CMK
Hort & Arb Ltd.

Arboricultural Assessment and Impact Report

Residential Development at Leopardstown Road, Dublin

SEPTEMBER 2024

Project Name: Residential Development at Leopardstown Road
Project Number: TWIL003

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1. Summary

20 trees, 4 hedges, 1 area of scrub vegetation and 1 motorway screen planting were surveyed within and adjacent to the site at Leopardstown Road. In general the trees were found to be of moderate condition and early mature. 4 trees and 3 hedges will be removed to facilitate the proposed development. An area of the scrub vegetation will also be removed (approximately 40%).

2. Client Brief and Methodology

CMK Hort + Arb Ltd. were commissioned by Dún Laoghaire Rathdown County Council to undertake an assessment of trees at Leopardstown Road, Co. Dublin (image 1). The assessment of trees was undertaken on the 22nd of August 2024 by Ciaran Keating & Lauren McColgan (CMK Hort & Arb Ltd).

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).

3. Site Description

The site is located on the Leopardstown Road to the south of Junction 14 on the M50 (image 1). It comprises a residential dwelling, surrounding garden, an unused open green space area to the east (image 2), and motorway screen planting and overgrown area to the north.

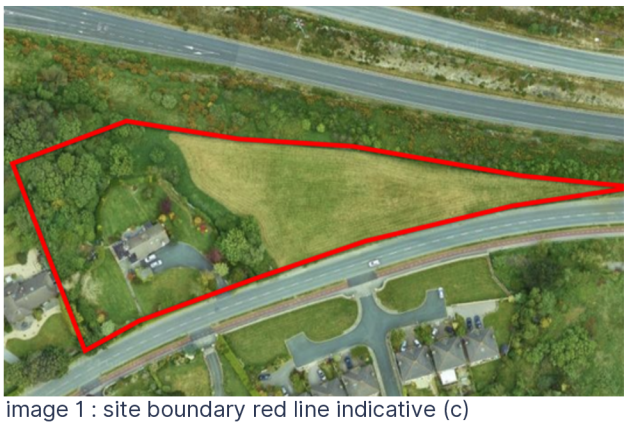
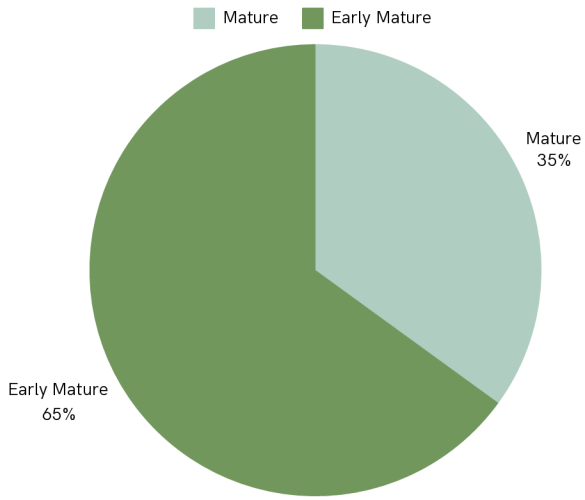


image 1 : site boundary red line indicative (c) Google 2024

Image 2 - Drone image of current house on site with open green space area in background.

3. General Description of Trees

Chart 1 - Age Class of site's trees



The site is a suburban house and garden with a field to the east. The house was built in the 1970s / 1980s and contains a range of trees and shrubs typical of this period. The planting is relatively mature and is mainly located within the garden area. A small number of trees are self-seeded within the adjoining field. A total of twenty trees were assessed with individual tree descriptions contained within Appendix i Tree Survey Data with locations shown on drawing TWIL003-00-DR-CMK-ARB-001 Tree Survey & Constraints.

The garden specimens include variegated maple (*Acer platanoides* 'Crimson King'), ornamental cherry (*Prunus cv*) and variegated holly (*Ilex aquifolium cv*). The planting is a little congested in places particularly near the entrance where the growth of some specimens is inhibited as a result.

