ARBECO LTD.

Arboricultural Assessment, Impact Statement & Method Statement for

Carlisle, Kimmage Road West, Dublin 12

BS 5837:2012 Trees in relation to design, demolition, and construction

Prepared for: McGill Planning Ltd.

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Date: 5th December 2024

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Section 5.2.1 Figures 1,2 & 3

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1.0 Instructions

I have been instructed McGill Planning Ltd, 9 Pembroke Street Upper, Dublin 2, D02 KR83 to survey, assess and record the condition of the trees located at Carlisle, Kimmage Road West Dublin 12, and produce the relevant document to accompany a planning application in accordance with BS 5837 Trees in Relation to Design, Demolition and Construction

A - To assess the present condition of the trees within this site area. See '**Appendix 2'** for detail of my findings.

B - To assess the impact of the proposed development layout on the trees indicating those for removal and retention.

C - To show also on this drawing the position of the line of protective fencing that is to be erected around the trees to be retained at the very start of the works and maintained until all construction works are complete.

2.0 Report Limitations

2.1 The initial inspection of the site was carried out on the 14th of August 2021, a subsequent assessment was carried out on December 3rd 2024, from ground level only, it is a preliminary report and does not include climbing inspections, internal investigations of the timber or below ground investigations. The assessment is based on what was visible at the time of the inspection and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.

2.2 This report only relates to factors apparent at the time of the inspection; as a result, further monitoring is imperative if potential problems/hazards are to be avoided. The recommendations within this report are valid for a 12 month period only, unless otherwise stated within the recommendations of the attached report.

2.3 Before undertaking any work to these trees, it would be advisable to check whether any planning or tree preservation controls are in operation, if they are it will be necessary to obtain consent before undertaking any works (pruning or felling).

3.0 Survey Data Collection and Methodology

3.1 The Arboricultural data which is presented within the attached tree schedule (see appendix 2), has been recorded in line with BS 5837:2012. The tree survey was conducted by collecting and assessing the following information on all significant trees located on site and plotted on the land survey map provided:

Tree Number (metal tags attached to 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

3.2 The mature trees on the site form an intermittent, overgrown, boundary hedge and are of the same species (Lawson's Cypress) and of similar, size, condition and vitality and therefore have not been individually tagged or numbered but are treated as a group.

This will be illustrated on the accompanying drawing**. DWG No. AB2024-28-01**

3.3 The inspection of the trees and hedges involves a visual assessment from ground level only and does not include any invasive means of assessing the trees internally, their below ground parts or the aerial parts that are not visible from the ground. Good, fair and poor have been used to summarize the physiological and structural conditions of these trees with the comments giving more detail. Other items that may limit the assessment of a tree included Ivy cover, scrub vegetation and/or basal suckers.

3.4 Their retention category has been assessed and categorized according to their quality and value within the existing context, and not in conjunction with any proposed development plans. In making this assessment, **particular consideration was given to;**

Arboricultural value – An assessment of the tree's health, structural form, life expectancy, species and its physical contribution to or effects on other features located on site.

Landscape value – An assessment of a tree's locality including its contributions to other features as well as to the site as a whole.

Cultural value – additional contributions made such as conservation, historical or commemorative value.

3.5 The trees have been divided into one of the following categories, in accordance with the cascade chart illustrated in table 1 of BS 5837:2012. The classification process begins by determining whether the tree falls within the (U) category, if not then the process will continue by assuming that all trees are considered according to the criteria for inclusion in the high category (**A**). Trees that do not meet these strict criteria will then be considered in light of the criteria for inclusion in the moderate category (**B**) and failing this, they will be allocated a low category (**C**).

The following summarizes each of the categories:

Category U – Those trees in such a condition that any existing value would be lost within 10 years. Most of these will be recommended for removal for reasons of sound Arboricultural practice/ management.

Category A - Trees of high quality/value with a minimum of 40 years life expectancy.

Category B – Trees of moderate quality/value with a minimum of 20 year life expectancy.

Category C – Trees of low quality/value with a minimum of 10 years life expectancy

3.6 The trees and hedges have been plotted onto the attached drawing **DWG No. AB2024-28-01**. The trees were plotted on to the drawing by the surveyor.

