Arborist Associates Ltd.

An Arboricultural Assessment of the Site Area at "The Gate Lodge" at Cabinteely Park, Dublin 18.

Prepared for: Dùn-Laoghaire Rathdown County Council

Prepared by: Felim Sheridan (F. Arbor.A, RFS Dip. Nat. Dip & NCH in Arboriculture)

Date: 28th June 2024

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Contents

1.0 Instructions.

1.1 I have been instructed by Dun Laoghaire Rathdown County Council to assess the site area at 'The Gate Lodge', at Cabinteely Park, Cabinteely, Dublin 18, and report on the following:

A - To assess the present condition of the tree vegetation within this site area. See 'Condition Tree Assessment Schedule' within **'Appendix 2'** of this report and 'Drawing Dwg No.CGL001' which has been prepared as a Tree Constraints Drawing for details.

B - To assess the impact of the proposed development layout on the tree vegetation located within the site area indicating those for removal and retention. See 'Section 5' of this report and 'Drawing No.CGL002' which has been prepared as an arboricultural impact assessment and tree protection plan.

C - To show the position of the tree protective fencing and other tree protection measures that will need to be put in place at the commencement of the works and be maintained in place until all construction works are complete. See 'Section 6.0' or our report and 'Drawing No.CGL002' for detail.

2.0 Report Limitations.

2.1 The inspection of the tree vegetation has been carried out from ground level only and is a preliminary report. It does not include climbing inspections or below ground investigations. Should a more detailed inspection be thought necessary on any tree/s, then this will be highlighted within my recommendations.

2.2 The assessment is based on what was visible at the time and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.

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

2.4 Before undertaking any work to these trees, it would be advisable to check whether or not there is 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). The 'Forestry and Wildlife Acts' will also need to be taken into consideration prior to carrying out any tree works and advice from an ecologist should be sought when planning to carry out any works.

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/category grade

3.2 Each tree included within this assessment has been marked with a small aluminum tag with a reference number that relates to the main condition report.

3.3 The inspection of the trees 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 (BS-4.5), and not in conjunction with any proposed development plans. In making this assessment, particular consideration was given to;

Arboricultural Value: An assessment of the trees 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 trees 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.

These would be seen as trees that have little or no potential either due to their physiological and/or structural condition and their removal would be seen necessary either now or in the short-term as the most appropriate management option. Due to the condition of these trees, they should not be considered a constraint on the design layout of the proposed development of this site area.

Any category 'U' trees identified within this site area have been shown on our drawings (Dwg Nos.CGL001 & CGL002) with a 'Red' donut around their trunk positions.

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

These would be seen as trees that have the potential to contribute to the tree cover of this area for the long term.

From our assessment of the tree vegetation on and surrounding this site area, none have been allocated to this category.

Category B - Trees of moderate quality/value with a minimum of 20 years life expectancy.

These would be seen as trees that have the potential to contribute to the tree cover of this area for the medium term.

Any category 'B' trees identified within this site area have been shown on our drawings (Dwg Nos.CGL001 & CGL002) with a 'Blue' donut around their trunk positions.

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

These trees would be seen as having the potential to provide tree cover for the short to medium term. As part of the future management, some of these would probably be removed for one reason or another. These trees should not be seen as a considerable constraint on the development of these lands, but should be considered for retention where viable.

Any category 'C' trees identified within the site area have been shown on our drawings (Dwg Nos.CGL001 & CGL002) with a 'Grey' donut around their trunk positions.

3.6 The trees have been plotted onto the attached drawing (Dwg Nos.CGL001) by a land survey company. This drawing has been developed as a 'Tree Constraints Plan' to aid the design team in the layout of the development and the tag numbers referred to in the condition tree report have been shown on this drawing along with their crown spreads and their retention category colour coded as recommended by BS 5837 2012. The constraint (Minimum Root Protection Area) for each tree has been shown with an 'Orange Circle' and all proposed development should be planned to be positioned outside those trees proposed for retention allowing for additional space for construction activities.

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is usually expressed as a radius in meters measured from the tree stem.

Any deviation in the RPA from the original circular plot takes account of the following factors whilst still providing adequate protection for the root system:

a) The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures, drainage ditches and underground apparatus);
b) Topography and drainage;
c) The soil type and structure;
d) The likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

4.0 Brief Site Description and Survey Findings

4.1 The site area around the 'Gate Lodge' at Cabinteely Park is made up of an overgrown former garden area to the west of the existing gate lodge building and a section of a linear tree belt which runs westwards inside the boundary wall with the public road. The site area is cordoned off from the public road to the north by a high stone rubble wall, to the south by the perimeter path around the park, to its east by the existing gate lodge building and park entrance and to the west by a linear tree belt.

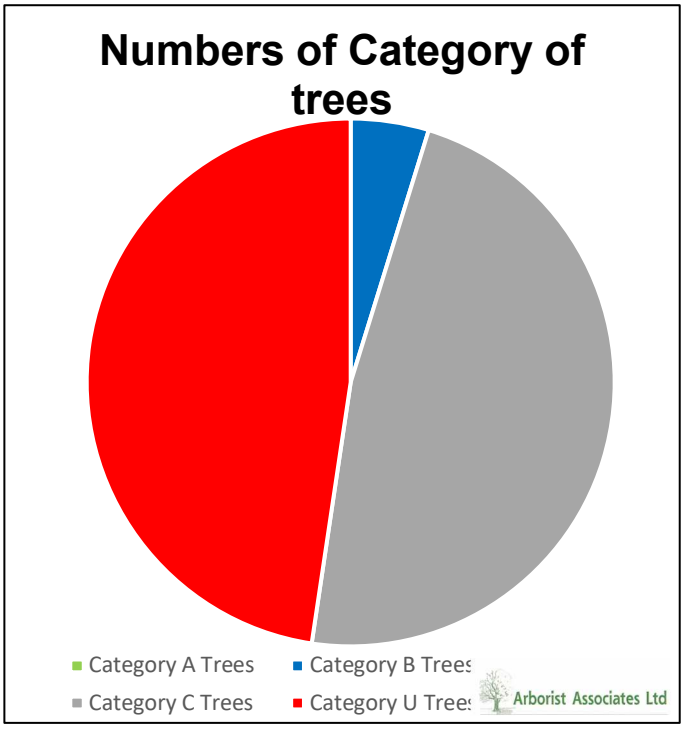
Figure 1: Shows the site area at 'The Gate Lodge' with the survey area outlined indicatively in red.

