ARBORICULTURAL REPORT

Location: -
The Long Point,
Lake Road,
Knockanima,
Loughrea,
Co. Galway
53.185619, -8.561930

Prepared for: -
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Executive Summary

In May 2025, Veon conducted a tree survey at The Long Point, Loughrea, County Galway, to provide arboricultural guidance in accordance with BS 5837:2012. The survey recorded a total of 62 individual trees and 8 groups, documenting their dimensions and Root Protection Area (RPA) radii to assess potential impacts from proposed development works.

A total of 55 trees and 4 groups will need to be removed to facilitate the development, most of which are low-quality (Category C) semi mature trees and are therefore more easily replaced through replacement planting - 10 of these trees and 2 of these groups should be removed due to their poor condition, regardless of the proposed development.

Tree protection fencing will be installed to safeguard all retained trees throughout the development, and additional safeguarding measures are outlined throughout. Provided that all mitigation measures detailed in the Arboricultural Impact Assessment, Arboricultural Method Statement, and Tree Protection Plan are adhered to, the overall impact on the site's arboricultural assets is considered low, with potential for enhancement through supplementary replanting.

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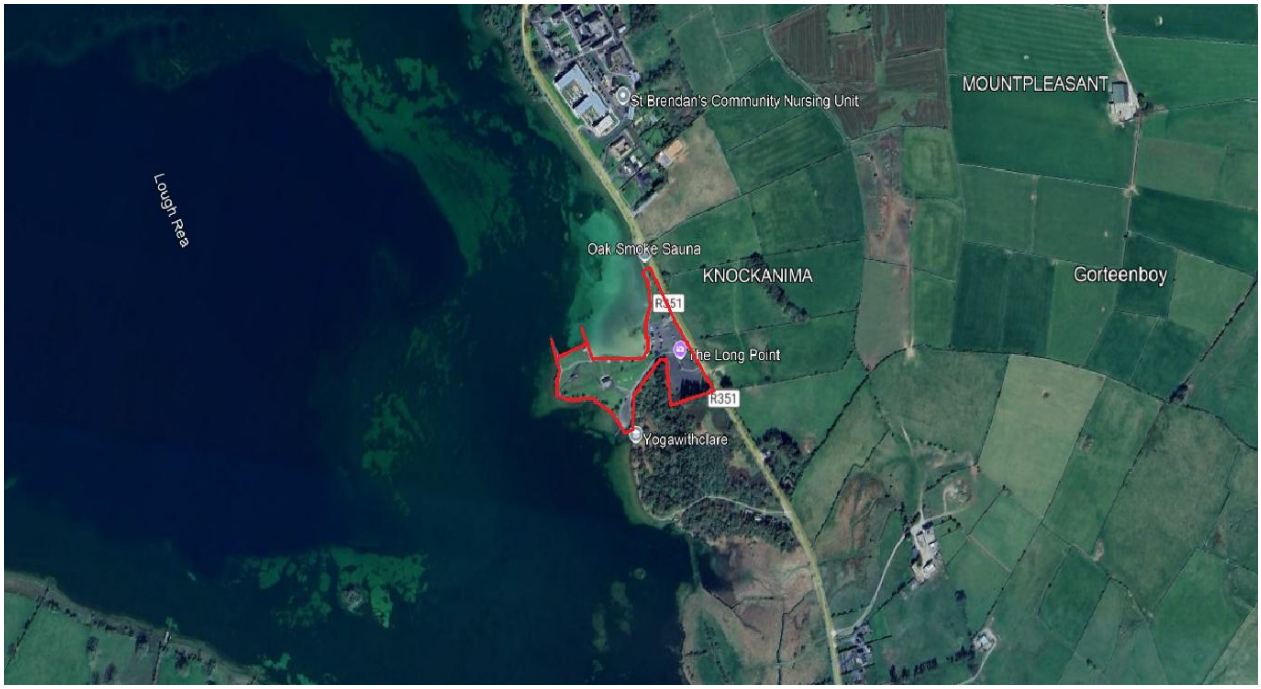
1.0 Introduction

1.1 In support of a planning application to develop The Long Point outdoor amenity area, Helena McElmeel Architects instructed Veon Ltd. to assess the tree and hedge vegetation on and proximal to the site (Maps 1 and 2) and provide the following information in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction:

- Tree Survey (Appendix 1)
- Aerial Maps (Appendix 2)
- Arboricultural Impact Assessment
- Arboricultural Method Statement
- Tree Protection and Removal Plan (Appendix 3)



Map 1: Approximate outline of the survey site within the wider locality.

Map 2: Approximate outline of the survey site.

2.0 Proposed Development

A Design Team led by Helena McElmeel Architects, in partnership with Galway County Council, is preparing a masterplan for the enhancement of the public spaces and facilities at The Long Point, Loughrea.

The proposals include:

- Reconfiguration of existing parking layout to increase waterside amenity area.
- Improvement of accessibility throughout the site, and into the water, for all.
- Increased parking capacity.
- Improved, and increased, amenity areas including enlarged beach area and paved area adjacent to waterside including access and turning area for emergency vehicles.
- Enhancement of, and addition to, existing walkways to create looped sensory walk through the site.
- Improvement of safety of entrance / exit at junction with public road.
- Improvement of changing facilities.
- Additional seating, picnic, and barbecue areas.
- Improvement to existing piers including additional and replacement ramps, steps, and ladders.
- Improved lighting throughout the site.

- Facilitation within the site of potential cycleway connection to both north and south.
- Refurbishment of existing former slipway and pier for kayak, paddle boards, and other users.
- Increased ecological corridors and biodiversity within the site.

3.0 Site Assessment & Methodology

3.1 The trees were assessed on two bright, sunny days on the 15th and 19th of May 2025, and the findings from this assessment are in the Tree Survey (Appendix 1), along with the supporting tree survey key. The arboricultural data presented in the Tree Survey 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 and proximal to the site.

- Tree number
- Tree species - both common and scientific name
- Age class
- Dimensions (height, trunk diameter, crown spread, crown clearance, Root Protection Area (RPA))
- Physiological condition
- Structural condition
- Management recommendations **(towards good tree management and safety, irrespective of any proposed development)**
- Life expectancy within their present environment
- Retention category grade (see Table 4 in Appendix 1 for more details on category grades)

3.2 For reference, aluminium tags were stapled to the tree's main stem at eye level, where possible. Tree groups, or trees that were inaccessible, were numbered sequentially – T1, T2 and TG1, TG2 etc.

3.3 Tree positions were plotted using ArcGIS software. Aerial maps of the surveyed trees in Appendix 2 show tree positions colour-coded to match their retention category grade. The tree retention category has been assessed based on quality and value within the existing context, independent of any proposed development plans. This assessment considers:

1. Arboricultural Value – Health, structure, lifespan, species, and physical impact on the site.
2. Landscape Value – Contribution to the site and surrounding area.
3. Cultural Value – Conservation, historical, and commemorative significance.

Trees are classified according to BS 5837:2012, beginning with Category U (unsuitable for retention). If suitable for retention, they are first assessed for Category A (high

quality). Those not meeting A criteria are considered for Category B (moderate quality), and if not, they are assigned Category C (low quality).

3.4 The Arboricultural Impact Assessment evaluates the impacts the proposal could have on the existing trees and the potential effects trees may have on the site. It lists the Tree Nos. and Category Grades of all that would need to be removed to facilitate the development. It introduces recommendations for mitigation to ensure tree health and project compatibility. It should be read in conjunction with the Arboricultural Method Statement and the Tree Protection and Removal Plan.

3.5 The Arboricultural Method Statement outlines specific procedures and specialised techniques to mitigate impacts on retained trees during the proposed development's construction phases. It details tree protective fencing, establishing Construction Exclusion Zones (CEZs), employing practical protection measures like air-spading or hand-digging near Root Protection Areas (RPAs) to avoid root severance, and using ground protection to minimise compaction and contamination.

3.6 The Tree Protection and Removal Plan (TPR-LP-01), included in Appendix 3, identifies the location of existing trees in relation to the proposed development, tree nos., crown spreads, category grades, and trees to be removed. It also shows the layout of tree protective fencing, CEZs, RPAs, ground protection and other tree protection measures that are to be implemented.

3.7 RPAs represent the minimum area around each tree that must be protected from disturbance during construction. These are generally shown as orange circular zones unless modified slightly to reflect site-specific conditions. The plan has been prepared to ensure that retained trees, tree groups, and hedgerows both on and adjacent to the site are adequately safeguarded throughout the development process.

4.0 Limitations of Survey

4.1 The tree survey was conducted from ground level, using a monocular, pocketknife, nylon sounding mallet, diameter tape, camera phone, GPS unit, and slash hook for clearing light vegetation around trees. Observations and recommendations are based on the knowledge and experience of the surveyor. Some defects, such as internal decay or root damage, may not be visible from a ground-level inspection.

4.2 The conclusions and recommendations in this report reflect the condition of the trees at the time of assessment. Environmental factors, such as storms, drought, or nearby construction, may affect the validity of these recommendations over time. Regular assessments are recommended, especially after severe weather events.

4.3 The surveyor assessed the trees and their growing environment to identify any perceived risks and provide management recommendations accordingly. If the

assessment was obstructed due to dense vegetation, buildings, or other factors, this will be noted in the report so that further inspection arrangements can be made if thought necessary.

5.0 Summary of Tree Survey Findings

5.1 In total, 61 Trees were individually tagged and 1 Tree, 5 Tree Lines and 3 Tree Groups were numbered sequentially. The following table lists the category grade given to the surveyed trees per the cascade chart (Table 4, Appendix 1)

Table 1: Category Grades

Reference Number	Category Grade
Tree Nos. 2569, 2570, 2571, 2572, 2574, 2576, 2578, 2579, 2580, 2582, 2584. **Tree Group No**. TG3. **Tree Line No.** TL1	**U** **11 X Trees** **1 X Tree Group** **1 X Tree Line**
Tree Line No. TL4.	**A** **1 X Tree Line**
Tree Nos. T1, 2577, 2585, 2586, 2587. **Tree Line No.** TL5.	**B** **5 X Trees** **1 X Tree Line**
Tree Nos. 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2573, 2575, 2581, 2583, 2588 ,2589 ,2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597. **Tree Line Nos.** TL2, TL3. **Tree Group Nos.** TG1, TG2.	**C** **46 X Trees** **2 X Tree Lines** **2 X Tree Groups**
Total = 62 Trees, 5 Tree Lines and 3 Tree Groups.	

5.2 The site (Maps 1 & 2) is a popular lakeside recreational area located on the eastern shore of Lough Rea, just outside the town of Loughrea in County Galway, Ireland. It serves as a key amenity for both locals and visitors, offering a range of outdoor activities in a scenic natural setting. The site is bordered to the east by the R351 and enclosed by Lough Rea to the north and west. The south of the site is bordered by a wooded area and scrubland. The site is made up of two tarmac based carparks along with several green areas, pathways and public toilets.

5.3 Lough Rea is a Special Area of Conservation (SAC) and a Special Protection Area (SPA), which means tree cutting near or within an SAC must be assessed to ensure it does not adversely affect the integrity of the site (EU Habitats Directive, Article 6). Consultation with the NPWS will be necessary before tree felling work is carried out on the site.