4.0 Findings

The trees were assessed during a site visit by G. Cahill of Arbeco Ltd. The field data for the trees is contained in the accompanying Tree Survey Schedule. Tree location, BS:5837 category, RPA and approximate crown shape are shown on the accompanying drawings. **Existing Tree & Hedge Survey** Dwg AB2024-28-01, **Tree Constraints Plan** Dwg AB2024-28-02 & **Tree Protection Plan** Dwg AB2024-28-03

4.1 The site proposed for development is currently an unused and unmanaged area of rough grass, brambles and nettles.

4.2 The site is bordered by 27 mature Lawson's Cypress to the northeast and 11 mature Lawson's to northwest sections of the boundary. The areas in between and to the east compose mainly of overgrown, hedging and shrubs including Laurel (*Prunus laurocerasus*), Box leaved honey suckle (*Lonicera pileata)*, Currant (*Ribes sp.)*, with occasional self-seeded saplings including, Cherry (*Prunus sp*.), Sycamore (*Acer pseudoplatanus)* and Buddleia. To the south is a metal fence separating the proposed site from an existing Gym carpark.

5.0 Arboricultural Implication Study

5.1 Introduction

It is being proposed to develop the site for housing/apartments.

This section of document is designed to assess the impact of the proposed development layout on the tree and hedge vegetation within this site area and to look at the necessary measures that will need to be undertaken to help retain the trees shown for retention free from adverse impacts for the duration of the construction period.

5.2.1 Impact of the New Development

There were no trees of high value i.e. Category A on site. Trees of Moderate quality/value are marked in Blue, Trees of Low quality/value are marked in Grey **See Tree Constraints Plan** and **Dwg AB2024-28-02**

On the accompanying drawing **(DWG AB2024-28-03)** Trees have been marked for either retention or removal with the appropriate RPA. Also shown on this drawing the line of the protective fencing that needs to be erected at the very start of the works and be maintained in place throughout the construction works period around the tree and hedge vegetation to be retained and other mitigation measures to ensure their protection and incorporation into the completed development.

It is proposed to retain 36 out of the 38 boundary Cypress trees whilst removing the Laurel hedging, the overgrown sections of the neglected hedging/scrub and the low-quality tree saplings. Post construction the boundaries are to be planted up with supplementary trees and hedging. The impact, therefore, of the development on the existing tree population should be minimal, with any loses easily mitigated by appropriate planting.

See Figures 1-3 for numbers and percentages of proposed tree removals and retentions

Figure 1.