4.2 The bulk of the site area I suspect once formed the garden area of this gate lodge with the remnants of a few Apple trees remaining. The area is overgrown with scrub vegetation and self-seeded trees establishing due to lapsed management for a good number of years and as a result, the area is difficult to access. Along its southern boundary with the perimeter path around the park, a linear shrub border had been planted some years back to tidy up this area.

4.3 Within the overall site area, the trees have been tagged with the reference numbers 5177- 5200 inclusively giving a total of 24No.Trees. There is a mix of tree age classes with most surveyed being of an early mature to mature age class. The main tree species is Ash with some Sycamore, Elm and a large mature Beech. Much of the tree stock is of poor quality and many of the Ash trees are in decline and are showing infection by 'Ash Dieback' *(Hymenoscyphus fraxineus)* and the Elm by 'Dutch Elm Disease' (*Ophiostoma Ulmi)*.

The following table and pie chart give a breakdown of the category grading given to the trees as per BS5837 2012.

Category Grade	**Tree Nos.**
Category U **10 Trees**	**Tree Nos.** 5178, 5179, 5180, 5181, 5182, 5183, 5184, 5192, 5196 & 5197
Category A **0 Trees**	**Tree Nos.**
Category B **4 Trees**	**Tree Nos.** 5187, 5198, 5199 & 5200.
Category C **10 Trees**	**Tree Nos.** 5177, 5185, 5186, 5188, 5189, 5190, 5191, 5193, 5194 & 5195.
Total	**24 Trees**



Figures 2-4: The front of 'The Gate Lodge' and the rear garden area of the property.

5.0.0 Arboricultural Implication Study

5.1.0 Introduction

5.1.1 It is proposed to develop this site area at 'The Gate Lodge' at Cabinteely Park, Dublin 18 for new changing rooms facilities and it will be necessary to allow for infrastructural works.

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

5.1.3 On 'drawing No.CGL002', I have identified the tree vegetation to be removed to facilitate this proposed development and management with 'Red' crown spreads and those to be retained with a 'Green Hatched' crown spread.

The protective fencing has also been shown on this drawing using 'Orange Hatching'. These tree protection fences and other tree protection measures will need to be put in place at the start of the works and be maintained in place until all works are completed. This fencing is to protect the root zones and crown spreads of the trees and to ensure their successful integration into the completed development.

5.1.4 The comments made within this impact assessment study are based on my understanding of the proposed development and what is required to allow for its construction.

5.2.0 Design Rational

5.2.1 The current site layout has been finalized and modified based on the information provided in the initial condition tree assessment of the site area and the creation of the tree constraints plan (DWG. No.CGL001) to ensure that any impact on the surrounding tree vegetation has been kept to a minimum.

5.3.0 Tree Loss

5.3.1 To accommodate the proposed changing room facilities and as part of tree management in this area, the following trees are shown for removal on our tree protection plan (No.CGL002):

Category	Tree Identification Number
Category U 10 Trees	**Tree Nos.**5178, 5179, 5180, 5181, 5182, 5183, 5184, 5192, 5196 & 5197. From this list, tree Nos.5192, 5196 & 5197 are not directly affected by the proposed changing room layout but given their current condition and the change of use of this surrounding area, we are recommending their removal now as part of management.
Category A	No trees.
Category B	No Trees.
Category C 1 Tree	**Tree No.**5185.

The undergrowth within the footprint of the building area will need removal also which is predominantly Bramble with some ornamental shrubs on the southern boundary and within the surrounding tree belt to the west, the undergrowth bordering with this site area will need some trimming/tidying works to improve appearance and to help incorporate this area into the completed landscaped area.

The loss of the above listed tree vegetation is to be mitigated against with the planting of trees and shrubs as part of the landscaping of the completed development which will complement the development and its incorporation into the surrounding area. It will also help to provide good quality and sustainable long-term tree cover, and as this establishes and grows in size, it will be continuously mitigating any negative impacts created with the loss of the existing tree vegetation to facilitate the proposed development. See 'Landscape Architects Drawings' and 'Schedules' for detail.

As part of the general management of the tree belt to the west of this site area, this will need to be checked in order to remove/make safe large size dead/unstable growth that would pose a risk to paths and boundaries. In some areas, it would also benefit from light selective thinning to reduce the density to allow the better quality trees space to grow and develop and also to create space to allow for new tree planting to help improve diversity and to future proof the canopy cover for the future against impacts from diseases such as 'Ash Dieback' *(Hymenoscyphus fraxineus).* This selective thinning would see dead, diseased and poorly structured trees being removed in favour of good quality trees being retained and these works would be seen as part of good management practice, irrespective of the development of this area.

5.3.2 **In summary**, 11No. individually tagged trees are proposed for removal to facilitate the proposed development of this area for a new sports changing rooms facility. See **'Appendix 2'** of this report for full details on this vegetation.

The tree vegetation for removal is made up of the following category grades:

- **Category 'U'** – 10No. trees.
- **Category 'A'** – None.
- **Category 'B'** – None.
- **Category 'C'** – 1No. tree

5.4.0 Tree Retention

5.4.1 For the tree vegetation proposed for retention, all necessary mitigation measures will need to be put in place in order to prevent or reduce impact to its very minimum. Mitigation measures used will need to include the erection of protective fencing at the very start of the works, ground protection installation within root zones where fencing cannot be erected to enclose the entire root zones, monitoring of the site works by the project Arboriculturist throughout the construction process and the use of tree friendly techniques and products for the construction process.