5.4 The northeast of the site is a grass area located between a concrete walkway and a dry stone wall bordering the main road - R351 (Image 1). The trees in this area are semi mature and low-quality (Category C). Several of the trees in this area have been poorly managed in the past and have been heavily topped, leaving large wounds wand poorly structured multi stem regrowth. The trees provide screening value to the site from the busy road but due to their close proximity to the wall, they will need regular maintenance to avoid conflict with the road (Image 2). Due to their proximity to the wall and compacted road surface, it is likely that roots have developed more to the west where better soil is present.

Image 1: Looking north at the line of trees beside the road, with Tag No. 2546 in the foreground.

Image 2: Looking south along the line of trees beside the road, with Tag No. 2549 in the foreground.

5.5 The west of the site contains two tree lines (Tree line Nos. 1 & 2) which create a partial border between the lake and the open green space. Tree Line No. 1 is located directly along the edge of the lake (Image 3) and contains several, poor-quality (Category U) ash trees with symptoms of ash dieback (*Hymenoscyphus fraxineus*). Some trees in the tree line have exposed root flare likely due to erosion from the lake, which may further compromise root stability and long-term structural integrity. Tree Line No. 2 (Image 4) is slightly farther from the water and generally appears healthier, with better canopy development and less visible root exposure. However, there are some ash trees with symptoms of ash dieback in the line which will need remedial work. Both tree lines provide a buffer from the lake with the tree roots likely helping to stabilise the soil and reduce erosion.

Image 3: Looking south along Tree Line No. 1 at declining ash.

Image 4: Looking west along Tree Line No. 2.

5.6 The southwest of the site contains several trees growing in proximity to a small roadway - Tag Nos. 2573, 2574 & 2575. A line of maintained wild cherries (Tree Line No. 3) runs between the road and woodland to the south (Image 5). Tree Group No. 1 grows in an unmaintained area of the park. It is outside the redline boundary but worth noting as it provides aesthetic and ecological value to the area. Tree Group No. 1 is predominantly willow, which reflects a naturally regenerating mix, with species composition suited to a damp, low-lying environment such as Lough Rea. All the trees in this section are low quality (Category C), except a moderate quality Category B), semi mature oak (T1) which has potential to form part of the long term tree cover in this area.

Image 5: Looking east at Tree Line No. 3, with Tree Group No. 1 and Tree Line No. 4 in the background.

5.7 This part of the survey site contains some planted aesthetically pleasing trees such as the *Acer pseudoplatanus* 'Spaethii' Tag No. 2577 (Image 7) (Category B). It also includes Tree Line No. 4 – a mature, high-quality (Category A) tree line comprised primarily of beech, with Sitka spruce and sycamore also present, forming a boundary between the woodland and the adjacent car park (Image 6). Several of the trees within the line are showing signs of decline, with structural defects and poor vitality, and will require removal (Tag Nos. 2578, 2579, 2580, 2582). A dense covering of ivy is present around the base of most trees, which has obscured the root crown and lower stems. While the line retains screening and aesthetic value, removal of declining trees and ongoing maintenance, such as ivy removal and future surveys will promote the longevity of the trees.

Image 6: Looking west at Tree line 4 comprising of beech and spruce, some of which require immediate attention.

Image 7: Looking south along Tree line 4 with Tag No. 2577 to the right in the foreground – *Acer pseudoplatanus* 'Spaethii'.

5.8 The line of mature Sitka spruce trees (Tree Line No. 5) (Image 9) forms a border between the car park and the adjacent scrubland, providing visual screening. The moderate quality (Category B) grade assigned to these trees is due to their landscape value as a tree line. A physical boundary of barbed wire runs along the line and into the trees at points. The trees are tall and relatively uniform in structure (Image 8), but several on the western side were windblown in recent storms. These fallen trees present a safety and access issue and will require removal. The remaining trees will also be more susceptible to windblow from the loss of these trees. They will need to be inspected annually for any signs of weakness. The windblown spruce are also damaging the crown of Tag No. 2585.

Image 8: Looking southeast at Tree Line No. 5, with windblown Tree Group No. 3 to the right of the picture.

Image 9: Looking south at Tree line 5 with Tag Nos. 2585, 2586 & 2587 on the right in the foreground.

5.9 The remainder of the south of the site contains some planted semi mature trees that hold little aesthetic value in the car park and were likely planted as landscape features. Some of the trees have been previously managed through crown reduction, which has helped maintain clearance from vehicles and pathways, however, this has left pruning wounds, which are beginning to occlude, and affected structure. Ongoing maintenance will be necessary to avoid conflict with cars and pedestrians (Image 10).

Image 10: Looking north at landscape feature trees Tag No. 2590 to 2597.

6.0 Tree Works Recommendations

6.1 The following management recommendations should be carried out in line with good arboricultural practice, irrespective of the proposed development. The following work should be carried out within 1 year.

Tree No.	Species	Age Class	Ht. m	Management Recommendations
TL1	**ash** *Fraxinus excelsior*	Semi Mature	7	Remove to ground level
2569	**ash** *Fraxinus excelsior*	Semi Mature	4	Remove to ground level
2570	**ash** *Fraxinus excelsior*	Semi Mature	4	Remove to ground level
2571	**alder** *Alnus glutinosa*	Semi Mature	4	Remove to ground level (Retain epicormic growth)
2572	**ash** *Fraxinus excelsior*	Semi Mature	6	Remove to ground level
2573	**grey willow** *Salix cinerea*	Semi Mature	7	Remove failing branch on north side of tree. May need crown raising in the future. Remove epicormic growth for future inspections.
2574	**ash** *Fraxinus excelsior*	Semi Mature	6	Remove to ground level
2576	**ash** *Fraxinus excelsior*	Semi Mature	8	Remove to ground level
2578	**Sitka spruce** *Picea sitchensis*	Mature	14	Remove to ground level
2579	**Sitka spruce** *Picea sitchensis*	Mature	10	Remove to ground level
2580	**common beech** *Fagus sylvatica*	Mature	17	Cut tree to approx. 5 metres from ground and retain as bulking/ ecological value.
2582	**Sitka spruce** *Picea sitchensis*	Early Mature	8	Cut tree as low as possible due to decay being low to the ground.
TG3	**Sitka spruce** *Picea sitchensis*	Mature	12	Clear trees from the area.
2584	**Sitka spruce** *Picea sitchensis*	Mature	8	Remove to ground level
2585	**sycamore** *Acer pseudoplatanus*	Semi Mature	9	Remove Sitka spruce hung up in crown.
TL5	**Sitka spruce** *Picea sitchensis*	Mature	26	Clear fallen trees to west as they are leaning on trees at the western end of the line. Cut ivy at base to 2 metres to allow for future inspections. Review annually for further windblow

7.0 Arboricultural Impact Assessment

7.1 To facilitate the proposed development, the following tree and hedge vegetation will need to be removed:

Table 2: Removal Table

Reference Number	Category Grade
Tree Nos. 2569, 2570, 2571, 2572, 2574, 2576, 2578, 2579, 2580, 2582. **Tree Line No.** TL1. **Tree Group No**. TG3.	**U** **10 X Trees** **1 X Tree Line** **1 X Tree Group**
Tree Nos. No Trees.	**A** **0 Trees**
Tree Nos. 2577, 2585, 2586, 2587.	**B** **5 Trees**
Tree Nos. 2538, 2539, 2540, 2542, 2543, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2560, 2561, 2562, 2563, 2564, 2568, 2573, 2581, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 3 trees from TL2. **Tree Line Nos.** TL3. **Tree Group No.** TG2.	**C** **40 X Trees** **1 X Tree Line** **1 X Tree Group**
Total = 55 Trees, 2 Tree Lines and 2 Tree Groups	

7.2 Tag Nos. 2538, 2539, 2540, 2542, 2543 are included in Table 2 but are located just outside of the redline boundary. Based on the trajectory of the proposed foot/cycle path parallel to the public road, they will need to be removed, but ownership of these trees will need to be determined before works are carried out on them.

7.3 The Tree Protection / Removal Plan (TPR-LP-01) in Appendix 3 shows the trees and hedges proposed for removal in 'Red Hatching'. The trunk positions of all the surveyed trees are colour-coded to match the corresponding category grade shown in Table 2.

7.4 All retained trees will be protected with Tree Protective Fencing for the duration of development (see sections 8.4 and 8.8 for detail).

7.5 The northeast and east of the site contains a number of small, low-quality (Category C) trees that are either of limited arboricultural value or in declining condition as a result of being topped (Tag Nos. 2537 – 2559 and 2590 - 2598). These trees do not make a

significant contribution to the landscape and would not be expected to mature into specimens of high quality or longevity. Their removal provides an opportunity for the introduction of a well-considered replanting scheme, incorporating a range of appropriate, high-quality tree species that will offer greater long-term amenity, biodiversity, and environmental benefits.

7.6 Tree Line No. 3 needs to be removed to facilitate a footpath running parallel to the woodland (Tree Group No. 1) to the east. There is already a proposed footpath on the opposite side of this road, so it is recommended that this footpath does not extend along the length of this woodland so that the cherry tree line can be retained and soil and root damage is not caused to Tree Group No. 1. See location of where the footpath should end in TPR-LP-01 – Appendix 3.

7.7 Four moderate quality (Category B) trees (Tag Nos. 2577, 2585, 2586 & 2587) will need to be removed under the current design layout. These trees are of good arboricultural value and should be retained where possible. These trees contribute positively to the site's character, provide ecological benefits, and are in good structural and physiological condition. If the car park layout can be reconfigured to allow for their retention, it would be a more sustainable and responsible outcome (see Figure 1).

7.8 The RPA of the Tree Line No. 5 along the southern boundary may be at risk of root damage due to the construction of the proposed car park and foot/cycle path. These trees are structurally significant and contribute to screening and site character. Sitka spruce typically develops a relatively shallow root system with long lateral roots, rather than deep anchoring taproots, making it particularly vulnerable to root disturbance from excavations. No-Dig methods and cellular confinement surface techniques should be used in be used (see sec 8.6 & 8.9 for ground protection details and TPR-LP-01 – Appendix 3 for where ground protection is to be positioned).

7.9 To mitigate impacts on the roots of Tree Line No. 2, the proposed footpath along this boundary should be moved farther north. These are younger trees without an expansive root system, so just tweaking the path’s route a couple metres north would have a beneficial effect on their development.