There is no particular design rationale behind the planting with screening probably the main driving factor in the locations of trees and shrubs.

There is an overgrown area to the northwest section of the site which has become impenetrable and is now colonised by scrub sycamore (*Acer pseudoplatanus*), bramble (*Rubus fruticosus agg*) and bindweed (*Convolvulus arvensis*).

Screen plantings are located on the embankment of the M50 on the northern boundary of the subject site. Given the relatively young age of these plantings it is considered unlikely that their roots will extend into the subject site.

In general the conditions of the trees were fair to good with the majority of trees onsite being classed as category B trees of moderate quality and value (Table 1 - Tree Catgeories). Most trees were in the early mature age class (Chart 1), the remaining would be considered mature for their species type but likely planted at a similar time. The hedges assessed generally had low arboricultural value. More in depth descriptions are available in the next section of this report.

TREE CATEGORIES	#	% OF TOTAL
A	0	0%
B	15	75%
C	1	5%
U	4	20%

Table 1 - Tree Categories

4. Hedge & Vegetation descriptions

Hedge 1
Species: Griselinia (*Griselinia littoralis*)
Heights: 2-3m
Dbh: less than 100mm
Depth: 1-1.5m
Arb value: Low
Condition: Good
Comments: Griselinia hedge running the length of the roadside boundary offering screening from the Leopardstown road.

Image 3 - Hedge 1

Hedge 2
Species: Leyland cypress (*x Cuprocyparis leylandii)*
Heights: 5-6m
Dbh: 200-300mm
Depth: 3-4m
Arb value: low
Condition: fair
Comments: Western hedge boundary with neighbouring house. Leyland cypress hedge is a monocrop towards the southern end but becomes overgrown/unkept with other garden shrub species mixed in towards the northern end of hedge where merges with scrub vegetation to the North West of site. Occasional sycamore here.

Image 4 - Hedge 2 from above

4. Hedge & Vegetation descriptions

Hedge 3
Species: Leyland cypress (xCupressocyparis leylandii)
Heights: 2-3m
Dbh: less than 100
Depth: 1.5m
Condition: poor to good
Arb value: low
Comments: Inner garden hedge dividing grass lawn and composting/overgrown section in front of boundary. Begins at western end of roadside Griselinia hedge and stepped out about 4m from boundary leylandii hedge on west. Dead or very poor condition at southern end where it is suppressed by other trees and elder shrubs. Bindweed and ivy overgrowth in rest of hedge. Ends at gate and gable end of house.


Image 5 - Hedge 3

Hedge 4
Species: California privet (*Ligustrum ovalifolium*), elder (*Sambucus nigra*), bindweed (*Convolvulus arvensis*), briar (*Rubus fruticosa agg.*), ivy (*Hedera helix*)
Heights: 2-2.5m
Dbh: less than 100mm
Depth: 4m
Condition: fair to good
Arb value: low
Comments: Inner garden hedge diving back lawn and overgrown area to northwest. Extends from gateway into overgrown area to small doorway which opens into field site, mostly privet of good condition with occasional variegated specimen. Elder overgrowth to back of hedge and hedge becomes mixed species towards eastern end. Occasional dead privet shrub throughout.


Image 6 - Hedge 4

4. Hedge & Vegetation descriptions

Motorway screen planting
Species: Field maple (*Acer campestre*), cherry (*Prunus avium*), birch (*Betula pendula*), scots pine (*Pinus sylvestris*), sycamore (*Acer pseudoplatanus)*, ash (*Fraxinus excelsior*), larch (*Larix decidua*), willow (*Salix caprea*), gorse (*Ulex europaeus*)
Heights: 3-6m
Dbh: less than 150mm
Depth: 4-6m
Condition: fair to good
Arb value: low to moderate
Comments: screen planting approx 1-1.5m away from boundary line fence near pointed end of field, becomes further back from fence (5+m) at house end. Mixed species planting. Young trees with some value to screen planting though limited individual values at present.

