Arborist Associates Ltd.

An Arboricultural Assessment on the Tree Vegetation on the Site Area at 'Great Connell SHD', Newbridge, Co. Kildare.

Prepared for: Ashton Ltd.

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1.0 Instructions

1.1 I have been instructed by Ashton Ltd. (planning applicant) to to prepare an arboricultural report on the tree vegetation on a site area at 'Great Connell SHD', Newbridge, County Kildare and report on the following:

A - To assess the present condition of the tree vegetation within this site area. See 'Appendix 2' of this report for details of our assessment and drawing No.GNB001 which has been prepared as a tree constraints plan to aid the design team in finalizing the design for the development of this site area.

B - To assess the impact of the proposed development layout on the tree and vegetation located within the site area indicating those for removal and retention. See 'Section 5' of this report and drawing 'No.GNB002' for detail.

C - To show the position of the tree protective fencing and other tree protection measures that will need to be put in place and be maintained in place until all construction works are complete. See 'Section 6.0' of our report, Appendix 1, and 'Drawing No.GNB002' 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 the trees and hedges 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 effects on other features located on site.
- **Landscape Value** – an assessment of a tree's locality including its contributions to other features as well as to the site as a whole.
- **Cultural Value** – additional contributions made such as conservation, historical, 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).

For the purpose of considering the proposed development layout and design for this site area, the trees included in categories A and B are those which most merit retention. While those in category C should also be considered for retention, they are not considered to be of sufficient value to be worthy of representing a constraint to the development design or site layout.

The following summaries each of the categories:

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

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 (No.GNB001 & No.GNB002) with a 'Red' donut around their trunk positions.

Category A - Trees of high quality/value with a minimum of 40 years life expectancy. These trees would be seen as having the potential to contribute to the tree cover of these grounds for the long-term.

Any category 'A' trees within this site area have been identified on our drawings (Nos.GNB001 & GNB002) with a 'Green' donut around their trunk positions.

Category B – Trees of moderate quality/value with a minimum of 20 years life expectancy. These trees would be seen as having the potential to contribute to the tree cover of these grounds for the medium-term.

Any category 'B' trees within this site area have been identified on our drawings (Nos.GNB001 & GNB002) 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 and they should not be seen as a considerable constraint on the development of these lands, but where viable, they should be retained.

Any category 'C' trees within this site area have been identified on our drawings (Nos.GNB001 & GNB002) with a 'Grey' donut around their trunk positions.

3.5 The trees have been plotted onto the attached drawing (Dwg. No.GNB001) by a land survey company and where they were not, they have been positioned by ourselves to the best of our ability and their positions may not be fully accurate. The tree reference 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 detailed above and recommended by BS 5837 2012.

The constraints for each tree were worked out as per the formulas in BS5837 2012 and have been shown on this drawing using an 'Orange Circle' to aid the

design team in their final development layout to ensure tree vegetation proposed for retention is retained successfully. The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works and is 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, open 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 located on lands at 'Great Connell SHD', Newbridge, County Kildare. It is an irregular shaped site bounded by agricultural lands / existing residential development to the north, agricultural lands to the west and south and by a local road to the east.

4.2 At the north-eastern end of the site area, there are site offices and associated machinery sheds and car parking located centrally, along with two houses and they all have access off the local road to the east. The most northerly located house is known as "Carraig" while the house to the south of it is known as "Valencia Lodge". The bulk of the trees on this site area are located around these houses and yards and consist of a mix of ornamental tree species planted as part of the landscaping of these properties over the years with most of an early-mature age class. Located along the boundary of the second house, there is a prominent group of trees made up of two mature Copper Beech (Nos.1841& 1842) and one mature Sycamore (Nos.1843). Trees of quality around the formal grounds of the first house include Tree Nos.1811, 1814, 1818, 1825 & 1827 which have been given a category grade of 'B' and Tree No.1833 which has been given a category grade of 'A'.

4.3 The site area outside these houses and yards is in agricultural use with the bulk of this currently in use for tillage farming with crops of cereals. The 'River Liffey' runs along part of the western boundary of the site area. There are a number of overhead utility lines traversing the site, mainly located along the southern boundary and also extending across the site in a broadly south -west to north-east direction.

4.4 These fields within the site area are bounded by hedgerows to the south and east while the boundary to the west and part of the northern boundary are undefined. The boundary of these fields to the existing residential development (Wellesley

Manor) to the north consists mainly of a concrete block wall with a small section consisting of Cherry Laurel hedge. The hedgerows on the site are typical of the agricultural hedgerows in this area and consist mainly of Hawthorn with Elder with an understory of Bramble and Dogrose which in places due to lapsed management are encroaching out on the adjoining fields. Within some of the hedgerows, Ash and Sycamore trees have grown up above the hedge line and are forming part of the upper canopy formation. These trees are mainly in the mature age category and some are of prominence, in particular (Nos.1844-1846) within the treescape of this area.

4.5 A line of Poplar trees are located along the southern side of the southern hedgerow (No.4) and these have developed into a line of trees of some prominence within the treescape of the local area. This line of trees has been broken into three sections (Tree Line Nos.1-3) based on their different past management which has seen all of Tree Line No.2 and parts of Tree Line Nos. 1 & 3 being heavily cut down/topped as part of their management due to their proximity to the overhead utility line to the north. These lines of Poplar trees are also beginning to seed/sucker themselves into this area creating a broader line of trees in places due to the lapse in management of the surrounding hedgerow.

4.6 In the south-west corner, there is a small group of large mature Poplar (Nos.1849-1852) and a linear woodland belt which extends southwards outside the site area. This woodland consists of tree species such as Oak and Beech of a mature age class and the trees within this woodland closest to the site boundary have been numbered (Nos.1853-1859) and this woodland belt is of prominence within the treescape of this area.

4.7 Extending north-south along the bank of the 'River Liffey' is a hedgerow (No.5) and this has extended out to create a scrub woodland belt area which is of some visual value to the treescape of this area and is most likely of ecological value. It is made up of Goat and Crack Willow with an understory of Bramble and Dogrose.

4.8 Within the overall site area 69 No. Trees have been individually tagged with 6 Hedges, 3 Tree Lines, 3 Scrub Areas, 1 Scrub Woodland Belt, 1 Shrub Border and 1 Woodland Belt being numbered numerically.

The following table gives a breakdown of the category grading allocation as per the cascade chart in BS5837 2012:

Category Grade	No. of Trees
Category U 2 Trees	**Tree Nos.** 1816 & 1819
Category A 1 Tree	**Tree No.** 1833
Category B 22 Trees + 1 Woodland Belt	**Tree No.** 1811, 1814, 1818, 1821, 1825, 1827, 1831, 1838, 1841, 1842, 1843, 1884, 1844, 1845, 1853, 1854, 1855, 1856, 1857, 1859, 1861 & 1878 **Woodland Belt No**. 1
Category C 44 Trees + 3 Tree Lines + 1 Shrub Border + 6 Hedges + 3 Scrub Areas + 1 Scrub Woodland Belt	**Tree Nos.** 1812, 1813, 1815, 1817, 1820, 1822, 1823, 1824, 1826, 1828, 1829, 1830, 1832, 1834, 1835, 1836, 1837, 1839, 1840, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1858, 1860, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1875, 1876, 1877, 1879, 1880, 1881 & 1883 **Tree Line Nos.** 1, 2 & 3 **Shrub Border No.** 1 **Hedge Nos.** 1, 2, 3, 4,5 & 6 **Scrub Woodland Belt,** No.1 **Scrub Area Nos.** 1,2 & 3
Totals:	**69 Trees + 6 Hedges + 3 Tree Lines + 1 Shrub Border + 1 Woodland Belt + 1 Scrub Woodland Belt & 3 Scrub Areas**

5.0 Arboricultural Implication Study

5.1.1 It is being proposed to develop this site area for a new residential development and it will also be necessary to allow for infrastructural works such as services.