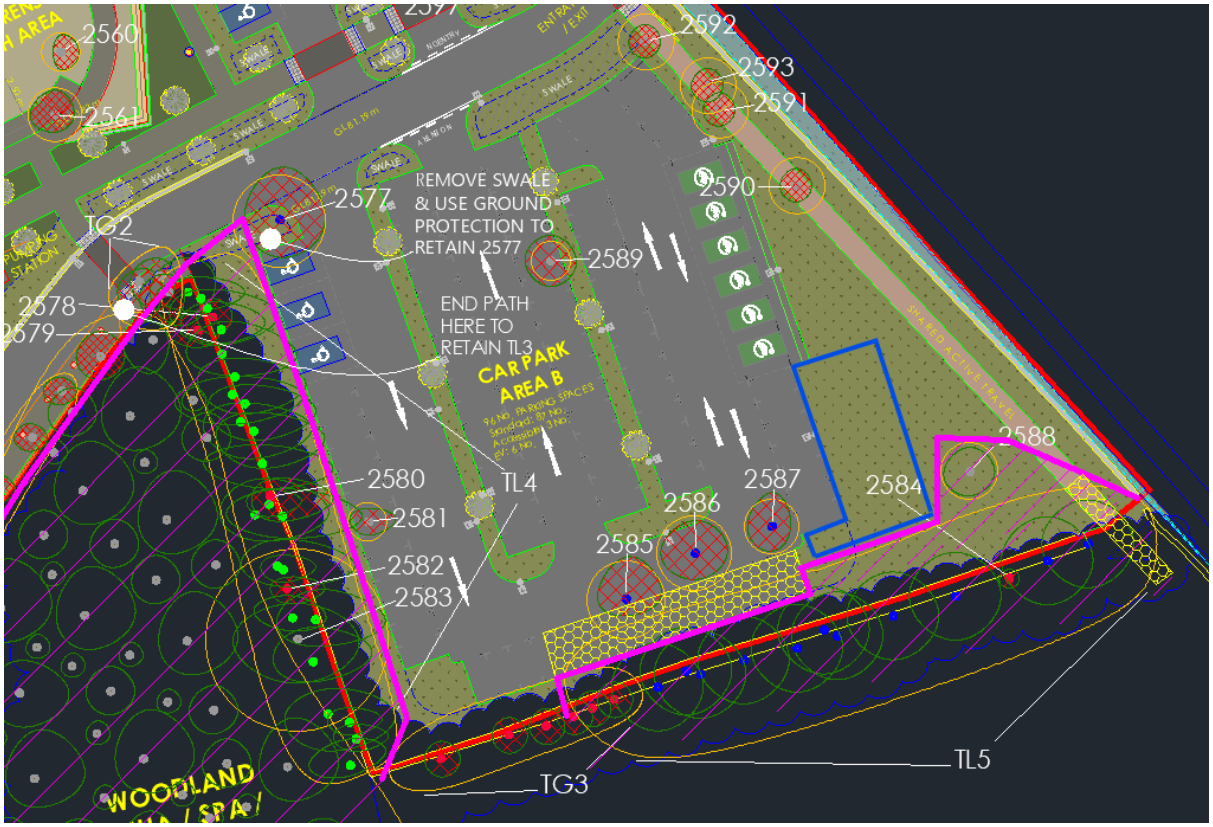


Figure 1: Excerpt from TPR-LP-01 showing how Tag Nos. 2577, 2585, 2586 & 2587 conflict the design layout. If the swale was removed from around Tag No. 2577, and ground protection (see sec 8.6 & 8.9) was used over the RPA, this tree could be retained. And the space outlined in blue to the southeast should be utilised so that Tag Nos. 2585, 2586 & 2587 could be retained.

7.10 The overall impact on the arboricultural assets on the site is moderate. Many of the trees for removal are low-quality (Category C). The biggest impact would be the removal of the four Category B trees mentioned in sec 7.8, for which mitigation measures are suggested. This, combined with the tree protection measures outlined in the Arboricultural Method Statement below and TPR-LP-01, as well judicious replacement planting (see Landscape Architects' plan), means that the arboricultural impact is low, with the potential for enhancement.

8.0 Arboricultural Method Statement

8.1 Overview

This Arboricultural Method Statement outlines the measures to protect trees throughout the construction phases. A copy of the AMS and Tree Protection & Removal Plans (TPR-LP-01 Appendix 3) will be retained in the site offices for reference. Tree protection is divided into three stages:

- Pre-Construction
- Construction Works
- Post-Construction

8.2 Pre-Construction

- The project arboriculturist will collaborate with the project team to minimise tree impacts where possible and ensure trees have minimal impact on the proposed development. The project team will adjust the layout where practicable to reduce these impacts.

- Any issues in relation to the trees on site will be discussed with the project arboriculturist and local authority prior to works being carried out.

8.3 Tree Works

- All tree works will likely be carried out prior to construction activity on site, though this would be subject to appropriate seasonal timing (i.e. bird nesting season).

- A qualified, insured tree surgery contractor will carry out works according to BS:3998 2010.

- Tree removal will be conducted carefully to avoid damage to surrounding trees.

- If stump grinding is necessary, protective measures (e.g., ground guards, plywood sheets) will safeguard trees' Root Protection Areas (RPAs).

8.4 Tree Protective Fencing

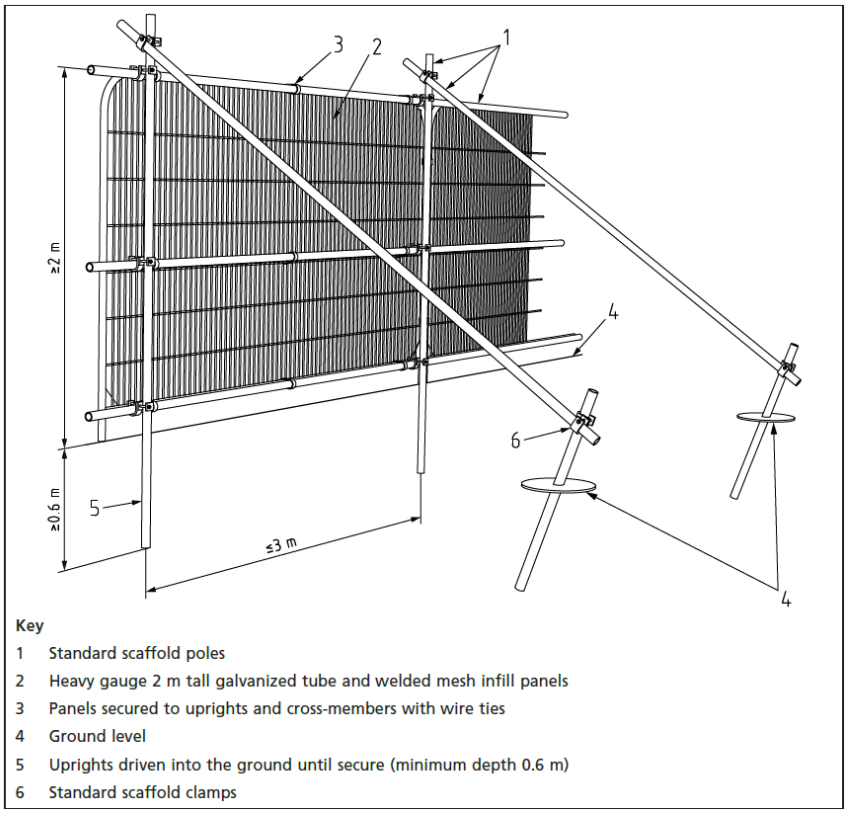
8.4.1 Installation

- Once tree works are completed, protective fencing will be erected in the position indicated by a solid pink line on TPR-LP-01.

- The fenced-off area, known as the Construction Exclusion Zone (CEZ), protects trees, their RPAs, and supplementary planting areas.

8.4.2 Specifications

- Fencing will be 2.3m high, using scaffold bars well-braced for impact resistance.
- Heras fence panels will be securely fixed with scaffold clamps (Figure 2).
- Where applicable, site hoarding may serve as protective fencing (subject to arboriculturist approval).
- Stabiliser struts on a block tray will be used if more practical (Figure 3).



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 2: Tree Protective Fencing example using uprights driven into the ground.

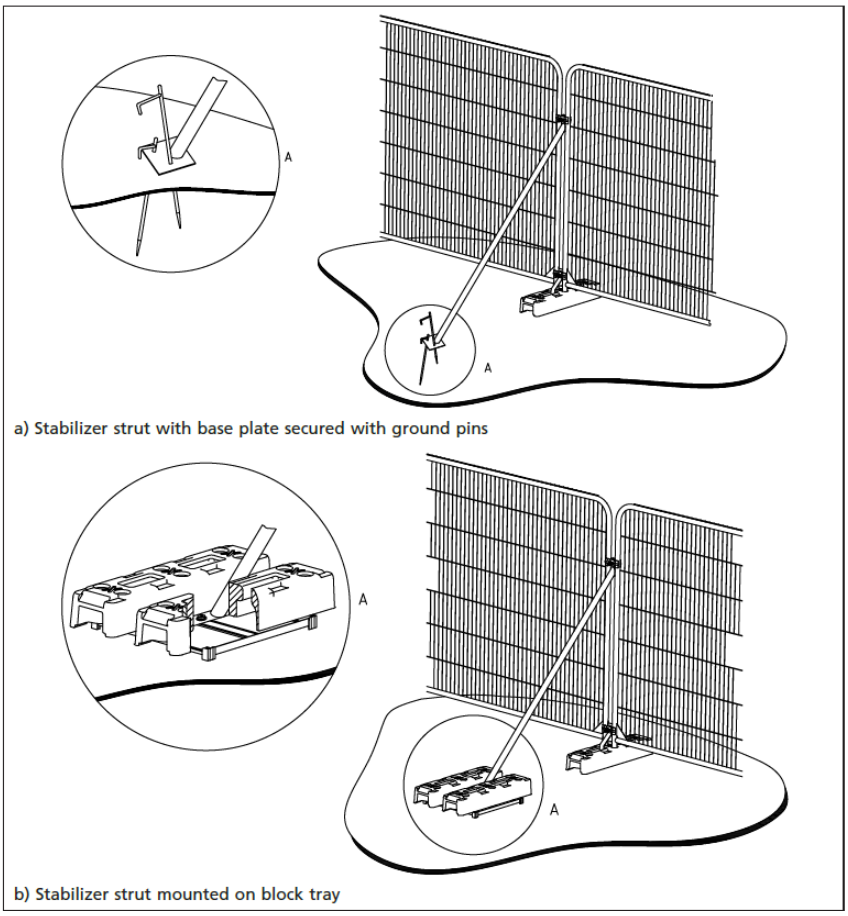


Figure 3: Tree Protective Fencing example using above ground stabilising units

8.4.3 Signage

- All weather 'Keep Out' signs will be secured to the fences (Figure 4).

Figure 4: 'Keep Out' sign examples for tree protective fencing.

8.4.4 Alternatives

- Where fencing is impractical, protective boxes (timber frames & plywood) and ground protection will be used (see Section 8.6).

8.5 Site Access, Storage and Parking

- These areas will be a minimum of 10 metres away from trees and slopes.
- Clearly signposted storage areas will prevent unauthorised material placement.
- Materials will be stored in containers/on pallets with plastic coverings to avoid soil compaction or contamination.

8.6 Ground Protection

Where traffic is expected within in a CEZ, approved ground protection will be used to dissipate vertical loads and prevent soil contamination.

Installation Steps:

- Prepare Ground: Remove loose organic matter; level surface with non-compacted, no-fines stone.
- Lay Geotextile: Place non-woven geotextile fleece with 300 mm overlapping dry joints.
- Edge Containment: Install treated timber/railway sleepers along edges.
- Deploy Cellular System: Place Cell Web (150-200 mm) over geotextile, pin/anchor open.
- Fill and Compact: Gradually fill with 20-40 mm clean sharp stone using a roll-out method.
- Final Surcharge: Add 25mm of 40-20 mm clean angular stone.

8.7 Construction Stage

- The project arboriculturist will be informed of any planned works in a CEZ.
- Tree monitoring will be conducted, with health and safety recommendations made as needed.

8.8 Tree Protective Fencing Maintenance

- Fencing must remain upright, rigid, and intact throughout construction.
- The main contractor is responsible for daily inspections and repairs.
- No materials or equipment shall be stored behind protective fencing.