5.4.2 **Main items for consideration during the proposed construction process:**

Item	Comments
Tree Pruning	As part of the initiating works, the crowns of some of the trees are to be pruned to remove dead/unstable growth, as well as the pruning of individual limbs/branches or entire crowns to reduce size due to structural weaknesses or to improve their juxtaposition within the built environment. A preliminary list of these works is given within the condition tree assessment in **'Appendix 2'** of this report and these are to be reviewed on site prior to being carried out. All tree felling and pruning works should be carried out by qualified and experienced tree surgeons *before* any construction work commences; all tree work should be in accordance with *BS3998 (2010) Tree Work – Recommendations.* For the stumps of trees that need to be removed, particularly those which are located within the root zone of trees being retained, these are to be ground out using a mechanical stump grinder taking care not to cause root damage to the trees being retained.
Tree Management	Within the proposed development, as is the current situation, trees will be positioned within close proximity to usable surfaces such as roads and footpaths. As a result, it will be necessary to continue to review the condition of these trees on a regular basis and to carry out any necessary remedial tree surgery works required to promote health and safety. The woodland belt located inside of the boundary wall is in need of some general management in the form of removing dead/unstable growth, Ivy management and the selective thinning of the trees in places to allow the better-quality trees which will form the final tree canopy cover the space to grow and develop. New tree planting should also form part of these management works to rejuvenate and future proof the tree canopy against disease.

Item	Comments
	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.
Tree Protection	Trees being retained will need to be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the 'Work Exclusion Zone' and sturdy protective fencing will need to be erected along the points identified in the Tree Protection Plan (Dwg No.CGL002) **prior** to any soil disturbance and excavation work starting on site. This is essential to prevent any root or branch damage to the retained trees. The type of tree protection fencing for each area is to be agreed with the project Arboriculturist prior to its erection and it needs to be suitable for the types of works that will occur within its vicinity. This fencing will need to be 2.3m high and constructed in a similar fashion as shown in figure 2 of BS 5837 2012 using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centres, and onto this weld mesh panels are to be securely fixed with wire or scaffold clamps. All weather notices need to be erected on the fences with words such as: "Tree Protection Fence — Keep Out". When the fencing has been erected, the construction work can commence. The fencing should be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work have finished and its removal is authorised by the project Arboriculturist.
Construction	It will be important that good housekeeping is in place at all times so that the site does not become congested. 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. Where workspace along by the protective fence lines is limited/ restricted, alternative work methods will need to be looked at so as to keep the work areas to their minimum in order to reduce the extent of soil and root damage occurring to the trees proposed for retention. See 'Section 6.2.3 of BS5837 2012' for detail on working within the RPA and ground protection. For light access works within the work exclusion zone, the installation of suitable ground protection in the form of scaffold boards, woodchip mulch or specialist ground protection mats/plates may be acceptable. These are to be reviewed with the project Arboriculturist and installed to their recommendations. See detail in **'Appendix 1'** of this report for

Item	Comments
	sample of ground protection for light weight construction works taken from 'BS 5837 2012'. Care should be taken when planning site operations to ensure that wide or tall loads or plant machinery with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Materials which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10m of a tree stem. Fires should not be lit in a position where their flames can extend to within 5 m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction. Notice boards, wires and such like should not be attached to any trees. Site offices, materials storage and contractor parking should all be outside the work exclusion zone.
Services	Services entering and leaving the site area are routed so they are located outside the root protection zones of the trees to be retained. This has been discussed with the design team in order to achieve this. 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 detailed 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 surrounding tree vegetation shown for retention. Any cabling for the lights along the paths where they come within the root zone of trees being retained will need to be installed in ducting within the buildup of these paths to ensure no soil or root damage is caused.
Boundary Treatments	The boundary treatments where required within the root zone of the tree vegetation being retained will need to be of a fence type structure where there will only be a need to dig small diameter holes for the uprights. These holes for the uprights are to be dug manually with no machinery allowed inside the root protection areas. Work zones within the root protection areas for these trees will need to be protected during the construction of the boundary fences by boarding as per Section 6.2.3 of BS 5837 2012.
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

Item	Comments
	moisture to the roots below. Recommendations of 'sections 8 of BS5837 2012' are to be adhered to during the landscaping within the RPA's of these trees.

5.5.0 Monitoring

5.5.1 Any construction works within close proximity to retained trees 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.

5.5.2 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.

5.5.3 Copies of the tree retention and protection plan (DWG No. CGL002) a copy of BS 5837(2012) and NJUG 4 (2007) should all be kept available on site during the construction works and all works are to be in accordance with these documents.

5.5.4 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 'Drawing DWG No.CGL002', for the position of the protective fencing and other mitigation measures.

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

Stage 1:

6.4.0 Pre-Construction Works

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

1. The client 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.

6.5.0 Site Meeting

6.5.1 Prior to any works commencing on site, it is necessary that a meeting be arranged between the project manager, site foremen, the project Arboriculturist and local authority to identify and finalize the trees for removal and the line of the protective fencing.

6.6.0 Tree Works

6.6.1 The client 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.

6.6.2 **Tree Removal -** Trees for removal are to be identified by the project Arboriculturist and the method of removing the stumps is to be carried out to the recommendations of the project Arboriculturist. The trees in the way of the works are to be removed in such a manner not to cause damage to those being retained. Where necessary to avoid damage to the trees to be retained, these are to be removed in sections by a tree surgeon (Arborist). Where necessary, the roots and stumps are to be dug out with a digger except where the stumps are located within the RPA (root protection area) of trees being retained. In this instance, the stumps are to be ground out with a mechanical stump grinder taking care not to cause damage to the roots of trees being retained.

6.6.3 **Remedial Tree Surgery Works -** The necessary remedial tree surgery works required to promote health and safety of the trees to be retained is to be carried out. A schedule of these works is to be produced by the project Arboriculturist taking into consideration the trees within their new built environment and prior to these works being carried out; they are to be agreed with the local authority.

6.7.0 Erection of the protective fencing

6.7.1 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 'DWG. No. CGL002'.

6.7.2 The fencing will need to be 2.3m high and constructed in accordance with 'figure 2 of BS 5837 2012' using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centres, and 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 No.CGL002' & **'Appendix 1'**.

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

6.7.4 **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.