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

5.1.3 On drawing 'No.GNB002', I have identified the tree vegetation to be removed to facilitate this proposed development and/or as part of management with 'Red' crown spreads and those to be retained to form part of the long-term tree cover on these lands with a 'Green Hatched' crown spread. The protective fencing has been shown on this drawing using 'Orange Hatching' and this will need to be erected at the start of the works and be maintained in place until all works are completed. This fencing is to protect the root zone of the tree and hedge vegetation being retained and to ensure their successful integration into the development of these grounds.

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

5.2.0 Tree Removal

5.2.1 **The following table gives a breakdown of the tree and hedge vegetation that will need to be removed to facilitate the proposed development.**

Category Grade	No. of Trees
Category U 2 Trees	**Trees No.** 1816 & 1819
Category A 1 Tree	**Tree No.** 1833
Category B 9 Trees	**Tree No.** 1811, 1814, 1818, 1821, 1825, 1827, 1831, 1838 & 1884.
Category C 26 Trees + 17 Trees from Tree Line No.1 + 2 Hedges & c.124m of sections of other Hedges + 1 Shrub Border	**Tree Nos.** 1812, 1813, 1815, 1817, 1820, 1822, 1823, 1824, 1826, 1828, 1829, 1830, 1832, 1834, 1835, 1836, 1837, 1839, 1940, 1846, 1848, 1870, 1875, 1880, 1881 & 1883 and 17 trees from Tree Line No.1 All of hedge Nos. 1 & 2 and c.77m from hedge No.3, c.39m from hedge No.4 & c.8m from hedge No.5. Shrub Border No. 1
Totals:	**38 Trees + 17 Trees from Tree Line No.1 + 2 full Hedges & c.124m from other Hedges + 1 Shrub Border.**

5.2.2 **So in summary**, 38 of the 69No.indivual trees surveyed plus 17 trees from Tree Line No.1, two full hedges and c.124m of hedging made of small sections of other hedges plus one Shrub Border are being proposed 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. See 'Appendix 2' of this report for full details on tree and hedge vegetation.

The trees for removal are broken down into the following category grades:

- 2 Category **'U'** trees.
- 1 Category '**A'** trees.
- 9 Category '**B'** trees.
- 26 Category **'C'** trees plus 17 trees from Tree Line No.1.

5.2.3 The loss of the above tree and hedge 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.

The design of the landscape areas within the completed development is focused on tree and hedge planting as mitigation for the existing tree and hedge vegetation loss particularly along the boundaries. A mix of tree species, forms and sizes including the use of semi- mature trees will form a strong and unifying element to the landscape areas.

The planting strategy key factors are to:

• Create a sense of identity using trees

• Create a robust landscape that performs all year round and is suitable for the current proposed use of these lands

• Use vegetation to screen and enhance views

• Use a more diverse mix of plant species that are good pollinators

• Plant robust species that tolerate drought and site-specific micro-climates

• Plant species that are maintenance friendly

5.3.0 Tree Retention

5.3.1 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 need to include the erection of protective fencing at

the very start of the works, ground protection installation within root zones where fencing cannot be erected to enclose the entire root zones, monitoring of the site works by the project Arboriculturist throughout the construction process and the use of tree friendly techniques and products for the construction process.

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

Item	Comments
Tree Pruning	As part of the initiating works, the crowns of some of the trees are to be pruned to remove dead/unstable growth, as well as the pruning of individual limbs/branches or entire crowns to reduce size due to structural weaknesses or to improve their juxtaposition within the built environment. A preliminary list of these works is given within the condition tree assessment in 'Appendix 2' of this report and these are to be reviewed on site prior to being carried out. The hedges being retained in most instances will require trimming to bring them back into active management and to incorporate them into the completed landscaped development. This will involve trimming in of their sides, particularly excessive spread of vegetation especially Bramble and the poorer structured sections will need trimming/pruning to address stability issues. The objective of the trimming of the hedges is to help rejuvenate them with the encouragement of lower growth development and once trimmed back; there will be an opportunity to augment poor quality sections with new hedge planting to create better structured sustainable hedges for the future suitable for their new built urban environment. All tree felling and pruning work should be carried out by qualified and experienced tree surgeons *before* any construction work commences; all tree work should be in accordance with *BS3998 (2010) Tree Work – Recommendations.* For the stumps of trees that need to be removed, particularly those which are located within the root zone of trees being retained, these are to be ground out using a mechanical stump grinder taking care not to cause root damage to the trees being retained.
Tree Management	Within the proposed development, as is the current situation, trees will be positioned within close proximity to buildings and usable surfaces such as roads and neighbouring properties. As a result, it will be necessary to continue to review the condition of these trees on a regular basis and to carry out any necessary remedial tree surgery works required to promote health and safety. This will involve the ongoing monitoring of the Ash trees retained for infection and decline as a result of Ash Dieback and the necessary management will need to be undertaken to address safety.

Item	Comments
	Any new tree planting carried out will require maintenance to encourage good growth habits and to alleviate any safety concerns that they may present as they grow in size.
Tree Protection	Trees being retained will need to be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the 'Work Exclusion Zone' and sturdy protective fencing will need to be erected along the points identified in the Tree Protection Plan (DWG No. GNB002) **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: *Trees in relation to design, demolition and construction (2012)* 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". When the fencing has been erected, the construction work can commence. The fencing should be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work have finished and its removal is authorised by the project Arboriculturist.
Construction	It will be important that good housekeeping is in place at all times so that the site does not become congested. All construction works are to be well planned in advance so as not to put pressure on the protective zone around the trees. All works are to occur from outside the protective zones. Where 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. Care should be taken when planning site operations to ensure that wide or tall loads or plant machinery with booms, jibs and counterweights can operate without coming into contact with

