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Document Register

Project – Phase 2 Knockrabo Development, Mount Annville Road, Goatstown, Dublin 14.

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Tree Constraints Plan	KB-P2-001	A1	1:500
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An Arboricultural Assessment of the Tree Vegetation on the Site Area for 'Phase 2' of the Knockrabo Development, Mount Annville Road, Goatstown, Dublin 14.

Prepared for: Knockrabo Investments DAC (Planning Applicant)

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

Date: 26th October 2021

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Summary

The site area is made up of part of the formal grounds of “Cedarmount” and a small part of the adjoining site area known as “Knockrabo Lands” which have been developed for a permitted residential development. They initially comprised of two separate properties that had been incorporated into one when these grounds were used as the “Bank of Ireland Sports Grounds” and have since been divided up again into two properties. The grounds around “Knockrabo” had been left derelict for many years and the grounds around “Cedarmount” were developed as a private residence with formal grounds and these have also been left derelict in recent years.

A planning permission has been granted on this site area under planning reference D17A/1124 and the bulk of the trees that had been highlighted for removal under this planning permission have been removed in preparation of the commencement of that development.

Following our review of the tree vegetation retained within the site area, 37No. Trees have been recorded along with two hedges numbered numerically. The following gives a breakdown of their category grading based on our review of their physiological and structural condition as per BS5837 2012.

- Category ‘U’ – 7No. Trees
- Category ‘A’ – 8No. Trees
- Category ‘B’ – 9No. Trees
- Category ‘C’ – 13No. Trees plus two hedges.

The trees have been plotted onto the attached drawing (DWG No.KB-P2-001) by a land survey company and their positions are assumed accurate. This drawing has been developed as a constraints drawing 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’.

The current proposal is to develop this site area with a larger density of residential units using a similar footprint of development as the current live planning permission (Ref: D17A/1124). This proposed site layout has been generated in consultation with the projects design team which have worked closely to retain a substantial number of the better quality existing trees on site and this will be strengthened with new tree, shrub and hedge planting using a mix of tree species including native species within the completed landscaped development. Engineering requirements for drainage and utilities have also been integrated into the overall site area while being mindful of the required root zones around the trees being retained.

On the accompany drawing (DWG. No.KB-P2-002), I have marked the trees for retention with ‘Green Hatched’ crown spreads and those for removal either directly as a result of the development layout, condition or as part of the most appropriate management with ‘Red Hatched’ crown spreads. I have also shown on this drawing the line of the protective fencing that needs to be erected at the very start of the works and be

maintained in place throughout the construction works period around those trees to be retained.

In summary, from the 37No.Trees within the site area, 16 (43.2%) are being shown for removal to accommodate the proposed development or as part of active management and this is made up of a mix of tree species, age classes and sizes with many being of a small size having been planted in more recent years.

This is broken down into the following category grades:

- 4No. category 'U' Trees.
- 3No. category 'A' Trees.
- 1No. category 'B' Tree.
- 8No. category 'C' Trees plus 2No. Hedges.

To help mitigate the loss of trees from this area as a result of the proposed development layout or condition and to improve the diversity and continuity of trees on these grounds, new tree, shrub and hedge planting using a variety of species and sizes including extra heavy standards are to be used in the landscaping of these grounds as part of the completion of this development. See landscape architects drawings and schedule for details.

The remaining tree vegetation within this site area is proposed for retention and incorporation into the completed development. On drawing No.KB-P2002, I have shown the required work exclusion zone around the tree vegetation to be retained with 'Orange Hatching'. These areas are to be fenced off from the site area using strong robust fencing and this is to be retained in place until the development is complete and these areas are incorporated into the finished landscaped development.

It will be important that these tree protection measures are put in place at the very start of the works prior to machinery coming on site and are maintained throughout the construction project to ensure that the tree vegetation which is proposed to be retained is done so successfully. These measures have been highlighted within my impact assessment and tree protection strategy and it is important that they are implemented.

The key issues for the client or project manager regarding tree protection are as follows:

- The appointment of a consultant Arboriculturist for the duration of the project.
- The establishment of tree protection/mitigation measures.
- Monitoring of tree protection and mitigation measures.
- The adherence of the tree protection measures by all staff and sub-contractors on site.
- Supervision of works within the vicinity of trees to be retained by the project Arboriculturist.
- Post construction assessment of retained trees by the project Arboriculturist and the implementation of the necessary measures required to promote the health of these trees and safety towards the end users of this finished development.

1.0 Instructions

- 1.1 I have been instructed by “Knockrabo Investments DAC” (planning applicant) to assess the tree vegetation located within the site area for ‘Phase 2’ of the “Knockrabo Development”, Mount Anville Road, Dublin 14 and to report on the following:
- A - To assess the present condition of the trees within this site area. See ‘Appendix 2’ and drawing No.KB-P2-001 which has been developed as a constraints plan for detail.
 - B - To assess the impact of the proposed development layout on the trees located within the site area indicating those for removal and retention. See ‘Section 5.0’ of this report and ‘Drawing No.KB-P2-002’ for detail.
 - C - To show on a drawing the position of the line of protective fencing that is to be erected around the trees to be retained at the very start of the works and be maintained until all construction works are complete.

2.0 Report Limitations

- 2.1 The inspection of these trees has been carried out from ground level only, is a preliminary report and does not include climbing inspections, internal investigations of the timber or below ground investigations. The assessment is based on what was visible at the time of the inspection and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.
- 2.2 This report only relates to factors apparent at the time of the inspection; as a result, further monitoring is imperative if potential problems/hazards are to be avoided. The recommendations within this report are valid for a 12 month period only, unless otherwise stated.
- 2.3 Before undertaking any work to these trees, it would be advisable to check whether any planning or tree preservation controls are in operation, if they are it will be necessary to obtain consent before undertaking any works (pruning or felling).

3.0 Survey Data Collection and Methodology

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

- Tree Number (metal tags attached to each tree).

- Tree species both common and botanical.
 - Dimensions (Trunk diameter, height, crown spread and crown clearance).
 - Age Class
 - Physiological Condition
 - Structural Condition
 - Preliminary Recommendations
 - Estimated remaining contribution within their present environment
 - Retention category
- 3.2 Each tree included within this assessment has either been marked previously with a small aluminum tag with a reference number or where no tag reference number was present /visible, they have been numbered numerically.
- 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 affects 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.

Any category 'U' trees within this site area have been identified on our drawings (Nos.KB-P2-001 & KB-P2-002) with a 'Red' donut around their trunk positions. 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.

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 these grounds for the long-term and consists of trees of all age classes from semi-mature to mature.

Any category 'A' trees within this site area have been identified on our drawings (Nos.KB-P2-001 & KB-P2-002) with a 'Green' donut around their trunk positions.

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 these grounds for the medium term and consists of trees of all age classes from semi-mature to mature.

Any category 'B' trees have been identified on our drawings (Nos.KB-P2-001 & KB-P2-002) 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. This category consists of trees of all age classes from young to mature. These trees should not be seen as a considerable constraint on the development of these lands, but should be considered for retention where viable.

The category 'C' trees within this site area have been identified on our drawings (Nos.KB-P2-001 & KB-P2-002) with a 'Grey' donut around their trunk positions.