Image 7 - Motorway screen planting aerial view.

Scrub vegetation area
Species: Willow (*Salix caprea*), sycamore (*Acer pseudoplatanus*), privet (*Ligustrum ovalifolium*), elder (*Sambucus nigra*), briar (*Rubus fruticosa b agg.*), various garden escapes
Depth: 10m
Heights: 3-12m
Dbh: 100-300mm
Condition: fair to good
Arb value: low
Comments: area of self seeded young and early mature trees and shrubs. Mostly scrub vegetation with occasional sycamore etc and some garden escapes such as privet.

Image 8 - Scrub vegetation area aerial view

5. Arboricultural Impact Assessment

Project description: The development will consist of 80 no. residential units together with associated infrastructure including open space and car/cycle parking and is a mixture of duplexes and apartments in 2 no. blocks ranging in height from three to six storeys.

5.1 Abroricultural Impact:

The proposed development will require the removal of 4 trees, 3 hedges, and approximately half of the wild/scrub vegetation area to the north-west of the site. The trees being removed are of moderate quality (category B trees) and are mostly early mature.

IMPACT	#	% OF TOTAL
Trees removed to facilitate development	4	20%
Trees to be removed for best practice	4	20%
Trees to be retained	12	60%

Table 2 - Arboricultural Impact

The hedges being removed are in various conditions, however all of those being removed were assessed as having low arboricultural value. The majority of the hedges being removed contain non-native species such as Griselinia (*Griselinia littoralis*) and California privet (*Ligustrum ovalifolium*).

A section of the scrub vegetation to the north-west of the site will be impacted to facilitate the development. Approximately 580m2 will be removed to facilitate the proposed building. Approximately 800m2 of the scrub vegetation will remain. The area which is to be removed is of the lowest arboricultural value as the young scrub trees such as sycamore and willow are largely sitauted to the north-most section of the site. Briars, bindweed, garden escapes, and young saplings are the majority of what is contained in this area which will be removed (image 9 drone survey).

Image 9 - Scrub vegetation aerial view showing extent of crawlers such as bindweed within this area.

Category	TO BE REMOVED	% OF CATEGORY
A	0	0%
B	4	28%
C	0	0%

Table 3 - Impact on Categories

5. Arboricultural Impact Assessment

5.2 Tree protection and retention: The retention of the 12 trees identified by the impact section of this report will require methodical protection to ensure their continued success.

- A site arborist shall be appointed to inspect tree protection measures throughout the development.
- Tree protection measures will be agreed with a site arborist and implemented prior to construction commencement.
- A post-construction assessment of the retained trees shall be undertaken by a site arborist.

5.3 Primary concerns for retaining trees:

- Directing heavy plant traffic away from root zones of retained trees.
- Implementation of root protection matting for construction within tree RPAs.
- Avoiding build up of materials around existing tree root areas and trunks.
- Implementation and maintenance of construction exclusion zones, associated signage, tree trunk protection, and watering measures throughout development.
- Supervised excavation of roots by the site arborist when excavating and installing boundary treatments in root RPAs.
- Post-construction tree maintenance.

5.4 Retention of tree #691

This tree has been identified for retention in close proximity to a proposed car parking space. This may be possible to do provided measures to protect the roots of this tree are taken. A cellular confinement system such as Cellweb (C) may be implemented to prevent compaction of roots when the bike shelter surface is installed. Further coordination will be required with the site arborist at the time of construction. A crown lift may also be necessary to allow clearance for the bike store and fence proposed here.