Item	Comments
	retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10m of a tree stem. Fires should not be lit in a position where their flames can extend to within 5 m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction. Notice boards, wires and such like should not be attached to any trees. Site offices, materials storage and contractor parking should all be outside the work exclusion zone.
Demolition	In and around tree **Nos.1841, 1842 & 1843**, there are existing buildings and surfacing within their root zones and these items need to be removed as part of the incorporation of this area around these trees into the completed landscaped development which will see this area maintained in soft landscape. All demolition works to be carried out in accordance with section 7.0 of BS5837 2012. Prior to the demolition works commencing, the tree protection fencing is to be adjusted to allow access to the buildings with all soft ground areas remaining cordoned off by the fencing. The buildings within this area will need to be removed first using the existing hard surfacing to drive the necessary machinery on to get access to these buildings. The machinery used to knock the buildings are to work from the existing hard standing surfacing in this area and the buildings are to be knocked in on themselves with no works occurring from the soft ground areas within the root zone of these trees. If works need to occur from the soft ground areas, then ground protection suitable for the machinery carrying out the works is to be installed prior to the works commencing to the recommendations of section 6.0 of BS5837 2012. The hard standing areas of surfacing within the root zone of the trees will need to be removed under the supervision of the project arborist to ensure no soil or root damage is caused. The machinery will need to work out of this area on the existing hard standing surface with good quality top soil being brought in as the surface is removed to allow this area to be incorporated into the completed landscape of the development. Ground levels are not to raised or left lower that existing levels and if works need to occur off the surfaced areas, then ground protection will need to be put in place prior to the works commencing suitable for the works being under taken.
Services	Services entering and leaving the site area are routed so they are located outside the root protection zones of the trees to be retained. Prior to the installation of any services routed near trees, these are to be marked out on site for review by the project Arboriculturist

Item	Comments
	and a detailed method statement is to be prepared by the installation contractor in conjunction with the project Arboriculturist on how these services are to be installed while providing protection to the surrounding tree vegetation shown for retention.
Landscaping	The existing ground levels within the RPA of the trees are to be retained and incorporated into the finished landscaped development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels. All soft and hard landscaping within the RPA of the trees to be retained are to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 are to be adhered to during the landscaping within the RPA's of these trees. 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'.
Boundary Treatments	The boundary treatments within the root zone of the tree and hedge vegetation being retained are of a fence type structure where there will only be a need to dig small diameter holes for the uprights. These holes for the uprights are to be dug manually with no machinery allowed inside the root protection areas. Work zones within the root protection areas for these trees will need to be protected during the construction of the boundary fences by boarding as per section 6.2.3 of BS 5837 2012. Where it is needed to install fences along existing hedges, it will be necessary to carry out some pruning of the side vegetation to allow access. This is to be kept to a minimum and where necessary, the hedges are to be augmented with new hedge planting to fill openings and to bulk up screening.

5.4.0 Monitoring

5.4.1 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.

5.4.2 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.

5.4.3 Copies of the tree retention and protection plan (DWG No. GNB002) 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.

5.4.4 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.GNB002, 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. GNB002.

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. GNB002 & 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.GNB002 & 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 'Cell Web' 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 Fibretex F4M non-woven geotextile with dry joints overlapping by 300mm.

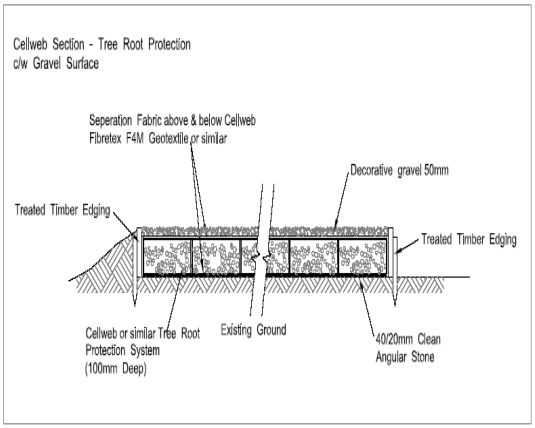
Step 3 – Place constraints along the edges to contain the fill material. These can be of such material as treated timber or railway sleepers.

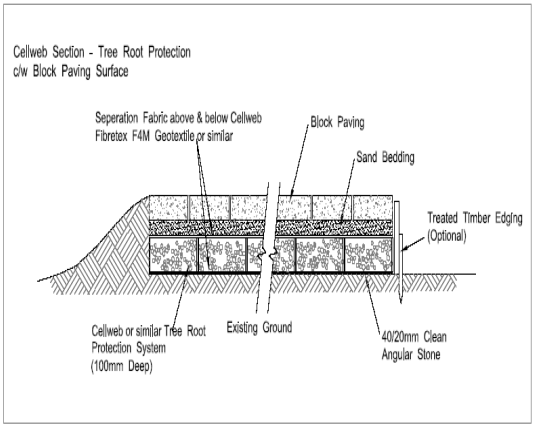
Step 4 – Place the required cellular confinement system (Cell Web150-200mm) over the geotextile and pin/anchor the cell walls open for infilling.

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.

Pictures show the Cell Web being installed on the ground.
The below diagram shows how the Cellular confinement system should be installed.


Cellweb Section - Tree Root Protection
c/w Gravel Surface
Seperation Fabric above & below Cellweb
Fibretex F4M Geotextile or similar
Decorative gravel 50mm
Treated Timber Edging
Treated Timber Edging
Cellweb or similar Tree Root
Protection System
(100mm Deep)
Existing Ground
40/20mm Clean
Angular Stone


Cellweb Section - Tree Root Protection
c/w Block Paving Surface
Seperation Fabric above & below Cellweb
Fibretex F4M Geotextile or similar
Block Paving
Sand Bedding
Treated Timber Edging
(Optional)
Cellweb or similar Tree Root
Protection System
(100mm Deep)
Existing Ground
40/20mm Clean
Angular Stone

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.

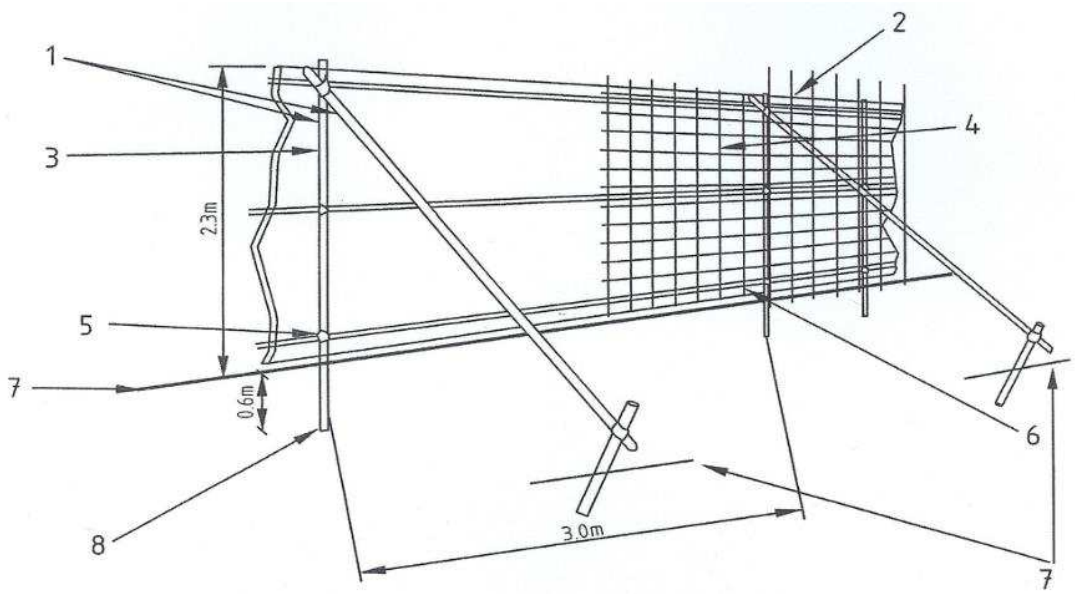
Signed Felim Sheridan Date 29th March 2022

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.