8.9 Working within a Construction Exclusion Zone (CEZ)

- Any work in the CEZ requires project arboriculturist consultation.
- Ground protection (e.g., ground guards, heavy-duty plywood over woodchip) will be used for temporary access.
- Tree protective fencing, if removed temporarily, will be securely stored and reinstated post-works.
- Work will be manual-only—no heavy machinery allowed.
- Existing hard surfacing within a RPA should be utilised for ground protection. If its removal is necessary, it must be done in a "working back-the-way" manner to maintain continuous ground protection.
- Removal of structures and materials within the (CEZ) will be carried out manually using appropriate hand tools, such as a mattock, pneumatic breaker, shovel, and wheelbarrow. If encountered, roots under 25 mm in diameter may be pruned; larger roots require approval from an arboriculturist. Any exposed roots left overnight will be protected with soil or moist hessian
- Where permanent surfaces are to be installed within a CEZ, No-Dig methods will be implemented. Finished surfaces will be porous to allow gas and water movement. (Figure 5)

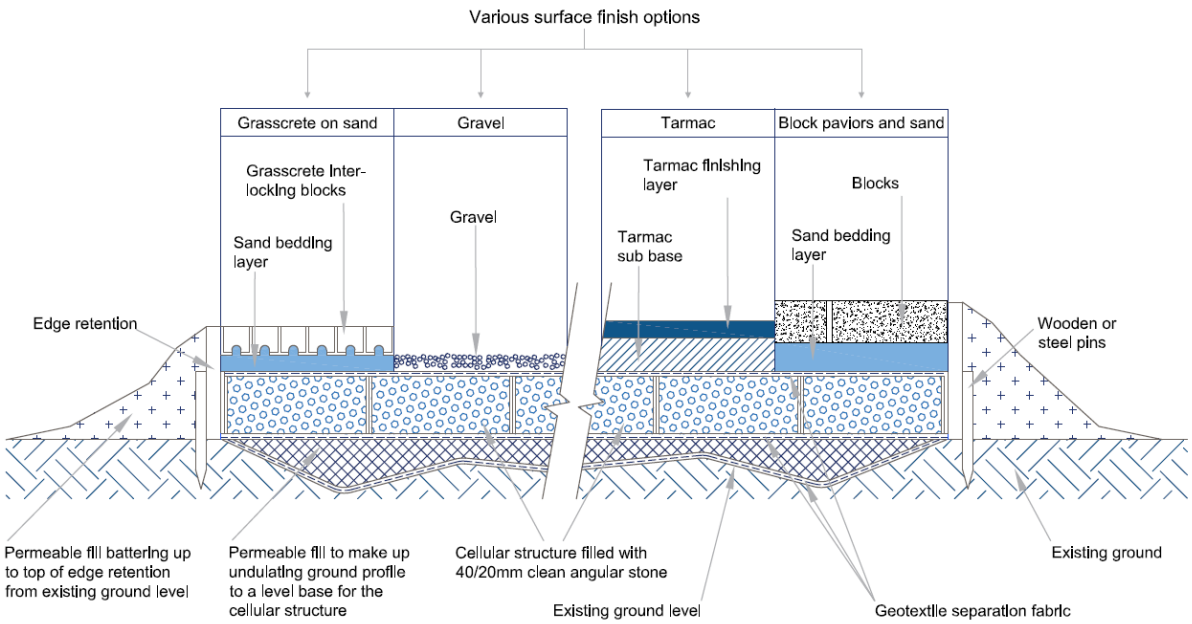


Figure 5: No-Dig, cellular confinement surface with examples of finishing options

8.10 Use of Cranes

- If the use of cranes is expected to interfere with trees, then working space will be provided by facilitation pruning or temporary branch tying. A specification for which will be prepared by the project arboriculturist.

- The smallest practicable crane will be used to prevent potential damage to trees and soil compaction. If there is a large crane on site, then it may be more prudent to move materials around trees from a far, as this will prevent soil compaction around trees.

- A banksman will direct lifting to prevent tree damage.

8.11 Excavations

- Excavations within RPAs is avoided where possible.

- If unavoidable, solutions such as piles or pads with above-ground beams will be used.

- Trial holes (600 mm deep) will be dug using Air-Spade/hand tools.

- Roots under 25 mm may be pruned; larger roots require arboriculturist approval.

- Roots left exposed overnight will be covered with soil or moist hessian.

- Piling near trees will use smallest practicable diam piles.

- Sleeved bored pile/screw piles will be used to protect the soil and roots from toxic effects of uncured concrete.

8.12 Services

- Services will be routed outside RPAs where possible.

- If unavoidable, trenchless insertion methods will be used, with entry/exit pits outside RPAs (Table 3). To avoid damage to roots when using trenchless insertion methods, the depth of the pit will be 750 mm.

Table 3: Trenchless solutions for differing utility apparatus installation requirements

Method	Accuracy	Bore dia. [A)]	Max. sub. [B)] length	Applications	Not suitable for
	mm	mm	m		
Microtunnelling	<20	100 to 300	40	Gravity-fall pipes, deep apparatus, watercourse/ roadway undercrossings	Low-cost projects due to relative expense
Surface-launched directional drilling	≈100	25 to 1 200	150	Pressure pipes, cables including fibre optic	Gravity-fall pipes, e.g. drains and sewers [C)]
Pipe ramming	≈150	150 to 2 000	70	Any large-bore pipes and ducts	Rocky and other heavily obstructed soils
Impact moling [D)]	≈50 [E)]	30 to 180 [F)]	40	Gas, water and cable connections, e.g. from street to property	Any application that requires accuracy over distances in excess of 5 m

- If the service route must pass through the RPA, it will be routed under the centre of the tree, where there are less roots.
- External lubrication of equipment with materials other than water or vegetable oil (e.g. mineral oil, bentonite, etc.) will not be used when working within the RPA.
- Shallow service runs may be excavated manually, avoiding roots and moving pliable ones.
- Roots under 25 mm may be pruned; larger roots require arboriculturist approval.
- Roots left exposed overnight will be covered with soil or moist hessian.
- No heavy machinery excavation within RPAs.

8.13 Finished Ground Levels & Landscaping

- Existing RPA ground levels will remain unchanged and incorporated into the finished development. If the new ground level outside of the RPA is higher, then a retaining structure will be used to prevent water pooling around the tree.
- No heavy machinery within RPAs. Landscaping will be done manually.
- Herbicide use near retained trees will be minimised, with only direct, systemic applications allowed if necessary.

8.14 Prohibited Activities in CEZ

- Stockpiling of soil or rubble.
- Washing of machinery.
- Attaching notice, cables, or other services to trees.
- Using neighbouring trees as anchor points.
- Fires or burning.
- Any action likely to cause waterlogging.

8.15 Post Construction Works

- The project arboriculturist will assess all the retained trees before project completion to ensure they can be safely integrated into the development.

9.0 Regulations on Tree Felling and Wildlife Protection

9.1 In Ireland, the felling of trees is regulated primarily under the Forestry Act 2014, which requires a felling licence to be obtained from the Department of Agriculture, Food and the Marine (DAFM) before cutting down any tree, with some exceptions, such as those approved for removal under a granted planning application — see Section 19 of the Act for list of exempt trees.

9.2 The site is not subject to any Tree Preservation Orders (TPOs), and it does not fall under a Special Area of Conservation (SAC); however, Lough Rea, just outside the redline boundary, is a Special Area of Conservation (SAC) and a Special Protection Area (SPA)

9.3 Under Section 40 of the Wildlife Act 1976 (as amended), hedge and tree cutting are prohibited from March 1st to August 31st to protect nesting birds and wildlife. Tree felling or vegetation clearance may proceed during the restricted period (1st March–31st August) where planning permission has been granted, provided the permission explicitly permits such works and any necessary ecological assessments, such as nesting bird surveys, have been completed. In such cases:

- The ecological impact must be minimised as a matter of compliance.
- A derogation from the National Parks and Wildlife Service (NPWS) may still be required, particularly in ecologically sensitive areas

9.4 Trees provide natural roosting spots for bats, especially mature trees with cracks, cavities, and crevices. Bats are legally protected under Irish and EU legislation, including the Wildlife Act 1976, Wildlife (Amendment) Act 2000, S.I. No. 94 of 1997, and S.I. No.

378 of 2005, which implement the EU Habitats Directive, as well as international agreements such as the Bonn Convention and Bern Convention. Remedial tree work can disturb bats and their roosts, so before carrying out such work, advice from a licensed bat surveyor should be sought.

9.5 Unauthorised tree felling can result in substantial fines or legal action. Anyone considering tree felling should consult with the relevant Council or local authority to ensure compliance with environmental and planning regulations.

10.0 References

- British Standards Institution (BSI). (2010). BS3998: Tree Work – Recommendations. London: BSI.

- British Standards Institution (BSI). (2012). BS5837: Trees in Relation to Design, Demolition and Construction – Recommendations. London: BSI.

- British Standards Institution (BSI). (2014). BS8545: Trees: From Nursery to Independence in the Landscape – Recommendations. London: BSI.

- Council of Europe & Government of Ireland (Various). Legislation and conventions relevant to the protection of European wildlife and natural habitats, including the Bern Convention (1979), Bonn Convention (1979), Wildlife Act (1976, as amended), and European Communities (Natural Habitats) Regulations.

- National Joint Utilities Group (NJUG). (2007). Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Vol. 4). London: NJUG.

Appendix 1
Tree Survey & Key

BS 5837 – Survey Form Key

Tag No: Tag stapled to tree for reference
Species: Both scientific and common name are provided
Stem diam: Stem diameter - diameter of the main stem in millimetres measured at 1.5m. This measurement forms the basis of the
Root Protection Area (RPA) calculation – that being the equivalent to a circle with a radius of 12 x the stem diameter
Crown spread: The radial spread of the crown from the centre of the tree, indicated at four cardinal points, **N**orth, **S**outh, **E**ast and **W**est.
C.Ht: The height of the first significant branch, measured in metres
C. Circa
A: Average
T: Tree, **TL:** Tree Line, **TB**: Tree Belt, **TG**: Tree Group, **H**: Hedge, **SB**: Shrub Border
LE: Life Expectancy of the tree in years
Age classes:
Young: In the first fifth of its life expectancy
Semi-Mature: In the second fifth of its life expectancy
Early-Mature: In the third fifth of its life expectancy
Mature: In the penultimate fifth of its life expectancy, reached maximum height
Over-Mature: In the final fifth of its life expectancy, in natural decline
Dead wood diameter sizes:
Small: <50mm
Medium: Between 50 – 100mm
Large: >100mm
Phys Cond: Physiological condition, an assessment of the tree's overall health –
Good: Good vitality e.g., healthy foliage or buds, crown density is consistent with that of the species
Fair: Low vitality e.g., sparseness of foliage or buds
Poor: Poor vitality e.g., dieback of foliage or shoot development, disease affecting growth.
Dead: The tree is dead
Struc Cond: Structural condition, noting any structural defects –
Good: No major structural defects observed (possibly some minor defects)
Fair: Minor defects present, such as bark wounds and isolated decay pockets, structure affected due to overcrowding and is dependent on group structure
Poor: Major structural defects present such as extensive dead wood, decay cavities affecting stability, splitting or cracking at unions
Preliminary Recommendations: Any initial work requirements in terms of sound arboricultural practice, irrespective of proposed works
Cat.: Category grade in terms of quality and value (Table 4)

