Independent Tree Surveys Ltd

Tree Survey Report

Old Kilcullen Heritage Trail
Old Kilcullen
Co. Kildare

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Independent Tree Surveys Ltd
Our Lady's Cottage,
Drummond
Rosenallis
Co. Laois
T: 057 8628597
M: 087 1380687
www.independenttreesurveys.ie

Arboricultural ASSOCIATION
Professional Member

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1.0 Introduction

It is proposed to carry out improvements to various stretches of road and pathways as part of the Old Kilcullen Heritage Trail project; part of the project involves the upgrading up a section of old lane between Hacklow and Halverstown Cross into a walking track, and another part involves the planting of a length of new hedging along the road frontage of the Brennan's Pub car park. This report has been commissioned to provide an arboricultural assessment of the trees and hedges along the route of the proposed walking track and to assess the condition of the existing Sycamore tree close to the site of the proposed new hedgerow planting at Brennan's Pub. Commentary on the condition of the trees and hedges is augmented by management recommendations where appropriate.

2.0 Report Limitations

- The inspection has been carried out from ground level using visual observation methods only.
- No digging or below ground investigation of any kind was carried out.
- 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.

Report Prepared by

John Morgan
BSc (Hons) Tech Cert (Arbor A)
M Abor A (Membership number PR407)

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4.0 Survey Methodology

The trees and hedges were assessed from ground level using Visual Tree Assessment (VTA) techniques and relevant observations and findings were recorded in compliance with the industry standard document BS5837: *Trees in relation to design, demolition and construction (2012)*. The trees and hedges were mostly described collectively, with some trees being picked out for individual assessment.

4.1 Survey Key

Tree Numbers

The trees (prefix T) and hedges (prefix H) were allocated numbers; these numbers identify the trees and hedges in the report and survey drawings.

Tree Species

Common and botanical names of the tree species were recorded.

Tree Crown Dimensions

Tree height (Ht) measurements are in metres and are estimated.

Stem Diameter (Dbh)

Measurements are in millimetres and taken at 1.5m from ground level, multiple stems (St) are recorded as a function of the BS:5837 RPA formulae described below. Where tree stems could not be directly accessed; the stem diameters were estimated.

Tree age classes

Y	Young	Recently planted (with 5 years or so)
SM	Semi-Mature	Well established young tree
EM	Early Mature	Established tree not yet fully grown
M	Mature	Full or near full grown tree
LM	Late Mature	Older specimen in full maturity
OM	Over Mature	Full maturity now declining through natural causes
Vet	Veteran	Notable due to large size, old age, ecological importance

Tree Physiological 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

Work Recommendations

Preliminary management recommendations are made where necessary and pertain to current site conditions unless otherwise stated.

Estimated Remaining Contribution (ERC)

The approximate number of years that a tree should continue to live and contribute amenity, conservation, or landscape value to the site under current site conditions.

4.2 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 younger trees with a stem diameter of below 150mm and/or <10m in height.

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.

4.3 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 in metres measured from the tree stem and is shown on the tree survey/constraints drawing 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.
The calculated RPA for each tree should be capped to 707 m2.

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:
√ ((stem diameter 1)2 + (stem diameter 2)2 ... + (stem diameter 5)2)
b) For trees with more than five stems, the combined stem diameter should be calculated as follows:
√ ((mean stem diameter)2 × number of stems)

5.0 Hacklow to Halverstown Cross Walking Track

5.1 Survey Findings

The trees and hedges were inspected and assessed during a site visit on the 24th of October 2023. The proposed walking track will follow a stretch of old lane approximately 500m long from the point at which the road from Hacklow becomes partially blocked and unusable to traffic towards the Halverstown Cross junction to the east. The survey area and indicative positions of the trees and hedges are shown on the tree survey drawing 23034_TS.

The route is bounded by old hedges to the north and south, which extend for the full length of the proposed track. Hedge H1 runs along the north side of the laneway, separating the lane from the arable farmland to the north. The hedge is made up primarily of a mixture of Ash (*Fraxinus excelsior*), Hawthorn (*Crataegus monogyna*), and Elder (*Sambucus nigra*) bushes. The bushes have been maintained by regular cutting with a mechanised hedge cutter, with the hedge having been cut back to around 2-3m high for most of its length not long before the survey visit. The maintenance cutting has cut the top and northern flank of the hedge, not the south face of the hedge, which has extended foliage and branching extending into the old laneway. The hedgerow plants in mostly fair condition, with no significant gaps along length of the hedge. The Ash bushes are likely to become affected by Ash dieback disease, but do not seem badly impacted yet.

