

Independent Tree Surveys

# Preliminary Tree Survey Report

Development Lands  
Caragh  
Co. Kildare

12 April 2021

**DOCUMENT:**  
**Preliminary Tree Survey Report**

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## 1 INTRODUCTION

Kildare County Council has issued notification of a proposal to apply a Tree Preservation Order to mature trees on lands at Caragh, Naas, Co. Kildare.

Many of the trees identified for inclusion in the TPO have been recorded as being of poor health and condition (in a preliminary tree survey carried out in April 2021), which would render them unsuited for inclusion in a TPO. This report has been prepared to provide an updated Arboricultural assessment of the trees and to indicate the health and condition issues that are apparent amongst the trees and which would render them unsuitable for TPO status.

The accompanying drawing C-TS-01 shows the locations of the individual trees and tree groups identified on the site during the survey.

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## 2 REPORT LIMITATIONS

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.

Individual trees shown on the survey drawing were not plotted by topographic survey methods, their positions should be regarded as approximate.

## 3 METHODOLOGY

The survey has been carried out in accordance with BS 5837: 2012 Trees in Relation to Design, Demolition and Construction to Construction – Recommendations.

The trees were accessed on foot and subject to preliminary assessment using Visual Tree Assessment (VTA) techniques only.

### 3.1 Tree, Tree Group and Hedge Number

Individual trees (prefix T), were allotted reference numbers to allow for identification and cross reference with the survey schedule and site drawings. Individual trees were not tagged on site.

### 3.2 Species

Refers to the specific tree species with both common and botanical names for individual trees.

### 3.3 Age Class

Y: Young tree – yet to reach biological maturity  
SM: Semi-mature - tree now well established and developing  
EM: Early-Mature - tree not yet fully grown  
M: Mature – Tree fully grown and in full maturity  
LM: Late Mature – in the later stages of maturity  
OM: Over mature - tree now declining from natural causes  
Vet: Veteran - tree of value due to old age and ecological/cultural significance

### 3.4 Stem Diameter and Tree Height Measurements – All Estimated

Ht: Total Tree Height in metres  
Dbh: Diameter (in mm) at breast height measured at 1.5m from ground level

### 3.5 Condition

Condition refers to both physiological condition (good, fair, poor, dead.) and structural condition.

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  
Dead: Tree now completely dead

### 3.6 Comments

Additional description/commentary on individual trees where appropriate.

### 3.7 Recommendations

Preliminary management recommendations are noted, these pertain to current site conditions unless otherwise stated.

### 3.8 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 young trees with a stem diameter of below 150mm.
- 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.

### 3.9 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 (rad) in metres measured from the tree stem and is shown on tree survey drawings 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.

- 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:  
$$\sqrt{((\text{mean stem diameter})^2 \times \text{number of stems})}$$

## 4 FINDINGS

The trees were initially assessed in April 2021, and were re-assessed during a site visit on the 18<sup>th</sup> November 2021. The field survey findings are recorded in the survey schedule appended to the report and include the data for 23 individual trees. Of the 23 individual trees assessed, 17 were graded category U (unsuited to long term retention) and 6 were graded category C (low quality). Photographs showing the significant defects identified on the trees are included below.

The survey included the two linked tree-lines to the north and east of the main field, which is open pasture. The northern tree-line is the longer and more dominant of the two and includes 15 significant individual trees. The eastern group is shorter and more sporadic, containing 6 significant individual trees. Two individual Ash trees to the southwest of the main groups were also included. Three remnant stumps of formerly large Beech trees were identified along the northern tree line.

Overall tree condition is poor, with the over-mature Beech trees being mostly in physiological and structural decline. Many of the Beech trees are showing clear signs of significant structural weaknesses and low physiological vitality. Several trees have already sustained major structural failures, including stem breakage. Many of the Beech trees were seen to be being colonised by species of fungi well known to cause significant wood decay and subsequent stem or root plate failure.

The decaying remains of three large trees (S1-S3) were also identified between the individuals recorded in the survey; these were evidently also Beech trees that have failed in the past due to basal decay associated with old age and decline. The three Oak trees were also showing signs of physiological stress, although the structural condition was not seen to be as poor as amongst the Beech trees. The two individual Ash trees were both showing signs of Ash dieback disease, with tree T22 also having significant basal decay, rendering it liable to collapse.

