition.

The landscape / arboricultural impact is considered to be low as the important mature boundary trees will be retained.

There will be a requirement to manage the canopies of trees #109 & 110 (mature sycamore) to facilitate the construction of the building. This is considered to be achievable without having a detrimental impact on the trees as the extent of crown reduction is limited and sycamore are suitable candidates for moderate crown reductions.

The filtration system which will be set at 300mm above existing ground levels will be in close proximity to trees #102, #103 & #104 and the Leyland hedge on the eastern boundary. As the system will be above existing tree roots and runoff should not have a significant impact on the trees it is not considered that there will be a negative impact on the trees from the system.

Proposed planting as shown within the landscape proposals included within the overall submission are considered to be positive in terms of the increased species diversity and the age profile which at present is tending toward older trees.

Tree protection measures are outlined on drawing TFOR001 103 Tree Protection and are designed to ensure that tree management is conducted in an appropriate way over the course of the project. It is recommended that a suitably qualified arboriculturist is employed to ensure appropriate management of retained trees is undertaken for the duration of the development

CATEGORY	NO REMOVED	% of Total
A	0	0
B	4	12
C	2	6
U	1	3

Table 2. Arboricultural Impact

4. Limitations of survey

This survey should be regarded as a preliminary assessment of the trees and deals with the current condition as identified during this survey only. Every attempt was made to identify hazardous trees in this report; however, this survey was carried out from the ground and therefore cannot be held to have identified elements of decay, which may be hidden out of sight within the crown or beneath ivy or other obstructions. To counter this limitation in the survey process it is vital that during tree works any additional defects found by the climbing arborist are communicated to the consulting arborist to allow appropriate action to be taken.

The details within this survey are based on the condition of the trees during the survey period only. The findings in this survey cannot be held to be valid after any site disturbance, man-made or natural, which may have an adverse effect on any trees present.

5. Terminology

Tree categories

- A Trees of high quality and value due to their size, age, condition, historical/visual merit and/or conservation potential (a minimum of 40 years).
 - A1 Mainly arboricultural values. Particularly good examples of species, essential components of groups or of formal or semi-formal arboricultural features.
 - A2 Mainly landscape values. Trees, groups or woodlands which provide a definite screening or softening effects to the locality in relation to views into or out of site, or those of particular visual importance.
 - A3 Mainly cultural values, including conservation. Trees, groups or woodlands of significant conservation, historical, comparative or other value (e.g. veteran trees or wood-pasture).
- B Trees of moderate quality and value (a minimum of 20 years).
 - B1 Mainly arboricultural values. Trees that might be included in high categories but are downgraded because of impaired condition (e.g. presence of remedial defects including unsympathetic past management and minor storm damage).
 - B2 Mainly landscape values. Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal features (e.g. trees of moderate quality within an avenue that includes better A category specimens) or trees situated internally to the site, therefore individually having little visual impact on the wider locality.
 - B3 Mainly cultural values including conservation. Trees with clearly identifiable conservation or other cultural benefits.
- C Trees of low quality and value (a minimum of 10 years).
 - C1 Not qualifying in higher categories.

Terminology cont.

- C2 Trees present in groups or woodlands but without conferring on them greater landscape value and/or trees offering low or only temporary screening benefit.
- C3 Trees with very limited conservation or other cultural benefits.
- U Trees in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management. Trees that are dead, dying or showing immediate and irreversible decline.

Comments: Refers to the tree's condition and suitability for the site.

Common name: Most widely used non-botanical name.

Co-dominant: Two branches assuming the role of leading shoots. When growing close together may form a weak attachment (included bark) at their point of contact. Trees with this defect may be in danger of splitting at this weak attachment.

Crown Spread: Measured in meters north, south, east and west.

Decay fungi: Refers to those species of fungi which degrade living wood and which may, depending on the degree of degradation, render the tree structurally unsound.

Defects: Refers to cracks, storm damage and any other damage mechanical or biological.

Diameter: Diameter of the trunk (millimetres) at 1.5m. M.S. after the measurement refers to the tree being multi-stemmed.

Genus & Species: Refers to the botanical names for the tree.

Height: Measured in meters.

Monitor: Refers to trees which need to be re-surveyed on a yearly basis to assess their condition. This timescale may be sooner where works or adverse weather conditions have impacted negatively on the trees.

Overhaul: A reference to standard tree surgery work which consists of the removal of deadwood, crossing branches and balancing where appropriate.

Recommendations: Indicates surgery work necessary for the retention or, where necessary, removal of the tree.

Tree No. Refers to numbered tag fixed to tree during survey.