- 3.6 The trees have been plotted onto the attached drawing (DWG No.KB-P2-001) by a land survey company and their positions are assumed accurate. This drawing has been developed as a constraints drawing 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 metres 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 Summary of Survey Findings

- 4.1 The site area is made up of part of the formal grounds of "Cedarmount" and a small part of the adjoining site area known as "Knockrabo Lands" which have been developed for a permitted residential development. They initially comprised of two separate properties that had been incorporated into one when these grounds were used as the "Bank of Ireland Sports Grounds" and have since been divided up again into two properties. The grounds around "Knockrabo" had been left derelict for many years and the grounds around "Cedarmount" were developed as a private residence with formal grounds and these have also been left derelict in recent years.
- 4.2 The site area slopes generally uniform and gentle except at the extreme northern end of the site where the land falls away towards the 'Eastern Bypass' reservation. It is adjoined to the north by other lands originally belonging to this property that have been set aside for a road reservation and further north of this again, the lands are being developed for another residential scheme. To the south it is adjoined by the existing 'Mount Annville Road and cordoned off from this by a stone wall', to the east by the remaining grounds of 'Knockrabo' which have been developed and to the west by a neighbouring residential house and a plot of land set aside for allotments.
- 4.3 This site area is located within a mature, suburban area on lands with a zoning of 'A' within the County Development Plan which has a stated objective to 'Protect and Preserve Trees, Woodland and Hedges'.
- 4.4 The grounds of 'Cedarmount' had been maintained formally up until recent years and had open lawn areas with the bulk of the trees being located around its perimeter. There is a mix of tree species present from those that formed part of the original planting on these grounds which include species such as Horse

Chestnut, Ash, Sycamore, Beech, Oak and Monterey Cypress to those that have been added as part of landscaping of these grounds in the last twenty or so years particularly along the eastern boundary separating it from the 'Knockrabo' lands. A diverse mix of tree species have been used in this landscape planting which includes a number of Wellingtonia, Larch and Cedar trees which are in keeping with the tree species used in the original planting layout. The bulk of these trees would appear to have been planted as either extra heavy standards or large semi- mature trees and some have struggled to establish with a number of them failing and having to be removed. The bulk of those remaining would appear to be establishing well and have the potential to form part of the long-term tree cover on these grounds.

- 4.5 A planning permission has been granted on this site area under planning reference D17A/1124 and the bulk of the trees that had been highlighted for removal under this planning permission have been removed in preparation of the commencement of that development.

The following table identifies the trees that have been removed as per the above approved planning permission, trees that were highlighted for removal but are still present and trees that were shown for retention but have been removed/lost for one reason or another.

Status	Tree No.	Total
Shown for removal and have since been removed under planning reference D17A/1124	Tree Nos. 0650, 0651, 0652, 0653, 0654, 0655, 0667, 0668, 0669, 0670, 0671, 0672, 0673, 0674, 0675, 0676, 0677, 0686, 0689, 0690, 0691, 0492, 0709, 0719, 0720, 0721, 0736, 0746, 0747, 0748, 0749, 0750, 0751, 0752, 0753, 0754, 0755, 0756, 0757, 0758, 0759, 0760, 0761, 0762, 0763, 0764, 0766, 0767, 0769, 0770, 0771, 0772, 0773, 0774, 0775, 0776, 0777, 0779, 0780, 0781, 0782, 0783, 0784, 0785, 0786, 0787, 0788, 0789, 0790, 0791, 0792, 0793, 0794, 0795, 0796, 0797, 0798, 0799, 0800, 0801, 0803, 0804, 0806 & 0807.	84
Shown for removal under planning reference D17A/1124 but are still present.	Tree No. 0657, 0660, 0722, 0723, 0693, 0708, 0710, 0711, 0745, 0765, 0768 & 0489	12
Additional trees that have either been removed or fallen and been cleared up.	Tree Nos. 0658, 0491, 0734 & 0778	4

- 4.6 Following our review of the existing tree vegetation within the sites red line boundary, 37No. trees have been recorded along with two hedges numbered numerically. The following table gives a breakdown of their category grading based on our review of their physiological and structural condition as per BS5837 2012.

Category Grade	No. of trees
Category U 7 trees	Tree Nos. 0693, 0492, 0739, 0740, 0741, 0489& 0490.
Category A 8 trees	Tree No. 0710, 0711, 0734, 0491, 0735, 0738, 0743 & 0802
Category B 9 trees	Tree Nos. 0692, 0695, 0712, 0713, 0714, 0715, 0744, 0745 & 0996
Category C 13 trees +	Tree Nos. 0694, 0707, 0708, 0716, 0737, 0742, 0765, 0804, 0805, Tree No.1, Tree No.2, Tree No.3 & Tree No.4
2 hedges	Hedge Nos. 1 & 2
Total	37 Trees + 2 Hedges

5.0.0 Arboricultural Implication Study

5.1.0 Introduction

- 5.1.1 There is a current live granted planning permission on this site area, (Planning reference D17A/1124) and in preparation for the commencement of this development, the bulk of the trees that had been highlighted for removal to facilitate this have been removed. The current proposal is to develop this site area with a larger density of units using a similar footprint of development as the current live planning permission.
- 5.1.2 The current proposed site layout has been generated in consultation with the projects design team which have worked closely to retain a substantial number of the better quality existing trees on site and this will be strengthened with new tree, shrub and hedge planting using a mix of tree species including native species within the completed landscaped development. Engineering requirements for drainage and utilities have also been integrated into the overall site while being mindful of the required root zones around the trees being retained.
- 5.1.3 This section of my report is designed to assess the impact of the proposed development layout on the existing tree vegetation on this site area and to look at the necessary measures that will need to be undertaken to help retain the trees shown for retention free from adverse impacts for the duration of the construction period.
- 5.1.4 On the accompany drawing (DWG. No.KB-P2-002), I have marked the trees for retention with 'Hatched Green' crown spreads and those for removal either directly as a result of the proposed development layout, condition or as part of the most appropriate management with 'Red Hatched' crown spreads.
- 5.1.5 I have also shown on this drawing using 'Orange Hatching' the position of the protective fencing that needs to be erected at the very start of the works and be maintained in place throughout the construction works period around those trees to be retained.

5.2.0 Impact on Tree Vegetation

5.2.1 The following is a list of the trees for removal either due to condition/management or due to the proposed development layout:

Reason for Removal	Tree No.	Category Grade
Being removed directly due to condition as part of management.	<p>Tree Nos. 0693, 0739, 0740 & 0741 These trees are in poor condition physiologically and/or structurally with limited remaining life expectancy and removal is being recommended as part of active management.</p>	<p>U (4No. Trees)</p>
Being removed directly due to the development layout.	<p>Tree Nos. 0710, 0711 & 0802. These are young trees planted as part of more recent landscaping with long life potential. Two of these trees (Nos.0710 & 0711) where highlighted for removal under the current live planning permission, D17A/1124.</p> <p>Tree No. 0745 This tree had been highlighted for removal under the current live planning permission, D17A/1124.</p> <p>Tree Nos. 0707, 0708, 0765, 0804, Tree No.1, Tree No.2, Tree No.3 & Tree No.4.</p> <p>Hedge Nos.1 & 2.</p> <p>All of the above trees were highlighted for removal in the current live planning permission, D17A/1124. Tree Nos.0708 & 0742 have been downgraded from a category grade of 'B' to 'C' and tree No.0741 downgraded from a category 'C' to 'U' due to deterioration in their condition. Tree Nos.1-4 had not been identified individually previously, but had been included as part of hedge No.2 for removal.</p>	<p>A1 (3No. trees)</p> <p>B1 (1No. tree)</p> <p>C1 (8No. Trees)</p> <p>C2 (2No. hedges)</p>

5.2.2 Breakdown of Trees for Removal:

From the 37No. trees surveyed within the site area, 16 (43.2%) are being shown for removal to accommodate the current proposed development or as part of

active management and this is made up of a mix of tree species, age classes and sizes with many being of a small size having been planted in more recent years.

This is broken down into the following category grades:

- 4No. category 'U' trees.
- 3No. category 'A' trees.
- 1No. category 'B' tree.
- 8No. category 'C' trees plus 2No. hedges.