The Beech trees are all in full or late maturity and will continue to deteriorate over the coming years. Older Beech is especially vulnerable to wood decay, which when sufficiently well-advanced will cause the trees to succumb to structural failure. The Ash trees are both likely to die from Ash dieback disease or structural failure over the next few years.

Whilst the trees currently still provide landscape and amenity value, these benefits will decline as the trees continue to deteriorate and collapse.

Given the poor physiological and structural condition of the trees, they should not be considered for coverage by a tree preservation order on the basis that a TPO should not be applied to a tree that is dead, dying or dangerous.

## 5 SITE PHOTOGRAPHS





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*Ganoderma spp.* fungi at base of tree T1



Beech stump S1



*Ganoderma spp.* fungi at base of tree T2



Beech stump S2



Fungal fruiting bodies on Beech tree T4



*Ustulina deusta* fruiting bodies at base of tree T5



Beech stump S3



*Meripilus giganteus* fungal fruiting bodies on Beech tree T8



Base of Beech tree T10



Base of Beech tree T11



*Armillaria spp.* fungi at base of Beech tree T13



Degraded remnants of Beech tree T14



Dieback of Oak tree T15



Base of Beech tree T16



*Meripilus giganteus* fruiting bodies on Beech T18



*Ganoderma spp.* fungi on stem of tree T21



Cavity at base of Ash tree T22



Crown dieback of Ash tree T23

## 6 SCHEDULE OF TREES INCLUDED IN THE SURVEY

Type	No.	Species	Age	Ht m	Dbh mm	ERC	Phys Cond	Structural Condition/Comments	Preliminary Recommendations	RPA m	Cat
T	1	Fagus sylvatica (Beech)	OM	21	1000	<10	Poor	Poor. Dieback in crown. <i>Ganoderma spp.</i> fruiting brackets on lower stem indicative of significant basal decay.	Not suited for long-term retention within a new development.	12	U
S	1	Fagus sylvatica (Beech)	OM					Stump of old Beech tree that has collapsed due to basal decay.	No urgent works needed.		
T	2	Fagus sylvatica (Beech)	OM	21	1000	<10	Poor	Poor. Dieback in crown. <i>Ganoderma spp.</i> fruiting brackets on lower stem indicative of significant basal decay.	Not suited for long-term retention within a new development.	12	U
S	2	Fagus sylvatica (Beech)	OM					Stump of old Beech tree that has collapsed due to basal decay.	No urgent works needed.		
T	3	Fagus sylvatica (Beech)	M	20	600	10+	Fair	Fair. Thick Ivy covering stem.	Cut Ivy	7.2	C2
T	4	Fagus sylvatica (Beech)	OM	21	1000	<10	Poor	Poor. Large decay cavity on stem. Fungal fruiting bodies emerging from cavity on main stem. Some sparseness of upper crown.	Not suited for long-term retention within a new development.	12	U
T	5	Fagus sylvatica (Beech)	OM	21	1000	<10	Fair/Poor	Poor. <i>Ustulina deusta</i> fruiting bodies present at stem base indicating embrittled heartwood in stem.	Not suited for long-term retention within a new development.	12	U
S	3	Fagus sylvatica (Beech)	OM					Stump of old Beech tree that has collapsed due to basal decay.	No urgent works needed.		
T	6	Fagus sylvatica (Beech)	OM	21	1000	<10	Fair/Poor	Poor. <i>Ustulina deusta</i> fruiting bodies present at stem base indicating embrittled heartwood in stem.	Not suited for long-term retention within a new development.	12	U
T	7	Fagus sylvatica (Beech)	M	21	1000	10+	Fair/Poor	Fair. Low vitality.	No urgent works needed.	12	C2
T	8	Fagus sylvatica (Beech)	M	21	1000	<10	Fair/Poor	Poor. Low vitality. <i>Meripilus giganteus</i> fruiting brackets at stem base indicating degraded anchorage and stability. Some sparseness of upper crown.	Not suited for long-term retention within a new development.	12	U
T	9	Fagus sylvatica (Beech)	M	21	1000	<10	Poor	Fair. Low vitality. Dieback in crown.	Monitor tree condition.	12	U
T	10	Fagus sylvatica (Beech)	OM	21	1000	<10	Poor	Bad. Significant basal decay. Very large old tear-out wound at base of main stem.	Not suited for long-term retention within a new development.	12	U