Stage 2:

6.8.0 The Construction Works Stage

6.8.1 **Protective fencing -** During the course of the works, special attention must be paid to ensure that these tree protection measures are kept in place, in good order and 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 tree vegetation agreed. These mitigation measures will include the supervisions of these works by the project Arboriculturist.

The protective fencing and all other protection measures are 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.

6.8.2 **Excavations -** The excavation works are only to commence once the protective fence line and all other protection measures are in place.

The excavations in the vicinity of the tree vegetation being retained will need to be viewed on site once marked out on the ground with the project manager, site foreman and the project Arboriculturist in advance of excavation to determine the extent of the impact and the work space 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. In certain areas, it may be necessary to use an alternative method of excavating to prevent encroachment into the RPA of the trees to be retained and this may include such methods as retaining walls or similar.

No roots are to be severed by the construction works without prior approval by the project Arboriculturist. Where roots are encountered, the project Arboriculturist is to assess these prior to cutting and these are to be pruned back to appropriate pruning points beyond the excavation line. Where roots cannot be cut; alternative methods of construction will need to be considered. The excavated face is then to be covered with soil or with Hessian sacking to prevent further drying out and the death of root material. Where the Hessian sacking is used, it will be necessary to keep this moist especially during dry periods.

6.8.3 **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.

The ground within the RPA of the trees must be protected from damage as per the recommendations of **section 6.2.3** of BS5837 2012. See detail within **'Appendix 1'** on ground protection using boarding for pedestrian loading.

6.8.4 **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. Recommendations of sections 8 of BS5837 2012 must be adhered to during the landscaping within the RPA of the trees being retained.

6.9.0 Other items

6.9.1 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.

Stage 3:

6.10.0 Post Construction Works

6.10.1 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 this site area and is for the sole use of the above-named client and refers to only the tree vegetation 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.

Signed Felim Sheridan Date 28th June 2024

Felim Sheridan
F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture

Felim Sheridan's qualifications:
Fellow of the Arboricultural Association (F. Arbor. A), Professional diploma Arboriculture (RFS), National diploma Arboriculture (ND) and National certificate Horticulture (NCH).

Appendix 1

1.1 Sample of Temporary Tree Protection Fencing Detail.

1.2 Sample of Ground Protection within Root Zone.

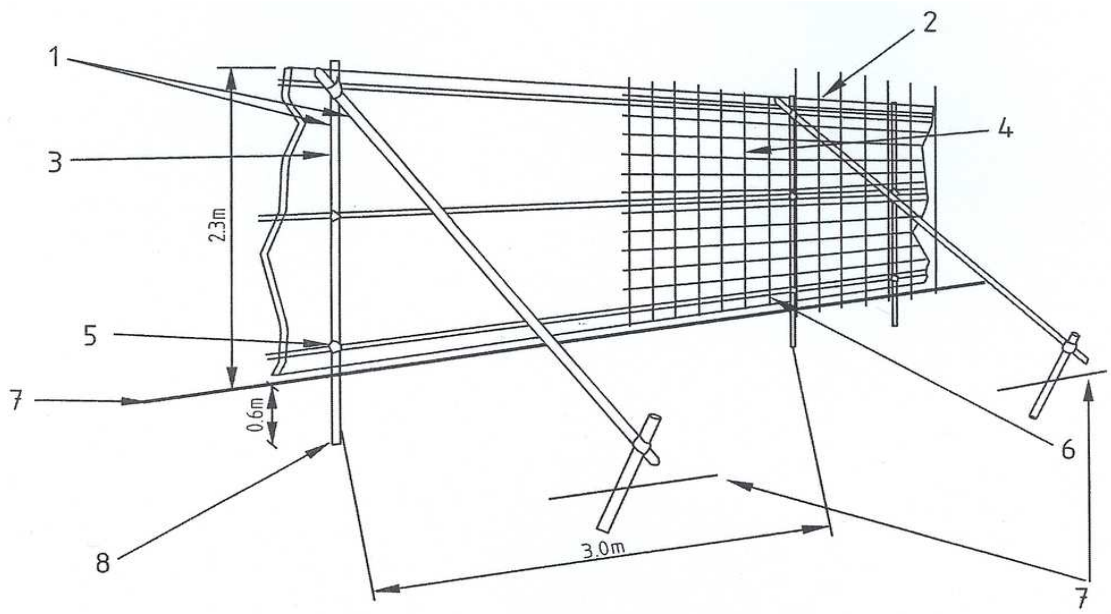
1.3 Sample of Trunk Protection

1.4 Sample of Toolbox Talk Sheet

1.5 Sample of Site Monitoring Sheet

Appendix 1.1

Protective Fence



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 2. – Protective fencing for RPA

Sample of signage to be placed on fence pannels.