5.2.3 All efforts have been made to retain as much of the tree and shrub vegetation around the site area that is important to its treescape and sylvan character. The loss of the above list of trees will have minimal impact on the overall treescape and sylvan character of this area as the bulk of the trees requiring removal to facilitate the proposed development are of a small size, many of which had been planted in more recent years as part of a landscaping project when 'Cedarmount House' was separated from the 'Knockrabo' lands and refurbished as a private residential home.

To help mitigate the loss of tree vegetation from this area as a result of the proposed development layout; condition and to improve the diversity and continuity of trees on these grounds, new tree, shrub and hedge planting using a variety of species and sizes including extra heavy standards (35-40 cm girth) are to be used in the landscaping of these grounds once the development is completed. See landscape architects drawings and schedules for details.

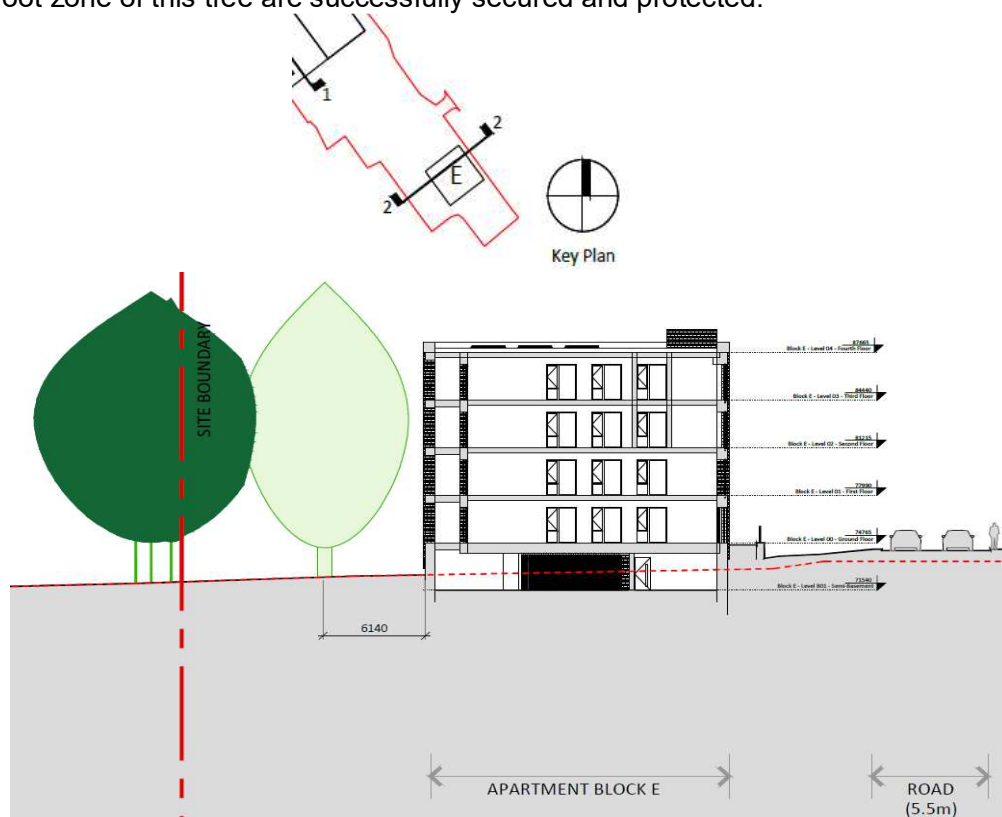
5.2.4 The majority of the large prominent mature trees that are important to the treescape of these grounds or the greater area are being retained within open areas within this development and will continue to be an asset to the treescape of this area for the future.

For those trees 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 include the erection of protective fencing at the very start of the works, monitoring of the works by the project Arboriculturist throughout the construction process and the use of tree friendly techniques and products for the construction process.

For the most part, the trees are being retained within open spaces around the proposed development and will be easily incorporated into these open spaces with no impact from the works. It will be important that the root zones of these trees as shown on our tree protection plan are cordoned off at the commencement of the construction works by strong sturdy protective fencing as shown in the sample of such fencing on our tree protection plan and within appendix 1 of this report. Landscaping within the root zone of the trees will need to be kept simple with minimal hard landscaping and planting within these root zones.

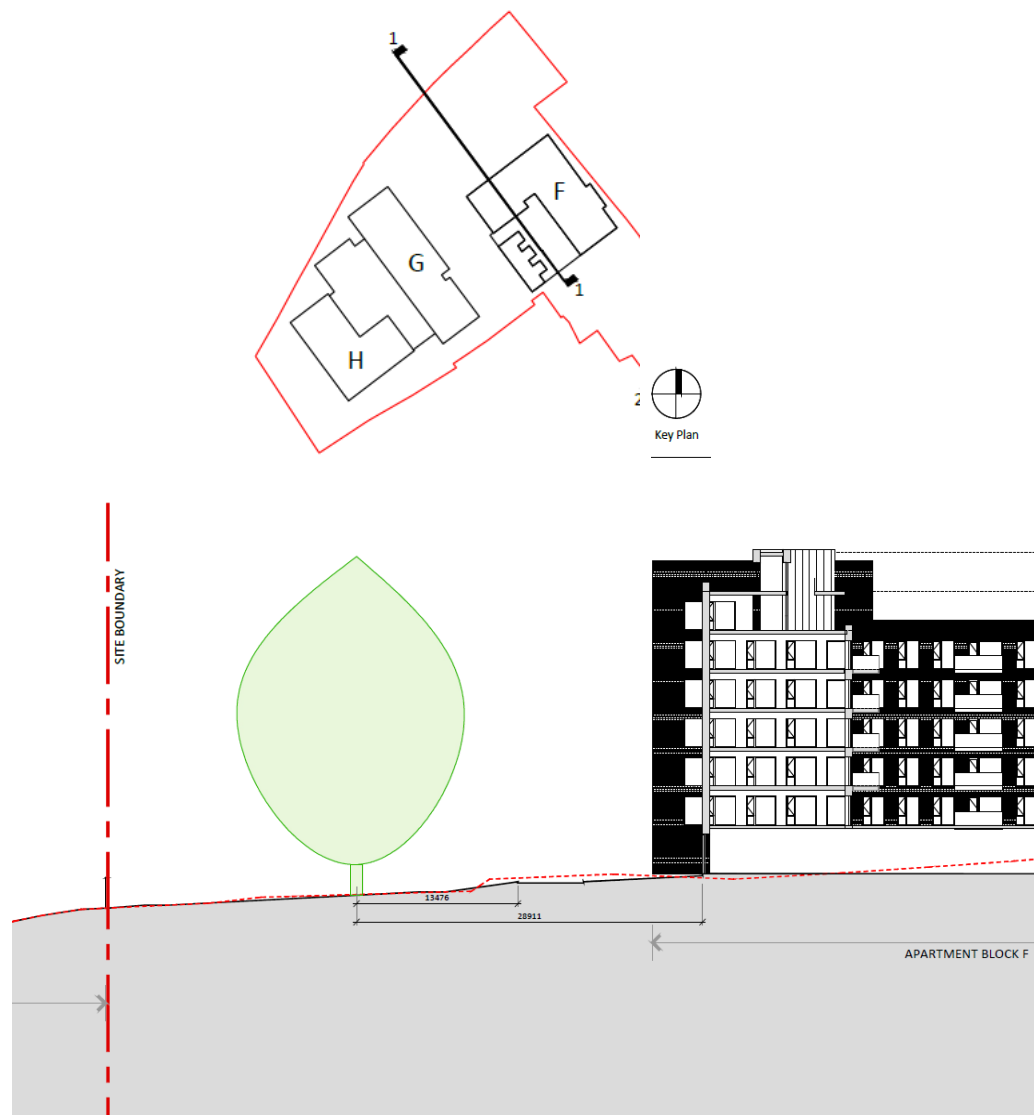
The following two trees will be located in close proximity to the main construction works:

Tree No.0715 is a mature Ash (*Fraxinus excelsior*) which is being retained in close proximity to the proposed apartment block 'E' will have the corner of the basement and building positioned in its calculated root zone on its south-eastern side, but this encroachment is not expected to have a negative impact on this tree's health and its ability to be retained. The excavation for the basement towards the tree is to be kept to its minimum with minimal battering back of the excavated face if roots are encountered and it may also be necessary to look at piling as a means to reduce the extent of the excavation into the root zone of this tree. All works on the basement and the building of Block E will need to work away from this tree and outside its remaining root zone. If any access is required for working on the building façade within the remaining root zone of this tree, then ground protection to the recommendations of 'Section 6 of BS5837 2012' will need to be put in place for the duration of these works and this is to be fit for purpose to protect the underlying ground from damage. The construction process around this tree will need to be discussed with the building contractor pre-commencement to review how the basement will be excavated and built and so that a detailed building method statement can be prepared by the building contractor to ensure that the necessary tree protection measures can be put in place. It will also be important that these works are monitored by the project Arboriculturist during construction to ensure that the root protection area and the root zone of this tree are successfully secured and protected.



Section east to west through the block 'E' prepared by project architects showing the relationship between the building & Tree No.0715 shown in light green

Tree No.0996 is a large mature Monterey Cypress (*Cupressus macrocarpa*) located along the northern side of the site area. This tree is being retained on an open space and all construction works including services have been positioned to be located outside its root zone. Tree protection will need to be erected at the commencement of the works around this tree and be retained in place for the duration of the construction works and the existing ground levels are to be incorporated into the completed landscaped grounds without changes that could result in soil and root damage.



Section running north to south through block 'F' prepared by the project architects showing the finished levels around Tree No.0996.

5.2.5 Main areas for consideration during the proposed development/ construction works are:

Item	Comments
Tree Pruning	<p>As part of the initiating works, the crowns of some of the trees are to be pruned to remove dead/unstable growth, 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.</p> <p>All tree felling and pruning work will need to be carried out by qualified and experienced tree surgery firm <i>before</i> any construction work commences and all tree works are to be in accordance with <i>BS3998 (2010) Tree Work – Recommendations</i>.</p> <p>All trees for removal will need identified by the project arborist and to be felled to stumps. All stumps in particular those which are located within the root zone of trees being retained are to be ground out using a mechanical stump grinder taking care not to cause root damage to the trees being retained.</p> <p>To abate concerns over safety, the necessary remedial tree surgery works required to promote health and safety will need to be carried out by a competent tree surgery firm. It will also be necessary for the trees health and safety to be reviewed by a suitably qualified Arboriculturist on a regular basis preferably ever 12 months and the necessary remedial tree surgery works carried out when required.</p>
Tree Protection	<p>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.</p> <p>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.KB-P2-002) 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 British Standard BS5837: <i>Trees in relation to design, demolition and construction (2012)</i> specifies appropriate fencing, see 'Appendix 1' for details.</p> <p>The fencing will need to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see 'Appendix 1' for detail) using vertical and horizontal scaffold bars well braced</p>

Item	Comments
	<p>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.</p> <p>All weather notices will need to be erected on the fences with words such as: "Tree Protection Fence — Keep Out".</p> <p>When the fencing has been put in place, then 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 authorized by the project Arboriculturist.</p>
Construction	<p>It will be important that good housekeeping is in place at all times so that the site does not become congested.</p> <p>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.</p> <p>Where work space between the works area and 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 of trees.</p> <p>Care will need to be taken when planning site operations to ensure that wide or tall loads or plant 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.</p> <p>Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, cannot be discharged within 10m of a tree stem.</p> <p>Fires are not to 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.</p> <p>Notice boards, wires and such like are not to be attached to any trees. Site offices, material storage and contractor parking are to be located outside the work exclusion zones of the tree and hedge vegetation being retained.</p>
Services	<p>Services entering and leaving the site area are routed so they run outside the work exclusion zones (fenced off areas) of the trees being retained. There is sufficient space on the site to allow this to occur and in consultation with the project engineers a satisfactory juxtaposition has been achieved. See project engineer's drawings for detail for service routes.</p>

Item	Comments
	<p>Prior to the installation of any services, these are to be marked out on site for review by the project Arboriculturist and a detail method statement is to be prepared by the installation contractor in conjunction with the project Arboriculturist on how these services are to be installed while providing protection to the tree vegetation shown for retention.</p>
Landscaping	<p>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.</p> <p>All soft and hard landscaping within the RPA of the trees to be retained are to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 are to be adhered to during the landscaping within the RPA's of these trees.</p> <p>The following are the main areas where landscaping is proposed within the root protection area of the trees being retained:</p> <ul style="list-style-type: none"> • Grass seeding will require the preparation of the ground. This should be planned in advance of the finishing landscaping of the development as it will take time to implement. The existing vegetation is to be strimmed off tight to ground level and left to sprout again. Then it is to be sprayed off with an appropriate herbicide to kill off the regrowth. Any loose material is to be removed manually and a thin layer of good quality top soil (50-100mm) is to be spread out over the area to create a level surface and a seed bed for the grass. No machinery is to be allowed into the root zone of the trees during these works and the ground for barrow routes should be protected by boarding. • Some paths run through the RPA of trees to be retained. Where these paths encroach into the RPA of trees, they will need to be laid above the existing ground levels prepared in advance similar as the area for grass seeding. To help create a stable surface, 100mm CellWeb should be laid on the existing ground, filled with a 20-40mm clean angular stone and the desired surface laid on this. See 'Section 6.8 of this report for further detail on installing a 'No Dig' path taking on board the product supplier's guidance and the advice of the project

Item	Comments
	engineers.
Boundary Treatments	<p>Along the southern (road side) boundary, the existing wall is to be made good where defective. To accommodate access in order to carry out these works, it will be necessary in places to carry out some cutting back of the tree and shrub vegetation. This should be kept to the minimum and should not have any negative impact on the treescape of this area. Where screening is weak or is weakened by this pruning, new tree and shrub planting can be added as mitigation.</p> <p>Some of the new proposed boundary treatments come within the RPA of the trees to be retained and where this occurs, these will need to be of a fence/rail type structure where there will only be a need to excavate small diameter holes for the uprights. To accommodate these works, it will be necessary for the pruning of the undergrowth in particular and in some instances the lower crowns of trees to facilitate these fences/railings and their erection. Again this pruning will need to be kept to a minimum and will not impact on the trees.</p> <p>For the boundary fences/ failings where they run through the root zone of trees small diameter holes will need to be dug 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 of 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.</p>

5.3.0 Monitoring

- 5.3.1 Any construction works in 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.
- 5.3.2 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.
- 5.3.3 Copies of the tree retention and protection plan (DWG No. KB-P2-002) a copy of BS 5837(2012) and NJUG 4 (2007) should all be kept available on site during development. All works are to be in accordance with these documents.

- 5.3.4 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 contractor/site manager on how the trees to be retained are 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 trees proposed for retention. See drawing DWG No. KB-P2-002, for the position of the protective fencing and other mitigation measures.
- 6.3 The protection of the vegetation shown for retention within this proposed development is divided into three main sections starting with the preconstruction stage right through to post construction and the reassessment of this retained vegetation.

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 developer or main contractor needs to appoint an Arboriculturist for the duration of the project. The Arboriculturist is to make regular site visits to ensure that the tree protection measures are in place and adhered to.
 2. The main contractors and all sub-contractors work force are to be briefed on the tree protection and ensure that these measures are to be kept in place throughout the construction period.
 3. All personnel are to adhere to the recommendations of the appointed Arboriculturist.
 4. Any issues in relation to the trees shown for retention must be discussed with the appointed project Arboriculturist and the necessary mitigation measures put in place without delay and prior to the works being carried out.

