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Tree & Hedgerow Survey, Assessment, Management, Mitigation & Protection Measures

FOR

RATHCOOLE AGE-FRIENDLY DEVELOPMENT
TAY LANE, NEWCASTLE ROAD,
RATHCOOLE, DUBLIN 24

On behalf of

Riverside Projects Limited

AUGUST 2022

1.0 INSTRUCTION

1.1 Gannon + Associates were commissioned by Riverside Projects Limited, to conduct a tree survey and complete this tree survey report for the proposed development at Tay Lane, Rathcoole, Co .Dublin. This report identifies and details the trees found on site during the survey, and provides a detailed assessment, impact assessment and recommendations for their management and protection. The survey was carried out by Jonathan Gannon of Gannon + Associates, Consultant Landscape Architect and Arborist, B.Ag.Sc Landscape Architecture, L.L.M Environmental Law and Sustainable Development, Member of the Irish Landscape Institute (MILI).

2.0 REPORT LIMITATIONS

2.1 The trees are subject to a visual inspection only. A visual inspection is from ground level only and it shall be borne in mind it is subject only to external defects visible at the time of inspection. It does not include a climbing inspection, below ground or internal investigations.

2.2 Trees should be inspected on a regular basis as their health and condition can change rapidly due to biotic and abiotic agents. The recommendations within this report are valid for a 12-month period only and this may be reduced in the case of any change in conditions to or in the proximity of the trees.

3.0 SURVEY DATE COLLECTION AND METHODOLOGY

3.1 The site was surveyed on the 15th November 2021 by this practice. The conditions were dry and visibility was good with foliage still present on the trees. The site was entered from the vehicular access off Saint Bridgets Terrace. The site was walked around and the findings have been summarised and recorded in the following report. All trees have been individually identified and numbers referenced in the following survey table.

3.2 This survey assesses the trees on the lands included within the site area. Details have been given on the trees individually and within their growing environment and this information has been presented in tabular format within appendix 1 under the following headings:

- Tree Number (Metal tags have been positioned on each tree).
- Tree species both common and botanical.
- Dimensions (Trunk diameter, height, crown spread and crown clearance).
- Age Class
- Physiological Condition
- Structural Condition
- Preliminary Recommendations
- Estimated remaining contribution within their present environment

- Retention category – this indicates in my opinion the value of the tree to the site/area based on Arboricultural and landscape merits.

3.3 The trees have been plotted onto the accompanying drawing 21149_TS_01 and the geographical information was supplied by a land survey company and are assumed accurate. The tag numbers referred to in the condition tree report have been shown on this drawing along with their crown spreads, retention category colour coded and minimum root protection areas (constraints).

4.0 SUMMARY OF FINDINGS

4.1 The subject site is locked in the urban environs of Rathcoole 50m to the north of Rathcoole Main Street and covers an area of approx. 0.43 ha. The site is bordered to the north by the Naas Road N7 motorway, to the south by an existing vacant structure, to the east by part of Eaton Drive and the apartments at Aubrey Manor, and to the west by part of St. Bridget's Terrace and a residential dwelling.

Fig 1.0 – Proposed site aerial photo outlined in red.

4.2 The site can be characterised by lands formerly occupied by a dwelling structure which has since been demolished and has been vacant for some time. The vacant site is now largely overgrown with dense, self-seeded scrub vegetation which makes a large portion of the site impassable. Access was created and the prominent trees in question could be surveyed.

Fig 2.0 – Site photo facing east.

Fig 3.0 – Site A photo facing north east.

4.3 The trees and vegetation on the site can be distinguished into groups and specimen trees. On site there are a total of four groups of trees and two specimen trees.

4.4 Tree group 1

This group of trees is found along the sites northern boundary and presents an important visual screen to the N7 motorway behind. A densely planted tree boundary that consists of 25% Populus alba and 75% Cupressus x Leylandii. These trees are in relatively good condition a form this dense boundary reaching a total height of approx. 10 – 12m tall. The Leylandii trees are planted at approx. 1.5m spacing with the Poplar trees planted at approx. 4 metres spacing providing an interesting mix of deciduous and evergreen trees along this boundary.

