

Arborist Associates Ltd.

An Arboricultural Assessment for the Site Area at 'Edmondstown Mill', Edmondstown Road, Rathfarnham, Dublin 16.

Prepared for: Ronan MacDiarmada & Associates Ltd.

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

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94 Ballybawn Cottages, Enniskerry, Co. Wicklow.

Tel: 2742011

Mobile: 087 2629589

Email: arborist@eircom.net

1.0 Instructions

- 1.1 I have been instructed by Ronan MacDiarmada & Associates Ltd. to assess the site area at 'Edmondstown Mill,' Edmondstown Road, Rathfarnham, Dublin 16 and report on the following:
- a. To assess the present condition of the trees on this site area. See drawing No.MEM001 that has been developed as a constraints plan and 'Appendix 2' for detail.
 - b. To assess the impact of the proposed development layout on the trees indicating on a drawing those for removal and retention. See 'Section 5' of this report and drawing No.MEM002 for detail.
 - c. To show on this drawing the line of protective fencing to be erected around the trees being retained along with other mitigation measures to aid in their successful retention. See 'Section 6.0' of our report and 'Drawing No.MEM002 for detail.

2.0 Report Limitations

- 2.1 The inspection 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 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).

3.0 Aims and Report Brief

- 3.1 Arborist Associates Ltd. has been commissioned to provide a condition assessment of the existing tree vegetation on the site area, to prepare an

arboricultural implication study and to recommend tree protective measures for those trees for retention within the proposed development.

3.2 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 onto 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

3.3 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 – including 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, commemorative value.

3.4 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 identified within this site area have been shown on our drawings (Nos. MEM001 & MEM002) 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.

From our assessment of the tree vegetation, none were 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 these grounds for the medium-term.

Any category 'B' trees identified within this site area have been shown on our drawings (Nos. MEM001 & MEM002) 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 be removed for one reason or another. These trees should not be seen as a considerable constraint on the proposed works on these grounds, but should be considered for retention where viable.

Any category 'C' trees identified within this site area have been shown on our drawings (Nos. MEM001 & MEM002) with a 'Grey' donut around their trunk positions.

- 3.5 The trees have been plotted onto the attached drawing (Dwg No.MEM001) by a land survey company and where not, they have been positioned by ourselves to the best of our ability and where development comes close, these positions need to be checked by a land survey company. 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 works 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.

- 3.6 Based on the proposed development layout, this drawing has been developed as a Tree Protection Plan (Dwg.No.MEM002) where the trees that are to be removed due to the proposed works or condition/ management have been shown with a 'Red' crown spread and those to be retained shown with a 'Green Hatched' crown spread and the necessary tree protection measures have been shown on this drawing using 'Orange Hatching'.

4.0 Summary of Survey Findings

- 4.1 The site area is located on the 'Edmondstown Road', Rathfarnham, Dublin 16. It is triangular in shape and is bounded on the eastern side by 'Edmondstown Road', on the west by the 'Owendoher River' and to the north and south by adjacent properties. There are a series of old factory/mill buildings located mostly on the southern end of the site while there are the remains of older buildings on the northern end. The majority of the trees are located along the river bank and have mostly developed here naturally from seed.
- 4.2 The trees consist primarily of Sycamore, Ash, Elm and Beech with a small number of conifers such as Lawson Cypress and Fir. A lot of the Elm trees have now succumb to 'Dutch Elm Disease' (*Ophiostoma Ulmi*) particularly at the northern end and these are now standing dead and are a risk to the public road as they become decayed and unstable. Many of the Ash trees are also showing signs of infection by 'Ash Dieback Disease' (*Hymenoscyphus Fraxineus*) and this may impact on the Ash tree population.
- 4.3 A significant part of the understory vegetation on the site consists of overgrown Cherry Laurel which is casting dense shade and is having a suppressive effect on the natural vegetation. This is now classified as an invasive species and carries a risk score of 18 which is marginally less than the risk score of 20 for Rhododendron Ponticum and Japanese Knotweed. It would be beneficial to the local flora and fauna to substantially reduce the size of the Cherry Laurel growth on this site or to remove it altogether.
- 4.4 The most significant trees on the site are located towards the southern end of the property, in particular, a Copper Beech and Douglas Fir trees which are of some prominence within the local treescape. The trees along the river bank are mostly

seedling trees which are developing in an unmanaged way. A number of trees growing on lands on the western side of the river have fallen across the river, causing damage to the trees on the site.

- 4.5 There are a number of large trees located adjacent to the southern end of the site which have also been included in the survey due to their close proximity. These trees are of some prominence within the local treescape. Some of the trees may require tree surgery works to manage the growth extending towards the existing buildings on the site.
- 4.6 Within the site area, 55 No. Trees were tagged individually and nine trees plus one hedge were numbered numerically. The following table gives a breakdown of the category grading given to the trees as per BS5837 2012.

Category Grade	No. of trees
Category U 26 Trees	Tree Nos. 1426, 1427, 1428, 1429, 1430, 1431, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1444, 1447, 1448, 1449, 1459, 1460, 1461, 1462, 1477, 1478 Tree 7, Tree 8 & Tree 9.
Category A 0 Trees	No Trees.
Category B 4 Trees	Tree Nos. 1453 & Tree 4, Tree 5 & Tree 6,
Category C 34 Trees + 1 Hedge	Tree Nos. 1432, 1440, 1441, 1442, 1443, 1445, 1446, 1450, 1451, 1452, Tree 1, Tree 2, Tree 3, 1454, 1455, 1456, 1457, 1458, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1479 & 1497 Hedge No. 1,
Total	64 Trees + 1 Hedge

5.0 Arboricultural Impact Assessment

- 5.1 The proposed development on this site area is to renovate the existing protected buildings for residential purposes and it will be necessary to allow for infrastructural works such as services.
- 5.2 On drawing No.MEM002, I have shown the tree vegetation for removal due to the proposed development and condition/management with 'Red' crown spreads and those to be retained with a 'Green Hatched' crown spread. I have also shown on this drawing, the position of any necessary tree protection measures in order to protect the root zone of the tree vegetation being retained within the vicinity of where the construction works will occur. These work exclusion zones are shown on this drawing using 'Orange Hatching' and these areas will need to be cordoned off by the erection of fencing or other means at the start of the works and this will need to be maintained in place until all works are completed. This fencing is to protect the root zone of the trees and to ensure their successful integration into the development of this site area.
- 5.3 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.