Table 4: Category Grade Chart BS 5837: 2012

Category and definition	Criteria			Identification on plan
Trees unsuitable for retention				
Category U Those 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	Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. 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, or very low quality trees suppressing adjacent trees of better quality			Red
Trees to be considered for retention				
	1. Mainly arboricultural qualities	**2. Mainly landscape qualities**	**3. Mainly cultural values, including conservation**	
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Green
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Blue
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2537	**silver birch** *Betula pendula*	Semi Mature	4	190	2	2	2	2	2	2	Good	Good	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Some open pruning wounds approx. 1 metre above ground level which are beginning to occlude. Witches broom present in multiple parts of crown.	Tree may need to be crown raised in the future.	20+	C2
2538	**silver birch** *Betula pendula*	Semi Mature	4	190	2	1	1	2	2	2	Fair	Good	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Some open pruning wounds approx. 1 metre above ground level which are beginning to occlude. Some dieback on the tips of the lower crown.	Tree may need to be crown raised in the future.	20+	C2
2539	**silver birch** *Betula pendula*	Semi Mature	5	260	3	2	2	2	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													crown raised in the past. Tree has been topped in the past. Some open pruning wounds approx. 1 metre above ground level which are beginning to occlude however small cavities are forming in the wounds. 10° lean east.			
2540	**silver birch** *Betula pendula*	Semi Mature	6	230	2	2	2	2	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been topped in the past. Some epicormic growth at base and 1m from ground level 5° lean east.	Tree may need to be crown raised in the future. Remove epicormic at base for future inspections.	10+	C2
2541	**mountain ash** *Sorbus aucuparia*	Semi Mature	3	210	1	1	1	1	1	3	Fair	Fair	Multi-stem tree located 3 metres from concrete path. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped and pruned in the past. Large number of new shoots at top of tree will be poorly attached in future.	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													Leaf blotch (brown) possibly from high amount of sunlight.			
2542	**wild cherry** *Prunus avium*	Semi Mature	4	250	2	2	2	2	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has some damage to its base and roots due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. 5° lean to east.	Tree may need to be crown raised in the future.	10+	C2
2543	**silver birch** *Betula pendula*	Semi Mature	4	180	1	1	1	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been topped in the past. Epicormic growth present at base of tree.	Tree may need to be crown raised in the future. Remove epicormic at base for future inspections.	10+	C2
2544	**whitebeam,** *Sorbus aria*	Semi Mature	4	250	2	2	2	2	2	3	Fair	Fair	Tree is located 2 metres from concrete path. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been topped in the	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													past. Several pruning wounds present approx. 2m from base of tree. Significant epicormic growth present at top of tree, causing the crown to have a heavy leaf covering.			
2545	**silver birch** *Betula pendula*	Semi Mature	6	160	2	2	1	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Some open wounds on east side approx. 2m from base. Tree has been topped in the past. Approx 10% of whole crown shows dieback in tips of branches.	Tree may need to be crown raised in the future.	10+	C2
2546	**silver birch** *Betula pendula*	Semi Mature	4	270	2	2	2	1	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. 10 cm wide wound at based on west side. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. Large cavity east,	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													1m, Turkey. 10° lean to east. Cavity at 1m extends approx. halfway through tree. approx. 10cm wide and 20cm tall.			
2547	**wild cherry** *Prunus avium*	Semi Mature	5	270	1	2	2	1	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to compartmentalise. Large epicormic growth in crown leading to weak attachment for future branches.	Tree may need to be crown raised in the future.	10+	C2
2548	**alder** *Alnus glutinosa*	Semi Mature	3	170	1	1	1	1	1	2	Fair	Fair	Tree is growing from the base of the boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been topped in the past resulting in open wounds, some of which are beginning to occlude.	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2549	**Himalayan white birch** *Betula utilis* 'Jacquemontii'	Semi Mature	4	140	1	2	2	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has some damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Some wounds not healing at present from pruning. Tree support and rubber tie still present.	Tree may need to be crown raised in the future. Remove supports and rubber tie.	10+	C2
2550	**wild cherry** *Prunus avium*	Semi Mature	3	220	2	1	1	1	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. 10cm diameter wound from stub present on west side of tree, approx. 1m from base.	Tree may need to be crown raised in the future.	10+	C2
2551	**silver birch** *Betula pendula*	Semi Mature	4	190	1	2	2	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds,	Tree may need to be crown raised in the future. Remove epicormic growth at base of tree for future inspections	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													some of which are beginning to occlude. Epicormic growth at base of tree.			
2552	**silver birch** *Betula pendula*	Semi Mature	5	200	1	2	2	2	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. Epicormic growth at base of tree.	Tree may need to be crown raised in the future.	10+	C2
2553	**wild cherry** *Prunus avium*	Semi Mature	4	200	1	1	2	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. 20cm diameter wound from stub present on west side of tree, spread approx. 1m to base.	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2554	**silver birch** *Betula pendula*	Semi Mature	4	140	1	1	2	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. Epicormic growth at base of tree.	Tree may need to be crown raised in the future. Remove epicormic at base of tree.	10+	C2
2555	**wild cherry** *Prunus avium*	Semi Mature	4	290	1	1	2	1	2	3	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past resulting in open wounds, some of which are beginning to occlude. 2 stems on west side of tree are standing dead, the dead stems make up 30% of crown.	Tree may need to be crown raised in the future.	10+	C2
2556	**silver birch** *Betula pendula*	Semi Mature	5	150	1	1	2	1	2	2	Fair	Fair	Tree is located 1 metre from boundary wall. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Tree has been heavily topped in the past	Tree may need to be crown raised in the future.	10+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													resulting in open wounds, some of which are beginning to occlude. Epicormic growth throughout the crown leading to a dense leaf covering.			
2557	**Norway maple Crimson King** *Acer platanoides "*Crimson King*"*	Young	3	80	1	1	1	1	2	1	Good	Good	Tree is located 0.5 metre from concrete path. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. some wounds present at base of tree on north side.	Tree may need to be crown raised in the future.	20+	C2
2558	**wild cherry** *Prunus avium*	Semi Mature	4	170	1	4	3	1	2	2	Good	Good	Tree is located 0.5 metre from concrete path. Path looks to be moulded around tree. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. 10cm diameter pruning wound present approx. 1m from base of tree on east side.	Tree may need to be crown raised in the future.	20+	C2
2559	**Norway maple Crimson King** *Acer platanoides "*Crimson King*"*	Young	3	130	1	2	2	1	2	2	Good	Good	Tree is located 0.5 metre from concrete path. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. Some pruning	Tree may need to be crown raised in the future.	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													wounds present but beginning to occlude.			
2560	**wild cherry** *Prunus avium*	Semi Mature	4	200	2	2	2	1	2	2	Good	Fair	Tree is located 0.5 metre from concrete path. Tree has damage to its base due to regular grass maintenance. Tree has been crown raised in the past. 30 cm diameter pruning wound present approx. 1m from base of tree on east and west side thick crown due to epicormic.	Tree may need to be crown raised in the future.	20+	C2
2561	**Norway maple** *Acer platanoides*	Semi Mature	6	240	3	3	2	2	3	3	Good	Good	Tree has damage to its base and roots due to regular grass maintenance. Tree has been crown raised in the past. Tree has multiple wounds present on the west side at the base. 3 wounds make up approx. 20% of circumference of tree. 5° lean to east.	Tree may need to be crown raised in the future.	20+	C2
2562	**Norway maple** *Acer platanoides*	Semi Mature	6	250	3	3	2	2	3	3	Good	Good	Tree has damage to its base and roots due to regular grass maintenance. Tree has been crown raised in the past. Tree has 5 cm diameter wound present on the east side at the base. 5° lean to east.	Tree may need to be crown raised in the future.	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2563	**Norway maple** *Acer platanoides*	Semi Mature	5	240	3	3	3	2	3	3	Good	Good	Tree has damage to its base and roots due to regular grass maintenance. Tree has been crown raised in the past. Tree has 20 cm diameter wound present on the east side approx. 2 m from base. 10° lean to east.	Tree may need to be crown raised in the future.	20+	C2
2564	**grey willow** *Salix cinerea*	Semi Mature	5	270	3	3	3	3	3	3	Fair	Fair	Tree has damage to its base and roots due to regular grass maintenance. Tree has been crown raised in the past. Tree has several large (20c m) pruning wounds present which are not healing yet. Large 30 cm diameter branch on southeast side of tree standing dead. Ivy and epicormic growth present around base of tree.	Tree may need to be crown raised in the future. Remove dead branch. Remove ivy and epicormic growth around base for future inspections.	20+	C2
TL1	**ash** *Fraxinus excelsior*	Semi Mature	7	250	1	1	1	1	2	3	Dead	Poor	Line of approx. 8 ash trees. 6 of the trees are standing dead. 2 of the trees show symptoms of ash dieback and are in decline. Trees are located 2 metres from footpath that is in frequent use.	Remove to ground level	<10	U

Tree Survey															
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2565	**alder** *Alnus glutinosa*	Semi Mature	2	170	2	2	2	2	1	2	Good	Good	Tree is located on bank of lake. Tree has been cut close to ground level in the past and the crown is forming a low shrub characteristic.	Tree may need to be crown raised in the future if conflicting with footpath.	20+	C2
2566	**grey willow** *Salix cinerea*	Semi Mature	3	200	3	2	2	2	1	2	Good	Good	Tree is multistem and is located on bank of lake. Tree has been crown raised on path side in the past.	Tree may need to be crown raised in the future if conflicting with footpath.	20+	C2
2567	**alder** *Alnus glutinosa*	Semi Mature	4	180	1	2	3	2	1	2	Good	Good	Tree is located on bank of lake. Tree has been crown raised in past. Tree is growing to the east due to competition for light from the tree line behind it.	Tree may need to be crown raised in the future if conflicting with footpath.	20+	C2
2568	**alder** *Alnus glutinosa*	Semi Mature	4	180	2	2	2	2	1	2	Good	Good	Tree is located on bank of lake. Trees' roots are exposed on the west due to its proximity to the lake. Tree has been crown raised in past.	Tree may need to be crown raised in the future if conflicting with footpath.	20+	C2
TL2	**willow** *Salix* sp., **alder** *Alnus glutinosa*	Semi Mature	7	230	2	2	2	2	2	3	Good	Good	Line of mixed species trees growing along bank of the lake. The roots of some of the trees are exposed due to their proximity to the lake. Trees have been crown raised in past. Any trees in this group that require more	Trees may need to be crown raised to aid grass maintenance.	40+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													immediate work have been tagged individually.			
2569	**ash** *Fraxinus excelsior*	Semi Mature	4	180	1	1	1	1	1	2	Dead	Poor	Tree is located as part of the line along TL2. Tree is standing dead.	Remove to ground level	<10	U
2570	**ash** *Fraxinus excelsior*	Semi Mature	4	200	1	3	1	1	1	2	Poor	Poor	Tree is located as part of the line along TL2. Tree is in late stage of decline due to ash dieback.	Remove to ground level	<10	U
2571	**alder** *Alnus glutinosa*	Semi Mature	4	160	1	1	1	1	1	2	Poor	Poor	Tree is located as part of the line along TL2. Tree is mostly standing dead except for small amount of epicormic growth at base.	Remove to ground level Retain epicormic growth.	<10	U
2572	**ash** *Fraxinus excelsior*	Semi Mature	6	200	1	3	2	1	1	2	Poor	Poor	Tree is located as part of the line along TL2. Tree is in late stage of decline due to ash dieback.	Remove to ground level	<10	U
2573	**grey willow** *Salix cinerea*	Semi Mature	7	450	3	3	3	3	3	5	Good	Fair	Tree is a multistem with 3 similar size stems growing from point close to ground. Epicormic growth surrounds base of tree. Tree has been crown raised in the past. Some 15 cm diameter pruning wounds present	Remove failing branch on north side of tree. May need crown raising in the future. Remove epicormic growth for future inspections.	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													approx. 1m from base of tree, tree may form cavities due to size. Branch on north side approx. 3 m from ground cracked and at risk of falling.			
2574	**ash** *Fraxinus excelsior*	Semi Mature	6	200	1	2	1	1	1	2	Poor	Poor	Tree is located close to the path to the southeast corner of the site. Tree is in late stage of decline due to ash dieback.	Remove to ground level	<10	U
2575	**plum** *Prunus domestica*	Semi Mature	6	200	2	2	2	1	1	2	Fair	Good	Tree is located close to the path to the southeast corner of the site. Tree has been crown raised in the past. Tree has had 2 large 30 cm diameter branches removed from just above ground level. Crown of tree shows dieback with approx. 30% of the crown affected. Epicormic growth around base.	May need to be crown raised in future. Review every 18 months for further decline.	10+	C2
2576	**ash** *Fraxinus excelsior*	Semi Mature	8	200	2	1	1	1	1	2	Poor	Poor	Multistem tree located close to the carpark area to the southeast corner of the site. Tree is in late stage of decline due to ash dieback. Tree is within falling distance of the frequently used carpark area.	Remove to ground level	<10	U