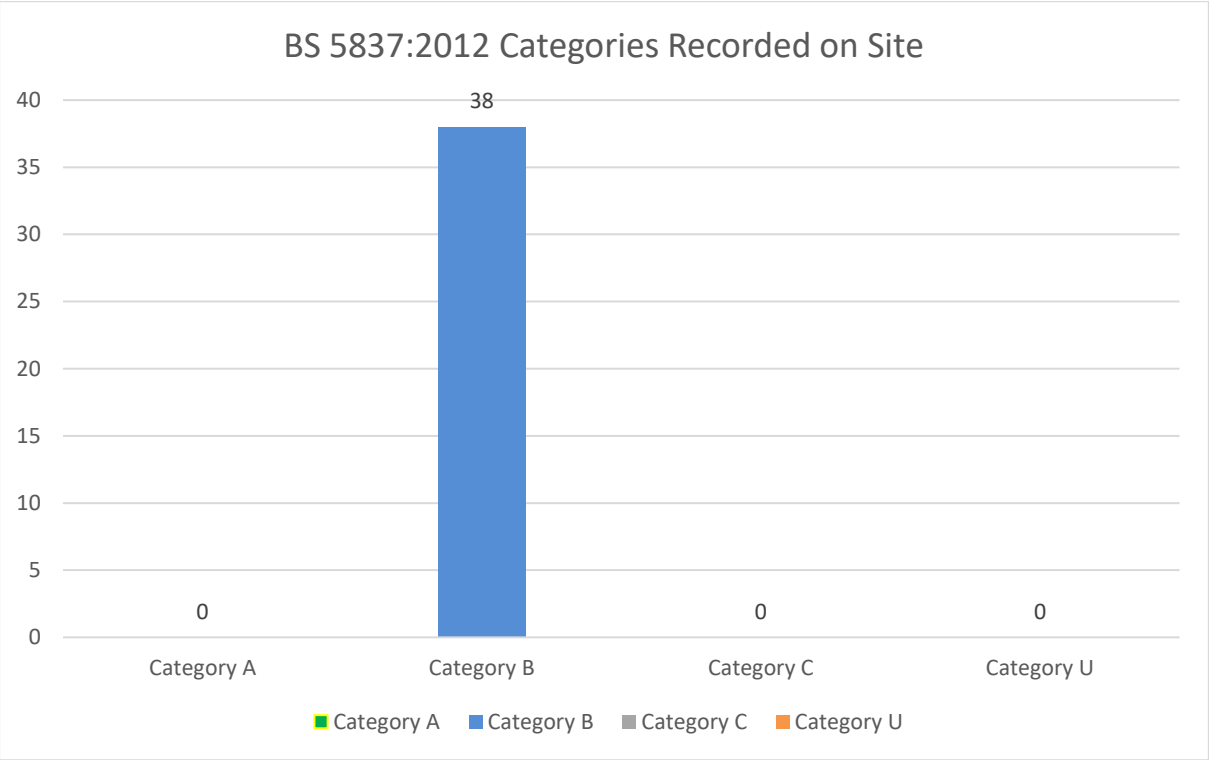


Figure 2.

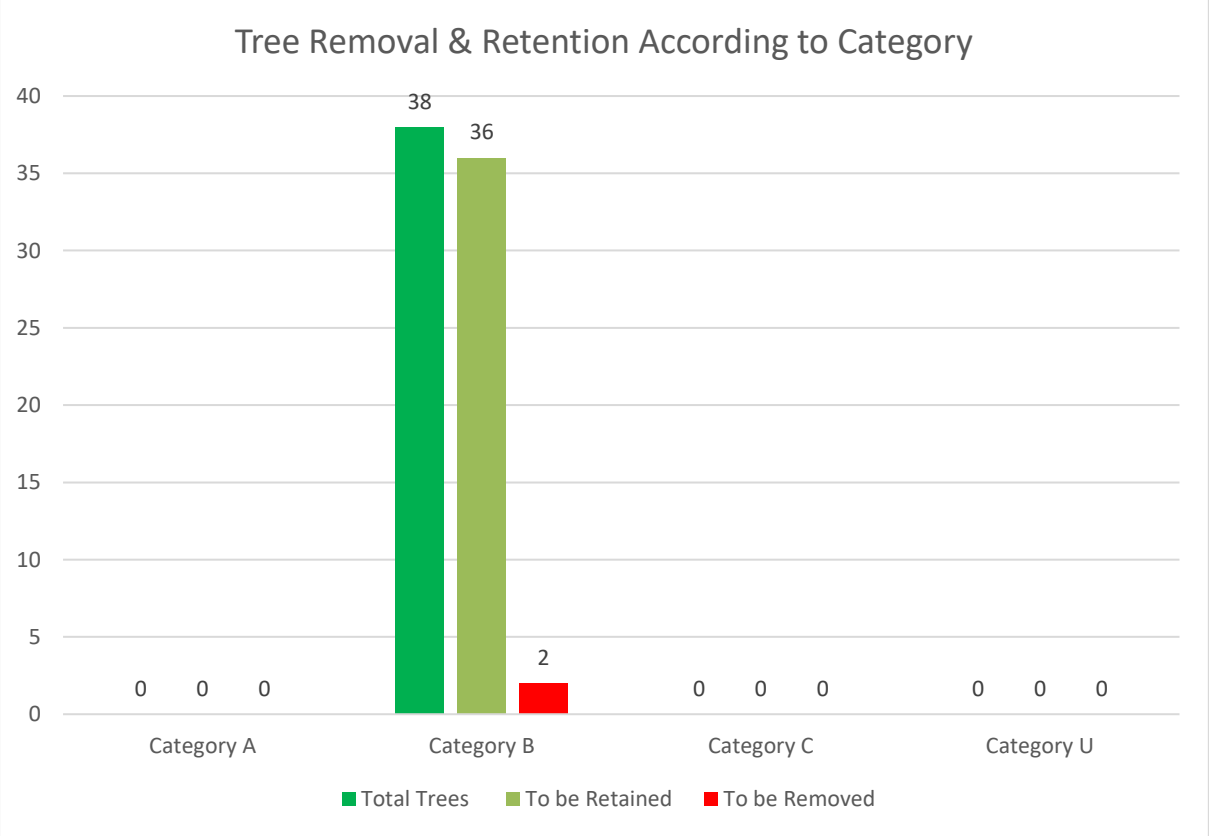
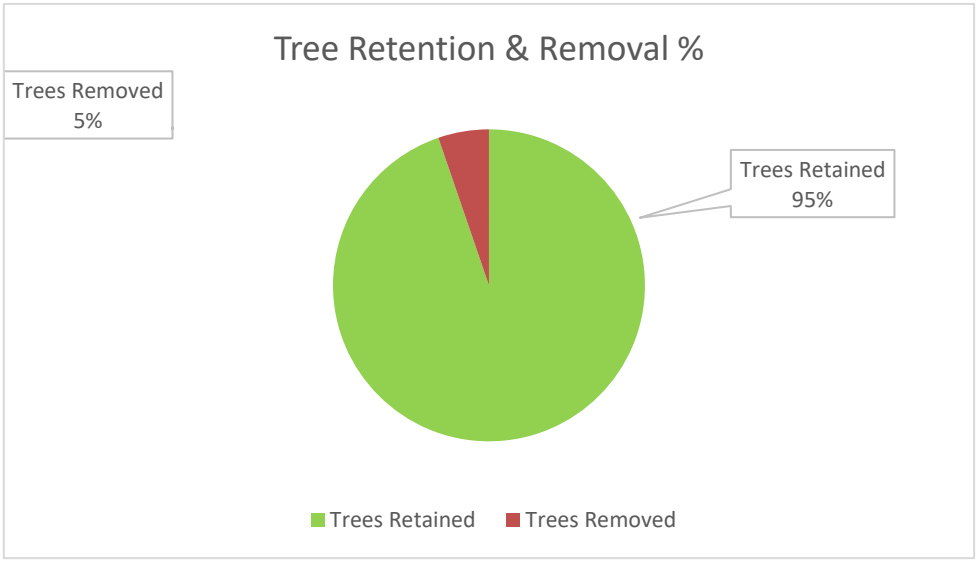