5.4.0 Tree Loss

- 5.4.1 To facilitate the proposed development works and/or as part of management, it will be necessary to remove the following tree vegetation:

Category Grade	No. of trees for removal
Category U 26 Trees	Tree Nos. 1426, 1427, 1428, 1429, 1430, 1431, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1444, 1447, 1448, 1449, 1459, 1460, 1461, 1462, 1477, 1478 Tree 7, Tree 8 & Tree 9. These trees, although some are required to be removed directly due to the development layout, are in such a condition that they will need to be removed as part of management now or in the short-term irrespective of the development proposals for this site area.
Category A 0 Trees	--
Category B 0 Trees	--
Category C 15 Trees + 1 Hedge	Tree Nos. 1432, 1440, 1441, 1442, 1443, 1445, 1446, 1458, 1463, 1464, 1465, 1466, 1467, 1479 & 1497. Hedge No.1

5.4.2 **So in summary**, 41 of the 64 trees included within this assessment are proposed to be removed to facilitate the proposed development works on this site area. This is made up of the following category grades with the greatest number of trees being within category 'U' and needing to be removed as part of management irrespective of the development of this site area:

- 26 Category **U** trees
- 0 Category **A** trees
- 0 Category **B** trees
- 15 Category **C** trees

5.4.3 The impact of the loss of the above vegetation on the surrounding area is minimal with the greatest impact being within the northern end of the site where the larger number of trees are being removed.

5.4.4 The loss of the above tree vegetation is to be mitigated against within the landscaping of this completed development with the use of trees, shrubs, hedging, herbaceous and bulb planting.

This planting as part of the landscaping 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 it 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.

5.5.0 Tree Retention

5.5.1 The remaining tree vegetation shown with 'Hatched Green' crown spreads within the site area are proposed for retention and incorporation into this completed development. This will involve some trimming/maintenance works to the trees and understory vegetation to improve structure and the pruning to some trees to deal with structural issues and to create a satisfactory juxtaposition within the completed development. A preliminary list of these works is included within the condition assessment within 'Appendix 2' of this report and this will need to be reviewed on site once the development is laid out to include any other additional works required.

5.5.2 There are some areas where surfaces such as paths and car parking spaces will encroach into the calculated root zone of the trees shown for retention, but these areas are already either under surfacing or buildings and it is not expected that these works will impact negatively on the trees. An example of this is the position of the parking bays within the calculated root zone of 'Tree No.1454' a mature Copper Beech tree. This area is already in hard standing surfaces and the new car parking spaces can be built on this existing surfacing without causing root damage and in any areas where the new car parking spaces encroach into the un-surfaced areas of the root zone of the trees, these areas will need to be constructed using a 'No-Dig' method incorporating a product such as 'CellWeb' to provide support and protection to the underlying soil and roots.

- 5.5.3 There is a proposal to route a path and have viewing areas along the river and in some areas, this will transverse the root zone of trees shown for retention and within these areas the path surface will need to be built up over the roots of the trees using construction friendly techniques in order to prevent damage occurring to the trees.
- 5.5.4 To minimize impact during the construction works, protective fencing and other mitigation measures will need to be put in place at the start of the works and be maintained until all works are complete. See drawing No.MEM002 for detail and position of fencing.
- 5.5.5 Main items for consideration during the proposed construction process:

Item	Comments
<p>Tree Pruning</p>	<p>As part of the initiating works, the crowns of some of the trees are to be pruned to clean out 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. The understory is also to be cut back to open up this area and to bring it into active management. A preliminary list of these works is given within the condition tree assessment within '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 should be carried out by qualified and experienced tree surgeons <i>before</i> any construction work commences; all tree work should be in accordance with <i>BS3998 (2010) Tree Work – Recommendations</i>.</p> <p>All trees for removal will need to be felled to stumps and 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>Tree Protection</p>	<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.MEM002) 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 <i>BS5837: Trees in relation to design, demolition and construction (2012)</i> specifies appropriate fencing, see appendix 1 for details. All weather notices should be erected on the fences with words such as: "Tree Protection Fence — Keep Out".</p> <p>When the fencing has been erected, the construction work can</p>

Item	Comments
	<p>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.</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 building lines 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 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 sample of ground protection for light weight construction works.</p> <p>Care should 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, should not be discharged within 10m of a tree stem.</p> <p>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.</p> <p>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.</p>
Services	<p>Services entering and leaving the site area are to be routed so they run outside the RPA (Root protection Area) of the tree vegetation being retained. Prior to the installation of any services routed near trees or hedges, 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 tree</p>

Item	Comments
	vegetation shown for retention.
Boundary Treatments	Construction of the new boundary fences within the root zone of trees vegetation being retained are to use a fencing system based on support posts rather than one that uses strip foundations where the post holes should be excavated manually or by augur or 'Airspade' when inside the RPAs of any trees intended for retention.
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>In a number of places, paths/surfaces will encroach into the root zone of the tree vegetation to be retained and these sections of paths and surfacing will need to be installed using a 'No-Dig' method over the existing ground levels to avoid causing damage to the soil and roots underneath. Where it is necessary to provide extra support for heavier loading, it will be important to use a cellular confinement system such as 'CellWeb' within the construction of these sections of paths/surfaces. See 'Section 6.8.0' of our report for general detail on the installation of such product and the guidance of the Arboricultural Practice Note 12 'The use of cellular confinement systems near trees' A guide to good practice'.</p>

5.6.0 Monitoring

- 5.6.1 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.
- 5.6.2 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.

- 5.6.3 Copies of the tree retention and protection plan (Dwg No. MEM002) 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.
- 5.6.4 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.MEM002, 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 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 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 developer or the main contractor is to appoint a tree surgery company competent of carrying out the remedial tree surgery works and tree felling that are required on this site. The tree surgery contractor is to produce a method statement detailing how he plans to undertake the works and informing the site foreman of the process so the necessary steps can be taken to ensure the works are carried out safely and efficiently. The works are to be carried out by appropriately trained personnel taking account of the recommendations of BS3998 2010.
- 6.6.2 **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. MEM002.

6.7.2 The fencing needs to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see fencing detail on drawing No.MEM002 & Appendix 1) using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centres. Onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps.

6.7.3 Signs need to be attached to these fences warning people to 'keep out'. See detail within drawing No.MEM002 & 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 Car Parking Bays, Pathway Surfaces and Working Areas**

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 to 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 Fibretex F4M non-woven geotextile with dry joints overlapping by 300mm.