Appendix 1.2 – Samples of ground protection within root zones

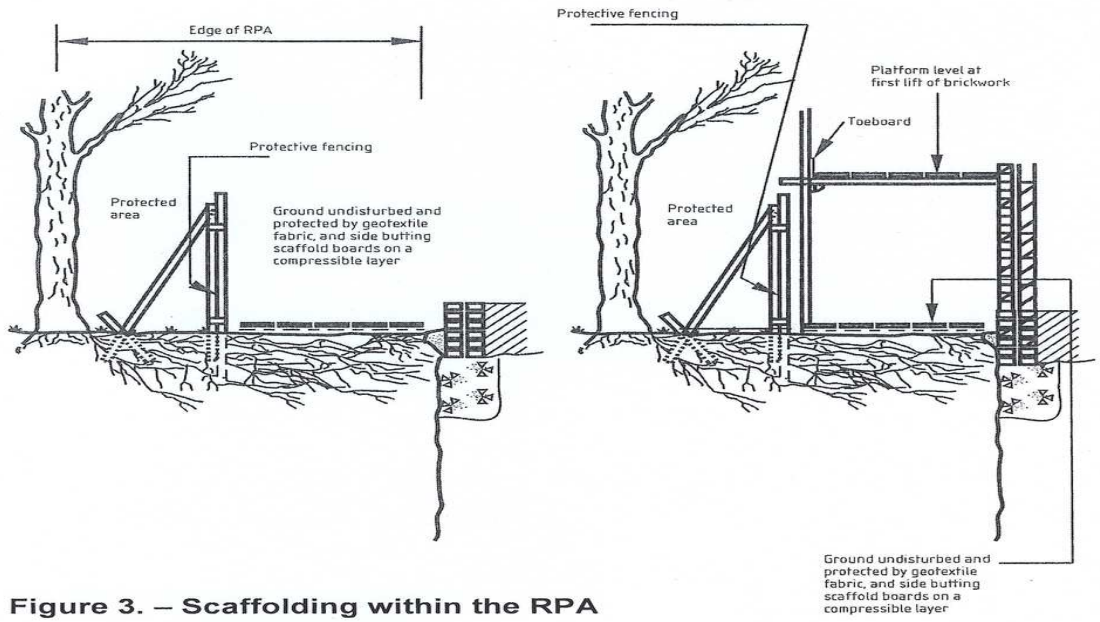
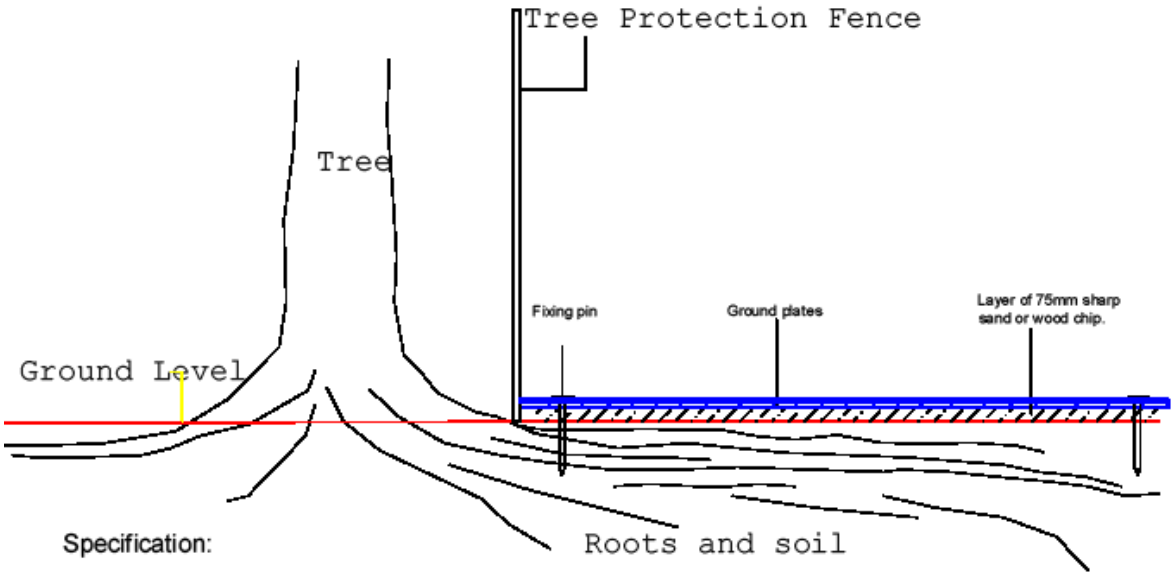


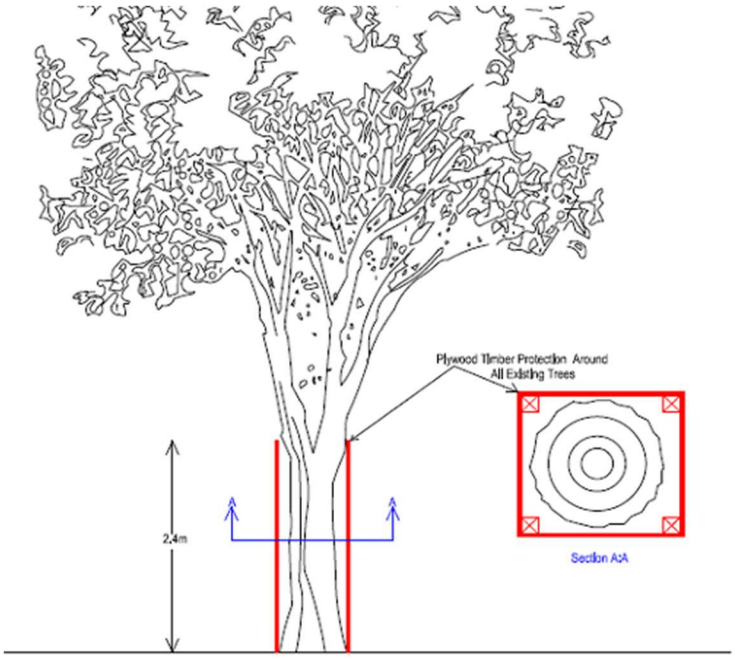
Figure 3. – Scaffolding within the RPA



Specification:

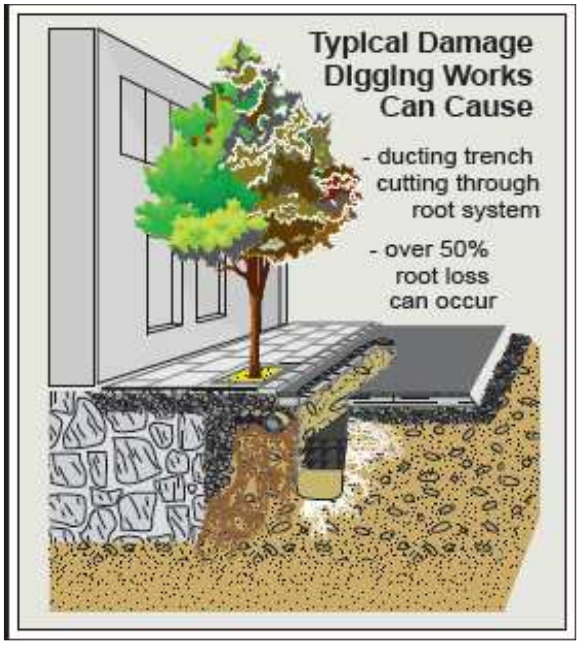
1. Lay min. 75m depth of sharp sand/wood chip over identified ground area
2. Lay side-butting scaffold boards/15mm poly propylene road plate over sand/wood chip
3. Fix ground protection cover into place with pins/pegs
4. Erect protection fence (where feasible).
5. Remove ground protection upon completion/landscaping only.