Fig 4.0 – Photo of sites northern boundary taken from northern side of N7.

Fig 5.0 – Photo demonstrating Leylandii/Poplar mix.

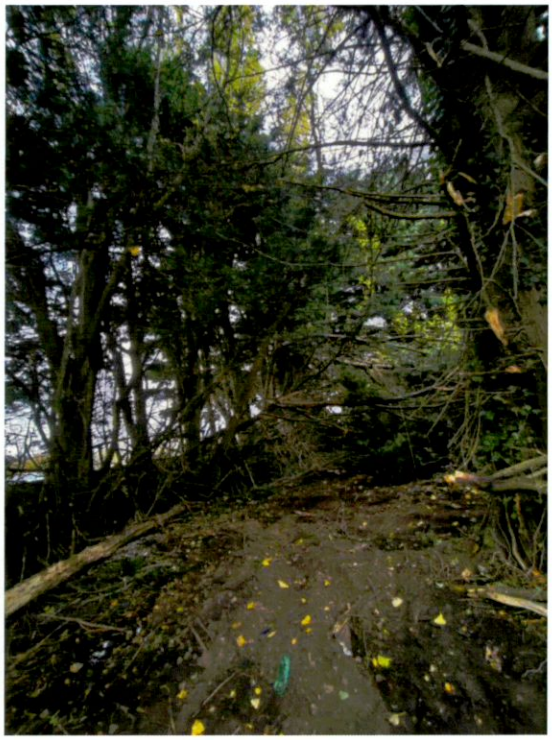


Fig 6.0 – Photo facing north of boundary.

4.5 Tree group 2

This group of trees is found within the site planted east to west in the middle of the site and consisting of only densely planted Cupressus x Leylandii trees planted. These trees have been tightly planted at approx. 1.5m spacing and there are approximately 17 trees in this boundary. These trees will be removed to facilitate construction.

Fig 7.0 – Photo of tree group 2 facing east.

Fig 8.0 – Photo of tree group 2 facing west.

4.6 Tree group 3

This group of trees is found along the sites northern boundary with the existing residential dwelling. A tightly packed group of 4 multi-stem Acer pseudoplatanus trees in relatively poor condition covers a small section of this boundary. These trees will be removed to facilitate the proposed construction.

Fig 9.0 – Photo of tree group 3 facing north.

4.7 Tree group 4

This group of trees is found along part of the sites north eastern boundary and consisting of only densely planted Cupressus x Leylandii trees planted. These trees have been tightly planted at approx. 1.5m spacing and there are approximately 4 trees in this boundary. These trees will be removed to facilitate the proposed construction.

Fig 10.0 – Photo of tree group 4 facing east.

4.8 Specimen Trees

There are two specimen trees that have been recorded on site. One prominent ,mature, multi stemmed Betula pubescens that is located in the centre of the site and one semi-mature Cupressus macrocarpa that is found to the north east of the site. Both of these trees will be required to be removed to facilitate the proposed construction.