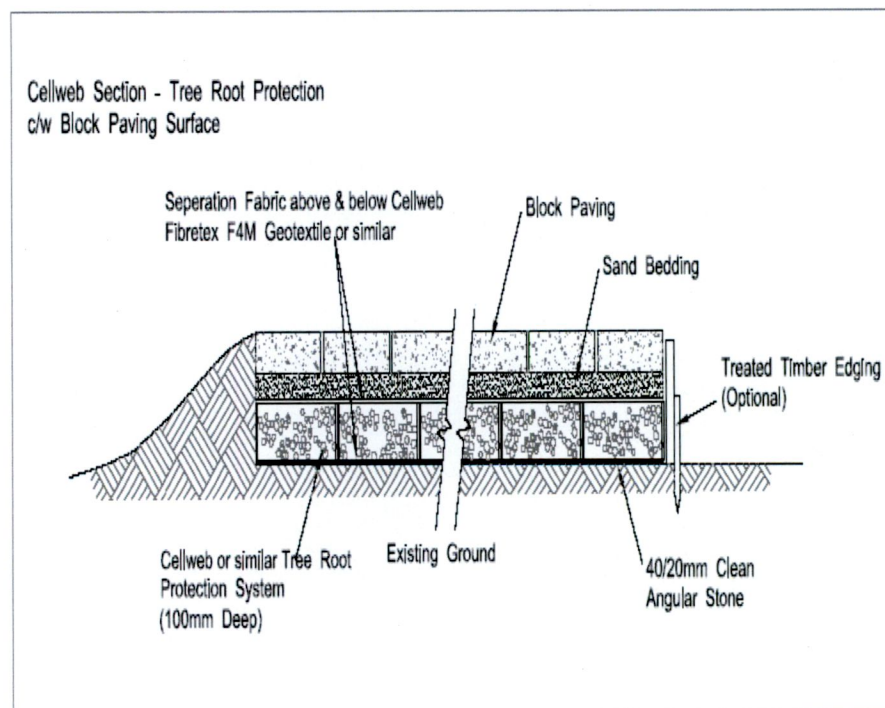
Step 3 – Place constraints along the edges to contain the fill material. These can be of such material as treated timber or railway sleepers.

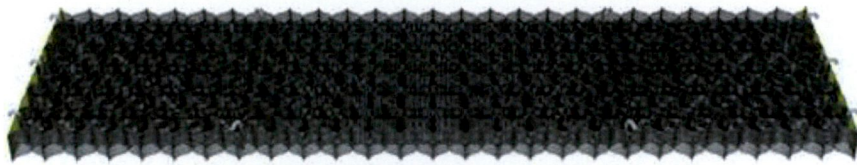
Step 4 – Place the required cellular confinement system (Cell Web 150-200mm) over the geotextile and pin/anchor the cell walls open for infilling.

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 Cell Web. Compact the infill material to the desired density.

Step 6 – Slightly surcharge the Cell Web product with 25mm of 40/20mm clean angular stone and place the finished wearing course over this.

Pictures show the CellWeb being installed on the ground.





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 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 in the vicinity of the tree vegetation being retained will 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 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.

- 6.9.3 **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.

- 6.9.4 **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 this site area and is for the sole use of the above named client and refers to only those trees and hedgerows 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 25th July 2022

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.**

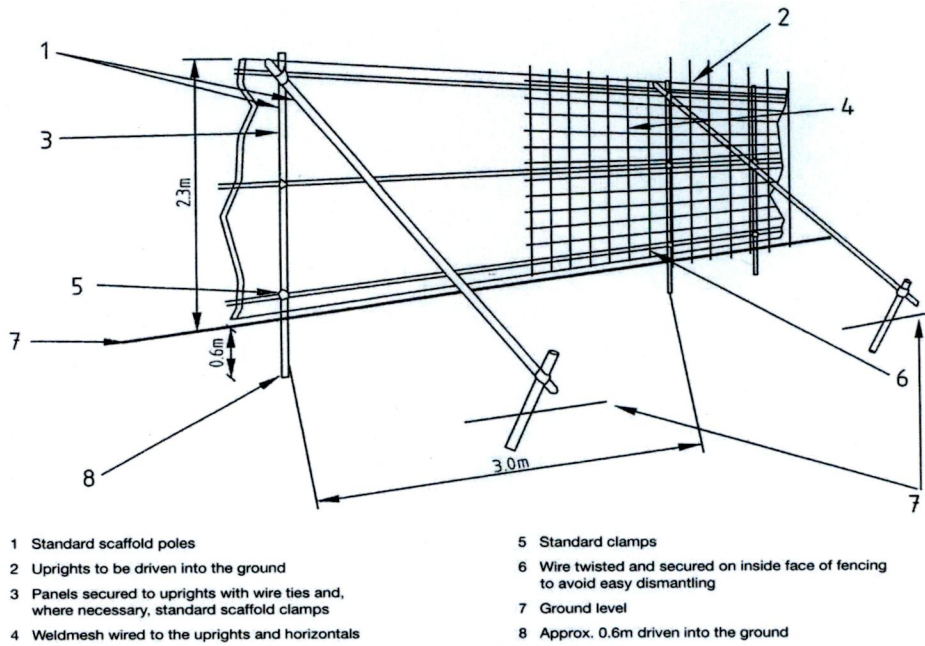


Figure 2. – Protective fencing for RPA



Sample of signage to be placed on fence panels.

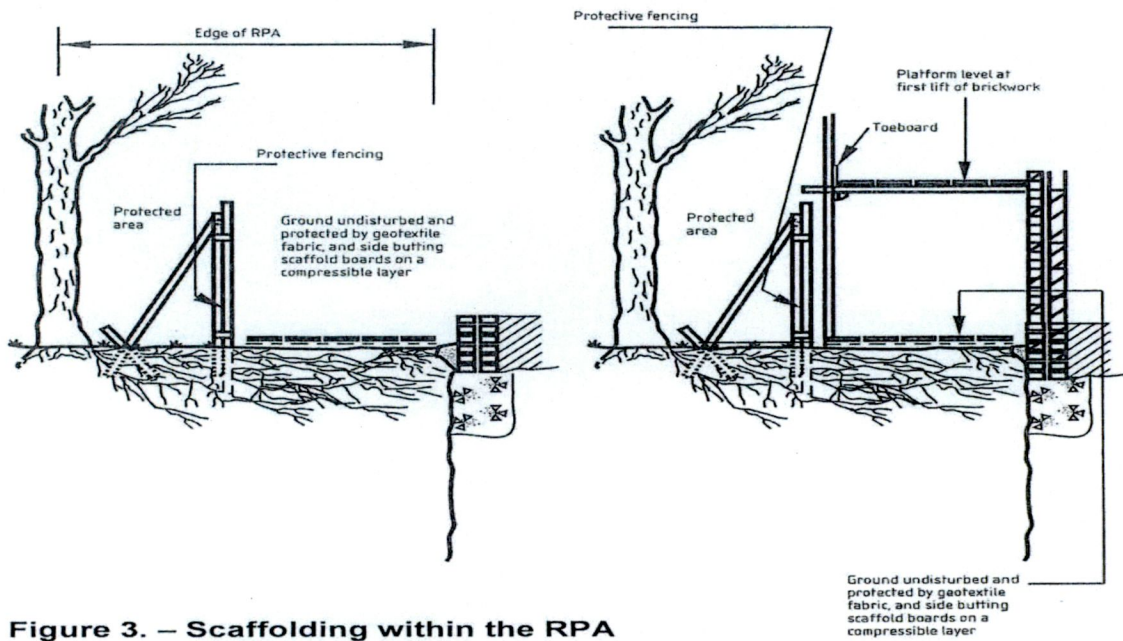
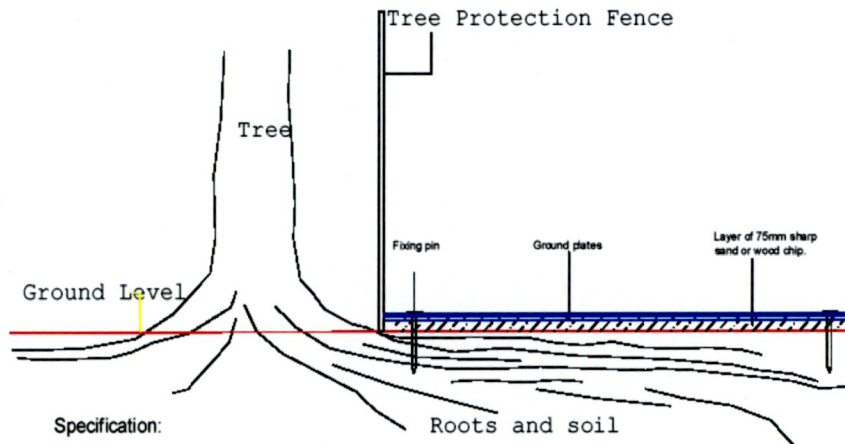