Appendix 1.3 – Sample of trunk protection.



Detail on individual trunk protection

Appendix 1.4 – Sample of Toolbox talk.



Do

- ✓ when excavations are to be carried out within 10m of a tree ask a foreman or site engineer for the correct procedures
- ✓ report any signs of trees roots to your foreman or site engineer
- ✓ always have the tree specialist on site when excavations are in close proximity to urban trees
- ✓ always use a vacuum extractor or air spade for excavations under or near urban trees even if the trees are located on the pavement
- ✓ cover any exposed tree roots with hessien matting and soak matting throughout the period of excavation
- ✓ backfill excavations near trees with similar soils that were originally excavated

Don't

- ✗ Dig near any trees without asking the foreman or site engineer for the correct procedures
- ✗ Use an digger/excavator or hand dig within 10m of a tree on the street
- ✗ Excavate near trees without having the tree specialist on site to monitor the works
- ✗ Leave trees roots uncovered or dried out

Appendix 1.5 – Sample of site monitoring sheet

Protected Tree Monitoring Form
Site Inspection Report

Zone:

Location:

Tree Group / Number

Tree Protection Checked By: **Date:**

Status of tree protection:

Remedial measures / comments:

Copied to:

Project Manager **Yes / No**

Project Manager's Arboricultural Consultant: **Yes / No**

Copied To Project Manager: **Yes / No**

Contact Name

Signed: **Date**

Appendix 2

Condition Tree Assessment

Site Area at ''The Gate Lodge", Cabinteely Park, Cabinteely Park, Dublin 18.

Date: 10th April 2024

Survey Notes

All codes referred to in this report are approximate and serve as a general guide only.

Reference to Numbers: The trees have metal tags attached and these correspond with the numbers in this report.

Reference to age class is as follows:

Young (Y): A tree, which has been planted in the last 10 years.

Semi Mature (SM): A tree that is less than 1/3 the expected height of the species in question.
Early Mature (EM): A tree, which is between a 1/3 and 2/3's the expected height of the species in question.
Mature (M): A tree that has reached the expected height of the species in question, but still increasing in size.
Over Mature(OM): A tree at the end of its life cycle and the crown is starting to break up and decrease in size.

Reference to Physiological, Structural Condition and other comments:

Physiological Condition

Good: A tree with no major defects, but possibly including some small defects.
Fair: A tree with some minor defects such as bark Wounds, isolated decay pockets or structure affected due to overcrowding.
Poor: A tree with more serious defects such as extensive deadwood, decay or defective to the point of being dangerous.

Structural condition and other comments –
This records noted visual defects and other information about the trees health and structure.

ULE – Useful Life Expectancy

This is based on an Arboricultural assessment of the tree and is estimated based of the findings noted at time. Trees still need to be reviewed on a regular basis, preferably annually.

Less than (<) 10 years remaining contribution
10 + years remaining contribution
20 + years remaining contribution
40 + years remaining contribution.

<u>Retention Categories</u>

The purpose of the tree categorization method is to identify the quality and value of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained should development occur.

It is carried out in accordance with section 4.5 (Tree Categorization Method) of BS 5837 2012.

Summary

Main categories

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

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

Sub categories

1 – Mainly Arboricultural Values
2 – Mainly Landscape values
3- Mainly Cultural and conservation value

Note: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation.

If a layout design places Category U trees in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer the recommendation to fell.

The terms 'Group, woodland or tree line' is intended to identify trees that form cohesive Arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally including for biodiversity (e.g. parkland or wood pasture), in respect to each of the three subcategories.

Reference to Crown spread, Height and Trunk Diameter:
This gives **a guide** to the area taken up by the tree.
Trunk diameter is the diameter of the main trunk taken at a height of 1.5m and is recorded in millimetres (mm).
Height records the overall height of the tree and is given in meters (m).
Crown Spread records the extent of the branches normally in a north, south, east and west direction from the base of the tree and is given in meters (m).
Clear crown height records the distance between the ground and the first branch form the base of the tree and is given in meters (m).

RPA – Root Protection Area

This is the minimum area around individual trees to be protected from disturbance during construction works; RPA is usually expressed as a radius in meters measured from the tree stem.
The Root Protection Area **(**RPA) is the minimum area around individual trees to be protected from disturbance during construction works.

For single-stem trees, the root protection area (RPA) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

For trees with more than one stem, one of the two calculation methods below should be used. The calculated RPA for each tree should be capped to 707 m2.

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{stem diameter } 1)2 + (\text{stem diameter } 2)2 \ldots + (\text{stem diameter } 5)2)}$$

b) For trees with more than five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{mean stem diameter})2 \times \text{number of stems})}$$

The RPA for each tree is plotted on the Tree Constraints Plan (DWG:NO: CGL:2005) any deviation in the RPA from the original circular plot takes account of the following factors whilst still providing adequate protection for the root system:

Annex D (normative)

Root protection area

The RPAs given in Table D.1 should be used for single stem trees and the equivalent resultant combined stem diameter for multi-stemmed trees.

Table D.1 **Root protection areas**

Single stem diameter mm	Radius of nominal circle m	RPA m^2	Single stem diameter mm	Radius of nominal circle m	RPA m^2
75	0.90	3	675	8.10	206
100	1.20	5	700	8.40	222
125	1.50	7	725	8.70	238
150	1.80	10	750	9.00	255
175	2.10	14	775	9.30	272
200	2.40	18	800	9.60	290
225	2.70	23	825	9.90	308
250	3.00	28	850	10.20	327
275	3.30	34	875	10.50	346
300	3.60	41	900	10.80	366
325	3.90	48	925	11.10	387
350	4.20	55	950	11.40	408
375	4.50	64	975	11.70	430
400	4.80	72	1 000	12.00	452
425	5.10	81	1 025	12.30	475
450	5.40	92	1 050	12.60	499
475	5.70	102	1 075	12.90	519
500	6.00	113	1 100	13.20	547
525	6.30	124	1 125	13.50	573
550	6.60	137	1 150	13.80	598
575	6.90	150	1 175	14.10	625
600	7.20	163	1 200	14.40	652
625	7.50	177	1 225	14.70	679
650	7.80	191	1 250+	15.00	707

NOTE These figures are derived from the calculations described in **4.6**.