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

Figure 2. – Protective fencing for RPA

Sample of signage to be placed on fence pannels.

Samples of Ground protection

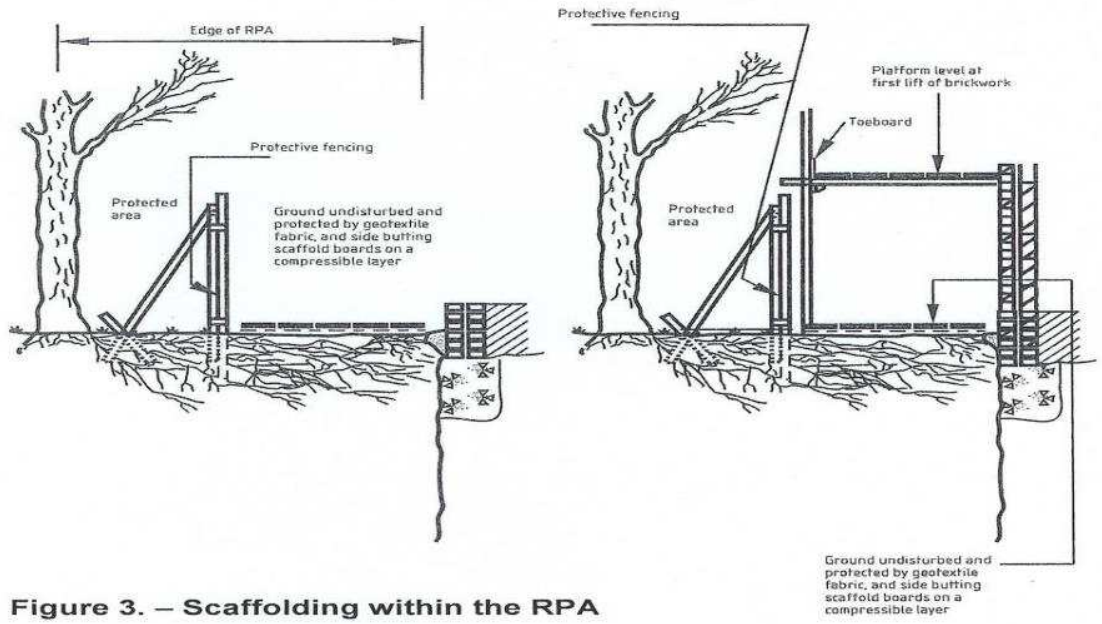
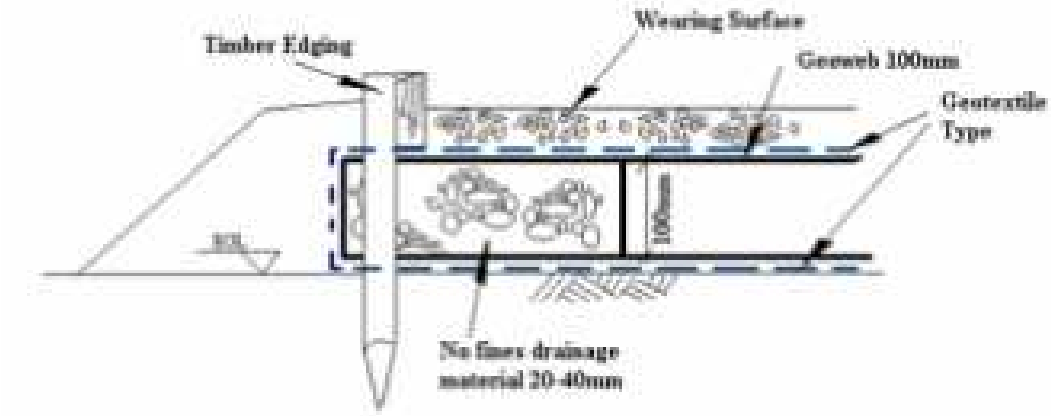
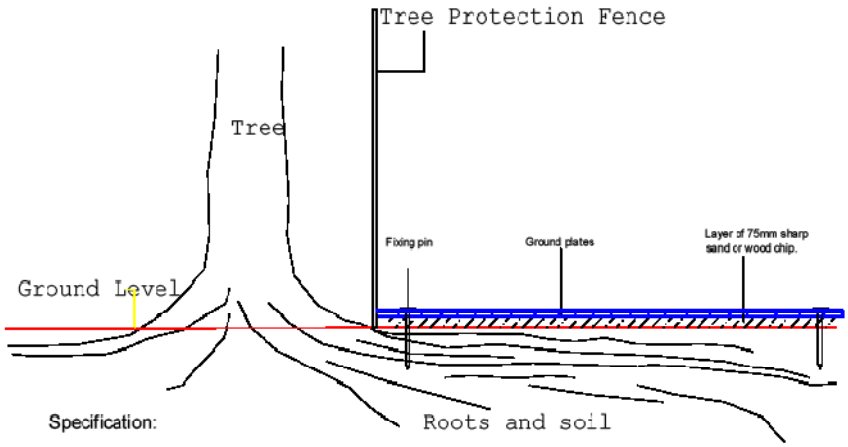


Figure 3. – Scaffolding within the RPA

Cellular confinement system such as Cellweb to protect root zone.



Example of use of steel/road plates over root area.



Specification:

1. Lay min. 75m depth of sharp sand/wood chip over identified ground area
2. Lay side-butting scaffold boards/15mm poly propylene road plate over sand/wood chip
3. Fix ground protection cover into place with pins/pegs

Example of use of steel/road plates over root area.

Appendix 2

Condition Tree Assessment.

On Site Area at 'Great Connell SHD', Newbridge, County Kildare.

Date: 28th July 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 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 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 10Years. Most of these will be recommended for removal for reasons of sound Arboricultural practice.
Category A - Trees of high quality/value with a minimum of 40 years life expectancy.
Category B – Trees of moderate quality/value with a minimum of 20 year life expectancy.
Category C – Trees of low quality/value with a minimum of 10 years life expectancy