6.5.0 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 landscape architect, the project Arboriculturist and local authority to identify and finalize the vegetation 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 development layout 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.KB-P2-002.
- 6.7.2 Where it is expected that there will be a high concentration of construction works, the fencing will need to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see fencing detail 1 within 'Appendix 1') 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.
- 6.7.3 Signs need to be attached to these fences warning people to 'keep out'. See detail within drawing No.KB-P2-002 & Appendix 1.
- 6.7.4 Once the protective fence line is erected, then the main construction works can commence on site.
- 6.7.5 **Storage of Material, Work Yards and staff car parking** - These areas must be identified on the work drawings prior to the construction works starting. These must be positioned outside the root protection areas around the trees being retained.

6.8.0 Ground Protection Installation for Pathways and Working Areas

- 6.8.1 The ground protection is to take the form of a product such as 'CellWeb' and this will need to be installed in the following manner under the guidance of the project Arboriculturist and engineer:

Step 1 - The existing ground cover vegetation (e.g. grass/weeds) if necessary is to be killed off using an appropriate herbicide (see Pesticides Handbook [15]). Herbicides that can leach through the soil, e.g. products containing sodium chlorate, are not be used.

The soil surface is not to be excavated to establish a sub base for the finished surfaces.

Loose organic matter, woody vegetation and/or turf are to be removed carefully using hand tools.

If there is a delay in installing the surface following clearing, the soil surface once prepared is to be covered immediately either with hessian sacking or plastic to prevent the surface drying out until the new surface is installed.

Step 2 – Place the geotextile separation filtration layer over the prepared ground surface. Use a Fibertex F4M non-woven geotextile with dry joints overlapping by 300mm.

Step 3 – Place constraints along the edges to contain the fill material. These can be of such material as treated timber or railway sleepers.

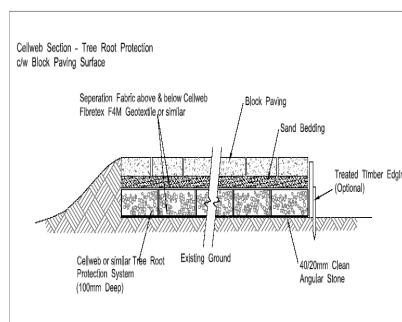
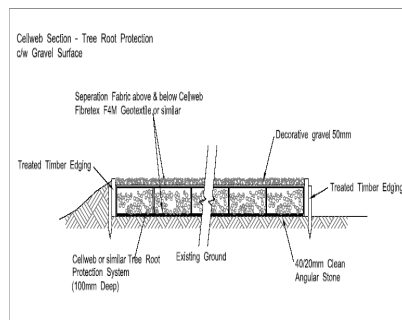
Step 4 – Place the required cellular confinement system (Cell Web 150-200mm) over the geotextile and pin/anchor the cell walls open for infilling.

Step 5 – Place the infill material of a 20-40mm clean sharp stone in the open cells of the Cell Web pushing the infill ahead of you so that the machinery is driving on the filled CellWeb. Compact the infill material to the desired density.

Step 6 – Slightly surcharge the Cell Web product with 25mm of 40/20mm clean angular stone.

Pictures show the Cell Web being installed on the ground.

The below diagram shows how the Cellular confinement system should be installed.



Stage 2:

6.9.0 The Construction Works Stage

- 6.9.1 **Protective fencing** - During the course of the works, special attention must be paid to ensure that these fences and all other 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.

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

The excavations need to be viewed on site once marked out with the project manager, site foreman and the project Arboriculturist in advance of excavation to determine the extent of the impact and the work space required to allow for the construction works to proceed and to assess what additional mitigation measures will be required to protect the 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 vegetation to be retained and this may include such methods as retaining walls or similar.

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

- 6.9.3 **Working within the RPA (Root Protection Area)** – If it becomes necessary to carry out works within the RPA of a tree being retained, 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.

6.9.4 **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.

6.10.0 Other items

6.10.1 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:

6.11.0 Post Construction Works

6.11.1 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 these lands and is for the sole use of the above named client and refers to only those trees identified within. Its use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.

Signed *Felim Sheridan*

Date 26/10/2021

Felim Sheridan

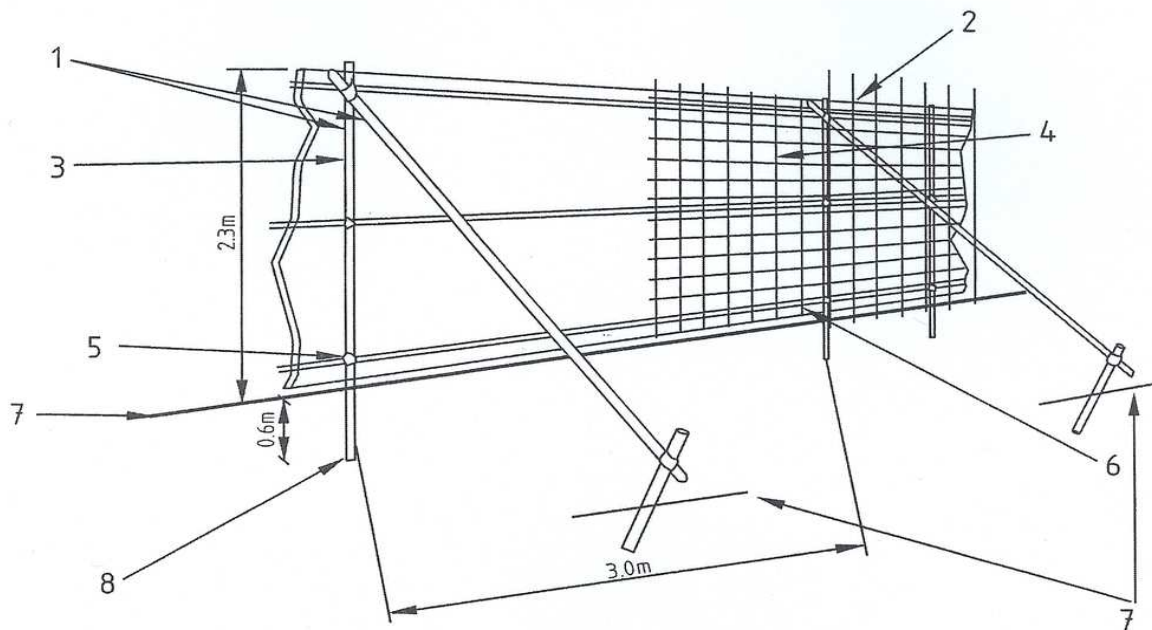
F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture

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

Sample of Temporary Tree Protection Fencing Detail and Ground Protection.