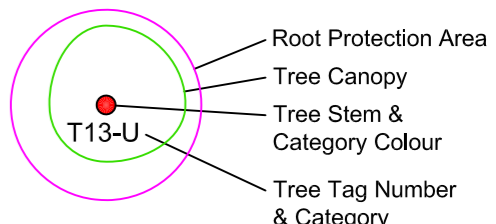
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Type	No.	Species	Age	Ht m	Dbh mm	ERC	Phys Cond	Structural Condition/Comments	Preliminary Recommendations	RPA m	Cat
T	11	Fagus sylvatica (Beech)	OM	22	1250	<10	Poor	Poor. Large specimen tree. <i>Ganoderma spp.</i> fungal fruiting bodies on stem indicating internal wood decay.	Not suited for long-term retention within a new development.	15	U
T	12	Fagus sylvatica (Beech)	M	21	1000	10+	Fair	Fair. Asymmetric form due to group competition.	No urgent works needed.	12	C2
T	13	Fagus sylvatica (Beech)	OM	21	1000	<10	Poor	Poor. Dieback in crown. <i>Armillaria spp.</i> Fungal fruiting bodies at stem base indicative of degraded roots and anchorage.	Monitor tree condition. Not suited for long-term retention within a new development.	12	U
T	14	Fagus sylvatica (Beech)	OM	10	1000	<10	Poor	Poor. Significant basal decay. Formerly large old tree that has suffered catastrophic failure of main stem at 4m in the past.	Not suited for long-term retention within a new development.	12	U
T	15	Quercus robur (Common Oak)	M	17	800	<10	Poor	Poor. Significant dieback in crown.	Monitor tree condition. Not suited for long-term retention within a new development.	9.6	U
T	16	Fagus sylvatica (Beech)	OM	20	1000	<10	Poor	Poor. Significant basal decay.	Not suited for long-term retention within a new development.	12	U
T	17	Fagus sylvatica (Beech)	M	21	1250	10+	Fair	Fair. Large specimen tree.	Monitor tree condition.	15	C2
T	18	Fagus sylvatica (Beech)	OM	21	1000	<10	Poor	Poor. Old tear-out wound on main stem. <i>Meripilus giganteus</i> fruiting brackets at stem base indicating degraded anchorage and stability. Sparse crown.	Not suited for long-term retention within a new development.	12	U
T	19	Quercus robur (Common Oak)	M	18	850	10+	Poor	Fair. Some dieback of upper crown.	Monitor tree condition.	10.2	C2
T	20	Quercus robur (Common Oak)	M	18	850	10+	Poor/Fair	Fair. Some minor dieback of upper crown.	Monitor tree condition.	10.2	C2
T	21	Fagus sylvatica (Beech)	OM	21	1250	<10	Poor	Poor. Dieback in crown. <i>Ganoderma spp.</i> fruiting brackets on lower stem indicative of significant basal decay.	Not suited for long-term retention within a new development.	15	U
T	22	Fraxinus excelsior	M	15	600 est	<10	Poor	Poor. Large decay cavity at stem base. Epicormic growth and crown dieback indicative of Ash dieback disease.	Not suited for long-term retention within a new development.	7.2	U
T	23	Fraxinus excelsior	M	14	450 est	<10	Poor	Poor. Epicormic growth and crown dieback indicative of Ash dieback disease. Bark damage to stem base.	Not suited for long-term retention within a new development.	5.4	U

## 7 TREE SURVEY PLAN



**LEGEND**





Root Protection Area


Tree Canopy


Tree Stem & Category Colour

Tree Tag Number & Category

 Category A Trees (high value)

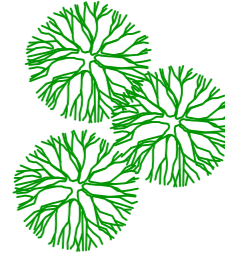
 Category B Trees (moderate value)

 Category C Trees (low value)

 Category U Trees (Poor Condition)

**NOTES:**  
 Please see Tree Survey Report for further detail.  
 All drawings to be read in conjunction with the consulting architects and engineers drawings.

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Project Name: Caragh, Co. Kildare
Drawing Title: Preliminary Tree Survey
Drawing Number: C-TS-01
Client:
Agent:
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Scale: Not to Scale