

# Arboricultural Assessment & Impact Report

## Garristown Library

### Garristown

### Co. Dublin

<b>Project No.</b>	<b>Project name</b>	<b>Date</b>	<b>Revision</b>
TGAR001	Garristown Library	28/06/21	A

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## 1. Client brief & Methodology

CMK Hort + Arb Ltd. were commissioned by Fingal County Council to provide an assessment of existing trees on the site of Garristown Library. The purpose of this assessment is to provide data on the nature and quality of the trees on the site with recommendations for their management as appropriate.

The field work was undertaken on the 18<sup>th</sup> of February 2021. The initial descriptions of trees within sections 2 and 8 of this report are designed to provide an independent analysis of the trees without any consideration of plans for the future development of the site. The arboricultural impact of the proposed development is discussed within section 5 of this report.

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).



Image 1. Site boundary (red)

## 2. General description of trees

The site is located to the east of Garristown main street (R130) on lands surrounding the library building (image 1). The library and associated lands are now under the stewardship of Fingal County Council but the original building was built from funds provided by the Carnegie foundation. It is possible that the older trees Austrian pine (*Pinus nigra*) and Lawsons cypress (*Cupressus lawsoniana*) on the site date from the early development of the library (images 2 & 3). Other trees present are a recently planted Turkish hazel (*Corylus avellana*) toward the front of the site and self-seeded sycamore (*Acer pseudoplatanus*) to the south of the site adjacent to neighbouring sheds. The locations of trees within the site are shown on drawing TGAR001 101 Tree Survey & Constraints.

Although it is surmised that the older trees date from the development of the library the presence of Austrian pine within neighbouring lands very close to the eastern boundary may suggest that the library was placed on estate lands already planted with these trees.

The condition of the existing trees is mixed (refer to table 1 for categorisations and section 8 for a detailed analysis of individual trees). The cypress and Turkish hazel to the front of the site are in good overall health however the land to the rear of the site and east of the library building appears to have been raised as evidenced by an absence of fluting at the base of trees in this area (image 4). A general decline in tree health is also notable in this area (image 5). It is likely that poorly managed construction works associated with the development of the extension to the library are responsible. It is also likely that the soil beneath the trees became compacted during construction works thereby negatively impacting on the root environment.

Category	Number	% of total
A	4	25
B	9	56
C	0	0
U	3	19

Table 1. Tree Categories

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**Image 2.** Lawsons cypress to front of site



**Image 3.** Lawsons cypress to south of library building and Austrian pines to rear of site



**Image 4.** Raised soil levels at the base of an Austrian pine

The sycamore which have self-seeded are not of merit overall and reduce the visual amenity of the pines where present. It is recommended that they are removed as a result.

There are the remnants of hedgerows on the northern and southern boundaries. They are primarily composed of elder (*Sambucus nigra*) and bramble (*Rubus fruticosus*) and though providing a degree of ecological value is unmanaged and in poor condition overall (image 6).

Should those pine trees identified as having the potential for retention be retained then it is advised that soil levels are investigated with a view to their re-establishment to original grades and decompaction works are undertaken to improve the condition of the root environment. If these works are not undertaken then it is likely that the health of the trees will deteriorate and they will die in a relatively short time.



**Image 5.** Sparse crowns of Austrian pines to east of site.



**Image 6.** Hedgerow on southern boundary.



**Image 7.** Sycamore overhanging north-eastern boundary

There are trees located within the neighbouring site to the east which in some instances have crowns overhanging the site and are also likely to have roots within the site. The sycamore within image 7 is very close to an existing structure on the north-eastern boundary with a lower canopy extending into the site.

The retention of the pine trees will necessitate soil level are brought back to original grade. In addition, decompaction works will be necessary to improve the condition of the root environment. If these works are not undertaken then it is likely that the health of the trees will deteriorate and they will die in a relatively short time.



### 3. 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.

### 4. Relevant legislation

There are no Tree Protection Orders (TPOs) on any of the trees on this site.

### 5. Arboricultural Impact

This section of the report is designed to outline the proposed works, the impact on existing trees and measures to be taken to undertake the works whilst retaining the integrity of the trees.

The proposals for the Landscape Development Plan incorporate the following amenities,

- A woodland-themed play area that can cater for 4 to 12-year-olds and which is inclusive in its offering. The playground will be sensitive to the setting of the garden and appropriately light-touch in its implementation, particularly in the context of existing trees.
- An outdoor classroom and picnic area.
- An entrance space that is refurbished but respectful of the library setting and the streetscape frontage.
- Improvements to the ogham stone location to make it more attractive and accessible.
- Street furniture in the form of bicycle stands and seating benches throughout the site.
- Improved paving treatments to the front of the library.
- Universally accessible parking space to be retained and improved.
- New boundary treatments.

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This play space is proposed to be located beneath the Austrian pine trees at the rear of the site. In order to undertake these works and provide the facility it will be necessary to remove the poor-quality category U trees (table 2), the soil build-up at the base of the trees and any accumulated deadwood within tree canopies.

Trees outside of the current boundary to the east include sycamore. It will be necessary to raise canopies of some of these trees where necessary to allow access and reduce the incidence of aphids and honeydew which would be uncomfortable for users and would spoil the play surfaces.

Category	Number	% of total
A	0	0
B	0	0
C	0	0
U	3	19

Table 2. Tree removal categories

## 6. Arboricultural Method Statement & Tree Protection

It is proposed that all trees identified for removal to facilitate the development or due to their condition are removed prior to the mobilisation of the main construction operation. However, as this project necessitates the installation of playground facilities beneath existing trees tree protection fencing will be required to be moved when works begin in these areas.