Figure 3. – Scaffolding within the RPA



Specification:

1. Lay min. 75mm 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

Appendix 2

Condition Tree Assessment.

**On Site Area at 'Edmondstown Mill', Edmondstown
Road, Rathfarnham, Dublin 16.**

Date: 25th July 2022

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 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.

Estimated Useful Life (EUL) 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 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 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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
		<p>A Condition Assessment of the trees within the site area at 'Edmondstown Mill' Edmondstown Road, Rathfarnham, Dublin 16.</p> <p>The survey commences at the northern end of the site beside the ESB substation and proceeds south to the roadside entrance to the site. The survey then proceeds north to the property boundary before returning south along the riverbank to the southern boundary.</p>									
											
1426	Sycamore <i>Acer pseudoplatanus</i>	14	370/ 160/ 160	4N 4S 4E 5W	4	Early Mature	Fair	Poor A group of three self-sown trees growing out of the base of the adjacent walls. Two of the trees have been cut back on the roadside to provide clearance with the overhead utility lines. The main tree has a somewhat unbalanced crown weighed out to the north and west. There is some deadwood in the lower crown with ivy growth extending up into its crown, increasing the wind sail. These trees are likely to cause structural damage to the adjacent walls as they develop and they have no long- term potential in this location as a	I would recommend their removal as part of management and to prevent structural damage occurring to the surrounding structures.	<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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. result.	A- average		
1427	Elm <i>Ulmus sp.</i>	14	260	1N 2S 2E 1W	8	Semi Mature	Fair/ Poor	A single-stem tree, growing close to the base of the roadside wall. It has been drawn up for light due to overcrowding / competition and the lower branches have been pruned in the past to provide clearance with the utility lines. The crown is showing signs of decline due to infection by 'Dutch Elm Disease' (<i>Ophiostoma Ulmi</i>). Ivy growth is extending up into the crown, increasing the wind sail. This tree is likely to cause structural damage to the adjacent wall as it develops, if not killed off the 'Dutch Elm' disease and as a result, it has no long-term potential in this location.	I would recommend its removal as part of management and to prevent structural damage occurring to the surrounding structures.	<10	U
1428	Sycamore <i>Acer pseudoplatanus</i>	12	190/ 160	1N 2S 3E 1W	6	Young	Fair	Fair / Poor A pair of self-sown trees growing out from the base of the roadside boundary wall. The trees have been drawn up for light and have been pruned in the past on the roadside to provide clearance of the adjacent overhead utility lines. The tree to the south has been cut back to c. 6m. These trees are likely to cause structural damage to the adjacent wall as they develop and as a result, they have no long-term potential in this location.	I would recommend their removal as part of management and to prevent structural damage occurring to the surrounding structures.	<10	U
1429	Sycamore <i>Acer pseudoplatanus</i>	12	160	2N 1S 4E 0W	7	Young	Fair	Fair/Poor Self-sown into this area and is growing out from the base of an internal boundary wall and has been drawn up for light due to overcrowding from neighbouring trees and it will be left more open/exposed by the dieback of the neighbouring Elm trees. This tree is likely to cause structural damage to the adjacent wall as it develops and as	I would recommend its removal in the short-term as part of management and to prevent structural damage occurring to the surrounding structures.	<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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. a result, it has no long- term potential in this location.	A- average		
1430	Elm <i>Ulmus sp.</i>	12	230/ 160	3N 2S 3E 2W	4	Semi Mature	Poor	A pair of trees growing out from the base of the adjacent wall. It is in decline due to infection by 'Dutch Elm Disease' (<i>Ophiostoma Ulmi</i>) and is almost completely dead.	I would recommend their removal as part of management.	<10	U
1431	Ash <i>Fraxinus excelsior.</i>	9	160	1N 2S 2E 0W	4	Semi Mature	Fair	Fair/Poor A single-stem, self-sown seedling, growing adjacent to the base of the roadside boundary wall. It has been drawn up for light due to competition and its crown is suppressed on the west side and has become more open/ exposed by the dieback within the neighbouring Elm trees. This tree is likely to cause structural damage to the adjacent wall as it develops and as a result, it has no long-term potential in this location.	Retain at the present time, but it is likely to require removal as part of management as it grows in size.	<10	U
1432	Sycamore <i>Acer pseudoplatanus</i>	14	270/ 270	4N 3S 4E 1W	3	Early Mature	Fair	Fair. A twin-stemmed tree from c. 1m above ground level and the union is acute but appears sound. The stems are co-dominant and the tree has been drawn up for light due to competition from the surrounding trees. Ivy growth is extending up into the crown which contains some deadwood and branch stubs from previous pruning.	Cut Ivy to ground level. Prune out deadwood and cut branch stubs to proper target pruning points. Cut basal suckers.	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
								The survey proceeds north through the remains of a former building structure where the following trees are located.			
											