Sub categories

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

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

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

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

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

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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
		A Condition Assessment of the trees within the site area at 'Great Connell SHD', Newbridge, County Kildare. The survey commences in the north- eastern corner of the site at House No. 1, known as "Carraig" and proceeds in a broadly clockwise direction around the garden area of this property. It then proceeds south along the roadside boundary to the second House known as "Valencia Lodge". The survey then continues south along the field side of the roadside boundary and then moves in a broadly clockwise direction around the open field. When the survey reaches the wall on the northern boundary with 'Wellesley Manor', the survey moves south along a drainage ditch to a group of Willow trees at the rear of the Murphy site offices. The survey then returns to the rear of "Valencia Lodge" where it concludes at the field boundary.											
	House No. 1 'Carraig'	**This property is located in the north eastern corner of the larger site area**. It is separated from the site by concrete walls. It consists of a house located on the northern side of the property with garden areas surrounding it to the south, east and west. It is mainly in lawn with a range of garden shrubs, ornamental trees and hedges planted throughout. The shrubs include Abelia, Weigela, Syringa, Forsythia, Rhus, Corylus and ornamental conifers which provide seasonal interest.													
Hedge No. 1	**Beech** *Fagus sylvatica*	**It runs in a north – south direction along the road frontage of the front garden.** It is of a mature age class in fair/ good condition both physiologically and structurally. It is continuous along its length except for the access points from the road and it has been clipped to contain height and spread in the past. Ash seedlings are developing in places. A2.5 | - | A1.5 | -										It would benefit from cutting to selected height and width to shape/ tidy and create a more formal hedge.		C2
Hedge No. 2	**Golden Leyland** *x Cuprocyparis leylandii cv.*	**It runs in a north – south direction inside the front garden boundary and it extends from the north of the entrance gate off the roadway.** It is of a mature age class in fair condition physiologically and structurally. It is growing immediately to the west (inside) of Hedge Mo. 1 and it has been topped in the past to its current height. It is encroaching out into the lawn area and is not continuous along its length. A2.5 | - | A2.5 | -										It would benefit from cutting to contain the height and spread. Replant sections of the hedge where plants have failed.		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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
		The following trees are located on the lawn area between the front boundary and the front of the house.												
1811	**Ash** *Fraxinus excelsior*	12	240/ 230/ 290/ 390	6	5	6	5	2	Early Mature	Fair	Fair A multi-stem tree from c.1.6m, it divides into two co-dominant stems which immediately subdivide again with acute union formations between the stems. There are signs of topping/ pruning in the past at c.6m from where the crown has re-grown. There is minor deadwood and dieback present in the crown. Ivy growth is extending up the main stem and will require management in the future.	Remove dead / unstable growth.	20+	B2
1812	**Cypress** *Chamaecyparis cv.*	9	280/ 200/ 200	2	2	2	2	0	Early Mature	Fair/ Good	Fair It has an upright habit and is multi-stemmed from ground level. The lower crown contains naturally suppressed deadwood. Minor branches have fallen out on the eastern and southern sides.	Prune back minor branches to restore shape.	20+	C2
1813	**Ash** *Fraxinus excelsior*	12	620	4	4	5	5	2	Mature	Fair	Fair A multi-stem tree from c.1.8m with an acute union formation between the stems. There is deadwood and dieback throughout, possibly indicating 'Ash Dieback'. Ivy growth is extending up into the crown.	Remove dead / unstable growth. Monitor its condition annually.	10-20	C2
1814	**Ash** *Fraxinus excelsior*	11	250	4	1	5	1	2	Early Mature	Fair / Good	Fair / Good A single stem tree growing with a slight lean to the east. One of the stems of Tree No. 1816 has broken out and is resting in the lower crown. The crown contains some light deadwood and dieback.	Remove the stem of Tree No. from 1816 from the lower crown.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
1815	**Flowering Cherry** *Prunus sp.*	10	230/ 270	3	2	7	5	1	Early Mature	Fair	Fair It divides near the base into two stems with an acute union formation between the stems. It has been drawn up and out for light affecting the structure. Lower branches have been pruned in the past to maintain clearance over the entrance driveway. The crown contains minor deadwood, branch stubs and small decay pockets at sites of branch removal. Ivy growth extends up into the crown.	Retain for now as part of the bulking of this area.	10-20	C2
1816	**Purple Leaf Plum** *Prunus cerasifera 'Pissardii'.*	9	320	3	2	3	4	1	Early Mature	Fair/ Poor	Poor A multi-stem tree from c.1.6m with an acute union formation between the stems. Included bark is developing between the stems which is a point of structural weakness. A large stem on the south side has broken out in the past leaving a large area of wood exposed to decay. The central stem has broken out to the north and is resting in the crown of Tree No. 1814. There are fungal brackets of the fungus '*Phellinus pomaceus'*. Present.	I would recommend **removal** as part of management.	<10	U
1817	**Cypress** *Chamaecyparis cv.*	5	100 (6 stems)	1	1	1	1	0	Early Mature	Fair	Fair / Poor A multi-stem tree from ground level and the lower crown contains naturally suppressed deadwood. It has been drawn up for light due to overcrowding / competition. The crown has been suppressed on the southern side due to surrounding trees.	Retain for now as part of the bulking of this area.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
		The following trees extend east – west on the garden area between the boundary wall and the gable end of the house												
1818	**Sycamore var.** *Acer pseudoplatanus 'Atropurpureum'*	12	720	5	4	5	6	2	Early Mature	Good	Fair / Good A multi-stem tree from c.1.8m from where the crown develops and it has a slightly acute union formation between the stems. Very heavy Ivy growth extends up into the crown, increasing the windsail. It is growing just to the south of the entrance gate against the boundary wall and the main stem has impacted the wall / coping on the eastern side.	Cut Ivy at ground level.	20+	B2
1819	**Purple Leaf Plum** *Prunus cerasifera 'Pissardii'.*	8	160/ 160	2	3	3	2	3	Early Mature	Fair	Poor It divides near the base into two stems with an acute union formation between the stems. The western stem has recently broken out at c.1.8m and has fallen out to the north. It has been drawn up for light due to competition and the lower crown has been suppressed by Ivy growth. It has no long-term potential.	I would recommend **removal** as part of management.	<10	U
1820	**Purple Leaf Plum** *Prunus cerasifera 'Pissardii'.*	9	290	1	5	3	2	3	Early Mature	Fair	Fair/ Poor A single stem tree to c.1.6m where it divides with an acute union formation between the stems. It has been drawn up for light due to competition. Part of the western stem has broken out and the crown contains minor deadwood throughout. Ivy growth extends up into its crown.	Retain for now as part of the bulking of this area.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
1821	**Hornbeam** *Carpinus betulus*	14	700	6	7	7	6	1	Mature	Good	Fair / Good A multi-stem tree from c.2.5m up and it has a number of scaffold branches low down. The crown is quite well balanced although it has been slightly suppressed on the southern side by Tree No. 1833	No works required at the present time.	20+	B2
1822	**Laburnum** *Laburnum anagyroides*	7	200/ 110/ 220/ 140	4	4	4	3	2	Mature	Fair	Fair/ Poor It appears to have heaved at the base in the past and is growing with a lean to the east. It divides at c.1.6m into a multi-stem tree. Very heavy Ivy growth extends up into the crown increasing the windsail. Its crown shows signs of past storm damage.	Cut Ivy at ground level.	10+	C1
1823	**Italian Alder** *Alnus cordata*	9	380	4	4	5	4	1	Early Mature	Fair / Good	Fair A single stem tree to c.4m where it divides with an acute union formation. There are suckers developing at the base and heavy Ivy extends high into the crown increasing the windsail.	Cut Ivy at ground level. Prune suckers at ground level. Review again in twelve months.	10-20	C1
1824	**Sweet Gum** *Liquidamber styraciflua*	5	170	3	2	3	3	1	Semi Mature	Fair / Good	Fair A single stem tree, the main stem has been damaged by a clothes line at c.1.8m, creating a structural weakness and point of potential failure in the future.	Retain for now as part of the bulking of this area.	10-20	C1
1825	**Hornbeam** *Carpinus betulus*	12	630/ 290	5	5	6	4	2	Mature	Fair / Good	Fair A twin stem tree from near the base. Light Ivy growth is extending up the stems. There is light	No works required at the present time.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											deadwood in the lower crown. Roots have been exposed on the western side most likely as a result of ground level changes around the base.			
1826	**Cherry Plum** *Prunus cerasifera* **Purple Leaf Plum** *Prunus cerasifera 'Pissardii'.*	7	150 (3 stems)	3	3	3	3	0	Early Mature	Fair / Good	Fair/ Poor A group of stems of both types growing up together. A stem on the northern side has grown along the ground before turning vertically.	Retain for now as part of the bulking of this area.	10+	C1
1827	**Common Beech** *Fagus sylvatica*	9	370	5	4	5	5	0	Early Mature	Good	Fair A single stem tree with a secondary stem developing at c.2.5m on the northern side. There is an acute union formation between the stems with included bark developing which is a potential structural weakness. It has potential to form part of the long-term cover of this site.	Carry out formative pruning to address structural issues.	20-40	B1