An outline guide to tree protection is shown on drawing TGAR001 103 and shall be erected under the guidance of the project arborist. All subsequent moving of tree protection shall be undertaken following consultation with the project arborist.

Should machinery be needed to access areas of tree protection then rubber matting shall be installed to reduce the potential for soil compaction. All such measures shall be undertaken under the guidance of the project arborist.

## 7. Terminology

Tree categories	
<b>A</b>	Trees of high quality and value due to their size, age, condition, historical/visual merit and/or conservation potential (a minimum of 40 years).
<b>A1</b>	Mainly arboricultural values. Particularly good examples of species, essential components of groups or of formal or semi-formal arboricultural features.
<b>A2</b>	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.
<b>A3</b>	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>B</b>	Trees of moderate quality and value (a minimum of 20 years).
<b>B1</b>	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).
<b>B2</b>	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.
<b>B3</b>	Mainly cultural values including conservation. Trees with clearly identifiable conservation or other cultural benefits.
<b>C</b>	Trees of low quality and value (a minimum of 10 years).
<b>C1</b>	Not qualifying in higher categories.
<b>C2</b>	Trees present in groups or woodlands but without conferring on them greater landscape value and/or trees offering low or only temporary screening benefit.
<b>C3</b>	Trees with very limited conservation or other cultural benefits.
<b>U</b>	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.



## Terminology (cont.)

**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.

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## 8. Tree condition analysis & preliminary recommendations

Tag No.	Species	Age Category	Vigour	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
1101	Turkish hazel Corylus avellana	Young	Good	Well developed with no visible defects.	No action necessary	B2	40
1102	Lawsons cypress Cupressus lawsoniana	Mature	Good	A well-developed specimen to front of library. Trunk co dominant from 1.5m with a tight union between stems. Unlikely to be structurally significant at present. Upper canopy well developed with no visible defects.	No action necessary	A2	40
1103	Lawsons cypress Cupressus lawsoniana	Mature	Fair	Minor basal damage to buttress to northwest but unlikely to be significant at present. Crown slightly sparse but unlikely to be indicative of decline.	No action necessary	B2	20-30
1104	Austrian pine Pinus nigra	Mature	Fair	Bark damage to base of trunk. Crown slightly sparse but unlikely to be indicative of decline.	No action necessary	B2	15-20
1105	Austrian pine Pinus nigra	Mature	Fair	A relatively well-developed specimen though crown restricted toward north and east due to competition from neighbouring trees. Trunk co dominant from 6m with a tight union between stems. Crown full toward south and overhanging a neighbouring shed.	No action necessary	B2	15-20
1106	Sycamore Acer pseudoplatanus	Young	Fair	Self-seeded. Potential to compete with high value tree #1105	Fell	U	<10
1107	Austrian pine Pinus nigra	Mature	Poor	In decline	Fell	U	<10

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Tag No.	Species	Age Category	Vigour	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
1108	Austrian pine Pinus nigra	Mature	Fair	A relatively well-developed specimen though crown somewhat sparse which could indicate the onset of decline.	No action necessary	B2	15-20
1109	Austrian pine Pinus nigra	Mature	Good	Though crown restricted toward south leaf cover full indicating good vigoro. No visible defects.	No action necessary	A2	30-40
1110	Sycamore Acer pseudoplatanus	Young	Poor	Self-seeded. Potential to compete with high value tree #1111	Fell	U	<10
1111	Austrian pine Pinus nigra	Mature	Good	Trunk with a lean toward east due to competition from neighbouring tree. Large extended limb over neighbouring shed but unlikely to be significant at present. Leaf cover full indicating good vigoro.	No action necessary	A2	30-40
1112	Austrian pine Pinus nigra	Mature	Good	A relatively well developed specimen. Very minot deadwood in crown. No visible defects.	Deadwood	A2	40
1113	Sycamore Acer pseudoplatanus	Mature	Good	A relatively well developed specimen though very heavy ivy growth obscuring view for assessment. No visible defects.	Cut ivy	B2	40
1114	Sycamore Acer pseudoplatanus	Mature	Good	A relatively well developed specimen though very heavy ivy growth obscuring view for assessment. No visible defects.	Cut ivy	B2	40
1115	Sycamore Acer pseudoplatanus	Mature	Good	A relatively well developed specimen though very heavy ivy growth obscuring view for assessment and competirion from neighbouring trees reducing growth potential to north. No visible defects.	Cut ivy	B2	40

### 8.1. Tree measurements

Tag No.	Species	Age Category	Vigour	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
1116	Sycamore Acer pseudoplatanus	Mature	Good	In close proximity to tank. Relatively well developed but crown growth potential slightly restricted due to competition from neighbouring trees. Very heavy ivy growth up trunk obscuring view for assessment.	Cut ivy	B2	40

Tree No.	Height m.	D.B.H. mm.	Spread m. N, S, E, W	Clear Stem first cardinal point	Tree No.	Height m.	D.B.H. mm.	Spread m. N, S, E, W	Clear Stem first cardinal point
1101	6	160	2,2,2,2	2n	1109	16	490	5,4,1,6	8w
1102	14	900	5,3,2,4	2w	1110	4	180	2,0,1,1	NA
1103	14	720	3,3,3,3	4n	1111	16	560	1,5,7,2	9s
1104	16	520	2,4,2,4	12n	1112	17	520	4,4,4,2	10s
1105	16	460	1,1,8,1	14s	1113	12	500	4,4,4,4	6w
1106	9	180	1,1,2,2	4n	1114	14	490	5,5,5,5	6e
1107	16	410	2,1,1,1	14n	1115	14	460	3,5,5,5	4n
1108	16	580	1,2,2,3	11w	1116	9	430	4,2,2,4	4w

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## **9. References**

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

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