1433 – 1437	Elm <i>Ulmus sp</i>	A14	A	270	6N 6S	A3 A3	Early Mature	Poor A group of five self-sown trees growing up as a	I would recommend their removal as part of	<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	EUL	Cat. Grade
(5 in total)				6E 5W				N-north S-south E-east W-west Phys.-physiological. group with intertwining stems. Ivy growth is extending up into their crowns. The trees are growing beside the wall of the old structure with potential to cause structural damage. The crowns are all showing signs of extensive dieback, most likely due to infection with 'Dutch Elm Disease' (<i>Ophiostoma novo-ulmi</i>) and as a result, they have no potential.	A- average management.		
1438	Elm <i>Ulmus sp.</i>	10	230	3N 0S 2E 5W	4	Semi Mature	Poor	Poor This tree is growing out of the base of the wall of the structure with a very pronounced lean to the north-west. The crown is thin and sparse, most likely due to infection with 'Dutch Elm Disease' (<i>Ophiostoma Ulmi</i>). It has no long- term potential in this location.	I would recommend its removal now as part of management.	<10	U
1439	Elder <i>Sambucus nigra</i>	10	240	2N 1S 1E 1W	2.5	Mature	Fair/ Poor	Poor It is growing out of the base of the wall of the structure and has been drawn up for light and has grown with a pronounced lean to the north due to overcrowding. The main stem is quite distorted and the crown contains deadwood. It is likely to damage the adjoining wall as it develops and it has no long- term potential at this location.	I would recommend its removal now as part of management.	<10	U
The survey now continues south along the river bank where the following trees are located.											
1440	Sycamore <i>Acer pseudoplatanus</i>	15	290/ 270	4N 4S 3E 4W	4	Mature	Fair	Fair. A twin-stemmed tree which divides at ground level with co-dominant stems. Ivy growth is extending up into the crown. A branch / stem has been pruned away on the west side at the base of the stem. It contains deadwood in the crown and branch stubs where branches have broken or have been removed in the past. There is deadwood and	Retain for now as part of the group bulking of the area. Cut Ivy at ground level.	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. dieback on the east side of the crown.	A- average		
1441	Sycamore <i>Acer pseudoplatanus</i>	10	290	1N 1S 2E 3W	6	Early Mature	Fair / Poor	Fair / Poor A single-stem tree to c. 1.8m from where three stems develop. Heavy ivy growth on the main trunk is extending high up into the crown and it contains deadwood throughout. The crown is being suppressed by the heavy ivy growth and larger, adjacent trees.	Retain for now as part of the group bulking of the area. Cut ivy at ground level. Prune out deadwood to proper target pruning points.	10-20	C2
1442	Goat Willow <i>Salix caprea</i>	15	350/ 450/ 470	7N 0S 5E 5W	6	Mature	Fair / Poor	Fair / Poor. Multiple-stemmed from c.1m up with an acute union formation between stems. Ivy cover on the main trunk is extending up into its crown. It contains a lot of deadwood in crown. It is sheltered within its present group environment.	Cut ivy at ground level and remove large size deadwood from within its crown.	10+	C2
1443	Sycamore <i>Acer pseudoplatanus</i>	15	370/ 290	2N 3S 4E 0W	5	Mature	Fair	Fair / Poor It consists of a pair of trees which have been drawn up for light due to competition from the surrounding trees. Heavy ivy growth is extending up into the crown. The crown is substantially suppressed on the north, west and south sides by the neighbouring trees.	Retain for now as part of the group bulking of the area. Cut ivy at ground level. Prune out deadwood to proper target pruning points.	10-20	C2
1444	Elm <i>Ulmus sp.</i>	15	420	3N 1S 2E 3W	12	Mature	Dead	Poor. A single-stem tree which is standing dead due to infection with 'Dutch Elm Disease' (<i>Ophiostoma Ulmi</i>). There is heavy ivy cover on the main trunk extending up into the crown, increasing the wind sail.	I would recommend its removal now as part of management.	<10	U
1445	Sycamore <i>Acer pseudoplatanus</i>	16	320	1N 1S 1E 2W	12	Early Mature	Fair	Fair / Poor. A single-stem tree which has been drawn up for light due to overcrowding/ competition. The lower crown is suppressed and it contains deadwood throughout. Heavy ivy cover on the main trunk is	Retain for now as part of the group bulking of this area. Cut ivy to ground level.	10+	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. extending high up into the crown, increasing the wind sail.	A- average		
1446	Sycamore <i>Acer pseudoplatanus</i>	13	500	5N 5S 1E 4W	6	Mature	Fair	Fair / Poor A single-stem tree which divides into two stems with an acute union formation between stems with included bark present creating a structural weakness. Heavy lvy cover on the main trunk is extending high up into the crown, increasing the wind sail.	Retain for now as part of the group bulking. Cut lvy at ground level.	10+	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
Tree Nos. 1447 and 1448 shown above.											
1447	Lawson Cypress cv. <i>Chamaecyparis lawsoniana</i> cv.	17	580 420	5N 2S 3E 5W	2	Mature	Fair	Poor Growing as one of a pair with Tree No. 1448. It is growing with a slight lean to the north indicating root movement / heave and issues over its stability. It divides low down with an acute union between the stems. The crown contains deadwood and is somewhat suppressed on the eastern side due to the presence of Tree No. 1448. There are stored materials and debris around the base of the tree. Heavy Ivy cover on the main trunk is extending high up into the crown, increasing the wind sail.	This tree has no potential and I would recommend its removal as part of management. If retained for the present time, cut Ivy at ground level to improve the wind sail of its crown and the risk of wind damage/ failure.	<10	U
1448	Lawson Cypress cv. <i>Chamaecyparis lawsoniana</i> cv.	17	720	5N 2S 3E 3W	2	Mature	Fair	Poor. It is growing as one of a pair with Tree No. 1447. It is a single-stem tree growing on a slightly raised bank at the entrance to the site. There is an Elder tree growing out of its base with heavy Ivy cover extending up into the crown increasing wind loading. The crown contains deadwood and is somewhat suppressed on the west side due to Tree No. 1447.	This tree has no potential and I would recommend its removal as part of management. If retained for the present time, cut Ivy at ground level to improve the wind sail of its crown and the risk of wind damage/ failure.	<10	U
1449	Cherry <i>Prunus</i> sp.	-	-	-	-	-	-	- This tree has recently fallen due to restricted rooting space.	Cut up fallen tree.	<10	U

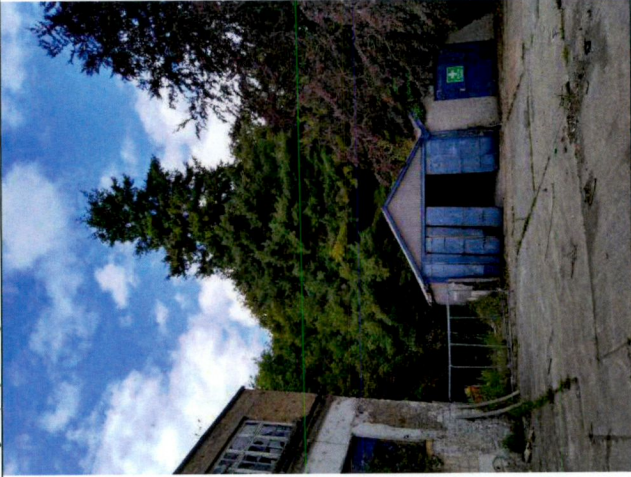
Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
											