Figure 3.



5.3 Visual Impact

All efforts have been made to retain the trees around the perimeter of this site to help blend this development into its surrounding environment, therefore, the visual impact of the proposed development on the trees will be minimum. Where hedging and scrub is to be removed to facilitate construction i.e. bike racks and bin bays, it will be mitigated by follow up tree and hedge planting (See Landscape Drawing)

The following is a description of trees/hedging to be removed from the site to facilitate construction/development. Vegetation to be removed is marked blue on the accompanying Tree Protection Plan drawing **DWG AB2024 28 03**

All laurel hedging

All scrub and natural regeneration

Any areas of hedging which interfere with the installation of bikes racks and/or bin bays

5.4 Impact of tree and shrub vegetation on the proposed development

The 38 retained Cypress trees should have little or no impact on the proposed development if they are appropriately maintained and managed i.e. reduced in height to approx 10-12m with laterals regularly trimmed, this maintenance regime will be ongoing. (**see Drawing AB2024 28 03**)

5.4.1 Where excavations and the implementation of access routes take place in close proximity to RPAs (Root Protection Areas) care should be taken to reduce and/or avoid root damage by excavating in accordance with **section 6.10** of this document

5.4.2 Any new tree planting carried out will require maintenance to encourage good growth habits and to alleviate any safety concerns that they may present as they grow in size.

5.5 Main areas for consideration during the proposed development

Works Protection Measures and Tree Pruning: Tree Protection Protective fencing is to be erected prior to the construction works commencing on site to enclose the RPA (Root Protection Area) of the trees to be retained as per drawing. This is to be marked out on site by the project Arboriculturist and once erected it is to remain in place for the duration of the project.

Construction: All construction works are to be well planned in advance so as not to put pressure on the protective zone around the trees. All works are to occur from outside the protective zones. If any works need to occur from within the root protection areas, for example scaffolding, the ground within these areas required for these works will need to be protected by boarding.