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

Figure 2. – Protective fencing for RPA

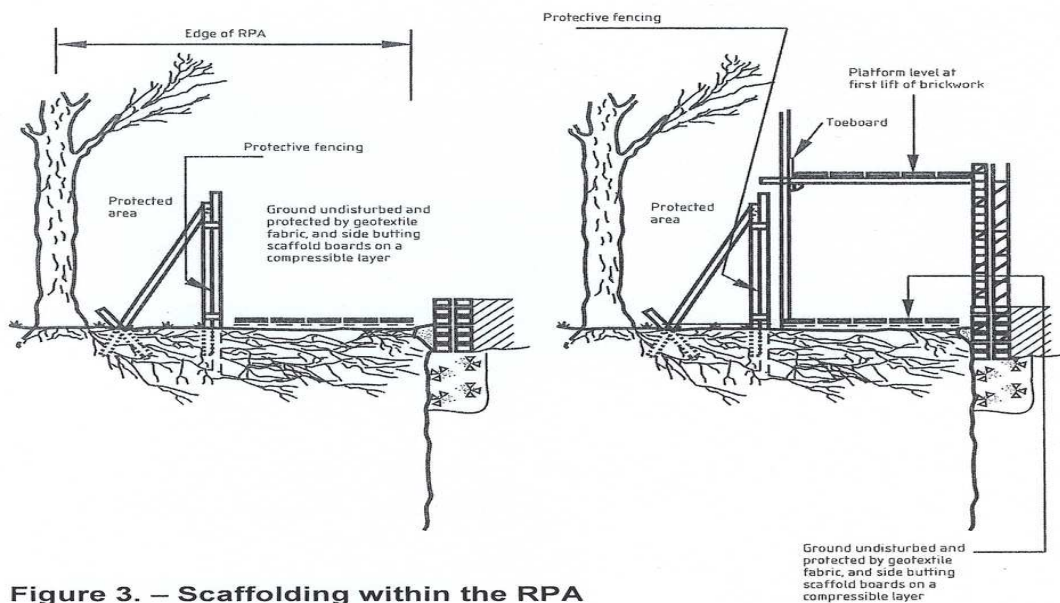


Figure 3. – Scaffolding within the RPA

Appendix 2

Condition Tree Assessment

**Of the Tree Vegetation on a Site Area for Phase 2 of the
“Knockraboo” Development, Mount Anville Road,
Goatstown, Dublin 14.**

Date: 3rd March 2021

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: A tree, which has been planted in the last 10 years.

Semi Mature A tree that is less than 1/3 the expected height of the species in question.

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

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

Over Mature: 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 effective 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.

Estimated Remaining Contribution in years

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.

Retention Categories

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 10 Years. 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 millimeters (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 from the base of the tree and is given in meters (m)

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	Remaining years	Cat. Grade	
								N-North S-South E-East W-West Ht.- Height C-Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category			
		A condition Assessment of the trees around the grounds of the property known as 'Cedarmount', Mount Annville Road, Dublin 14										
		The following trees are located along the roadside boundary to the east (right) of the entrance to the gate lodge.										
0692	Sycamore <i>Acer pseudoplatanus</i>	16	600	4N 4S 4E 4W	5	Mature	Fair/ Good	Fair It is growing within a group environment with a slightly open and asymmetrical crown as a result. Light Ivy cover on the main trunk is beginning to extend up into its crown. The lower limbs/ branches have been removed in the past in order to raise up its crown. It has also received pruning due to the overhead utility lines.	Remove all dead/ unstable growth from within its crown and carry out pruning to help reshape / balance crown. Remove heavy Ivy growth and basal suckers.	20+	B1	
0693	Willow <i>Salix Fragilis</i> (2 in total)	9	140	---	---	Semi Mature	Dead	Poor Originally planted into this area to fill the opening where an original tree was removed between tree Nos. 0692 & 0694. They have failed to establish and have been standing dead for some time.	I would recommend their removal without further delay as part of management.	<10	U	
0694	Birch <i>Betula pendula</i>	7	200	2N 1S 2E 2W	2	Semi Mature	Fair/ Good	Fair It has been planted as part of the landscaping of this area and is located next to the path and may lead to structural damage occurring to this path as it grows in size. The lower branches have been pruned in the past in order to raise up its crown over the path. It has a slightly asymmetrical crown due to its group growing environment.	Requires no work at the present time.	20+	C1	
0695	Horse Chestnut <i>Aesculus hippocastanum</i>	20	1040	8N 5S 6E	4	Mature	Fair	Fair/Poor It is a large tree with a broad spreading crown. It has been heavily pruned in the past and has	Remove all dead/ unstable growth from within its crown and	10-20	B2	

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	Remaining years	Cat. Grade
				5W				developed a multiple-stemmed crown from these pruning points with tall upright stems. It has suffered storm damage in the past with decay pockets developing from the lower pruning points. It contains some tall, poorly tapered, end loaded side limbs/ branches. It divides at a height of c.1.6m into a twin-stemmed tree with an acute union formation between stems with some included bark present. This may develop into a potential weak point in the future. It has also received pruning on the roadside to maintain clearance with the overhead utility lines.	reduce its crown size, particularly height by c.3m and end loading on heavy side limbs/ branches and tall poorly tapered limbs and those developing from the structurally weak areas. It will require further maintenance management in order to contain.		
		The following trees are located out on the formal lawn area to the front of the main house. It consists of some large mature original trees and those that have been added over the years.									
0707	Willow <i>Salix sp</i>	20	580	3N 3S 3E 3W	4	Semi Mature	Fair	Fair/ Poor The planting stay wire is now partially incorporated into the main trunk at a height of c.3.5m and is likely to create a point of structural weakness. Structural damage is also evident on the surrounding path and this may be contributed to by the roots of this tree. It is not an ideal long-term tree species for this area.	Remove dead/ unstable growth at present and remove lower epicormic growth. The stay wires cutting into the main trunk should be removed where possible without causing further damage. Monitor its condition.	10+	C1
0708	Weeping Willow <i>Salix babylonica</i>	14	400	3N 3S 4E 4W	4	Semi Mature	Fair	Fair/ Poor I suspect that it was initially planted as a semi-mature tree and it is finding it difficult to establish. The lower branches have been pruned in the past in order to raise up its crown and the fungus 'Phellinus igniarius' is present at one of these wounds at a height of c.2m.	Monitor its condition on a twelve monthly basis.	10-20	C1

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	Remaining years	Cat. Grade
0709	Larch <i>Larix decidua</i>	This tree has been removed as per granted planning permission D17A/1124.									
0710	Copper Beech <i>Fagus sylvatica</i> 'Purpurea'	19	940	6N 7S 6E 6W	4	Mature	Fair	Fair It is a large parkland tree located on the open lawn area and forms part of the original planting on these grounds. It contains deadwood within its crown and there is a bark wound at 0.5m up on its south side of the trunk where decay is developing into the underlying timber. It has received pruning in the past to raise up its crown. There is debris piled up within its rootzone. There have been some minor soil disturbances during the development works in this area and this may have a knock on effect on its health.	Remove all dead/unstable growth from within its crown.	40+	A1
0711	Blue Cedar <i>Cedrus Atlantica</i> 'Glauca'	12	270	3N 3S 3E 3W	1	Semi Mature	Good	Good It was planted as an extra heavy standard and is establishing well. It has suffered some lower branch breakage with a branch formation down to near ground level. It is likely to make a good replacement tree in the long-term.	Requires no work at the present time.	40+	A1
The following trees form part of the earlier landscape planting and are growing up within an open group and are prominent trees within this area. Their category grading is based on their group value within the treescape of this area and not on the individual merits of the tree.											
0712	Horse Chestnut <i>Aesculus hippocastanum</i>	20	980	4N 4S 5E 6W	4	Mature	Fair	Fair It is a large size tree growing up within a group environment and it has been drawn up for the light as a result. Soil rutting/ damage has been caused in recent times due to a service track created in the grass area to the west of this tree and this may have had an impact on the health of this tree. It is showing signs of	Monitor its condition on a twelve-monthly basis.	10-20	B2