The hedge includes a single mature Ash tree (labelled T9 on the survey drawing and shown in photo 8 below) located at the junction of another hedge running north. This is a medium sized tree around 18m tall but is in poor condition due to infection by Ash dieback disease.

The southern hedgerow (labelled H2) varies in character and composition along the length of the lane. The western part of hedge H1 is made up mainly of early and semi-mature Ash trees distributed along the fence line with the adjacent farm pasture. These trees are mostly 8-12m tall, 300-500mm dbh, with thick Ivy cover and are all suffering from infection by Ash dieback disease to some extent (three of these Ash trees are marked on the drawing T1-T3). The hedge is now somewhat fragmented with only smaller Hawthorn bushes in between some of the Ash trees and has not been actively managed for many years, some branch growth extends into the lane; all the trees were graded category C.

The central portion of hedge H2 borders the quarry workings to the south, with much of the growth located within a wider swath growing out of a raised bank between the lane and the quarry yard. A single mature Apple tree (category B) was seen in the northwest corner of the quarry site fence line and plotted as T4 on the drawing. The bank is densely vegetated with bushes of Ash, Elder and Hawthorn, as well as 3 young multi-stemmed Beech (*Fagus sylvatica*) trees (labelled T5-T7) close to the lane. 2 slightly larger Ash trees (labelled T8 and T9) are growing in the eastern part of this central section of hedge H2.

The Ash trees are in poor condition due Ash dieback disease; however, the Beech are in good condition and were graded category B on the drawing. There is considerable branch growth extending out over the lane.

The eastern part of hedge H2 extends from the quarry yard to the junction of the old lane with Halverstown Cross. This section of the hedge is very fragmented, with some extended gaps between the semi-mature and early mature Ash trees; all of which were suffering from Ash dieback to some degree.

The old laneway has been impassable to vehicular traffic for some years, and an amount of green waste and other material has been dumped along the western end of the walking track route. There are the remains of old hard surfacing still in place along parts of the laneway, but the lane is uneven in places (especially towards the east), with woody tree roots visible on the soil surface. The route has been kept partially open by walkers and horse riders but has extensive vegetation growth extending into the path from the hedges H1 and H2 to the north and south.

5.2 Recommendations

No urgent or major tree works were identified along the route of the proposed walking trail during the site visit; however, the following management recommendations should be considered as the project progresses.

The green waste and other material that has accumulated along the western end of the route should be cleared away to an appropriate facility. This work should be done with care to avoid damage to the adjacent hedgerow plants and should avoid digging down into the soil at the base of the hedge.

Dead stems and branching from hedgerow trees and bushes, along with undergrowth such as Brambles and suckering should be cut back from both sides of the track route to improve the clearance and to facilitate the new 3m wide gravel track. This should be a combination of mechanised hedge trimming for the bushes and undergrowth and then proper pruning and coppicing of branches and stems from trees and coppice stools by professional tree workers. The cuttings and brash should be chipped on-site for use as mulch or removed to a suitable facility. This work should be done before the machinery etc. arrives on site to begin the build up of gravel etc. for the track.

Construction of the new track should be built on-top of the existing soil or tarmac surface where possible, and endeavour to leave the underlying soil surface unchanged where possible. The patches of old tarmac surfacing should be left in situ if possible. All these actions will reduce the likelihood of root damage and subsequent impact on plant health to the adjacent hedgerow trees and bushes.

The hedges will need to be clipped back at once a year to maintain a suitable clearance from the new track.

All tree pruning and felling work should be carried out by qualified and experienced tree surgeons working in accordance with *BS3998 (2010) Tree Work – Recommendations.* Such tree and hedge works should be done during the period September 1st and February 28th to avoid the bird nesting season.

The Ash trees along the route should subject to regular inspection to monitor the progress and severity of Ash dieback disease. If the trees suffer extensive dieback or die, they should be coppiced (cut to stump) without undue delay.