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
T1	**pedunculate oak** *Quercus robur*	Semi Mature	8	180	4	1	3	4	2	2	Good	Fair	It forms the outer canopy formation in this small, wooded area and it has an asymmetrical crown orientated to the north due to competition from the neighbour and trees	It would benefit from the removal of the neighbouring Willow to free up space for its development as it has long-term potential compared to the willow	40+	B1
TG1	**goat willow** *Salix caprea*	Mature	5	300	4	4	4	4	0	2	Good	Fair	A group of self-set willow growing just inside the red line boundary	No work currently needed	20+	C2
TL3	**wild cherry** *Prunus avium*	Semi Mature	4	180	2	2	2	2	2	2	Good	Good	8 wild cherry trees growing along a roadway. Trees are all of similar quality. Trees have been crown raised in past. All trees show signs of past pruning wounds, most of which seem to be beginning to occlude. Trees hold most value as a group line formation.	Trees may need to be crown raised in the future if conflicting the roadway.	20+	C2
TG2	**Sitka spruce** *Picea sitchensis*	Mature	20	500	3	3	3	3	3	6	Fair	Fair	They are growing as a group and provide shelter to each other	May need work in future if conflicting with road.	10+	C2
2577	**Spaeth sycamore,** *Acer Pseudoplatanus* 'Spaethii'	Early Mature	12	450	6	5	4	4	2	5	Good	Good	Tree growing in grass area next to carpark. Tree has been crown raised in the past. Pruning wounds are occluding. Prominent tree	No work presently required	40+	B2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
TL4	**common beech,** *Fagus sylvatica,* **Sitka spruce,** *Picea sitchensis,* **sycamore,** *Acer pseudoplatanus*	Mature	16	500	3	8	3	4	2	6	Fair	Fair	Mainly beech tree line located on the redline boundary. Significant amount of ivy growing around the bases of most trees. Low branches leaning towards car park may require work if interfering with grass maintenance. Ivy and branches from tree work obstructed the assessment of some of the trees, but trees with noticeable defects were tagged individually.	Remove ivy off stems to 2 m to allow for a more detailed inspection.	40+	A2
2578	**Sitka spruce** *Picea sitchensis*	Mature	14	400	2	2	2	2	3	5	Dead	Poor	Tree is standing dead. Complete bark delamination from the base. Tree is within falling distance of carpark.	Remove to ground level	<10	U
2579	**Sitka spruce** *Picea sitchensis*	Mature	10	350	2	2	2	4	3	4	Dead	Poor	Tree is standing dead. Tree is within falling distance of carpark. Complete bark delamination from the base.	Remove to ground level	<10	U
2580	**common beech** *Fagus sylvatica*	Mature	17	800	2	7	3	2	3	5	Fair	Poor	Tree is part of tree line running next to carpark. Tree's crown has been damaged likely during a storm - estimate approx. 30% of crown lost - Ganoderma australe on south side at base of tree.	Cut tree to approx. 5 metres from ground and retain as bulking/ ecological value.	<10	U

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2581	**purple cherry plum** *Prunus cerasifera*	Semi Mature	5	180	1	5	3	1	1	2	Fair	Fair	Tree is located in the south of the survey site. Tree has been crown raised in the past. Some pruning wounds not occluding on the tree. Epicormic growth on lower stem. 20% sparseness of foliage in crown.	Tree may need to be crown raised to assist grass maintenance.	20+	C2
2582	**Sitka spruce** *Picea sitchensis*	Early Mature	8	350	1	4	2	1	2	3	Poor	Poor	Tree is located in the south of the survey site and is part of the TL. The tree has significant decay in the bark at the base. The decay affects 70% of the circumference of the tree. The tree is leaning towards the carpark. There large lengths of timber placed against the base of the tree.	Cut tree as low as possible due to decay being low to the ground.	<10	U
2583	**sycamore** *Acer pseudoplatanus*	Mature	13	870	4	7	5	7	2	10	Good	Poor	Tree is located in the south of the survey site and is part of the tree line. The tree has decay forming at the base through an open wound approx. 50 cm high/ 20 cm wide, on the north side. A cavity is forming in the tree extending approx. 70cm inside. Walls of cavity are beginning to decay.	Monitor cavity every 10 months for further decay. Remove ivy to 2 m for future inspections.	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
TG3	**Sitka spruce** *Picea sitchensis*	Mature	12	500	2	2	2	2	1	6	Dead	Poor	Group of trees that have been blown over in recent storms. Root plates lifted. Some trees are leaning / hung up and are at risk of falling.	Clear trees from the area.	<10	U
2584	**Sitka spruce** *Picea sitchensis*	Mature	8	350	1	1	1	1	3	4	Dead	Poor	Tree is standing dead.	Remove to ground level	<10	U
2585	**sycamore** *Acer pseudoplatanus*	Semi Mature	9	380	5	4	2	4	2	3	Good	Good	Tree growing in grass area next to carpark. Tree has been crown raised in the past. Pruning wounds look to be occluding. Tree has been impacted by windblown Sitka spruce. Spruce hung up in crown of tree causing damage and pressure on limbs.	Remove Sitka spruce hung up in crown.	40+	B2
TL5	**Sitka spruce** *Picea sitchensis*	Mature	26	1100	5		5		1	13	Good	Good	Tree line running east to west forming the south border of the survey site. line of Sitka spruce with understory of elder. Trees on the west of the line have been impacted by windblown trees. hard to access due to hung up dangerous trees. Ivy present in lower portion of all trees. Trees more susceptible to windblow.	Clear fallen trees to west as they are leaning on trees at the western end of the line. Cut ivy at base to 2 metres to allow for future inspections. Review annually for further windblow	20+	B2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2586	**pedunculate oak** *Quercus robur*	Semi Mature	10	420	7	5	4	3	2	3	Good	Fair	Tree growing in grass area next to carpark. Tree has been crown raised in the past. Pruning wounds look to be occluding. Tree has lost significant limb on south side approx. 2 m from base. Wound is approx. 30 cm wide/ 1 m long. Wound beginning to occlude. Cavity forming at base of wound.	No work currently needed.	40+	B2
2587	**sycamore** *Acer pseudoplatanus*	Semi Mature	8	250	4	3	3	4	2	3	Good	Good	Tree growing in grass area next to carpark. Tree has been crown raised in the past. Pruning wounds look to be occluding. Lower canopy is beginning to be in competition for light with elder to the south.	No work currently needed.	40+	B2
2588	**crab apple** *Malus sylvestris*	Semi Mature	5	210	3	3	3	3	1	3	Good	Good	Multi-stem tree growing in grass area next to carpark. Tree has been crown raised in the past. Pruning wounds look to be occluding. Crowded canopy formation of the Sitka spruce line causing tree to be shaded.	No work currently needed.	20+	C2
2589	**common lime** *Tilia x europaea*	Semi Mature	5	170	3	3	3	3	1	2	Good	Good	Tree growing in square 4m x 4 m gravel patch, in centre of south carpark. Pruning	It will require raising in the future to provide clearance with the car park	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													wounds look to be occluding. Low canopy formation.			
2590	**whitebeam** *Sorbus aria*	Semi Mature	5	280	2	2	2	2	2	3	Good	Fair	Tree growing grass area on east side of south carpark. Tree has been crown raised in the past. Several 10 cm diameter pruning wounds present. Pruning wounds look to be occluding. Dense epicormic in crown due to being topped at 2.5 m. Damage due to base of tree, likely due to regular grass maintenance.	No work currently needed.	20+	C2
2591	**hornbeam** *Carpinus betulus*	Semi Mature	5	230	2	2	2	2	2	3	Good	Fair	Tree growing grass area on east side of south carpark. Tree has been crown raised in the past. Several 10 cm diameter pruning wounds present. Pruning wounds look to be occluding. Dense epicormic in crown due to being topped at 2.5 m. Damage due to base of tree, likely due to regular grass maintenance.	No work currently needed.	20+	C2