Fig 11.0 – Photo of T005 Betula pubsecens

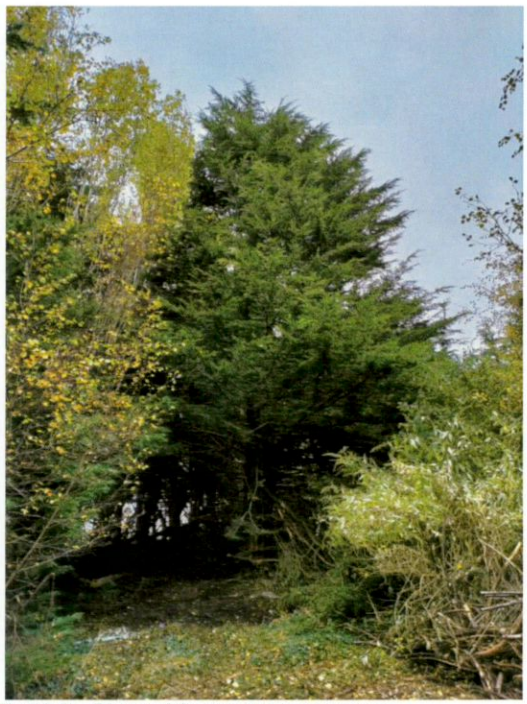


Fig 12.0 – Photo of Cupressus macrocarpa

4.9 No invasive species were detected at the time of the survey.

5.0 ARBORICULTURAL IMPACT ASSESSMENT

5.1 There is no record of tree protection orders on the trees within this site at present. The trees surveyed are a mix of semi-mature tree species that were largely planted as part of a residential dwelling garden and to provide fast visual screening along the sites boundaries. They are still functioning well in the provision of screening for the site and particularly provide excellent visual boundary with the N7 motorway to the north. Though much of the screening trees are of low quality Cupressus x Leylandii, the retention of these trees will maintain a strong visual screen.

5.2 The proposed development will require the removal of 42 no. Category C trees to facilitate the proposed construction a further 2no.catagorey B trees is to facilitate construction.. This will present a change to part of the sites southern elevation but in generally the lost of these trees is not considered significant on account of their low quality, condition and appearance.

5.3 To mitigate against the loss of these trees. The landscape plan for the development, proposes the planting of 29 no. semi-mature native trees and 23 no. Multi-stem trees including the planting of a desirable mix of pollinator friendly landscape planting. This will improve the visual aesthetic of the development providing mixed canopy cover throughout the site.

5.4 All trees on the sites northern boundary are to be retained and protected. A construction exclusion zone (CEZ) has been proposed to protect the below ground roots of the trees that are to be retained. The CEZ secures approx. 20 the trees to be protected with 37 ln.m of tree protection fencing as set out in drawing 21149_TS_01. The root protection fencing shall be erected prior to construction works taking place and must be supervised by a qualified arborist and must not be removed until all construction works have been completed. There should be no storage of materials or construction works of any kind to take place within the CEZ. A limited amount of work will be permitted within the CEZ to accommodate car parking and vehicular access.

5.5 There is no impact caused by the trees on the proposed works on site, the foliage size and density should not cause unacceptable shade and falling fruit / seeds should not cause an unacceptable hazard.

5.6 The trees will become part of an overall management program where their amenity shall be enhanced and longevity ensured.

6.0 ARBORICULTURAL METHOD STATEMENT

The following to be read in conjunction with Tree Protection Drawing No. 21149_TS_01

6.1 Site access will be through the proposed through the existing vehicular gate at the entrance to the site. Work traffic is free to enter and exit the site through entrance A as they do not interfere with the tree canopies.

6.2 The intensity and nature of construction of the proposed works, is considered to be relative to the size and scale of the site and can be completed within the provided space, beyond the CEZ. Workers car parking and site huts, temporary latrines and areas for storing of materials, spoil and fuel and the mixing of cement and concrete will be outside CEZ.

6.3 The first phase of works involves preliminary tree works recommended in this report and the installation of tree protection measures. These will be put in place before any construction or

demolishing works will commence on site. The final phase of works will be the removal of the tree protection measures under arborist instruction.

6.4 Working areas will not interfere with the existing trees to be retained. Services will not interfere with the existing trees to be retained. There should be no ground level changes proposed within the protected CEZ. See drawing 21149_TS_01 in order to protect the existing tree roots and avoid unnecessary root removal of ground compaction.

6.5 Works on potentially harmful liquids should be executed outside the CEZ.

6.6 Tree Protection Measures will be in accordance with BS 5837: 2005 Trees in relation to Construction, as detailed in Drawing No. 21149_TS_01

6.7 The client will be responsible for the installation and maintenance of the protection measures on site. The arborist shall approve the installation of protection measures and only he can instruct when to dismantle same on completion of works. The arborist is to be available throughout works on site should their advice be sought or to remedy any unforeseen incidents.

