

Arboricultural Assessment & Impact Report

The Seamus Ennis Centre

Naul

Co. Dublin

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TNAU001	Naul	28/06/21	-

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TNAU001

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 the Seamus Ennis Centre, Naul Co. Dublin. 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 16th of April 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 area where trees are located is to the rear of the Seamus Ennis Arts Centre. The main body of trees is within old agricultural hedgerow toward the eastern section of the site with a small number of young trees which appear to have been planted during the development of the site located near the northern boundary. A large section of the site to the rear of the arts centre was a construction area. At this time abandoned rubble and assorted construction material litter the site with a large mound of rubble in close proximity to the former agricultural hedgerow. This hedgerow is composed of ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*) and what appears to be a dead elm (*Ulmus procera*) which vary in age from early-mature to mature. The condition of the trees is generally good though a number are in poor condition (table 1). There has been no noticeable management in some time with some trees becoming suppressed by more dominant specimens. There is little in terms of an herb layer which may have populated the hedgerow with heavy bramble (*Rubus fruticosus* agg) growth dominating much of the understory. Children have also made the treeline a den with much construction with pallets etc. No vandalism or damage was observed to trees from this informal use of the area.

The young trees planted toward the northern boundary are lime cultivars (*Tilia cordata* cv) which are in relatively good condition despite their neglect.

Category	Number	% of total
A	0	0
B	12	80
C	1	7
U	2	13

Table 1. Tree Categories



Image 2. Northern section of hedgerow (note extensive rubble dumping to edge of hedgerow)



Image 3. Southern section of hedgerow (note extensive rubble dumping to edge of hedgerow)



Image 4. Young trees on northern boundary

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

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

- A playground that can cater for a wide age range and which is inclusive in its offering.
- A village green and large size feature tree to act as a focal point
- A medieval herb garden
- Defined entry points for pedestrians from the public footpath and a new footpath and open space offering within the park.
- A universally accessible route that connects the park and the area to the rear of the Séamus Ennis Arts Centre. A pronounced level difference separates both areas and so the corresponding route is designed with reference to Technical Guidance Document M: Access and Use, of the Building Regulations. Part M is applied as a standard to all accessible routes whether they directly access a building entrance or not.
- Multiple opportunities for sitting and picnicking.
- A car park with capacity for approximately 17 cars.
- Relocation and incorporation of existing shipping containers within redevelopment proposals.
- Revised boundary treatment along the R122 Balbriggan Road.

The proposed site layout has incorporated the line of trees forming the old remnant hedgerow. This group of trees provide not only an historic context to the site but also provides a range ecosystem services including nesting opportunities for birds and habitat provision for bees and other invertebrates.

The impact on trees is outlined within table 2. Five category B trees are proposed for removal due to the direct impact of the proposed development. One category C tree is considered unsuitable for retention within the contact of the development. This represents 40% of the category B & C trees present. Two category U trees are proposed to be removed based on their condition. There are no category A trees on the site.

One category B ash tree will be removed to facilitate construction of the path linking the carpark with the main elements of the centre with the four small, juvenile lime trees on the boundary with the public road also removed to facilitate the development. The rationale for removing the category C tree is its unsuitability for retention within the proposed development to its poor form. The two category U trees will be removed due to their condition and very limited long-term potential.

The overall impact of the proposed development is not considered to be significant in terms of tree removal as the hedgerow line will be retained virtually intact. Given the relatively small number of trees on the site the percentage impact on category B trees as shown in table 2 is skewed by the inclusion of the four juvenile limes. Though these trees have long-term potential their replacement with similarly sized trees would be straightforward.

Category	Number	% of total
A	0	0
B	5	33
C	1	7
U	2	13

Table 2. Tree removal categories
(% totals rounded)

There are a new number of trees proposed within the landscape masterplan which, with appropriate management, can provide a new generation of trees for the site.

6. Tree Protection

It is proposed that all trees identified for removal to facilitate the development are removed prior to the mobilisation of the main construction operation. The location of tree protection fencing as shown on drawing TNAU001 103 shall be erected following tree removal and retained for the duration of the works. A project arborist will be retained to provide advice on all matters pertaining to the management of retained trees on the site and a post construction report will be provided outlining the condition of retained trees and any remedial works which might be required.

Tree protection fencing must be erected before construction works commence and must be in accordance with BS 5837 (2012).

- a.** Oil, bitumen, cement or other materials likely to be injurious to a tree should not be stacked or discharged within 10m of a bole, and materials generally should not be stacked or discharged within 5m of a bole. It is essential that allowance is made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.
- b.** Concrete mixing should not be carried out within 10m of a tree.
- c.** Fires should not be lit in a position where the flames could extend within 5m of foliage, branches or trunk, bearing in mind the size of the fire and the wind direction.
- d.** As the majority of tree roots occur within the top 600mm of soil changes to soil levels within the root zone can have serious consequences for tree health.