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)				C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	ULE	Cat. Grade	RPA (radius) (m)
				N	S	E	W				**N**-north **S**-south **E**-east **W**- west **C-Ht.**-crown height, **Dia.**-diameter **Phys.**-physiological.	**ULE**-useful life expectancy **Cat.**-category, **A**-average			
		A condition assessment of the trees within the site area around ''The Gate Lodge'' at Cabinteely Park, Dublin 18.													
		The survey starts at the front of the 'Gate Lodge' and works in a clockwise direction to the rear of the property.													
T5177	**Cordyline** *Cordyline australis*	8.5	350, 190, 420	2	2	2	2	3	M	Fair/ Poor	Fair. It is growing at the front door of the house in an old planting bed. It is multi-stemmed from the base with some 'Dieback' evident.	Remove dead/unstable growth.	10+	C1	6.95
		The following trees are located within a linear tree belt which extends from the back of the gate lodge westwards along the inside of the boundary wall with the public road. The upper canopy is made up of tree species such as Ash and Beech with a dense undergrowth of Bramble and overgrown ornamental shrubs which makes access through this area difficult. As part of the generally tidying up of this area to improve its appearance, more ornamental shrubs have been added to this area particularly on the inside along the path and there are the remnants of old garden hedges along its southern and eastern boundaries, but these have been lost since the area has lain derelict and become overgrown. I suspect that the immediate area to the rear of the house was once a more formal garden area for the 'Gate Lodge'.										It would benefit from general tidying works to improve appearance and access.			
T5178	**Ash** *Fraxinus excelsior*	7	450	1	1	1	1	0	Mature	Poor	Poor. It is growing at the old pedestrian gate. It is heavily suppressed by Ivy and has no real crown structure. It is leaning over the buildings.	I would recommend its **removal** as part of management.	<10	U	5.4
T5179	**Ash** *Fraxinus excelsior*	14	280, 150, 260	2	1	2	2	4	Early Mature	Poor	Poor. It has possibly self-seeded in this area. It is multi-stemmed from low down with a heavy Ivy cover suppressing its crown and main stems. Its crown is showing some signs of decline due to 'Ash Dieback'.	I would recommend its **removal** as part of management. If retained for the short term monitor its condition due to 'Ash Dieback'.	<10	U	4.92

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)				C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	ULE	Cat. Grade	RPA (radius) (m)
				N	S	E	W				**N**-north **S**-south **E**-east **W**- west **C-Ht.**-crown height, **Dia.**-diameter **Phys.**-physiological.	**ULE**-useful life expectancy **Cat.**-category, **A**-average			
												Cut Ivy at ground level.			
T5180	**Ash** *Fraxinus excelsior*	13	600	5	4	6	5	6	Mature	Fair/ Poor	Poor. It is growing tight to the boundary wall with potential to cause structural damage to the boundary wall. It shows signs of decline within its crown, possibly from 'Ash Dieback'. It is multi-stemmed from circa 2m. Heavy Ivy cover on the lower stem is progressing into its crown. It has recently lost branches from storm damage.	I would recommend its **removal** as part of management.	<10	U	7.2
T5181	**Elm** *Ulmus glabra*	11	90, 100, 100, 150, 100, 90	5	4	4	4	0	Early Mature	Poor	Poor. It has self-seeded into the old garden area directly behind the gate lodge building and is of poor structural form. It is multi-stemmed from the base with some weak and dead stems. Its crown is showing signs of decline/dieback most likely due to 'Dutch Elm Disease'. Ivy is progressing into its crown	I would recommend its **removal** as part of management.	<10	U	3.14
T5182	**Ash** *Fraxinus excelsior*	11	100, 90, 120	2	1	2	2	2	Semi Mature	Poor	Poor It self-seeded here and consists of two stems, with a third further out growing up in the dense undergrowth. Its crown is in declining health due to 'Ash Dieback'. Ivy has suppressed the crown pushing it up for light.	I would recommend its **removal** as part of management.	<10	U	2.16
T5183	**Ash** *Fraxinus excelsior*	15	380	5	6	5	5	3	Mature	Fair/ Poor	Fair/Poor. It is growing on the edge of the canopy and would have self-seeded as the area lay unmanaged. Due to its location, it	Due to its proximity to the 'Gate Lodge' building I would	<10	U	4.56

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)				C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	ULE	Cat. Grade	RPA (radius) (m)
				N	S	E	W				**N**-north **S**-south **E**-east **W**- west **C-Ht.**-crown height, **Dia.**-diameter **Phys.**-physiological.	**ULE**-useful life expectancy **Cat.**-category, **A-**average			
											may cause issues for the building in the future. Ivy is progressing into its crown and crown is showing signs of infection by 'Ash Dieback'.	recommend its **removal** as part of management.			
T5184	**Ash** *Fraxinus excelsior*	14	550	5	5	5	5	1	Mature	Poor	Poor. It is growing on the canopy edge and it is at present heavily suppressed by Ivy and this has caused sections in its upper crown to die and break off. It shows signs of decline within its crown, possibly from 'Ash Dieback'.	Cut Ivy at ground level. Remove major dead/unstable growth. Monitor its condition as it is likely to need to be removed in the short term due to 'Ash Dieback'.	<10	U	6.6
T5185	**Downy Birch** *Betula pubescens*	9	170	1	2	1	1	2	Early Mature	Fair	Fair/Poor. Growing in the dense undergrowth, possibly from the old garden area. It has been heavily suppressed by Ivy and has struggled for light	Cut Ivy at ground level at present.	10+	C1	2.04
T5186	**Ash** *Fraxinus excelsior*	14	230, 300, 310	5	5	4	5	4	Mature	Fair/ Poor	Fair/ Poor. It is multi-stemmed from the base and is heavily suppressed by Ivy. It is growing centrally on the site area within the dense undergrowth. There is a decayed cavity at the stem union and its crown is showing decline due to 'Ash Dieback'.	Remove dead/unstable growth. Monitor its condition in particular for progression of 'Ash Dieback'. Cut Ivy at ground level, clear around the base to allow reinspection.	10+	C1	5.87
T5187	**Norway Maple** *Acer platanoides 'Crimson King'*	9	200	2	2	2	2	2.5	Early Mature	Fair/ Good	Fair. It is growing up through the dense undergrowth and has grown up with a	Cut Ivy at ground level. Tidy up undergrowth.	20+	B1	2.4