Tree Nos. 1450, 1451, 1452 and 1453 shown above.											
1450	Cherry Laurel <i>Prunus laurocerasus</i>	14	A.200 X 7 stems	9N 4S 5E 8W	1	Mature	Fair	Fair/Poor A multi -stem tree from near ground level growing on the side of the steep riverbank and its stability at this size on the bank is a concern. It has a large spreading crown which is suppressing neighbouring vegetation and it extends out over the river bank. Some stems have broken off / cracked opening up the crown leaving it more prone to wind damage.	Retain for now as part of the group bulking of this area. Reduce crown size by 3m and remove lower branches and open up the area and prune in side branches to contain width.	10+	C1
1451	Sycamore <i>Acer pseudoplatanus</i>	16	360/ 310/ 280	2N 6S 7E 1W	3	Early Mature	Fair	Fair/ Poor This tree divides at ground level into three stems growing parallel to each other with an acute union formation between some stems. It has been drawn	Retain for now as part of the bulking of this area. Prune back Cherry Laurel to open up its crown and prune lower	10+	C1

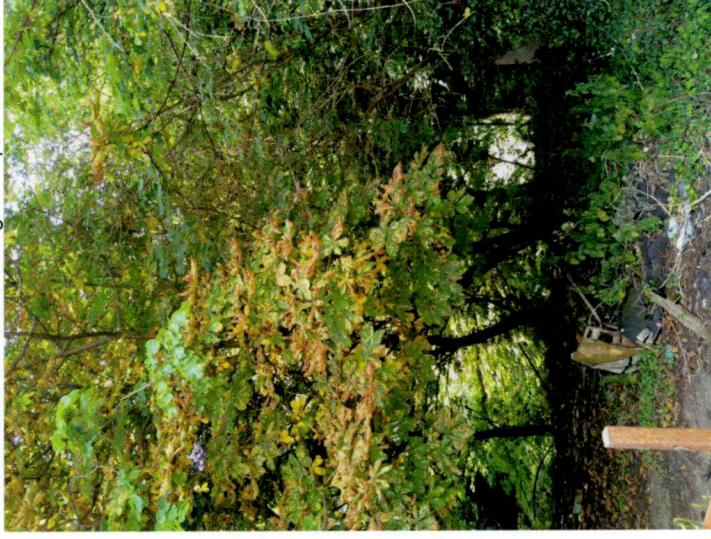
Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
								up for light due to competition from the adjacent Cherry Laurel (No. 1450) and is growing with a lean to the east out over the adjacent circulation area as a result.	branches on the eastern side to improve ground clearance. Cut Ivy at ground level.		
1452	Sycamore <i>Acer pseudoplatanus</i>	16	280/ 280	5N 2S 7E 1W	4	Early Mature	Fair	Fair / Poor This tree divides at ground level into co-dominant stems with an acute union formation between stems containing included bark which is structurally weak. There was a third stem on the west side which has been cut away at some point in the past. The Ivy growth is extending up into the crown. The crown has been heavily suppressed by the adjacent Cherry Laurel (Tree No. 1450) and Sycamore (Tree No. 1451). The tree is leaning out to the east over the adjacent circulation area.	Retain for now as part of the bulking of this area. Cut Ivy at ground level at present.	10+	C1
1453	Copper Beech <i>Fagus sylvatica purpurea</i>	16	430	5N 4S 6E 3W	1	Early Mature	Fair/ Good	Fair A single -stem tree, with a somewhat asymmetrical crown due to suppression from neighbouring trees that have been removed / failed in the past. The crown is weighed out to the east over the adjacent circulation area. It has potential to form part of the longer-term cover on the site.	It would benefit from some formative pruning on the eastern side to rebalance the crown and to improve ground clearance.	20+	B1
Tree No.1	Sycamore <i>Acer pseudoplatanus</i>	12	#320	2N 2S 2E 3W	10	Mature	Fair/ Poor	Poor. Growing on a steep river bank which will impact on its rooting ability. It was not possible to safely access this tree to fully inspect it due to its position on the embankment. It has been drawn up for light, due to competition from neighbouring trees which were removed in the past.	Retain for now as part of the bulking of this area. Prune in crown to improve its shape/ balance.	10+	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	EUL	Cat. Grade
Tree No.2	Sycamore <i>Acer pseudoplatanus</i>	17	#500	2N 4S 7E 5W	10	Early Mature	Fair	N-north S-south E-east W-west Phys.-physiological. Fair/ Poor Growing on a steep river bank which will impact on its rooting ability. It was not possible to safely access this tree to fully inspect it due to its position on the embankment. It divides at a height of c.2m into two stems with an acute union formation between stems with included bark present creating a structural weakness at this point. Heavy Ivy growth is extending up into the crown, increasing the wind sail. There is a stump at the base on the west side. It has been drawn up and out for the light due to competition from the neighbouring trees which have been removed in the past.	A- average Retain for now as part of the bulking of this area. Cut Ivy at ground level at the present time. Prune side branches to shape/ balance its crown.	10+	C1
Tree No.3	Sycamore <i>Acer pseudoplatanus</i>	16	#200	3N 3S 1E 4W	10	Early Mature	Fair	Fair/ Poor Growing on a steep river bank which will impact on its rooting ability. It was not possible to safely access this tree to fully inspect it due to its position on the embankment. It has been drawn up for light, most likely due to competition from neighbouring trees which have been removed/ failed in the recent past. Heavy Ivy growth is extending up into the crown, increasing the wind sail.	Retain for now as part of the bulking of the area. Cut Ivy at ground level at the present time.	10+	C1
1454	Copper Beech <i>Fagus sylvatica purpurea.</i>	24	1080	8N 12S 12E 7W	2	Mature	Fair/ Good	Fair. This is a large prominent tree in this area with a broad spreading crown. The main stem sub-divides at c.1m with an acute union formation between stems creating a structural weakness. The tree shows signs of limb loss in the past and a large limb has been removed on the east side and this may allow for the entry of decay.	It would benefit from some pruning on the east side to improve clearance over the circulation area and on the south side to improve clearance over the adjacent buildings.	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	EUL	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	A- average		
									Cut Ivy to ground level. Monitor its condition and review again in twelve months.		
1455	Sycamore <i>Acer pseudoplatanus</i>	8	160 130	3N 3S 1E 3W	3	Early Mature	Fair	Fair / Poor Self-seeded into this area and is twin- stemmed from base. It has been drawn up for light due to competition affecting its structure. Ivy cover is extending up into the crown and it contains deadwood in the lower crown.	Retain for now as part of the bulking of the area. Cut Ivy at ground level at present.	10-20	C1
1456	Sycamore <i>Acer pseudoplatanus</i>	18	560 820	6N 3S 6E 0W	5	Mature	Fair	Fair / Poor Originally this tree divided from ground level into three-stems. The stem on the west side has broken out near the base or has been removed. The remaining stems have been drawn up for light due to competition from the surrounding trees. There is basal decay present on the west side of the tree where major limb loss has occurred in the past.	Retain for now as part of the bulking of the area. Cut Ivy to ground level. Review when this area is cleaned up.	10+	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. Heavy Ivy cover is extending up into the crown which is somewhat suppressed on the east side by the larger Fir tree (No. 1458)	A- average		
1457	Sycamore <i>Acer pseudoplatanus</i>	18	450	1N 6S 6E 4W	6	Mature	Fair	Fair/ Poor A single stem tree growing effectively as a pair with Tree No.1456 on the bank of the river. It has been drawn up for light and the crown is somewhat suppressed by competition from the surrounding trees. There is deadwood in the crown and it has suffered storm damage in the past. Heavy Ivy cover is extending up into the crown.	Retain for now as part of the bulking of the area. Cut Ivy to ground level.	10+	C1
1458	Douglas Fir <i>Pseudotsuga menziesii</i>	26	770	3N 6S 5E 2W	6	Mature	Fair/ Good	Fair. A single-stemmed, large visual tree with naturally suppressed deadwood up along the main trunk. Ivy growth has been controlled in the past. The tree shows signs of storm damage in the past as well as pruning to provide clearance over the adjacent building.	Prune lower branches over the adjacent building back to proper target pruning points to provide clearance.	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
											