6. References

BS 5837 (2012). Trees in Relation to Design Demolition and Construction

Mattheck and Breloer (1994). The body language of trees

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
NA	Leyland Cypress hedge x Cupressocyparis leylandii	Mature	Good	Well developed with no visible defects. Spread approximately 4m into site. Good screen at present but long-term growth may reduce suitability for site	No action necessary	C2	10-15	600	17	4,4,4,4
101	Larch Larix decidua Spruce Picea spp	Early Mature	Good	A cluster of trees forming a screen at the northeastern boundary of site. Most are drawn up for light due to competition but are working as a functioning group.	No action necessary	B2	20-30	200	14	3,3,3,3
102	Beech Fagus sylvatica	Mature	Good	A large specimen on northern boundary. U-shaped union between stems at 2.25m. Upper canopy well developed with no visible defects.	No action necessary	A2	40	960	20	7,9,10,8
103	Beech Fagus sylvatica	Mature	Good	Soundings with a sound hammer indicating decay in trunk to south. Eater staining from trunk at 0.5m to west may be related. Upper canopy appears to have been reduced in the past but appears relatively well developed.	Undertake analysis of possible decay in trunk	C2	15-20	920	11	6,7,9,7
104	Beech Fagus sylvatica	Mature	Good	Soundings with a sound hammer indicating decay in trunk below crown formation at 2.5m. Canopy topped in the past with well-developed re-growth.	Assess extent of decay in trunk	C2	10-15	900	10.5	5,4,7,5

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
105	Sycamore <i>Acer pseudoplatanus</i>	Young	Good	A tall slender specimen forming an element of undercanopy on northern boundary. No visible defects	No action necessary	B2	40	200	12	3,3,3,3
106	Golden Cypress cultivar <i>Cupressus lawsoniana</i> cv	Early Mature	Good	A well-developed specimen forming an element of undercanopy on northern boundary. No visible defects but could possibly benefit from reduced competition from neighbouring trees.	No action necessary	B2	40	9320	9.5	5,5,5,5
107	Beech <i>Fagus sylvatica</i>	Early Mature	Good	A tall slender specimen forming an element of upper canopy on northern boundary. Heavy ivy growth up trunk obscuring view for assessment. No visible defects	No action necessary	B2	15-20	250	16	3,3,3,3
108	Sycamore <i>Acer pseudoplatanus</i>	Mature	Fair	Three stemmed from base with central stem dead. Sub-dominant basal stems also present in close proximity to boundary wall.	Remove dead central stem and sub dominant basal stems at wall	C2	15-20	1200	15	5,6,6,5
109	Sycamore <i>Acer pseudoplatanus</i>	Mature	Good	Trunk co dominant from 1m with a tight union between stems. Unlikely to be a significant present. Upper canopy well developed with no	No action necessary	B2	30-40	400	15.5	4,5,5,6

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
110	Sycamore Acer pseudoplatanus	Mature	Good	A relatively well-developed specimen forming an element of upper canopy on northern boundary. Crown restricted toward east due to competition from neighbouring trees. Heavy ivy growth up trunk obscuring view for assessment.	No action necessary	B2	40	340	16	6,3,6,6
111	Tag not in use									
112	Sycamore Acer pseudoplatanus	Mature	Good	A well-developed specimen on northern boundary. Strong ivy growth up trunk. No visible defects.	No action necessary	B2	40	350	16	5,4,4,4
113	Monterey cypress Cupressus macrocarpa	Early Mature	Good	A decapitated specimen of very limited merit except to provide low level screening	No action necessary	C2	15-20	320	6	4,5,4,2
114	Sycamore Acer pseudoplatanus	Mature	Good	In close proximity to boundary wall but not impacting on it at present. Trunk with tight unions at 1.25m and 2m. Strongly vertical habit with upper canopy well developed.	Monitor potential impact on boundary wall	B2	20-30	800	19	6,6,6,6

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
115	Sycamore <i>Acer pseudoplatanus</i>	Mature	Fair	A slightly sub dominant specimen three stemmed from base. Crown restricted toward north and west due to competition from neighbouring trees. Strong ivy growth up stems obscuring view for assessment.	No action necessary	B2	30-40	620	15	1,5,4,1
116	Sycamore <i>Acer pseudoplatanus</i>	Mature	Good	A tall slender specimen with a sub dominant stem from base to south. Very strong ivy growth up trunk obscuring view for assessment. Crown with a strong vertical habit. No visible defects.	No action necessary	B2	40	350	19	4,5,5,4
117	Birch <i>Betula pendula</i>	Mature	Good	A well-developed specimen with no visible defects.	No action necessary	B2	30-40	350	15.5	3,3,3,3
118	Ash <i>Fraxinus excelsior</i>	Early Mature	Good	A relatively well-developed specimen. Twin stemmed from base. No evidence of ash dieback at present.	Monitor for ash dieback	C2	10-15	200	14	3,4,2,4