Increases in soil levels within the root zone of trees can lead to root asphyxiation and ultimately to tree decline and/or death.

A reduction in soil levels may expose roots to drying out and/or being damaged and have the same effect on the tree as described above.

Tree root protection

The Root Protection Area should be calculated using as per Table 1 and/or Annex D (BS 5837 2012) as an area equivalent to a circle with a radius 12 times the stem diameter for single stem trees and 10 times basal diameter for trees with more than one stem arising below 1.5m above ground level.

Number of stems	Calculation
Single stem tree	$\text{RPA (m}^2\text{)} = \frac{(\text{stem diameter (mm)} @ 1.5 \text{ m} \times 12)^2 \times 3.142}{1000}$
Tree with more than one stem arising below 1.5m above ground level.	$\text{RPA (m}^2\text{)} = \frac{(\text{basal diameter (immediately above root flare (mm)} \times 10)^2 \times 3.142}{1000}$

7. 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.
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.

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.

8. Tree condition analysis & preliminary recommendations

Tag No.	Species	Age Category	Vigour	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
174	Ash Fraxinus excelsior	Mature	Good	Very heavy ivy growth up trunk. Trunk co-dominant from 0.5m with wide a union between stems.	Cut ivy and re-assess	B2	30-40
175	Sycamore Acer pseudoplatanus	Early Mature	Good	Tall slender due to competition from neighbouring trees. Strong vertical basal stems and minor stems present. Very heavy ivy growth obscuring view for assessment. No visible defects.	Remove minor basal stems.	B2	40
176	Ash Fraxinus excelsior	Mature	Good	Crown restricted toward south due to competition from neighbouring trees. No visible defects. Minor deadwood in crown.	Dead wood	B2	30-40
177	Ash Fraxinus excelsior	Early Mature	Fair	Very heavy ivy growth up trunk obscuring view for assessment. Sub-dominant to neighbouring trees to south. Crown restricted as a result. Light suppressed deadwood in crown.	Cut ivy and re-assess	B2	20-30
178	Ash Fraxinus excelsior	Mature	Poor	A sub-dominant specimen with a very poorly developed crown. Trunk co-dominant from base with a tight union between stems.	Consider for removal.	C2	10-15
179	Ash Fraxinus excelsior	Mature	Good	Multi-stemmed from base with wide unions between stems. Very heavy ivy growth obscuring view for assessment. Crown restricted in development due to competition from neighbouring trees.	Cut ivy and re-assess	B2	30-40

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Tag No.	Species	Age Category	Vigour	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
180	Ash Fraxinus excelsior	Mature	Good	A large cavity in trunk at 6m at point of limb loss. Storm damage in upper crown.	Fell	U	<10
181	Ash Fraxinus excelsior	Mature	Good	A multi-stemmed specimen. Wide unions between stems. Heavy ivy growth up one stem. Minor pockets of decay and deadwood in crown.	Dead wood	B2	30-40
182	Hawthorn Crataegus monogyna	Mature	Good	A sub dominant multi-stemmed specimen with a knarled form and strong basal lean toward east.	Cut ivy	B2	40
183	Hawthorn Crataegus monogyna	Mature	Good	A multi-stemmed specimen with a typical knarled form. Minor pockets of decay in lower trunk but unlikely to be significant at present.	No action necessary	B2	40
184	Ash Fraxinus excelsior	Mature	Dead		Fell	U	0
0000	Small leaved lime cultivar Tilia cordata cv	Young	Good	Relatively well developed with no visible defects.	Remove bamboo	B2	>40
0000	Small leaved lime cultivar Tilia cordata cv	Young	Good	Bark damage to trunk and lower crown. Unlikely to be significant.	Remove stake and bamboo	B2	30-40
0000	Small leaved lime cultivar Tilia cordata cv	Young	Good	Bark damage to trunk and lower crown. Unlikely to be significant.	Remove stake and bamboo	B2	30-40

8.1. Tree dimensions

Tag No.	Species	Age Category	Vigour	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
0000	Small leaved lime cultivar Tilia cordata cv	Young	Good	Crown slightly congested. No visible defects.	Undertake formative pruning	B2	30-40

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
174	12	450	2.4.4.3	5.5s	183	4.5	350	1.3.2.2	3e
175	13	350	1.4.1.4	4.5w	182	8	320	2.4.3.2	0
176	14	420	3.5.2.4	4.5nw	184	10	250	1.2.2.2	NA
177	14	290	3.2.1.3	4w	000	4	70	2.2.1.1	2e
178	4.5	460	1.4.0.4	2.5w	000	4	70	1.1.1.1	1.75s
179	12	400	1.5.2.2	0	000	4	70	1.1.1.1	1.75S
180	12	420	3.5.4.5	NA	000	4	70	1.1.1.0.5	2w
181	13	250	6.6.3.6	0					

9. References

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

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