Work Yards, Storage of Material, Staff Car parking, Site Huts: This site is of sufficient size to facilitate these without a need to encroach into the RPA of the trees being retained. The areas where these are to occur, need to be identified on the work drawings prior to the construction work commencing.

Services: Services entering and leaving the site area are to be routed so they run outside the RPA (Root protection Area) of the trees being retained. There is sufficient space on the site to allow this to occur. See project engineer's drawings for detail for service routes. Prior to the installation of any services routed near trees, these are to be marked out on site for review by the project Arboriculturist and a detail method statement is to be prepared by the installation contractor in conjunction with the project Arboriculturist on how these services are to be installed while providing protection to the tree and hedge vegetation shown for retention.

Landscaping: The existing ground levels within the RPA of the trees are to be retained and incorporated into the finished landscaped development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels. All soft and hard landscaping within the RPA of the trees to be retained are to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below.

5.6 Monitoring

Any construction works within close proximity to retained trees/hedges are advised to be undertaken in accordance with approved method statements prepared by the construction contractor under the direct supervision of a qualified consultant Arboriculturist. Therefore, during the construction works, a professionally qualified Arboriculturist is recommended to be retained by the principal contractor or site manager to monitor and advice on any works within the RPA of retained trees to ensure successful tree retention and planning compliance.

It is advised that tree protection fencing, any required special engineering and supervision works must be included in the main tender documents, including responsibility for the

installation, cost and maintenance of tree protection measures throughout all construction phases.

Copies of the tree retention and protection plan should all be kept available on site during development.

On the completion of the construction works, all trees retained are to be reviewed by the project Arboriculturist and any necessary remedial tree surgery works required to promote the health of the trees and safety are to be implemented.

6.0 Arboricultural Method Statement/Tree Protection Strategy

6.1 The objective of this arboricultural method statement/tree protection strategy is to provide information for the main building contractor/site manager on how trees need to be protected during a construction project and so that they can prepare their own site-specific detailed method statement for their works.

6.2 It is necessary for tree protective fencing to be erected and all other mitigation measures required to be put in place prior to the development works commencing on site and these are to enclose and protect the root zone of the tree vegetation proposed for retention. See relevant drawing for the position of the protective fencing and other mitigation measures.

6.3 The protection of the tree vegetation shown for retention within this proposed development is divided into three main sections starting with the preconstruction stage right through to post construction and the reassessment of the retained trees.

6.4 Pre-Construction Works

Prior to the main construction works commencing on site the following needs to be planned:

1. The developer or main contractor needs to appoint an Arboriculturist for the duration of the project. The Arboriculturist is to make regular site visits to ensure that the tree protection measures are in place and adhered to.

2. The main contractors and all sub-contractors work force are to be briefed on the tree protection and ensure that these measures are to be kept in place throughout the construction period.

3. All personnel are to adhere to the recommendations of the appointed Arboriculturist.

4. Any issues in relation to the trees shown for retention must be discussed with the appointed project Arboriculturist and the necessary mitigation measures put in place without delay and prior to the works being carried out.

6.5 Site Meeting

Prior to any works commencing on site, it is necessary that a meeting be arranged between

the site foremen and arboriculturist to identify and finalize the trees recommended for removal and the line of the protective fencing.

6.6 Tree Works

The developer or the main contractor is to appoint a tree surgery company competent of carrying out the remedial tree surgery works and tree felling that are required on this site. The tree surgery contractor is to produce a method statement detailing how he plans to undertake the works and informing the site foreman of the process so the necessary steps can be taken to ensure the works are carried out safely and efficiently. The works are to be carried out by appropriately trained personnel taking account of the recommendations of BS3998 2010.

6.7 Erection of the Protective Fencing (See Appendix 1)

Once the trees have been removed, the line of the protective fencing that is required around the trees being retained must be erected as per relevant drawing **DWG AB2024-28-02**

The fencing needs to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see fencing detail on appendix 1) using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centres. Onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps.

Signs need to be attached to these fences warning people to 'keep out'. See detail within drawing & appendix 1.

Once the protective fence line is erected, then the main construction works can commence on site.

Storage of Material, work yards and staff car parking - These areas must be identified on the work drawings prior to the construction works starting. These must be positioned outside the root protection areas around the trees being retained.