1828	**Evergreen Oak** *Quercus ilex*	6	120 (4 stems)	3	3	4	2	0	Semi Mature	Fair / Good	Fair It is growing from the base of the boundary wall to the north. It is a multi-stem tree from near ground level with a distorted structure. It is likely to impact the wall structurally as it develops. It has no long-term potential in this location.	Retain for now but plan for removal.	10+	C1
1829	**Evergreen Oak** *Quercus ilex*	5	90/ 110	2	3	3	3	0	Semi Mature	Fair / Good	Fair It is growing from the base of the boundary wall to the north. It is a multi-stem tree from near ground level with a distorted structure. It is likely to impact the wall as it develops. It has no long-term potential in this location.	Retain for now but plan for removal.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
Tree Line		On the adjoining landside of the northern boundary wall is a short line of semi mature Lime trees planted at intervals into a landscape shrub border in the adjoining development 'Wellesley Manor' and they have grown up forming an upper canopy layer. The branches on the southern side of the crowns are resting on / overhanging the site boundary wall.												
Shrub Border No.1	**Mixed Species**	The survey continues on the field side of the boundary wall of this property ('Carraig') working from east to west along the linear landscaped strip. It consists of a mix of large landscape shrubs such as Dogwood, Berberis and Euonymus interplanted with a mix of trees such as Silver Birch and Scots Pine. The trees have started to develop above the line of the shrub layer forming an upper canopy layer. **The following trees are located within this shrub border.**										It would benefit from some general maintenance to maintain a formal structure.	-	C2
1830	**Scots Pine** *Pinus sylvestris*	7	190	0	3	2	4	1	Semi Mature	Fair / Good	Fair A single stem tree growing close to the boundary wall. It has been drawn up for light due to overcrowding/ competition. It has grown up above the surrounding shrub layer. It has been somewhat suppressed by surrounding trees. The planting stake is still present on the northern side. Bramble is colonising the base.	Retain for now as part of the bulking of this area.	20+	C1
1831	**Scots Pine** *Pinus sylvestris*	12	230	3	4	4	2	1	Semi Mature	Fair / Good	Fair / Good A single stem tree which has grown up above the surrounding shrub layer. It is located somewhat forward from the boundary wall in this area. It has been somewhat suppressed by surrounding trees. Bramble is colonising the base.	Retain for now as part of the bulking of this area.	20+	B1
1832	**Silver Birch** *Betula pendula*	15	230	2	2	2	2	2	Early Mature	Fair / Good	Fair A single stem tree, it has been drawn up for light due to overcrowding/ competition and has grown up above the surrounding shrub layer. It is located somewhat forward from the boundary wall in this	Retain for now as part of the bulking of this 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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											area. It has been somewhat suppressed by surrounding trees. Bramble is colonising the base.			
1833	**Sessile Oak** *Quercus petraea*	12	840	7	8	6	7	3	Early Mature	Fair / Good	Fair It is growing beside the boundary wall and may have been impacted by the construction of this wall. Very heavy Ivy growth extends high into the crown increasing the windsail and this has also limited the visual inspection. The crown contains deadwood.	Cut Ivy at ground level. Remove dead / unstable growth. Review again in twelve months.	40+	A1
		The survey continues southwards on the field boundary with the adjoining road.												
Tree Group (1834 – 1840)	**Silver Birch** *Betula pendula* **Scots Pine** *Pinus sylvestris* **Sycamore** *Acer pseudoplatanus*	Planted into a mounded area which extends in a north to south direction along the roadside boundary. It is a group of mixed age and mixed species planted to form a visual screen along the boundary. An overhead utility line runs to the north west of part of the group and trees nearby will require pruning to maintain clearance. **The following trees are located within this tree group.**										Tidy up undergrowth.		-
1834	**Silver Birch** *Betula pendula*	5	270	3	2	3	2	1	Semi Mature	Fair / Good	Fair A single stem tree, it is growing with a lean to the east.	Retain for now as part of the bulking of this area.	20+	C1
1835	**Sycamore** *Acer pseudoplatanus*	7	280	4	2	3	4	0	Semi Mature	Good	Fair / Good It divides at c1.8m with an acute union formation between the stems. There is an overhead utility line to the north west. It will require pruning in the future to maintain clearance.	Retain for now as part of the bulking of this area.	20+	C1
1836	**Scots Pine** *Pinus sylvestris*	9	300	2	4	5	3	0	Semi Mature	Fair	Fair A single stem tree with a distorted structure.	Retain for now as part of the bulking of this area.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											Bramble and Ivy are colonising the base.	Tidy up undergrowth.		
1837	**Sycamore** *Acer pseudoplatanus*	8	180/ 200	3	4	2	2	1	Semi Mature	Fair / Good	Fair / Poor A twin stem tree from near the base with an acute union formation between the stem with included bark developing between the stems is creating a point of structural weakness. Bramble is colonising the base.	Retain for now as part of the bulking of this area.	10-20	C1
1838	**Scots Pine** *Pinus sylvestris*	8	280	3	2	5	4	0	Semi Mature	Fair / Good	Fair / Good A single stem tree, the planting stake is still present.	Remove planting stake	20+	B1
1839	**Silver Birch** *Betula pendula*	10	270	2	4	4	3	1	Semi Mature	Fair / Good	Fair / Good A single stem tree with the planting stake still present.	Remove planting stake	20+	C1
1840	**Sycamore** *Acer pseudoplatanus*	9	380/ 110/ 260	4	4	4	4	0	Semi Mature	Fair / Good	Fair / Poor A multi-stem tree from ground level, it divides into three stems. It has grown up around a concrete post and rail fence and is now impacting the fence causing damage.	Retain for now as part of the bulking of this area.	10-20	C1
		The survey now moves to the garden area of the second property on the site, known as "Valencia Lodge". There is a small group of very large, visually prominent trees located in the garden area. They have grown up together forming a combined canopy.												
1841	**Copper Beech** *Fagus sylvatica* 'Purpurea'	19	1110	8	8	8	8	4	Mature	Fair	Fair / Poor It has grown up with Tree No. 1842 and forms a combined canopy. It is a large, visually prominent tree. A large limb has been lost on the northern side in the past at c.2m and there is decay present with fungal brackets of '*Ganoderma sp*.' below. There is also decay at the base of one of the main	Remove dead / unstable growth and lighten in heavy scaffold limbs/ branches by 1-2m. Remove Sycamore sapling at the base.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											stems at c.5m. Ivy cover is extending up the main stem into its crown. There is a young Sycamore developing at the base.	Review again in twelve months. It would benefit from internal investigation of decay on lower trunk/ base.		
1842	**Copper Beech** *Fagus sylvatica* 'Purpurea'	19	1200	8	9	10	9	3	Mature	Fair / Good	Fair It has grown up with Tree No.1841 and forms a combined canopy. It is a large, visually prominent tree with heavy scaffold branches low down. Ivy cover has been controlled in the past but is starting to regrow. A minor branch has been cut away on the northern side. A branch stub is decaying back into the main stem at c.2m.	Remove dead / unstable growth and lighten in heavy scaffold limbs/ branches by 1-2m. Review again in twelve months.	20+	B2
1843	**Sycamore** *Acer pseudoplatanus*	18	1700	9	7	7	7	3	Mature	Good	Fair A multi-stem tree from c.2.5m with large stems growing in a co-dominant manner. It shares a canopy with tree No. 1841. Ivy growth is extending up into the lower crown. There is minor deadwood in the centre and some branch fusion.	No works required at the present time.	20+	B2
1884	**Sycamore var.** *Acer pseudoplatanus 'Atropurpureum'*	13	440/ 350	5	6	5	5	0	Early Mature	Good	Good It is a twin stem tree from c.1.3m with an acute union formation and co-dominant stems. It has branches to ground level and lower branches have impacted the concrete post and rail fence causing it to break.	No works required at the present time.	20+	B2
Hedge No. 3	**Hawthorn** *Crataegus*	**It runs in a north to south direction along the eastern boundary of the site area with the adjacent road.** It is of a mature age class in fair condition physiologically and structurally. It consists of predominately Elder and										It would benefit from cutting on the field side to contain spread.		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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
	monogyna **Elder** *Sambucus nigra* **Dogrose** *Rosa canina* **Bramble** *Rubus fruticosus* **Ash** *Fraxinus excelsior* **Sycamore** *Acer pseudoplatanus* **Elm** *Ulmus sp.*	Hawthorn with Dogrose along the line. Re-generating Elm is developing along the line. It is mostly continuous along its length with a short gap at the northern end. It has been cut down low in the past to the current height but has been allowed to encroach out into the field. Bramble and Dogrose is colonizing in places. There are a number of large, visually prominent Sycamore and Ash trees along the line which form the upper canopy formation. A2.0 | - | A3.0 | - **The following trees are located within Hedge No.3.**												
1844	**Sycamore** *Acer pseudoplatanus*	15	640/ 520	6	8	7	8	5	Mature	Fair / Good	Fair A twin stem tree from c.1.6m with an acute union formation between the co-dominant stems. Heavy undergrowth limited the visual inspection at the base.	Cut Ivy at ground level and remove to a height of 2m to allow a more detailed assessment of its base and lower trunk.	20+	B2