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	Remaining years	Cat. Grade
								slight sparseness within its crown and is infected by "Bleeding Canker" of Horse Chestnut. There are decay cavities developing up along the main trunk where lower limbs /branches were removed or broke out in the past.			
0713	Horse Chestnut <i>Aesculus hippocastanum</i>	21	920	3N 3S 5E 5W	4	Mature	Fair	Fair/ Poor It divides at a height of c. 3.5m into a twin-stemmed tree with an acute union formation between stems with some included bark present. This has created a structural weakness and it may be prone to failure from this point as a result. There are decay pockets developing at old pruning wounds up along the main trunk. It has suffered storm damage within its crown and its upper crown is showing some signs of stress/decline, most likely related to infection by "Bleeding Canker". There is some suckering developing from its base.	Remove all dead/ unstable growth from within its crown and reduce its crown size by c.3m to reduce pressure on the structurally weak union formation between the two main stems. Remove suckering growth from base. Monitor its condition on a twelve monthly basis.	10-20	B2
0714	Horse Chestnut <i>Aesculus hippocastanum</i>	20	800	5N 3S 4E 4W	3	Mature	Fair	Fair / Poor It forms part of the end canopy at the northern end of this short tree group. There is some epicormic growth developing up along the main trunk and it is suckering from base. There are some decay pockets developing where lower limbs / branches have been removed in the past. There is a decay pocket at c. 0.5m up on the west side of its base. The upper crown is showing signs of slight sparseness and decline, possibly associated with an infection by "Bleeding Canker" of Horse Chestnut.	Monitor its condition on a twelve-monthly basis. Remove lower basal suckers.	10-20	B2

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	Remaining years	Cat. Grade
0715	Ash <i>Fraxinus excelsior</i>	23	880	7N 7S 5E 5W	3	Mature	Fair	Fair It is a large tree located out on its own with an independent crown formation. It contains both minor and major deadwood throughout its crown and has suffered storm damage in the past. Its crown is a little thin at extremities with smaller leaves and sparser growth which may indicate towards stress/ decline. Some lower branches have been removed in the past in order to raise up its crown with decay pockets developing at the larger of the pruning wounds. It is a prominent visual tree within this area.	Remove all dead/ unstable growth from within its crown and reduce end loading on heavy, overextended side limbs / branches by c.1-2m. Remove basal suckers and lower epicormic growth.	20+	B1
0716	Mimosa <i>Acacia dealbata</i>	5	180	2N 2S 1E 2W	2	Semi Mature	Fair	Fair I suspect that it was initially planted as an extra heavy standard tree and is beginning to establish. There is some epicormic growth developing up along the main trunk and its rootzone is propagating via suckers. It is suppressed on the east side due to a neighbouring Horse Chestnut tree (No. 0714).	Maintain lower epicormic growth and clearance over the grass area. Remove bamboo cane.	20+	C1
<p>The survey now continues on the open lawn area that extends from the eastern gable end of 'Cedar Mount House' around into the garden of this house. It was previously formally maintained with lawn and shrub areas but this has been lost due to the house and grounds being derelict for some time. Some large size semi-mature trees were planted into this area to give an instant impact/ screening, particularly along the eastern boundary. Some of the larger trees that have been added have found it difficult to establish and some have failed / died off completely.</p>											
0720 & 0721	Monterey Cypress <i>Cupressus macrocarpa</i>	These trees have been removed as per granted planning permission D17A/1124.									
0734	Lucombe Oak <i>Quercus x hispanica</i>	21	960	8N 6S 6E	4	Mature	Good	Good It is a large prominent, visual tree in this area. It has received some crown pruning in the	Remove dead/unstable growth at present. Revert ground within	40+	A1

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	Remaining years	Cat. Grade
				6W				past; in particular to remove deadwood and unstable growth with some new deadwood occurring, generally of a small size. Lighting has been attached to the mid crown. Surfacing for car parking has been installed within its rootzone on its north and east side and this may have caused some surface soil and root damage. Which may have a knock on effect on the health of this tree.	rootzone to original soft landscaping, taking care not to cause any further soil and root damage.		
0491	Deodar Cedar <i>Cedrus deodara</i>	21	760	5N 8S 7E 6W	9	Mature	Fair/ Good	Fair/ Good It contains a lot of naturally suppressed deadwood throughout its crown. Some lower branches have been removed in the past in order to raise up its crown with stubs remaining. It has a slightly asymmetrical crown formation due to overcrowding / competition from neighbouring trees in the past. Soil alterations have occurred around its base during past development works, but this does not appear to be impacting on the health of this tree at present.	Remove dead/unstable growth at present. Where possible, remove excess soil from within the rootzone of this tree without causing soil or root damage.	40+	A1
0492	Sycamore <i>Acer pseudoplatanus</i>	10	240	2N 2S 2E 2W	3	Semi Mature	Fair	Fair / Poor It is growing from underneath the canopy of tree No.0491, obstructing its growth. It is self-seeded into this area with suckers growing from its base. Soil levels have been built up around its base, but don't appear to be impacting on its health.	Requires no work at present, but I would recommend its removal as part of the selective thinning/ management within this area.	<10	U
Hedge No.1	Bamboo	It is cordoning off the formal grounds around "Cedar Mount" from the grounds of "Knockrabo" development site. It was planted to provide screening along this boundary which it is doing so effectively.						Carry out general tidying works.		C2	
0735	Wellingtonia	14	640	3N	3	Early	Good	Fair/ Good	Revert ground within	40+	A1

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	Remaining years	Cat. Grade	
	<i>Sequoiadendron giganteum</i>			3S 3E 3W		Mature		It has been planted into this area as a large semi-mature tree with some stay wires still attached to the main trunk. It has established well with good growth and it has good potential for the future. Surfacing for car parking has been installed within its rootzone and some soil damage may have been caused.	rootzone to original soft landscaping, taking care not to cause any further soil and root damage.			
0736	Holly <i>Ilex aquifolium</i>	This tree has been removed as per granted planning permission D17A/1124.										
0737	Larch <i>Larix decidua</i>	13	220	2N 1S 1E 1W	2	Semi Mature	Fair/ Poor	Fair It has been planted to provide bulking within this area and is located between two Wellingtonia trees. I suspect that it was planted as an extra-heavy standard but has failed to establish well. The canopy is thin and sparse and the tree is struggling to establish.	It may be considered for removal in the future as part of the selective thinning / management of this area to allow the Wellingtonia trees space to develop.	10+	C1	
0738	Wellingtonia <i>Sequoiadendron giganteum</i>	17	700	3N 3S 3E 3W	2	Early Mature	Good	Good It is establishing well and I suspect that it was planted as a large semi-mature tree. It appears to have established its roots system outside the root ball. It has a low canopy formation and has good potential for the future.	Monitor for stability issues.	40+	A1	
0739	Larch <i>Larix decidua</i>	This tree has collapsed at ground level due to basal decay.								Cut up fallen tree.		U
0740	Larch <i>Larix decidua</i>	-	-	-	-	-	Dead	Poor It has snapped out at its base and is now dead	I would recommend its removal as part management.	<10	U	
0741	Western Red Cedar <i>Thuja plicata</i>	14	440	3N 3S 3E	3	Semi Mature	Poor	Poor It was most likely planted as an extra-large, semi-mature tree and has struggled to	I would recommend its removal as the most appropriate management	<10	U	

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	Remaining years	Cat. Grade
				2W				establish. Dieback is evident throughout its crown with a large portion of its crown now dead. There is a secondary limb developing from low down.	option.		
0742	Larch <i>Larix decidua</i>	15	220	2N 2S 1E 2W	2	Semi / Early Mature	Fair	Fair / Poor It was most likely planted as an extra heavy standard tree and is establishing well. There is a vertical seam on the lower trunk, possibly an indication of structural weakness and basal decay.	Requires no work at the present time. Monitor its condition.	10+	C1
0743	Wellingtonia <i>Sequoiadendron giganteum</i>	15	900	3N 2S 2E 2W	4	Early Mature	Fair/ Good	Fair/ Good I suspect that it has been planted as an extra-large semi-mature tree and it has established well. It has suffered bark wounding on the lower trunk, but this appears to be callusing over well. Its lower braches have been removed in the past to raise up its crown.	Requires no work at the present time. Monitor for stability issues.	40+	A1
0744	Horse Chestnut <i>Aesculus hippocastanum</i>	16	860	5N 5S 6E 5W	4	Mature	Fair	Fair Its lower limbs/ branches have been removed in the past in order to raise up its crown. It has suffered a branch breakage at c.6m on its south side creating a large size tear wound as a result. It forms part of the earlier planting on these grounds. There is some epicormic growth developing on the main trunk and suckers growing from its base. There is a large decay cavity on the main trunk at a height of c. 2.5m up with decay progressing into the main trunk; this may create a structural weakness. There is a small area of infection by "Bleeding Canker" of Horse Chestnut present and this may have an impact on its long-term health issues. Chestnut Blight and	Maintain lower epicormic growth and basal suckers. Monitor its condition on a twelve-monthly basis.	20+	B1