6.8 Remedial tree works if any to be instructed by the arborist and undertaken by a qualified tree contractor. Works to be in accordance with BS 3998: 1990 Recommendations for Tree Works.

7.0 **CONCLUSIONS**

7.1 The proposed works on site will require the removal of 42 trees in total which can be considered to be of low quality and providing a limited landscape benefit trees in total. The proposed tree planting scheme as part of the development will provide for a total 29 no. semi-mature native trees and 23 no. Multi-stem replacement trees that are of a suitable native species that are suitable spaced and will have a continued contribution of in excess of 60 years.

7.2 The existing street trees associated with sites northern boundary are to be retained and protected throughout the construction phase. The proposed tree protection fencing should be erected prior to any further works taking place on site and no works will be undertaken in the construction exclusion zone. There will be no level change adjacent to the hedgerow which will be retained. No compaction or excavation will take place in this area.

8.0 RECOMMENDATIONS

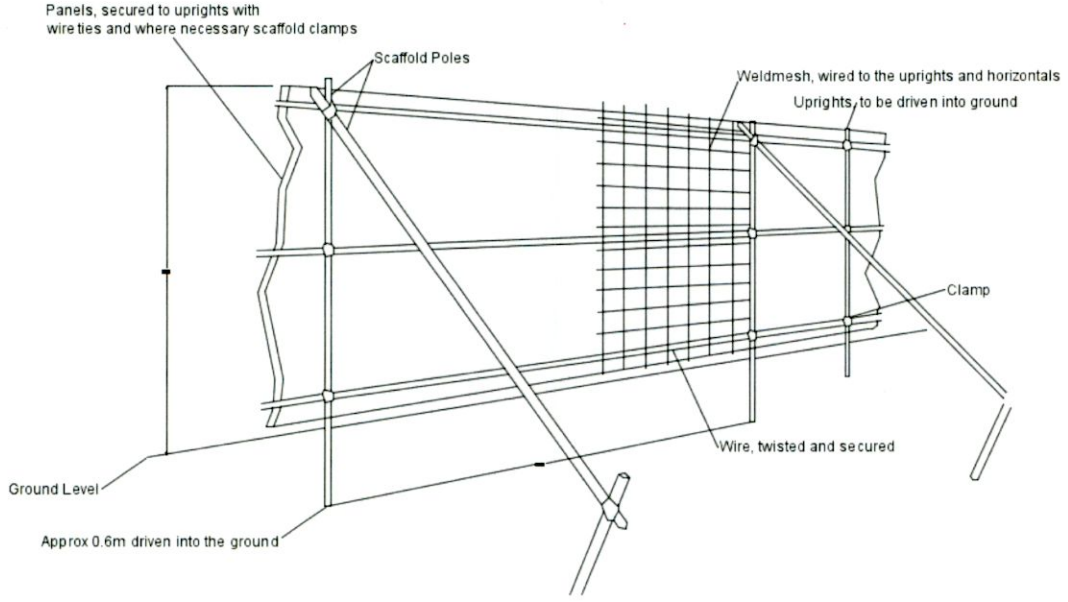
8.1 All trees should be monitored on a regular basis for signs of defects and should be reported to an arborist qualified to diagnose them and recommend treatment.

8.2 In accordance with BS 5837:2005 "Trees in relation to construction" undisturbed land shall be protected throughout construction with the election of the proposed tree protection fencing as shown in drawing 21149_TS_01

8.3 This report has been produced as part of a planning application for these lands and is for the sole use of the above named client and refers to only those trees identified within. Its use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.