6.8 Root Protection Area (RPA)

The root protection area of each tree is estimated as an average of 12 x bhd of trees to be retained. Therefore, a straight line of fencing has been proposed for the Root Protection Areas, this aids with fence erection and ability to plan works outside the designated RPA. **An RPA of 3m from the centre of each tree is deemed appropriate protection in this instance**, provided excavations in and around the bases of the retained trees adhere to the guidelines listed in Section 6.10 and the trees are reduced and maintained as a hedge no more than 12m high. **(See Drawing AB2024-28-02)**

6.9 The Construction Works Stage

Protective Fencing - During the course of the works, special attention must be paid to ensure that these fences remain upright, rigid and complete at all times. They must be checked daily by the main contractor/foreman and any damage noted must be fixed immediately. If works need to take place inside the protective fence lines, then the project Arboriculturist must be informed in advance of the works taking place and the mitigation measures required to reduce impact on the trees and hedges agreed. These mitigation measures will include the supervisions of these works by the project Arboriculturist. The

protective fencing is to remain in place throughout the construction works phase and must only be removed when all the works are complete and at this stage incorporated into the finished landscape.

Excavations - The excavation works are only to commence once the protective fence line is in place. The excavations need to be viewed on site once marked out with the project manager, site foreman and the project Arboriculturist in advance of excavation to determine the extent of the impact and the workspace required to allow for the construction works to proceed and to assess what additional mitigation measures will be required to protect those trees to be retained.

Where roots of trees to be retained are exposed during the excavation works, these are to be assessed by the project Arborist and pruned back beyond damaged material. The excavated face is then to be covered with soil or with Hessian sacking to prevent further drying out and death of root material. Where the Hessian sacking is used, it will be necessary to keep this moist especially during dry periods.

Working within the RPA (Root Protection Area) – If it becomes necessary to carry out works within the RPA of a tree/trees, these must be discussed and agreed with the project Arboriculturist. All works must be carried out manually. Root pruning is to be undertaken by an Arboriculturist using proprietary cutting tools such as a secateurs or hand pruning saw. **See Section 6.10** for instructions on how to excavate within the RPA

6.10 Recommendations for work within the RPA

Should any works have to be carried out within the designated RPAs, the following is a list of instructions to be adhered to minimise and damage to tree roots

6.10.1 To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil within the RPA is generally not acceptable, and topsoil within it should be retained in situ. However limited manual excavation is acceptable subject to justification. Such excavation should be undertaken carefully using handheld tools where possible and preferably by compressed air soil displacement.

6.10.2 Roots, whilst exposed, should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to back filling which should take place as soon as possible.

6.10.3 Roots smaller than 25mm should be pruned back, making a clean cut with a suitably sharp tool (e.g. secateurs or handsaw). Roots occurring in clumps or of 25mm in diametre or over should be severed only following consultation with an arboriculturist as such roots might be essential to the tree's health and stability.

6.10.4 Prior to backfilling, retained roots should be surrounded with topsoil or uncompacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced.

6.10.5 Due to the high alkalinity of leachate produced during the curing of wet concrete, concrete should not be poured within the RPA unless an impermeable liner has been installed.

6.10.6 The surrounding soil structure should be protected from compaction during construction through either the use of ground protection or careful consideration of the remaining RPA.

Finished ground levels/Landscaping - The existing ground levels within the RPA of trees must be retained and incorporated into the finished landscaped development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels. All soft and hard landscaping within the RPA of the trees to be retained must be carried out manually and the soil levels must not be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below.

6.11 Other Items

The following is a list of additional activities that are not allowed within the RPA or within the vicinity of the trees being retained.

1 - Storage of equipment, fuel, construction material, or the stockpiling of soil or rubble.

2 - Burning rubbish

3 -The washing of machinery

4 - Attaching notice boards, cables, or other services to any part of the tree.