1459	Ash <i>Fraxinus excelsior</i>	12	260	3N 3S 4E 1W	4	Early Mature	Fair	Poor This tree is growing as a pair with Tree No. 1460 which arises at its base. It has been drawn up for light due to competition/ overcrowding from the surrounding trees. There is a lot of material stored around its base. It is growing on a steep bank with concern over its rooting ability and stability.	Remove debris from around its base. I would recommend its removal as part of management in short-term.	<10	U
1460	Horse Chestnut <i>Aesculus hippocastanum.</i>	9	230	2N 3S 7E 0W	1.8	Early Mature	Fair	Poor Growing out from the same base as Tree No. 1459, with a very pronounced lean to the east and this raises concerns over its rooting ability and stability. It extends out over adjacent buildings and	I would recommend its removal as part of 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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. factory yard. There is a lot of material stored around its base. It has no long-term potential.	A- average		
											
1461	Horse Chestnut <i>Aesculus hippocastanum</i>	15	300	4N 4S 7E 1W	6	Early Mature	Fair	Poor This tree is growing out of the river bank with a lean to the east towards nearby buildings raising concerns over its rooting ability and stability. It has been drawn up for light due to competition from the surrounding trees and it is quite suppressed on the western side as a result. The main stem divides at a height of c. 7m into two co-dominant stems. Ivy	I would recommend its removal as part of management.	<10	U