9.0 TREE PROTECTION MEASURES

9.1 Trees that are to be retained should be protected so that soil disturbance and changes in soil levels do not occur. The construction exclusion zone and calculated root protection zone surrounding a tree shall contain sufficient rooting volume to ensure the survival of the tree. The location and erection of protective fences and extent of ground protection is as specified in accordance with BS 5837:2005 "Trees in Relation to Construction" and on the drawings, (see drawing no. 21149_TS_01 for detail). All of the above will be in accordance with *Item 11 Demolition and construction in proximity to existing trees in BS 5837:2005 Trees in relation to Construction.*



10.0 TREE SURVEY FOR: RATHCOOLE HOUSING
DATE OF SURVEY: 15TH NOVEMBER 2021

Tree Survey was carried out on the lands of the proposed accommodation development at Tay Lane, Rathcoole, Co. Dublin.

Reference to Tree Numbers on Plan: Trees have metal tags attached and these correspond with the numbers in this report.

Reference to Tree Species: Trees species are identified and logged in both the Latin botanical name and common name in English.

Reference to Height: Refers to height of tree measured in meters.

Reference to Stem Diameter: Refers to stem diameter measured in millimeters at 1.5m above adjacent ground level (on sloping ground to be taken on the upslope side of the tree base) or immediately above the root flare for multi-stemmed trees

Reference to Branch Spread: Refers to branch spread in meters taken at the four cardinal points, north, south, east and west to derive an accurate representation of the crown

Reference to Height of Crown Clearance: Refers to height of crown clearance is the height in meters of crown clearance above adjacent ground level

Reference to age / class is as follows:

Y - Young: A tree, which has been planted in the last 10 years or is less than 1/3 expected height of the species in question.

SM – Semi Mature: A tree, which is between a 1/3 and 2/3's the expected height of the species in question.

M - Mature : A tree that has reached the expected height of the species in question, but still increasing in size.

O - Over Mature: A tree at the end of its life cycle and the crown is starting to break up and decrease in size.

V – Veteran A tree showing features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Reference to Physiological Condition is as follows:

Good: A full healthy crown and trunk, but possibly including some suppressed, physically damaged branches or other small defects.

Fair: Canopy slightly sparse when in leaf; some minor or isolated major deadwood and some defects such as bark wounds or included bark.

Poor: A tree with more serious sparse leaf cover, extensive deadwood or defective to the point of being dangerous.

Dead: A tree that is dead or is showing signs of significant, immediate and irreversible overall decline.

Reference to Structural Condition: Refers to the general condition of a tree, e.g. tree collapsing, the presence of any decay or physical defect, etc.

Reference to Preliminary Management Recommendations: Refers to preliminary management recommendations e.g. further investigation of suspected defects that require more detailed assessment or potential for wildlife habitat, etc.

Reference to Estimated Remaining Contribution: Refers to estimated remaining contribution in years e.g. less than 10, 10-20, 20-40, more than 40.

Reference to Tree Categorisation is as follows:

Category A (Green) *Trees of high quality and value*: in such condition as to be able to make a substantial contribution - (a minimum of 40 years is suggested)

Sub categories

1. Mainly Arboricultural values – Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or informal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)

2. Mainly landscape values – Trees, groups or woodland which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance e.g. avenues or other arboricultural features assessed as groups)
3. Mainly cultural values, including conservation – Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture)

Category B *Trees of moderate quality and value*: those in such a condition as to make a (Blue) significant contribution - (a minimum of 20 years is suggested)

Sub categories

1. Mainly Arboricultural values – Trees that might be included in the high category, but are downgraded because of slightly impaired condition e.g. presence of redeemable defects including unsympathetic past management and minor storm damage)
2. 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 arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality.
3. Mainly cultural values, including conservation – Trees with clearly identifiable conservation or other cultural benefits.

Category C (Grey) *Trees of low quality and value*: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested) or young trees with a stem diameter below 150mm

Sub categories

1. Mainly Arboricultural values – Trees not qualifying in higher categories
2. Mainly landscape values – Trees present in groups or woodlands, but without this conferring on them a greater landscape value, and/or trees offering little or no screening benefit.
3. Mainly cultural values, including conservation – Trees with very limited conservation or other cultural benefits.