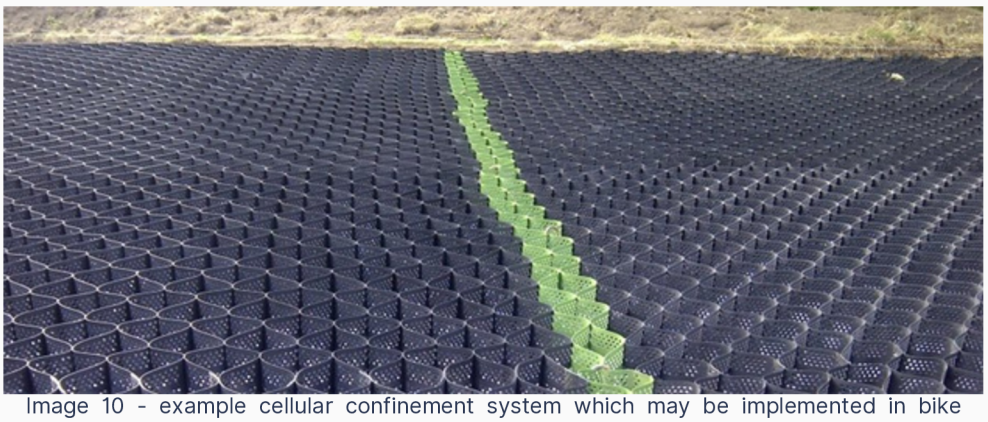


Image 10 - example cellular confinement system which may be implemented in bike shelter area.

6. 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.

7. Dún Laoghaire-Rathdown County Council Tree Strategy Policies

6.1. The following is largely taken from the Dún Laoghaire Rathdown County (DLRCC) Development Plan 2022 - 2028. *The County Council's updated Trees and Urban Forestry Strategy 2022 - 2031 is not yet available*. It is recommended to view the impact of the development with the following considerations:

6.2 Within the DLRCC County Development Plan, Chapter 3 Climate Action refers to the objective of retaining and promoting Urban Greening which includes tree planting. (3.4.4.1, CA18)

6.3 Chapter 4 Neighbourhood - People, Homes and Place refers to the 'retention of trees' in section 4.3.1.4 on the Development of Institutional Lands (PHP21).

6.4 It also notes the detailed consideration of street trees in development proposals. (4.4.1.3, PHP37)

6.5 Chapter 8 of the County Development Plan 'Green Infrastructure and Biodiversity' notes the objective to protect '*existing woodlands, trees and hedgerows which are of amenity or biodiversity value*'. It includes the protection and management of Trees listed under Tree Protection Orders (TPOs). (8.7.1.1, GIB18)

7. Dún Laoghaire-Rathdown County Council Tree Strategy Policies

6.6 Important consideration is given to trees in Chapter 9 Open Space, Parks and Recreation. Under 9.3.1.3, the objective relates to the implementation of the 'forthcoming Tree Strategy'. This includes 'ambitious goals for conserving and managing' the existing trees in the County and prioritising making TPOs (OSR7).

6.7 Also in Chapter 9, it's noted that trees will be protected against 'unnecessary damage during planning, design and development of any greenway route.'

6.8 Chapter 12 of the Plan refers to Development Management and trees. It details that trees should be used in Urban Greening for cooling and reduction of wind tunnel effect. (12.2.6)

6.9 Also detailed in that infill development will respect the trees and landscaping already present. (12.3.7.7)

6.10 Institutional Lands will require development around existing trees (12.3.7.10)

6.11 The protection of specimen trees, mature trees and hedgerows is outlined in Chapter 12 under 'Sensitive Landscapes and Site Features'. The same also refers to the planting of native Irish flora and the provision of roadside trees by developers.

6.12 Arboricultural Assessments (AA) are a noted requirement for the decision on preservation of trees in 12.8.11 Existing Trees and Hedgerows. Here it notes a qualified Arborist will carry out the AA as part of planning applications for sites and will be in accordance with BS 5837 (2012).

6.13 It is also noted that the planning applicant will provide details of 'adequate measures' for tree protection during development prior to the construction beginning.

The Tree Preservation Orders (TPOs) within the DLRCC area have been reviewed and there are no TPOs located on this site.

8. 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.

8. Terminology contd.

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.

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.

9. References

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

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

Watson (2013). Tree Pests and Diseases

10. Appendix i - Tree Survey Data