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
120	Sycamore <i>Acer pseudoplatanus</i>	Mature	Good	Decay visible at pruning point at 2.15m to south but unlikely to be significant at present. Trunk three stemmed from 2.25m with wide unions between stems. Upper canopy well developed with no visible defects.	No action necessary	B2	40	570	16	7,5,7,7
121	Sycamore <i>Acer pseudoplatanus</i>	Mature	Good	One of a line of 3 trees on western boundary. Canopy suppressed toward south due to competition from neighbouring trees. Occluded pruning points on lower trunk but no associated decay visible.	No action necessary	B2	40	780	15	5,5,2,5
122	Sycamore <i>Acer pseudoplatanus</i>	Mature	Good	One of a line of three trees on western boundary. Crown mainly oriented toward north and east due to competition from neighbouring trees. No visible defects.	No action necessary	B2	40	608	15	7,8,2,3
124	Himalayan birch <i>Betula albosinensis</i>	Mature	Good	A well developed specimen with no visible defects.	No action necessary	B2	40	260	11.5	4,4,4,4
125	Hop hornbeam <i>Ostrya carpinifolia</i>	Mature	Good	Extensive lower limb removal may lead to decay development in trunk. Not an issue at present. Upper canopy well developed with no visible defects.	No action necessary	B2	30-40	410	15	8,8,5,5

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
126	Birch <i>Betula pendula</i>	Mature	Good	A well developed specimen on southern boundary. Canopy relatively well developed though suppressed toward east due to competition from neighbouring tree. Very strong ivy growth up trunk obscuring view for assessment. of	No action necessary	B2	30-40	350	13	3,1,4,4
127	Ash <i>Fraxinus excelsior</i>	Mature	Good	Located on southern boundary. Very minor deadwood in crown unlikely to be indicative of ash dieback.	Monitor for ash dieback	B2	15-20	450	19	5,3,5,5
128	Hop hornbeam <i>Ostrya carpinifolia</i>	Mature	Good	A well developed specimen on southern boundary. Crown suppressed toward west due to competition from neighbouring tree. No visible defects.	No action necessary	B2	40	570	20	5,7,5,2
128	Ash <i>Fraxinus excelsior</i>	Early Mature	Good	Located on southern boundary. Strong ivy growth up trunk obscuring view for assessment. Light deadwood in lower canopy may be indicative of early stage ash dieback.	Monitor for ash dieback	C2	10-15	350	9	3,3,4,4
130	Cherry cultivar <i>Prunus cv</i>	Mature	Good	A well developed specimen located on southern boundary. No visible defects.	No action necessary	B2	30-40	370	11	5,4,5,5

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
131	Rowan <i>Sorbus aucuparia</i>	Mature	Fair	Sub dominant to neighbouring trees with a central stem dead. Congestion and tight unions between remaining stems. Could benefit from removal of overhanging competition from neighbouring trees.	Fell	C2	10-15	210	6.5	4,2,1,2
132	Birch <i>Betula pendula</i>	Mature	Good	A well-developed specimen with no visible defects.	No action necessary	B2	30-40	390	13	4,5,4,3,5
133	Birch <i>Betula pendula</i>	Mature	Good	A cluster of three stems forming a combined canopy. A number of limbs removed from stem to west but no associated decay visible. A well developed group overall.	No action necessary	B2	30-40	310	15.5	4,4,4,4,
134	Cherry cultivar <i>Prunus cv</i>	Mature	Fair	A large limb removed at 0.5m to west. Canopy slightly sparse and restricted toward east due to competition from neighbouring trees.	No action necessary	B2	15-20	260	6.5	4,0,5,4,4
Tree group 1	Larch <i>Larix decidua</i> Spruce <i>Picea spp</i>	Early Mature	Good	A cluster of trees forming a screen at the northeastern boundary of site. Most are drawn up for light due to competition but are working as a functioning group.	No action necessary	B2	20-30	200	14	3,3,3,3

Appendix i Tree Survey & Preliminary Recommendations

Tag number	Species	Age Class	Vigour	Comments	Preliminary Recommendations	Category	Long-term potential (years)	Dbh mm	Height m	Spread m N, E, S, W
Tree group 2	Birch Betula pendula, Wych elm Ulmus glabra, Ash Fraxinus excelsior	Young	Poor	A cluster of even aged trees to inner edge of boundary trees. With few exceptions trees in poor condition due to disease (ash dieback, Dutch elm disease) and competition.	Remove poor specimens	U	<10	250	12	2,2,2,2