1845	**Sycamore** *Acer pseudoplatanus*	15	880	8	7	9	8	4	Mature	Fair / Good	Fair A single stem tree with light Ivy growth developing on the lower stem. A barbed wire fence extends along the base on the western side. Ploughing has come into the root impact area under the canopy. It is visually prominent in the local area.	Cut Ivy at ground level and remove to a height of 2m to allow a more detailed assessment of its base and lower trunk.	20+	B2
1846	**Ash** *Fraxinus excelsior*	14	810	8	8	9	5	4	Mature	Fair	Fair A single stem tree to c.4m from where it divides into a multi-stem tree with an acute union formation between the stems. There is dieback in	Cut Ivy at ground level and remove to a height of 2m to allow a more detailed assessment of	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											the upper crown possibly related to infection by 'Ash Dieback'. Light Ivy growth is extending up the main stem. A large branch has been lost in the past on the western side. There is wound wood and a decay pocket at the base of the stem. A barbed wire fence runs along the base on the western side. It is visually prominent in the local area.	its base and lower trunk. Review again in twelve months.		
Scrub Area No. 1	**Hawthorn** *Crataegus monogyna* **Elder** *Sambucus nigra* **Elm** *Ulmus sp.* **Bramble** *Rubus fruticosus*	**This area is located to the west of Hedge No. 3 and to the south of Hedge No. 4**. It is an overgrown and unmanaged area with clumps of Hawthorn, Elder and Ash, Sycamore and Elm are regenerating. Bramble has also established over large parts of the area, limiting access.										Retain for now as part of the bulking of this area.		C2
Hedge No. 4	**Hawthorn** *Crataegus monogyna* **Elder** *Sambucus nigra* **Dogrose** *Rosa canina*	**This hedge extends at 90 degrees in an east – west direction from the southern end of Hedge No. 3 and forms the southern boundary of the site area. It forms a boundary between fields.** It is of a mature age class in fair condition physiologically and structurally. It consists of mainly Hawthorn and Elder with some Ash saplings. Bramble is developing along the line. It has been allowed to grow up and out due to lapsed management. Encrouching scrub and weeds have been cut back to maintain clearance for ploughing. A6.0 | - | A8 | - **The following trees are located in Hedge No.4.**										It would benefit from general tidying works, particularly to contain width and encroachment out on to the adjoining fields.		C2
1847	**Goat Willow** *Salix caprea*	7	150/ 150	3	3	3	3	0	Early Mature	Good	Fair / Good A multi stem tree from the base, it is located slightly forward of Hedge No. 4. It has been	Retain for now as part of the bulking of this area.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											somewhat suppressed on the southern side due to surrounding vegetation.			
1848	**Poplar** *Populus tremuloides*	15	270	3	3	3	3	2	Early Mature	Fair / Good	Fair A single stem tree growing forward of Hedge No. 4. It is isolated from the nearby tree lines.	No works required at the present time.	10-20	C2
Tree Line No. 1	**Poplar** *Populus tremuloides*	A. 15	A.500	A2	A2	A2	A2	A.4	Early Mature	Fair / Good	Fair / Poor A line of trees planted at close centres along the southern side of Hedge No. 4 and in some places it has widened out to a double line of trees. It extends in an east to west direction and they form a visually prominent line of trees in the local area. They have grown up above the hedge line and heavy Ivy cover extends up into the crowns of many of the trees. Some of the trees have broken out in storms and there is deadwood in the crowns of some trees. There are a few dead trees along this line.	Make safe any large size dead/ unstable growth. Cut Ivy at ground level. Review again in twelve months.	10-20	C2
Tree Line No. 2	**Poplar** *Populus tremuloides*	A. 10	A.500	A4	A4	A2	A2	A.3	Mature	Fair	Poor It continues on from the western end of Tree Line No. 1. The trees have been topped in the past/ reduced to 3-4m to clear the adjacent, overhead utility line to the north and this is impacting on their structure and quality. They have regrown to the current height with heavy Ivy cover extending up into the main stems of many of the trees. Structurally this regrowth is weak and will be prone to limb/ branch failure as it grows in size. Some of the stumps have started to regrow with	Retain for now as part of the bulking of this area. Review again in twelve months.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											epicormic growths developing. These growths have weak unions and are likely to fail in the future as they develop. The line is not continuous with gaps colonised by Elder.			
Tree Line No. 3	**Poplar** *Populus tremuloides*	A. 20	A.500	A6	A7	A2	A2	A.4	Early Mature / Mature	Fair	Fair It continues on from the western end of Tree Line No. 2. The trees are taller than previous lines and are visually prominent in the local area. Heavy Ivy cover is extending high into the crowns, increasing the windsail of their crowns and limiting the visual inspection. The trees closest to Tree Line No. 2, which are close to the overhead utility line to the east, have been topped/ heavily reduced, but they are re-growing with epicormic growth developing along the stem.	Retain for now as part of the bulking of this area. Cut Ivy at ground level. Review again in twelve months.	10-20	C2
Tree Group (1849 – 1852)	**Poplar** *Populus tremuloides*	29	A 750	A 10	A 8	A 6	A 4	A 4	Mature	Fair / Good	Fair A group of four very large trees that have grown up together with a combined canopy. They are visually prominent in the local area. Tree No. 1850 has been suppressed by the larger surrounding trees. Heavy Ivy growth is extending up into the crowns, increasing the windsail of their crowns.	Cut Ivy at ground level at present.	10-20	C2
Wood land Belt No. 1	**Sessile Oak** *Quercus petraea* **Common Beech** *Fagus sylvatica*	**It is located to the west of Tree Group no.2 and extends in a southerly direction away from the site area. The northern most trees have been included in the survey.** They are large trees which are visually prominent in the local area. They have grown up together and share a group canopy formation. The understorey consists of seedling Sycamore and Bramble. Tree Nos. 1853 and 1854 are slightly isolated to the east from the main group.										Management is located outside the control of this site area.		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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
		The following trees are located closest to the site boundary.												
1853	**Sessile Oak** *Quercus petraea*	20	800	7	4	5	8	5	Mature	Fair / Good	Fair A single stem tree with minor deadwood in the crown. Heavy Ivy growth extends high into the crown, increasing the windsail of its crown.	Cut Ivy at ground level.	20-40	B2
1854	**Sessile Oak** *Quercus petraea*	20	780	4	12	5	5	3	Mature	Fair / Good	Fair A single stem tree with deadwood throughout the crown. Heavy Ivy growth extends high into the crown, increasing the windsail of its crown.	Cut Ivy at ground level. Remove dead /unstable growth.	20 - 40	B2
1855	**Sessile Oak** *Quercus petraea*	23	748	11	4	7	6	4	Mature	Fair / Good	Fair A single stem tree, it has been drawn out to the north for light due to overcrowding. A heavy scaffold branch on the northern side has broken out leaving a large jagged wound and there is deadwood throughout the crown. Heavy Ivy growth extends high into the crown, increasing the windsail of its crown.	Cut Ivy at ground level. Remove dead /unstable growth.	20 - 40	B2
1856	**Common Beech** *Fagus sylvatica*	24	800	8	4	9	10	4	Mature	Fair / Good	Fair A tall, single stem tree with a decay cavity evident at c.10m on the eastern side. Light Ivy growth is extending up the main stem. The crown contains minor deadwood.	No works required at the present time. It would benefit from a more detailed assessment, particularly the decay cavity at c.10m.	20+	B2
1857	**Sessile Oak** *Quercus petraea*	22	820	8	7	7	6	7	Mature	Fair / Good	Fair A single stem tree, it is growing up with Tree No. 1858. It has been drawn out to the east for light due to competition. There are suckers developing	No works required at the present time.	20-40	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											along the main stem.			
1858	**Common Beech** *Fagus sylvatica*	5	700	3	9	8	16	0	Mature	Fair / Good	Fair / Poor It is growing up in between Tree No.1857 and 1859 with a distorted structure. It divides at c.3m with a broad union formation. The main stem has fused to the main stem of Tree no. 1859. There is a large decay cavity at the base on west side.	Retain for now as part of the bulking of this area. The basal decay would benefit from a more detailed assessment and management.	10+	C2
1859	**Common Beech** *Fagus sylvatica*	24	1200	8	8	8	8	4	Mature	Fair / Good	Fair It is growing up with Tree No.1857 and 1858. The main stem of Tree No. 1858 is resting / fused to the main stem.	No works required at the present time.	20-40	B2
Hedge No. 5	**Hawthorn** *Crataegus monogyna* **Alder** *Alnus sp.* **Elder** *Sambucus nigra* **Dogrose** *Rosa canina* **Bramble** *Rubus fruticosus* **Sycamore** *Acer pseudoplatanus* **Willow** *Salix sp.*	**This hedge extends along the top of an embankment to the River Liffey.** It is of a mature age class in fair condition physiologically and structurally. It consists of mainly Hawthorn and Elder and it has been allowed to grow in an unmanaged manner with scrub species such as Bramble encroaching out to create a broader hedge. Tree species such as Alder, Ash and Sycamore have developed along the line and some have grown up above the general hedge line. A5 | - | A7 | 0 **The following trees are of prominence within this hedge line.**										It would benefit from general tidying works to contain.		B2
Scrub Wood land	**Goat Willow** *Salix caprea* **Crack Willow**	**This linear scrub area extends on from hedge No.5 in an east to west direction on the bank of the River Liffey.** It is of a mature age class in fair condition physiologically and structurally. It consists of Goat Willow, Crack Willow, Ash										Carry out general tidying works particularly to contain the spread out		C2/ C3