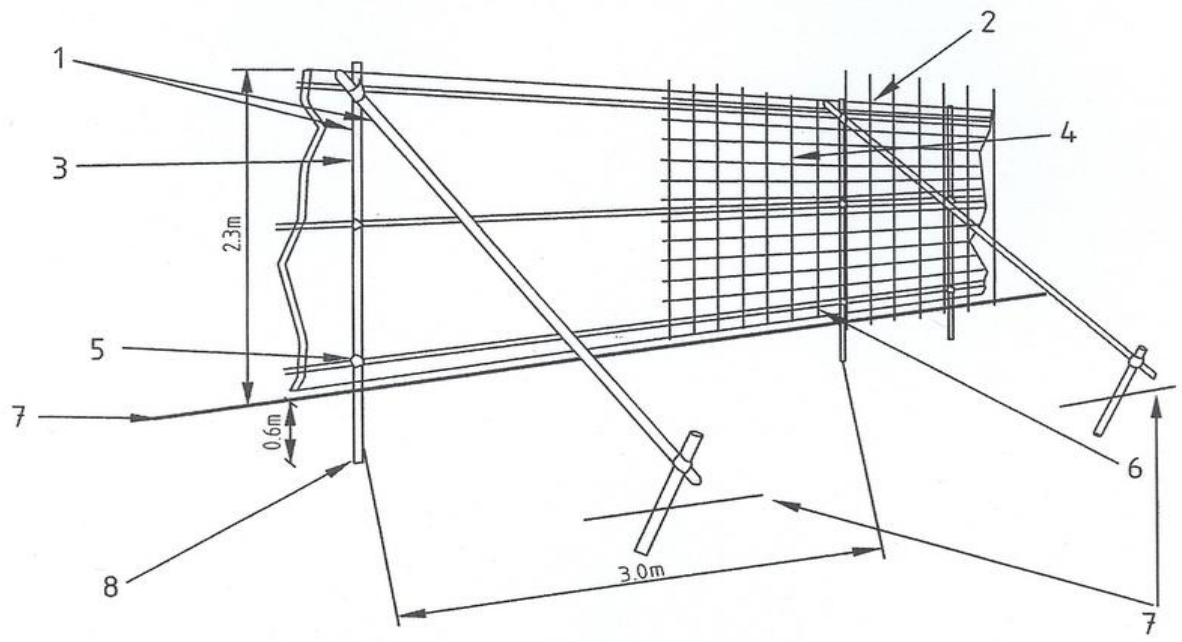
5 - Using neighbouring trees as anchor points.

6 - Care is required when using machinery such as Tele-porters, cranes or other equipment close to trees so as not to damage the crown or any other parts.

6.12 Post Construction Works

This project is not to be considered complete until all retained trees have been re-examined by the project Arboriculturist and the remedial works necessary to ensure the health of the trees and the immediate safety of the end user of this development are implemented. 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.

Appendix 1 Fencing for RPA



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6m driven into the ground

Figure 1 – Protective fencing for RPA

Appendix 2 ARBORICULTURAL ASSESSMENT

Introduction

The purpose of this report is to set out the findings following the inspection of trees on the site at, Carlisle, Kimmage Road, West Dublin, D 12 and set out their condition. The survey work was undertaken on the 5th of December 2024 by the undersigned and qualified arboricultural consultant. The term of reference for the report is the submission of a planning application on the site.

The following categories have been used within the tree report tables and where appropriate, the criterion used to define each category is defined:

- **Tree No:** Refers to the identification tag attached to a tree (also identified as such on the accompanying survey drawing)
- **Species:** Refers to the common and scientific name given to a tree
- **Stem diameter:** Refers to the diameter of the tree stem in centimetres, as measured at 1.5 metres above ground level and above the root flare for multi-stemmed trees
- **Height:** Refers to the total height of the tree in metres
- **Crown spread:** Refers to the width of the crown in metres, measured at each cardinal point on the compass
- **Condition:** Refers to the physiological condition of the tree as a whole described as:
  - **Good:** Full healthy canopy but possibly including some suppressed or damaged branches
  - **Fair:** Slightly reduced leaf cover, minor dead wood or isolated major dead wood
  - **Poor:** Overall sparse leafing or extensive dead wood

Vitality: Refers to the
- **Good:**
- **Moderate:**
- **Poor:**

- **Age:** An estimation of the age of the tree described as:
  - **V:** Veteran, trees which by recognised criteria, show 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
  - **OM:** Over Mature, trees reaching the end of their life, in decline and senescent