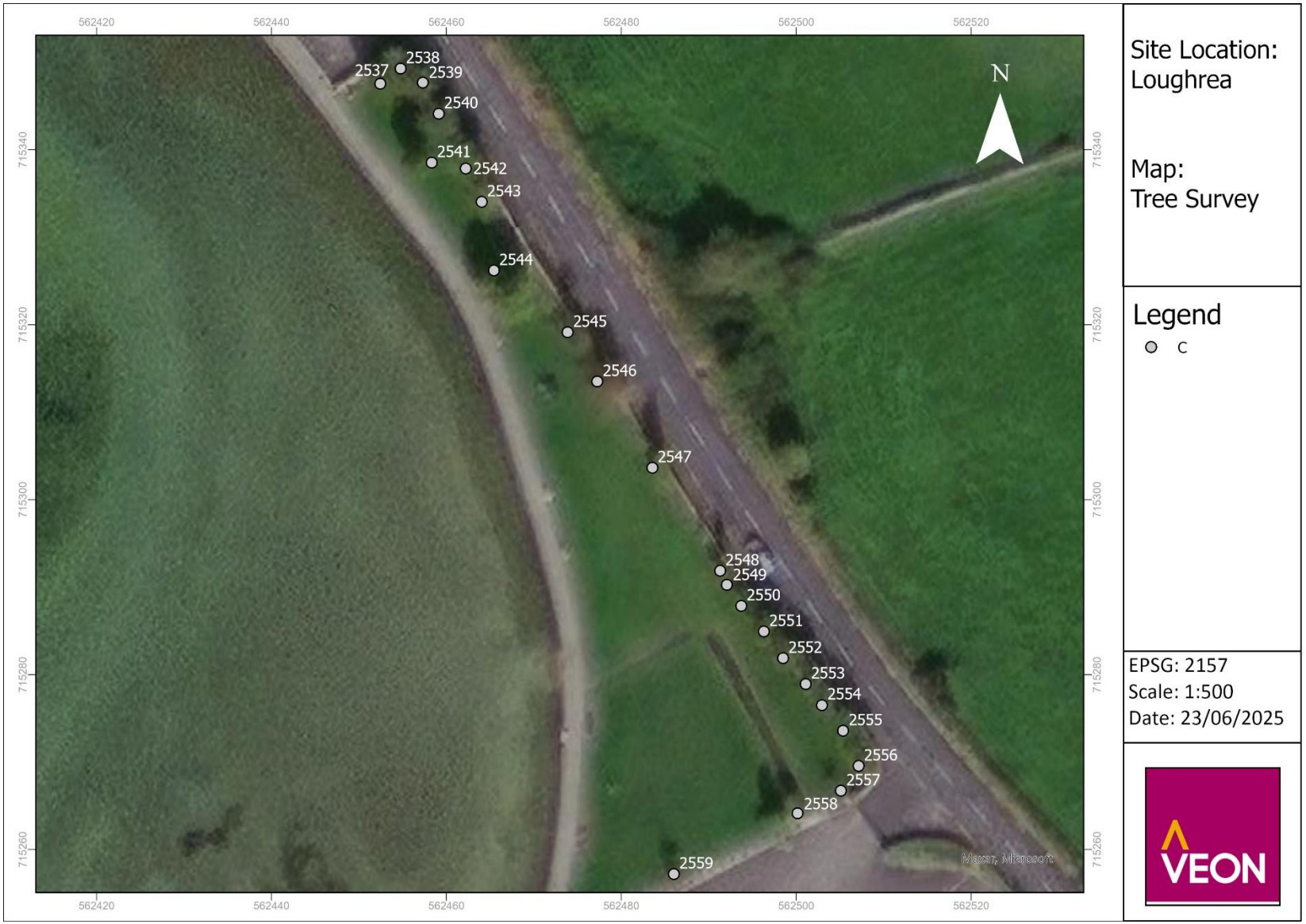
Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2592	**wild cherry** *Prunus avium*	Semi Mature	3	330	2	2	2	2	2	3	Poor	Poor	Tree growing grass area on east side of south carpark. Tree has been crown raised in the past. Tree has been poorly and severely pruned leaving large diameter wounds across the tree. 40 cm diameter stem to north is dead. Damage due to base of tree, likely due to regular grass maintenance.	Reviewer every 18 months for further decline	10+	C1
2593	**whitebeam** *Sorbus aria*	Semi Mature	4	160	2	2	2	2	2	2	Good	Good	Tree growing in a grass area on east side of south carpark. Tree has been crown raised in the past. Several 5 cm diameter pruning wounds present in lower portion of tree. Pruning wounds look to be occluding. Damage due to base of tree, likely due to regular grass maintenance.	No work currently needed.	20+	C2
2594	**hornbeam** *Carpinus betulus*	Semi Mature	4	170	2	2	2	2	2	2	Good	Good	Tree growing in a grass area on east side of south carpark. Tree has been crown raised in the past. Several 5cm diameter pruning wounds present in lower portion of tree. Pruning wounds look to be occluding. Damage due to base of tree,	No work currently needed.	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
													likely due to regular grass maintenance. Utility wire 2 m above crown, will restrict growth.			
2595	**hornbeam** *Carpinus betulus*	Semi Mature	4	180	2	2	2	2	2	2	Good	Good	Tree growing in a grass area on east side of south carpark. Tree has been crown raised in the past. Several 5 cm diameter pruning wounds present in lower portion of tree. Pruning wounds look to be occluding. Damage due to base of tree, likely due to regular grass maintenance. 5° lean to east. Utility wire 2 m above crown, will restrict growth.	No work currently needed.	20+	C2
2596	**hornbeam** *Carpinus betulus*	Semi Mature	4	190	2	2	3	2	2	2	Good	Good	Tree growing in a grass area on east side of south carpark. Tree has been crown raised in the past. Several 5 cm diameter pruning wounds present in lower portion of tree. Pruning wounds look to be occluding. Damage to base of tree, likely due to regular grass maintenance. Support post present. Utility wire 2 m above crown, will restrict growth.	Remove support post.	20+	C2

Tree Survey																
Tag No.	**Species**	**Age Class**	**Ht. m**	**Stem Diam mm**	**N m**	**E m**	**S m**	**W m**	**C. Ht m**	**RPA *r* m**	**Phys Cond**	**Struc Cond**	**Comments**	**Management Recommendations**	**LE years**	**Cat.**
2597	**hornbeam** *Carpinus betulus*	Semi Mature	4	180	2	2	2	2	2	2	Good	Good	Tree growing in a grass area on east side of south carpark. Tree has been crown raised in the past. Several 5 cm diameter pruning wounds present in lower portion of tree. Pruning wounds look to be occluding. Damage due to base of tree, likely due to regular grass maintenance.	No work currently required.	20+	C2

Appendix 2
Tree Survey Maps

Map 3 – Full site map

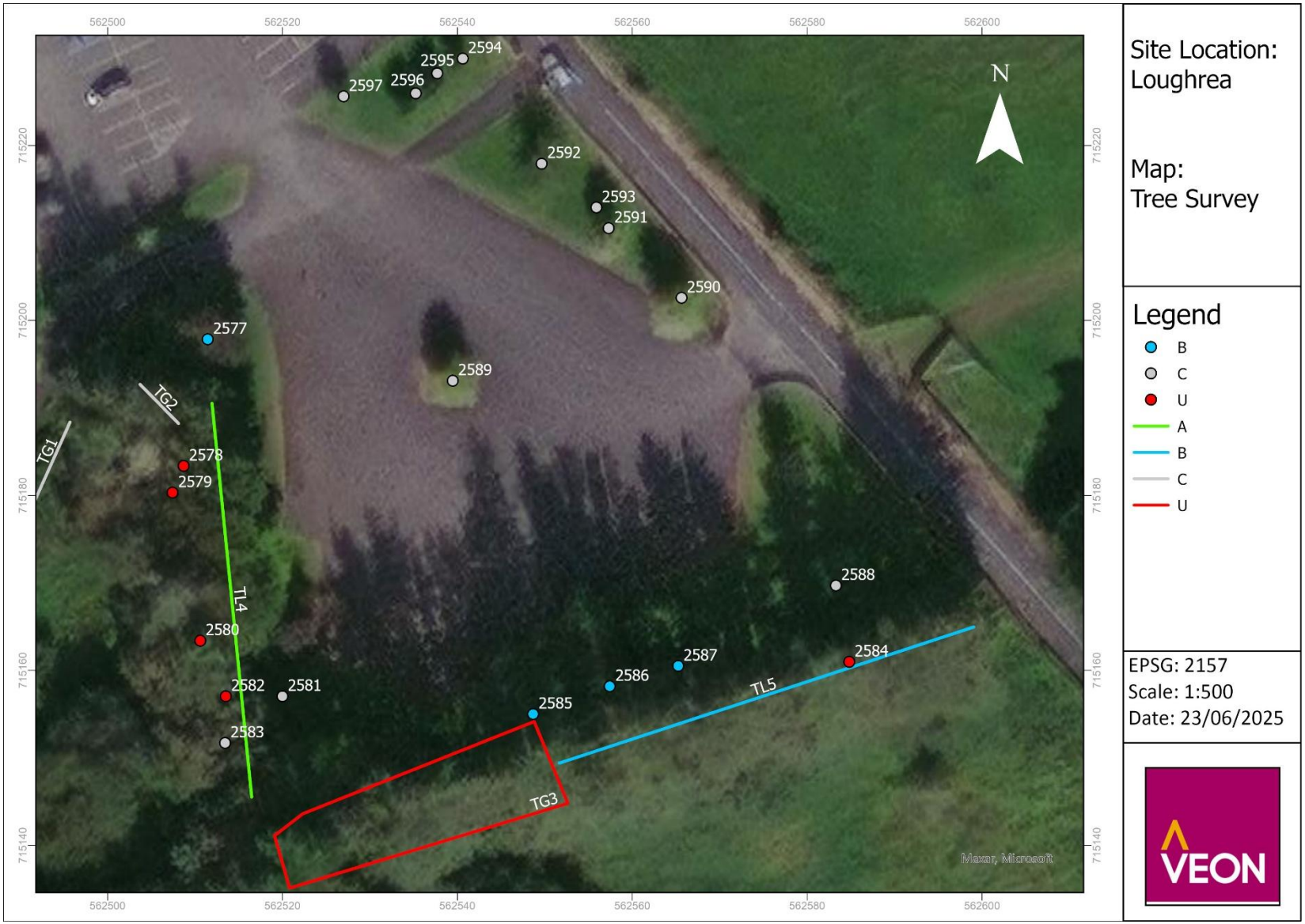


Map 4 – North corner of the survey site.

Map 5 - Middle of the survey site.

Map 6 - southwest corner of the survey site.

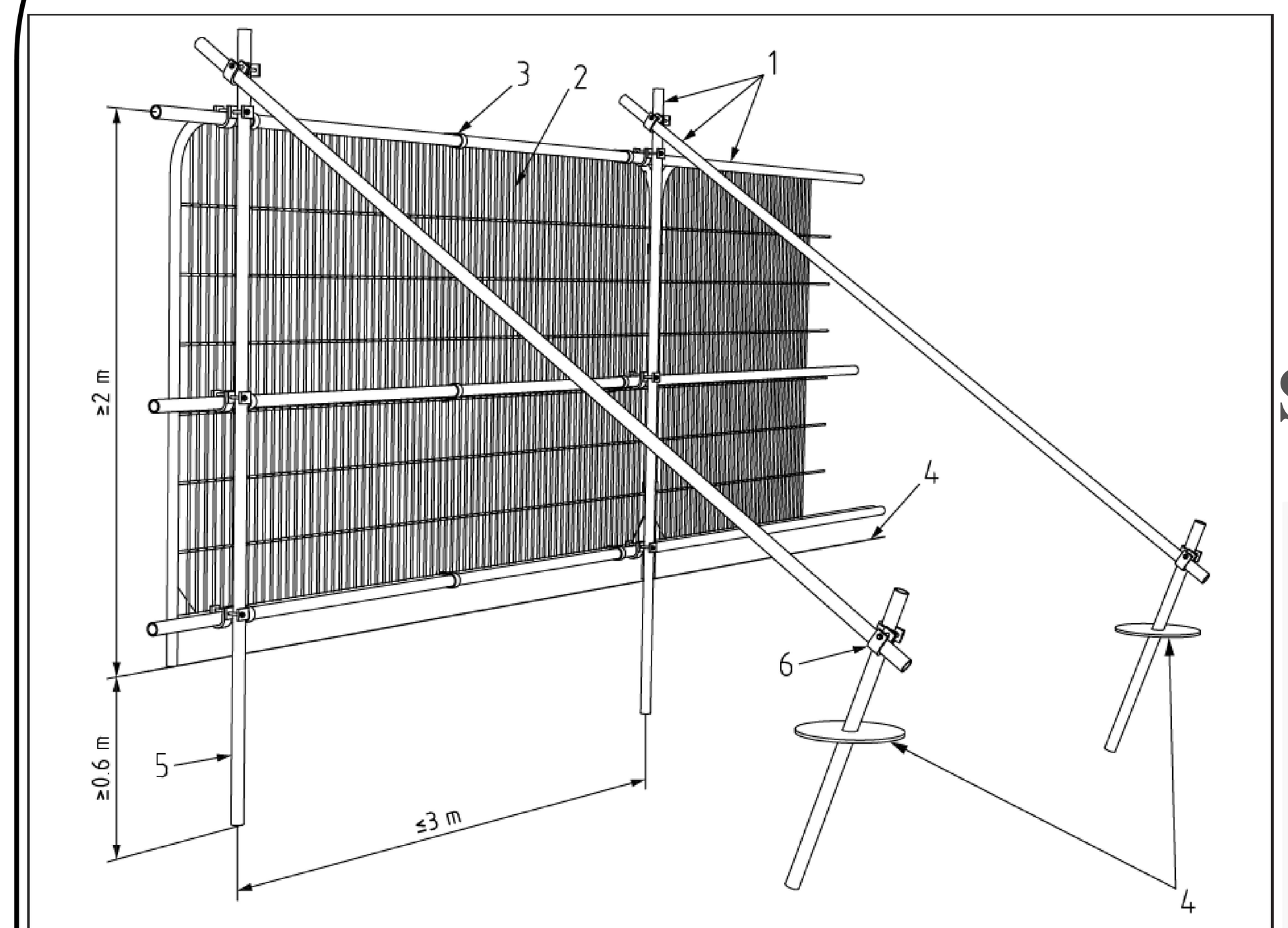
Map 7 – South of the survey site.