New native hedgerow plants (such as Hazel, Hawthorn, Blackthorn, Holly, Spindle etc.) should be planted into the gaps along hedge H2 to reinforce the hedge and to replace any Ash trees that succumb to Ash dieback disease.

5.3 Walking Track - Site Photographs

1. Last part of the lane passable by vehicles – to the west of the proposed walking track, back towards Hacklow

2. Western end of the walking track route with green waste dumped next to hedge H1 on the left

3. Western end of route facing west, with hedge H1 on the right and fragmented hedge H2 on the left

4. Western end of the central part of the route – facing west, with quarry site on left

5. Dense growth from both hedges in the central part of the route (facing west)

6. Young Beech tree growing out of the bank in the central part of hedge H2 on the left. Note trimmed top to hedge H1 to the right

7. More dense growth from hedges into track route – facing west, with hedge H2 and quarry site on the left

8. Mature Ash tree T9 growing out of hedge H1

9. Multi-stemmed bushes growing out of hedge H2 on the left (facing west)

10. Gaps in fragmented eastern part of hedge H2 on left

11. Gaps in fragmented eastern part of hedge H2 on left

12. Overgrowth in the eastern end of hedges H2 (left) and H1 (right)

13. Far eastern end of the walking track route as it meets Halverstown cross

6.0 Brennan's Pub

Plans for the new heritage trail include some new hedge planting at Brennan's Pub, Old Kilcullen help separate the existing car park and adjacent road. The new hedge will run north from the base of the mature Sycamore tree; the Sycamore was subject to a visual inspection and assessment as part of the tree survey. The location of the tree is shown on the survey drawing 23035_TS in the appendices and is shown in the photos below.

6.1 Survey Summary

Species	Sycamore (*Acer pseudoplatanus*)
Tree Number	T12
BS5837 Category	C2 (low value)
Age Class	Mature
Height (m)	13m
Stem Diameter (mm)	550mm + 550mm at 1.5m above ground level
RPA (m) radius	9.3m
Physiological Condition	Poor: Sparse foliage, with some dieback of upper crown. Some dead branches.
Structural Condition	Poor/Fair: Some decay in old wounds likely to have weakened branches.

Sycamore seen from south

Close up of tree base and main stems

The Sycamore is twin stemmed from close to ground level and is growing out of a raised mound surrounded by compacted road surfacing. The mound has the appearance of being formerly enclosed in a raised bed of some kind, with the retaining structure now removed. Some woody roots are visible on the soil surface of the mound.

The tree has been heavily pruned in the past, with both stems having been topped at around 4m, before producing new growth; there is some wood decay evident in some of the old wounds. The tree has been crown lifted over the road and to the north and south, presumably to create clearance from the telecom and ESB overhead service wires. The tree crown is now somewhat sparse, with poor foliage density and some branch dieback.

Wood decay is visible in old wounds to scaffold branches at 3m and 6m on the western stem, with a branch off the east stem snapped or cut at 8m. Some small old wounds to the lower stem and tree base; mostly occluded. Decay cavities on both stems between 3-5m.

6.2 Recommendations

The Sycamore tree is in relatively poor condition and some remedial pruning is recommended:

- Prune to reduce the tree crown by 3-4m down to appropriate branch unions.
- Prune to remove dead and weak branches.
- Prune to shorten branching in the western side of the crown by 1-2m.
- The tree should be subject to regular inspection (every 1-3 years) by a qualified arborist.

Ground preparation to establish a new hedgerow to the north of the tree should be started away from the raised mound upon which the tree is growing and be kept as a narrow and as shallow as is practicable, using hand digging in the section within the nominal root protection area (RPA) of the tree. Any significant tree roots encountered (especially those > 25mm diameter) should be left intact and undamaged. Planting into a linear ridge of topsoil above the existing ground level should be seriously considered, although it is likely that the underlying compacted ground will need to be broken up beneath this new ridge to aid drainage and future root growth from the new hedgerow plants. The surrounding surfacing within the nominal root protection area (RPA) of the tree should be left intact where practicable, however, where existing surfacing has to be replaced within the RPA of the Sycamore, the old sub-base should be re-used where possible.