M: Mature, fully grown, breeding trees with only small annual increments
EM: Early Mature, one or two-thirds of its total life expired
Y: Young, recent planting, with up to one-third of its total life expired

- **ERC:** Estimated remaining contribution in years, expressed as less than 10, 10+, 20+ or more than 40

- **Remarks:** Descriptive comments about the health (physiological) or form (structural) of the tree, its environment or external influences and may include preliminary management recommendations

- **Category grade:**
  A: Those trees of a high quality and value in such a condition as to be able to make a substantial contribution
  B: Those trees of a moderate quality and value in such a condition as to be able to make a significant contribution
  C: Those trees of a low quality and value currently inadequate condition to remain until new planting could be established or young trees with a stem diameter below 15cm
  U: Those trees in such a condition that any existing value would be lost within 10 years and which should be in the correct context, removed for reasons of sound arboricultural management

  Sub Category 1: Mainly arboricultural qualities < 40yrs
  Sub Category 2: Mainly Landscape qualities < 20yrs
  Sub Category 3: Mainly Cultural values, including conservation < 10yrs

Glossary of terms used:

Basal: The base of the tree close to the ground (basal shoots are those emanating from the base)

Burr: Woody protuberances, especially those derived from the mass proliferation of adventitious buds

Compression union: A 'V' shaped union of co-dominant stems prone to failure

Crown (canopy): The leaves and branches of a tree
Crown reduction: Specified pruning i.e. 2m, 3m etc. of the entire crown

Co-dominant: Stems or branches of ear equal diameter, often weakly attached

Co dominant canopy: Where 2 or more trees make up a single canopy due to proximity

Decay: Degradation of wood by fungi and/or bacteria

Defect: Any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment

Dieback: The death of part of a plant, usually starting from a distal point and often progressing in stages

Epicormic growth: Pertaining to shoots or roots which are initiated on mature woody stems; shoots may form in this way from dormant buts or they may be adventitious

Fruiting bodies: Reproduction bodies of Fungi i.e. Mushrooms, Brackets etc.

Full canopy: Canopy which extends to the ground or nearly to the ground

Hazard Limb: An upwardly curved part in which strong internal stresses may occur and cause wood to crack

Included Bark/ Included Union: Bark of adjacent parts of a tree (usually in forks, acutely angled branches or basal flutes), which is in face to face contact causing weakness due to the lack of a woody union.

Lean: Departure of the trunk from the vertical

NSD:	*Natural suppressed deadwood* – Found in conifers, deadwood which has died as the crown height extended and the lower branch no longer has a function in the production of foliage
Occluded Bark:	Where the tree has successfully and completely sealed a wound
Pathogens:	Fungal and/or bacterial infections which degrade the wood and render trees liable to failure
Prune:	To cut and remove any part of a tree or shrub
RPA:	*Root protection area* – Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority
Scaffold limbs:	Branches which form the main framework of the crown of a tree with a decurrent growth habit
Shoot:	Derived from a dormant or adventitious bud on the main stem or branch
Stub/peg:	A short section of a branch, may have been left after previous pruning or storm damage
Wound:	Injuries on the surface of a trunk or branch
Wound wood:	Wood with atypical anatomical features, formed in the vicinity of a wound or the occluding tissue around a wound

Tree Schedule

Tree No.	Species	Height (m)	M/Stem Diameter (cms)	Spread (m)	Condition	Vitality	Age	ERC	Remarks	Grade
A	Lawson's Cypress X 38 *Chamaecyparis lawsoniana*	14-16	30-40	N – 3-4 E – 3-4 S – 3-4 W – 3-4	Fair/Good	Fair/Good	M	10+	A row of single and double stemmed, symmetrical trees making up an intermediate canopy. 1st lateral 1-2m. Very minor deadwood, no obvious disease or decay. Trees are approx. 20-30 years old and will require management if they are to be sustainably retained **Recommendation:** **Cut and treat Ivy & climbers, manage and maintain to agreed height and width,** **i.e. Reduce height to 10-12m, reduction of laterals by 1-2m**	B2
B	Laurel *Prunus laurocerasus*	3-6	10-15	N – 2 E – 2 S – 2 W - 2	Fair/Good	Fair/Good	M	10+	Laurel hedging, no obvious disease or decay	C3