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)				C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	ULE	Cat. Grade	RPA (radius) (m)
				N	S	E	W				**N**-north **S**-south **E**-east **W**- west **C-Ht.**-crown height, **Dia.**-diameter **Phys.**-physiological.	**ULE**-useful life expectancy **Cat.**-category, **A**-average			
											slight lean. It subdivides into two stems at circa 2.5m and Ivy is progressing into its crown.				
T5188, 5189	**Apple** *Malus spp*	5	260	4	4	4	4	0	Mature	Fair/ Poor	Poor. They were once part of the domestic garden and are now heavily suppressed by the dense undergrowth of Bramble and Viburnum. They were once cut back to contain. They contain large amounts of dead wood with a heavy Ivy cover suppressing their lower crowns.	Cut back competing vegetation and cut Ivy at ground level. Carry out pruning to address shape of it crown and exposure. Remove dead/unstable growth.	10+	C1	3.12
T5190	**Ash** *Fraxinus excelsior*	14	650, 120, 50	4	6	5	5	2	Mature	Fair/ Poor	Fair/ Poor. It is growing in the dense undergrowth. It has a twin stem formation from the base. It has been heavily suppressed by Ivy and there is a large amount of deadwood in its crown and it is shows signs of decline most likely by 'Ash Dieback'.	Cut Ivy at ground level. Remove major deadwood and broken/damaged branches. Monitor its condition in particular for infection by 'Ash Dieback'	10+	C1	8.98
T5191	**Field Maple** *Acer campestre*	8	400	2	2	2	2	0	Early Mature	Fair	Fair/ Poor. It is growing in the former garden. It has heavy undergrowth around its base and dense undergrowth. Its crown has been heavily reduced a number of times in the past. There are decay pockets at these points. Ivy and Bramble are progressing into its crown.	Cut Ivy at ground level, clear around the base to allow reinspection.	10-20	C1	4.8

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)				C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	ULE	Cat. Grade	RPA (radius) (m)
				N	S	E	W				**N**-north **S**-south **E**-east **W**- west **C-Ht.**-crown height, **Dia.**-diameter **Phys.**-physiological.	**ULE**-useful life expectancy **Cat.**-category, **A**-average			
T5192	**Beech** *Fagus sylvatica*	20	850	6	6	6	6	2.5	Mature	Poor	Poor. It is a large mature tree showing evident signs of decline. It is heavily suppressed by Ivy and has signs of bark necrosis with the fungus 'kretzschamaria duesta' present around its base. There is large amounts of deadwood along its main stem and into its crown.	I would recommend its **removal** as part of management.	<10	U	10.2
T5193 & 5194	**Ash** *Fraxinus excelsior*	18	350, 200, 550	3	2	2	2	3	Early Mature	Fair Poor	Poor. They are heavily suppressed by Ivy and some large limbs have broken off into the undergrowth. They have grown away from T5192 for light further affecting their structure.	Remove dead and unstable growth. Monitor their condition for infection by 'Ash Dieback'. They may need to be removed in the short term as part of management. Cut Ivy at ground level.	10+	C2	8.18
T5195	**Ash** *Fraxinus excelsior*	13	220	1	1	1	1	2	Early Mature	Fair/ Poor	Poor. It is self-seeded in the dense undergrowth. It has been suppressed by Ivy and grown up tall for light. It has a slight lean and poor crown formation with deadwood throughout.	Cut Ivy, allow to die off and revaluate	10+	C2	2.64
T5196	**Ash** *Fraxinus excelsior*	11	350	4	4	2	4	2	Mature	Fair Poor	Poor. It has been heavily suppressed by Ivy and has an asymmetrical crown due to overcrowding from Tree No. T5197 with deadwood throughout. It shows signs of decline due to 'Ash Dieback'.	Monitor its condition in particular for progression of 'Ash Dieback'. It may need to be removed in the short term at present. Cut Ivy at ground level, clear	<10	U	4.2

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)				C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	ULE	Cat. Grade	RPA (radius) (m)
				N	S	E	W				**N**-north **S**-south **E**-east **W**- west **C-Ht.**-crown height, **Dia.**-diameter **Phys.**-physiological.	**ULE**-useful life expectancy **Cat.**-category, **A-**average			
												around the base to allow re-inspection.			
T5197	**Beech** *Fagus sylvatica*	19	750	4	4	4	4	2.5	Mature	Fair/ Poor	Poor. A mature size tree growing up over the surrounding vegetation. It has dense undergrowth around its base and Ivy cover-up along the main stem and this has limited some stem union inspections. There is deadwood along the main stem and within the crown with decline evident. It is infected at its base by the Fungus "Kretzschmaria Deusta" and internal decay is evident.	I would recommend its **removal** as part of management.	<10	U	9
T5198, 5199 & 5200.	**Austrian Pine** *Pinus nigra*	A23	A780	A5	A 5	A 5	A 5	A5	Mature	Fair/ Good	Fair/Good. They are growing up as part of an overall group of Pine and are prominent trees in the treescape of this area. They have received some minor past maintenance in particular to remove lower deadwood and T5198 has a large scaffold limb low down as the main trunk.	Remove any new dead/unstable growth and reduce weight on the scaffold limb on Tree No. 5198 extending north east by 1-2m.	20+	B1/ B2	9.4
Notes:															