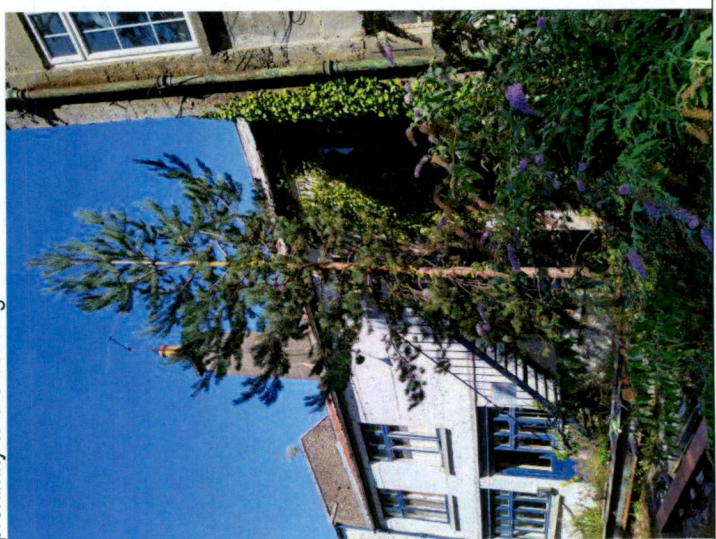
Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. growth is extending up into the crown. The lower crown contains deadwood. It has no long-term potential.	A-average		
1462	Sycamore <i>Acer pseudoplatanus</i>	14	200	1N 3S 5E 0W	6	Semi Mature	Poor	A single stem tree growing with a pronounced lean to the east off the side of a steep embankment raising concerns over its rooting ability and stability. It is being overcrowded by the surrounding trees and it is in decline with dieback evident within its crown. Ivy cover is extending up into the crown.	I would recommend its removal as part of management.	<10	U
1463	Norway Maple <i>Acer platanoides</i>	16	260	4N 4S 3E 2W	4	Early Mature	Fair	Fair/Poor Most likely a self-sown seedling, this tree is growing out of the base of Tree No. 1464 with a lean out to the east due to overcrowding/competition. It divides at c. 3m with a broad union between the stems.	Retain for now as part of the bulking of the area.	10+	C1
1464	Elm <i>Ulmus glabra</i>	18	470	7N 2S 6E 0W	4	Early Mature	Fair	Fair/Poor A single-stem tree growing with a lean to the north with a distorted structure. There is deadwood in the crown which also shows signs of having been pruned back in the past, most likely to provide ground clearance in this area. The upper crown is beginning to show evidence of infection by 'Dutch Elm Disease' (<i>Ophiostoma Ulmi</i>).	Remove deadwood and branch stubs back to proper target pruning points.	10+	C1
1465	Sycamore <i>Acer pseudoplatanus</i>	14	180	5N 1S 4E 0W	3	Semi Mature	Fair	Poor. A single stem, self-sown seedling which has been drawn up for light due to overcrowding. Ivy growth is extending up into the crown.	Retain for now as part of the bulking of the area. Cut Ivy at ground level at present.	10+	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	EUL	Cat. Grade
1466	Sycamore <i>Acer pseudoplatanus</i>	15	300	5N 2S 6E 1W	2	Mature	Fair	N-north S-south E-east W-west Phys.-physiological. Fair/Poor The crown is asymmetric, due to competition from the undergrowth of Cherry Laurel and trees to the west and south and is weighted out to the east as a result. Heavy Ivy growth is extending up into the crown.	A- average Retain for now as part of the group bulking of the area. Cut Ivy at ground level.	10+	C1
1467	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	24	630	3N 3S 3E 3W	2	Mature	Fair	Fair/Poor A single- stem tree growing within a confined space. The lower crown contains naturally suppressed deadwood due to overcrowding/competition from the surrounding vegetation and this would impact on its visual appearance and value if left in isolation. The main stem divides at c.10m into a number of stems with acute unions which may be vulnerable to failure in high winds.	Prune deadwood back to proper target pruning points. Review in more detail when this area is opened up or it is left in isolation.	10+	C1
Group No.1	Cherry Laurel <i>Prunus laurocerasus</i>	An overgrown group of Cherry Laurel growing on a raised bank. This group has substantially encroached into the surrounding area due to lapsed management and was once maintained as a low hedge structure.									
1468	Sycamore <i>Acer pseudoplatanus</i>	18	460/ 240	3N 4S 3E 5W	10	Early Mature	Fair	Fair. The main stem divides near ground level into two stems with a broad union which further subdivides with an acute union on the larger stem with included bark in the union formation. There is also damage to the base of the larger stem with potential to allow for the entry of decay. The tree has been drawn up for light due to competition from the surrounding trees.	It would benefit from significant cutting back to reduce its height and spread and to contain within this area. Requires no work at the present time.	20+	C1
1469	Goat Willow <i>Salix caprea</i>	17	340	3N 4S 3E	10	Early Mature	Fair	Fair/Poor A single-stem tree which divides at c. 4m and then further subdivides above this again. It has been	Retain for now as part of the bulking of the area.	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. drawn up for light due to overcrowding/ competition affecting its structure.	A- average		
1470	Alder <i>Alnus glutinosa</i>	18	360	5W 2N 2S 3E 4W	12	Early Mature	Fair	Fair. A single-stem tree which has been drawn up for light due to competition/ overcrowding from the neighbouring trees.	Requires no work at the present time.	10-20	C1
1471-1473	Sycamore <i>Acer pseudoplatanus</i>	A.14	A.210	2N 1S 3E 0W	8	Early Mature	Fair	Fair / Poor It consists of a group of stems which have been drawn up for light due to overcrowding/ competition from the surrounding trees. There is a large decay cavity at the base of Tree No. 1472 on the east side.	Retain for now as part of the bulking of the area. Cut Ivy at ground level at present.	10+	C1
1474	Sycamore <i>Acer pseudoplatanus</i>	16	340/ 160/ 170	3N 4S 3E 3W	10	Early Mature	Fair	Fair / Poor. A multi-stem tree from base and the main stem divides at c.1.5m with an acute union formation between stems with included bark present between the stems creating a structural weakness at this point. It has been drawn up for light due to competition from neighbouring trees. Ivy growth is extending up into the crown, increasing the wind sail.	Retain for now as part of the bulking of this area. Cut Ivy at ground level at present.	10-20	C1
1475	Ash <i>Fraxinus excelsior</i>	16	200	2N 2S 2E 1W	12	Young / Semi Mature	Fair / Poor	Fair/Poor. This tree has been drawn up for light due to overcrowding/ competition from the surrounding trees.	Retain for now as part of the bulking of this area.	10+	C1
1476	Sycamore <i>Acer pseudoplatanus</i>	16	220 80 140 160	3N 3S 2E 4W	10	Early Mature	Fair	Fair / Poor. There is a wasp nest present at the base of these trees which limited the inspection. A group of self-sown seedling trees and they have been drawn up for light due to overcrowding/ competition. There is a major cavity at the base of the main stem where	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10+	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	EUL	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological. another stem appears to have been lost in the past. Ivy growth is extending up the stems.	A- average		
1477	Sycamore <i>Acer pseudoplatanus</i>	18	430	6N 5S 4E 3W	8	Early Mature	Fair	Fair / Poor This tree is growing out of the base of the steps at the side of the building. It divides at c. 1.8m into two stems with an acute union formation between stems. A third stem was cut back to near ground level in the past.	I would recommend its removal as part of management.	<10	U
1478	Ash <i>Fraxinus excelsior</i>	12	140	2N 2S 2E 1W	10	Young / Semi mature	Fair	Poor. Self-sown seedling, it has been drawn up for light due to competition affecting its structure. It is growing out of a surfaced area, possibly on top of an old tank and this will affect its stability.	I would recommend its removal as part of management.	<10	U
1479	Sycamore <i>Acer pseudoplatanus</i>	10	350	3N 3S 4E 2W	4	Early Mature	Fair	Fair / Poor A single-stem tree which divides at c.3m with an acute union formation between stems. Heavy Ivy cover is extending up into the crown.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10+	C1
Hedge No. 1	Privet <i>Ligustrum ovalifolium</i>	It is growing along the fence on the southern boundary. It has become overgrown and unmanaged and has substantially encroached into the area between the fence and the building due to lapsed management. There is heavy Ivy growth extending up through this hedge.							It would benefit from being cut back hard to rejuvenate and to contain within this area. Cut back the competing vegetation.	10+	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	EUL	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological. adjacent buildings to the north due to competition from larger trees to the south. Heavy Ivy growth is extending up into its crown.	A- average		
Tree No. 5	Beech <i>Fagus sylvatica</i>	18	420	5W 7N 3S 7E 5W	4	Early Mature	Fair	Fair. A single -stem tree, the crown contains storm damage branches from the adjacent Fir tree. A heavy scaffold limb is weighed out over the adjacent buildings to the north. Ivy growth is extending up into the crown.	Remove storm damage branches from crown. Cut Ivy at ground level.	20+	B2
Tree No.6	Douglas Fir <i>Pseudotsuga menziesii</i>	30	790	4N 4S 2E 4W	16	Mature	Good	Fair This is a visual tree within this area. It is single - stemmed tree and the lower crown contains deadwood and branch stubs. It appears to have divided in the upper crown with two leaders present. Heavy Ivy growth is extending up into the crown.	Cut Ivy at ground level. Prune deadwood and branch stubs back to proper target pruning points.	20+	B2
Tree No. 7	Sycamore <i>Acer pseudoplatanus</i>	11	11 stems A.150	5N 5S 5E 5W	2	Mature	Fair	Fair/Poor A multi -stemmed tree from ground level and it is growing on top of the old mill structure and is being suppressed by Ivy. It is unsuitable for this location.	I would recommend its removal as part of management and to prevent structural damage occurring to the Mill structure.	<10	U
Tree No. 8	Sycamore <i>Acer pseudoplatanus</i>	8	8 stems A.100	4N 4S 3E 4W	2	Mature	Fair	Fair A multi -stemmed tree from ground level and is growing on top of the old mill structure. It is unsuitable for this location and has no long-term potential.	I would recommend its removal as part of management and to prevent structural damage occurring to the Mill structure.	<10	U
Tree No. 9	Ash <i>Fraxinus excelsior</i>	12	240 210	3N 2S 2E 3W	4	Young	Fair	Fair. This tree is growing on top of the old mill structure. It divides at ground level with a broad union between the stems and it has been drawn up for	I would recommend its removal as part of management and to prevent structural damage occurring	<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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological. light due to competition. It contains branch stubs and deadwood along the main stems. It is unsuitable for this location and has no long-term potential.	A- average to the Mill structure.		
Tag Nos. 1480 – 1496 are not in use.											
1497	Scots Pine <i>Pinus sylvestris</i>	8	130	1N 1.5S 1E 1.5W	1	Semi Mature	Good	Fair / Good A single-stemmed tree, growing in a plant bed beside the main building. It is establishing well, but may eventually outgrow this location due to its proximity to the building.	Requires no work at the present time.	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	EUL	Cat. Grade
								N-north S-south E-east W-west Phys.-physiological.	A- average		
Notes:											