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	Remaining years	Cat. Grade
								Leaf Miner are also noted on its foliage. Lighting has been attached to the main trunk.			
0745	Wellingtonia <i>Sequoiadendron giganteum</i>	12	610	3N 3S 3E 3W	3	Early Mature	Fair/ Poor	Fair I suspect that it has been planted as an extra-large semi-mature tree and it is finding it difficult to establish. The top may have broken out in the past and there is some damage caused by the stay wire in mid crown.	Monitor its condition on a twelve-monthly basis. Remove the stay wire, if possible, without causing bark damage to this tree.	20+	B1
0746-0764	Larch <i>Larix decidua</i>	These trees have been removed as per granted planning permission D17A/1124.									
0765	Willow <i>Salix fragilis</i>	17	570	3N 3S 4E 3W	2	Early Mature	Fair/ Good	Fair I suspect that it has been planted as an extra-large semi-mature tree and is establishing well. It has suffered storm damage within its crown, leaving it more open/ exposed.	Requires no work at the present time.	20+	C1
0766 & 0801	Alder <i>Alnus incana</i>	These trees have been removed as per granted planning permission D17A/1124.									
0802	Ash <i>Fraxinus excelsior</i>	8	220	3N 3S 3E 3W	2	Semi Mature	Good	Good It is a good quality tree and has potential for the long-term. It has suffered a branch breakage in its lower crown on its south side.	Requires no work at the present time.	40+	A1
0803	Beech <i>Fagus sylvatica</i>	This tree has been removed as per granted planning permission D17A/1124.									
0804	Norway Maple <i>Acer platanoides</i>	9	300	4N 4S 2E 4W	1	Semi Mature	Fair/ Good	Fair/ Poor There is an acute union formation between scaffold limbs with included bark present between stems which may develop into a structural weakness. It has been damaged by a tree tie in the past. It forms part of the bulking along the boundary. A service track has been created through its rootzone which may have caused some soil/ root damage.	Retain as part of the bulking within this area. Tidy up the area around its base. It may require further works in the future due to structural weaknesses.	10-20	C1

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	Remaining years	Cat. Grade
0805	Callery Pear <i>Pyrus calleryana</i> "Chanticleer"	8	180	1N 1S 1E 1W	2	Semi Mature	Good	Fair/ Good It is growing well with a good conical habit. Building materials have been piled up around its base.	Remove building materials from around base.	20+	C1
0806 & 0807	Yew <i>Taxus baccata</i>	These trees have been removed as per granted planning permission D17A/1124.									
Hedge No.2	Beech <i>Fagus sylvatica</i> Sycamore <i>Acer pseudoplatanus</i> Ash <i>Fraxinus excelsior</i> Holly <i>Ilex aquifolium</i>	It extends west from tree No.0996. It is of a mature age class in fair condition physiologically and structurally. It was initially maintained as a formal hedge cut to a height of 2m, this cutting has lapsed and it has been allowed to grow up tall into a tree line. Bramble and Dogrose are encroaching out from this hedge to create scrub areas. The following trees are located in this hedge.							Make safe large dead/unstable growth. Cut encroaching scrub species back into the hedge line. Carry out other pruning to address structure of hedge.	C2	
Tree No.1	Beech <i>Fagus sylvatica</i>	15	240 X 5 stems	6N 3S 5E 2W	5	Mature	Fair	Fair/ Poor It is multiple-stemmed from base and some stems have been cut off on its south side, impacting on crown structure and leaving its remaining crown open/ exposed.	Prune in exposed side branches by 1-2m.	10-20	C1
Tree No.2	Sycamore <i>Acer pseudoplatanus</i>	16	250 X 9 stems	6N 5S 3E 5W	4	Mature	Fair	Fair It is multiple-stemmed from base as a result of being cut/ coppiced into the hedge. Ivy is extending into its crown and its lower limbs have been cut back. It forms part of a group canopy formation.	Requires no work at the present time.	10-20	C1
Tree No.3	Ash <i>Fraxinus excelsior</i>	16	280 X 7 stems	7N 7S 6E 4W	4	Mature	Fair	Fair It is multiple-stemmed from base as a result of being cut/ coppiced into the hedge. Ivy has been cut at ground level in the past and there is deadwood in the crown.	Remove dead/ unstable growth.	10-20	C1
Tree No.4	Beech <i>Fagus sylvatica</i>	15	260 X 5 stems	6N 5S 4E	1.5	Mature	Fair	Fair It is multiple-stemmed from base as a result of being cut/ coppiced into the hedge. It forms	Requires no work at the present time.	10-20	C2

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	Remaining years	Cat. Grade
				3W				part of the hedge bulking.			
0996	Monterey Cypress <i>Cupressus macrocarpa</i>	29	2200	9N 10S 12E 14W	3.5	Mature	Fair	Fair It is a large, prominent visual tree with a broad crown formation and contains heavy scaffold limbs/ branches throughout. It has also been recorded in TROI Records (Tree Register of Ireland). It has received pruning in the past to remove lower branches in order to raise up its crown. It has suffered storm damage and contains deadwood throughout. Some ground alterations have occurred around its base in the past. It has suffered a large bark wound at its base, exposing the underlying timbers to decay pathogens on the southern side and this may have an impact on its long term health and stability.	Remove dead/unstable growth and reduce end weight on remaining heavy side limbs / branches by up to 2m to lessen the risk of further branch failure.	20+	B1
The following two trees (Nos.0489 & 0490) are growing in isolation and would have initially formed part of a larger group of trees with some trees being removed in the past leaving these trees open / exposed to winds. The soil levels have been raised considerably around the base of these trees during previous development works and this is likely to have a negative impact on their health. This increase in soil levels has limited the visual assessment of the base and lower trunks of these trees.											
0490	Corsican Pine <i>Pinus nigra sub sp.</i>	20	700	4N 7S 6E 7W	8	Mature	Poor	Poor It has an asymmetrical crown formation due to overcrowding and is weighted in a south-westerly direction. It contains storm damage, heavy side branches and deadwood in crown. It is infected at its base and up to a height of c.2m on the main trunk by "Phaeolus schweinitzii"; this is an indication of the presence of internal decay. As a result, this tree has limited potential and its suitability for retention within a developed area is questionable. A wire, along with lighting, has been attached to the main trunk at a height of c.8m.	Due to structural issues, I would recommend its removal as part management.	<10	U

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	Remaining years	Cat. Grade
0489	Corsican Pine <i>Pinus nigra sub sp.</i>	20	880 MS	5N 6S 5E 7W	5	Mature	Fair/ Poor	Poor It forms a twin-stemmed tree from low down with an acute union formation between stems with included bark present. It has been left more open/ exposed due to the removal / failure of neighbouring trees. It has received pruning to remove deadwood in crown, but still contains some pieces. It is showing signs of sparseness and decline within its crown, most likely the result of damage caused during the past construction works.	Due to condition, I would recommend its removal as part management.	<10	U
Notes:											