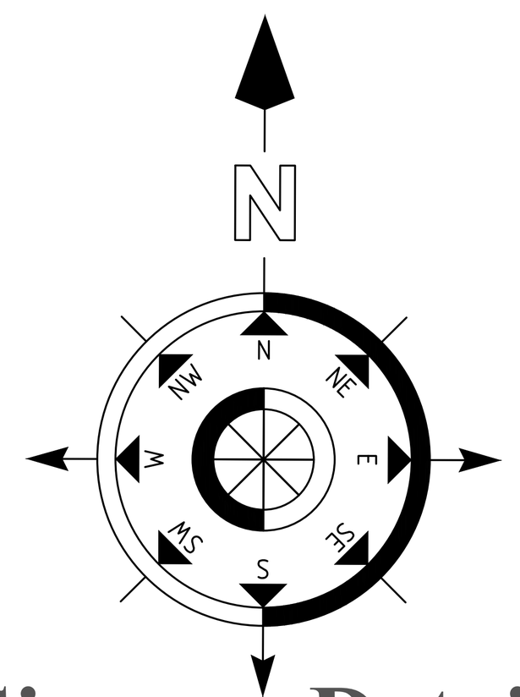
Map 8 - Southeast corner of the survey site.

Appendix 3
Tree Protection and Removal Plan

Tree Protection Detail



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps



Signage Detail

Tree protection fencing must be erected around the Construction Exclusion Zone (CEZ) to protect retained trees and any areas marked for supplementary planting. In some areas, site hoarding may be sufficient to act as protective fencing if the tree and its Root Protection Area (RPA) are positioned outside of the hoarding where there will be no construction activity. This must be discussed and agreed upon with the project arboriculturist before construction activity begins on site.

Where tree protection fencing is needed, it must be 2.3 metres high and constructed in accordance with figure 2 of BS 5837 2012 (see detail above), using vertical and horizontal scaffold bars, or similar, well-braced together with the verticals spaced out at a maximum of 3 metre centres. Onto this, weld mesh panels (herris fence panels) must be securely fixed with wire or scaffold clamps.

Signs must be attached to these fences warning people that this is a protective area and that the fencing must be maintained in good condition in accordance with the approved plans and drawings for this development.

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

The following must be adhered to in order to protect retained trees and CEZ's:

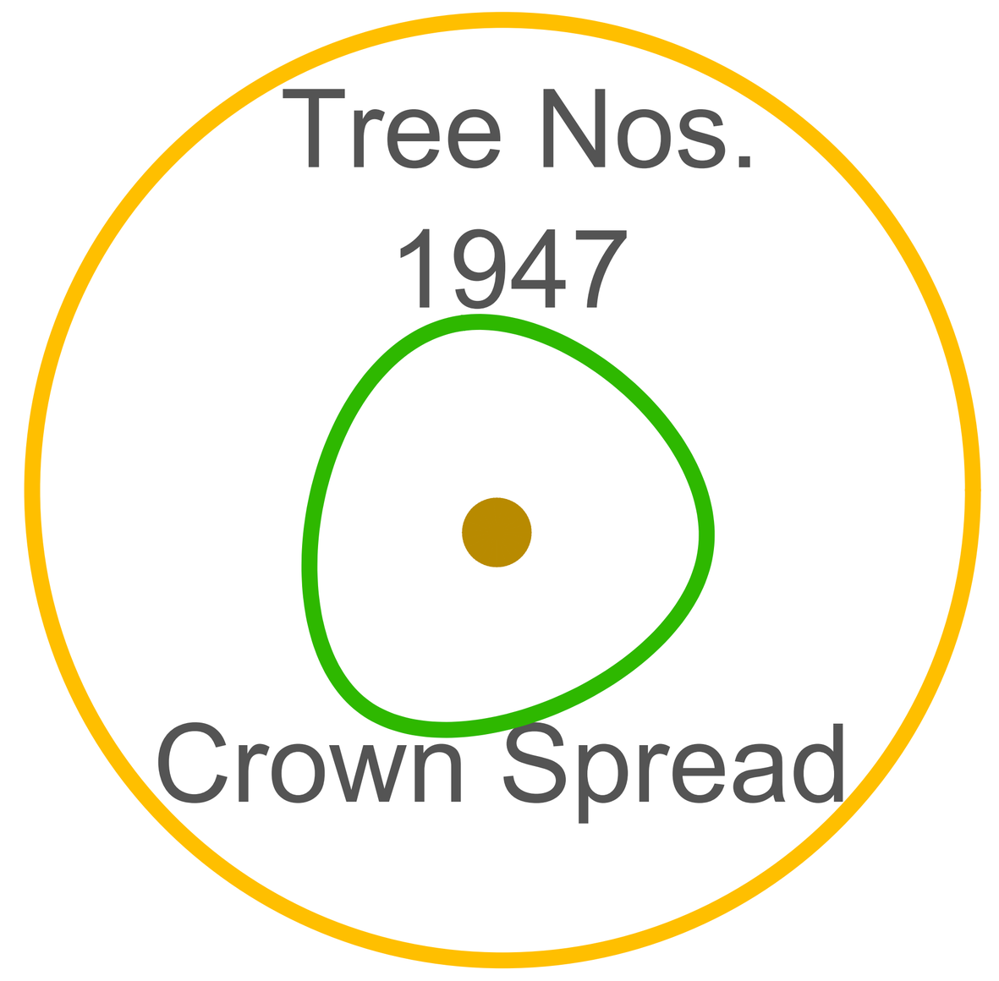
1. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, moving, or storing construction materials.
2. Protect root systems from ponding, eroding, or excessive wetting caused during construction operations.
3. Do not store construction materials, debris, or excavated material near trees or inside the CEZ. When excavating, place excavated material on opposite side of trench away from the tree or CEZ.
4. Do not permit vehicles or foot traffic within the CEZ; prevent soil compaction over root systems.
5. Do not allow fires near the CEZ or retained trees.
6. Do not attach notice boards, cables or other services to any part of a tree.
7. Do not use neighbouring trees as anchor points.
8. Do not use high machinery such as Tele-porters, cranes, or other equipment close to trees, to avoid damage to the crown or any other part of the tree.

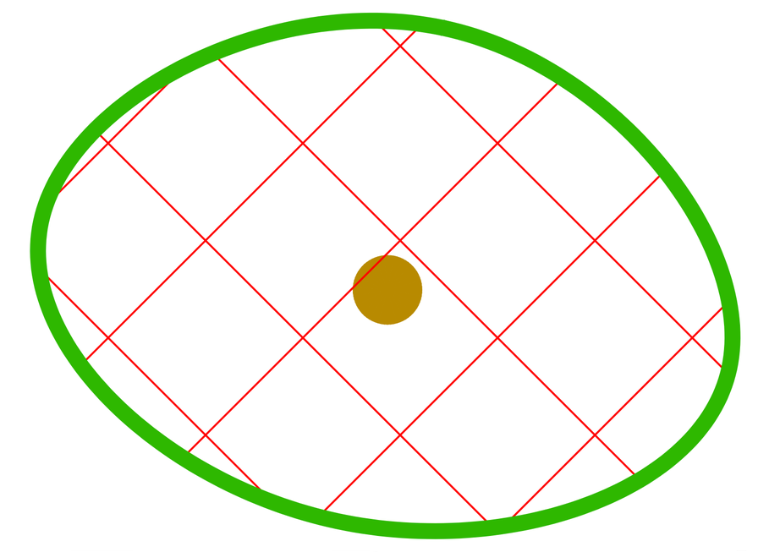
During the construction works the following is required:

1. The main contractor or site manager must brief all people working on site about the tree protection measures and the procedure if works must be carried out within the CEZ.
2. Storage of material, work yards and staff car parking must be identified on the the work drawings prior to the construction works starting, these will be positioned outside the CEZ as indicated.
3. The main contractor or site manager must check the tree protective fencing daily and carry out any repairs required to ensure they stay upright and secure.
4. The main contractor or site manager must liase with the project arboriculturist if works are to be carried out within the CEZ or near retained trees.
5. Any works that are to occur within the CEZ, such as landscaping, must be carried out manually, with no machinery allowed within the CEZ. Soil levels must not be lowered or raised with the CEZ as this affects rooting conditions. Recommendations in section 8 of BS 5837:2012 must be adhered to in relation to site works, landscape operations and management.
6. The protective fencing around the CEZ must stay in position until all the construction works are complete and are only to be removed following discussions and agreement with the project arboriculturist.

Legend

RPA

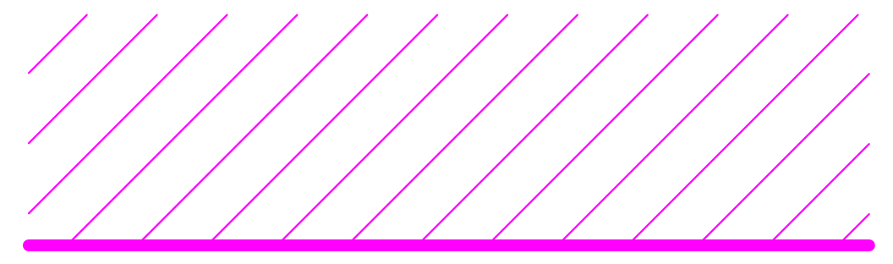




Tree Removal

Ground Protection

CEZ



Protective Fencing

Category U

Category A

Category B

Category C

Tree Layers Provided by:

VEON

1 Leopardstown, Business Centre, Ballyogan Road, Dublin 18, D18 DK64

Project name and address

Tree Protection and Removal Plan

The Long Point

Loughrea

Co. Galway

Annotated by	Sheet
EG & CD	A0
Date: 02-07-2025	Drawing No.: TPR-LP-01
Scale: 1:500	Revision No.: 1

For Discussion Purposes Only