Category R (Red)	Trees in such a 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 have a serious, irremediable, structural defect, such that their loss is expected due to collapse including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)
- Trees that are dead or are showing signs of significant, immediate and irreversible overall decline.
- Trees infected with pathogens of significance to the health and/or safety of other trees nearby (Dutch elm disease) or very low quality trees suppressing adjacent trees of better quality.

9.0 DISCLAIMERS

This report is intended solely for the benefit of the parties to whom it is addressed and no responsibility is extended to any third party for the whole or any part of its contents. The conclusions and recommendations in this report are only valid for a period of one year. This period of validity may be reduced in the case of any change in conditions to or in proximity to the tree. In the event of adverse weather conditions, there is the possibility of any tree despite good report surveys, falling over. In the event of a falling tree causing damage to residential or non residential buildings in their proximity, no liability will attach to this firm, in the event of damage by such trees, to any person, any building public or private, or any mechanical vehicle or otherwise. Recommendations made in this report are subject to the knowledge and expertise of the qualified Arborist that carried out the above inspections.

Undertaken by:

Signed_____ Dated: 18/08/2022

Jonathan Gannon

Consultant Arborist

B. Ag.Sci (Landscape Architecture)

LL.M (Environmental Law and Sustainable Development

M.I.L.I (Member of the Irish Landscape Institute)

Tree No.	Species	Height (m)	Stem DBH (mm)	Spread (m, N,S,E,W)	Ht of crown clearance (m)	Age	Condition	Condition Notes & Recommendations	ERC (years)	Grade
Group 001	Leylandii, *Cupressus x Leyllandii*, Poplar,*Populus alba*	10-12m	400 - 600	6 north, 3 south forming continuous canopy east west	1	SM	Good	The trees form a continuous canopy along the sites northern boundary 67 metres in length. Consisting of a total of 11no. Poplar trees demonstrating good structural form planted at approx. 4.0m spacing. Consisting of an additional 22no. Leylandii trees planted at approx. 1.5m spacing demonstrating a fair structural condition requiring some clearance of deadwood and a tight formative pruning of the southern limbs.	20-40yrs 14 no. trees to be REMOVED to facilitate proposed development 22no. Trees to be partially RETAINED	C2
Group 002	Leylandii, *Cupressus x Leyllandii*,	12 - 14m	350 - 600	5 north, 5 south forming continuous canopy east west	1	SM	Fair	The trees form a continuous canopy within the site leading east to west of 50 metres in length. A total of 17 trees of the same maturity and quality are found along this boundary. These trees were originally planted as boundary hedging and have since escaped to mature tree form and are offering little contribution at this stage.	20-40 yrs (trees to be REMOVED to facilitate proposed development)	C2

Group 003	Sycamore, *Acer pseudoplatanus*	6-8m	200-40	2 north, 4.5 south forming continuous canopy east west	0	Y	Fair	Crowded group of multi-stem, self seeded Sycamore trees growing on part of the existing northern boundary of the site. Trees are suffering from over crowding and do not have the size or space to offer thorough growth.	10-20 yrs (trees to be REMOVED to facilitate proposed development)	C2
Group 004	Leylandii, *Cupressus x Leyllandii*,	10-12m	400-550	3 east, 33 west forming continuous canopy north-south	1	SM	Fair	These trees form a continuous canopy of 10 metres in length along the sites north eastern boundary. A total of 4 trees of the same maturity and quality are found in this stand. These trees are proposed to be retained to offer adequate screening to the boundary	10-20 (trees to be REMOVED to facilitate proposed development)	C2
Tree 005	Birch, *Betula pubescens*	8.5m	m/s 600 at base	5,4,6,4	0	M	Good	Prominent multi-stem Birch tree engulfed in Ivy with some wounds in lower leaders evident. Mature tree.	20-40 (trees to be REMOVED to facilitate proposed development)	B2
Tree 006	Monterery cypress, *Cupressus macrocrpa*	12m	750	5,5,4,4	1	SM	Fair	Semi-mature specimen suffering from damaged lower leader with exposed wound and some lower canopy deadwood.	10-20 (trees to be REMOVED to facilitate proposed development)	C1