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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
Belt No.1	*Salix × fragilis* **Ash** *Fraxinus excelsior* **Alder** *Alnus glutinosa* **Elder** *Sambucus nigra* **Bramble** *Rubus fruticosus* **Dogrose** *Rosa canina*	and Alder from the upper canopy with Bramble, Elder and other scrub species from the understory and making access difficult. It protrudes out from the boundary with the river and creates a good buffer between the field and the river. Individually the trees within are of low quality, but collectively it is of more value especially ecologically.										into the field.		
1860	**Alder** *Alnus sp.*	12	360/ 410	4	7	4	6	0	Mature	Fair / Good	Fair A twin stem tree from near the base. A Hawthorn is developing at the base on the eastern side. Ivy growth is extending up the main stem.	Retain for now as part of the bulking of this area.	10-20	C2
1861	**Sycamore** *Acer pseudoplatanus*	13	660	5	4	7	7	1	Early Mature	Good	Fair/ Good A single stem tree with light Ivy growth beginning to develop on the main stem.	No works required at the present time.	20-40	B1
1862	**Alder** *Alnus sp.* **Ash** *Fraxinus excelsior*	12	280/ 280	3	4	7	2	2	Early Mature	Fair	Fair A twin stem tree from near the base. The northern stem has broken out a c.0.5m. An Ash tree has developed at the base of the union and has been drawn out to the south for light due to competition.	Retain for now as part of the bulking of this area.	10-20	C2
1863	**Alder** *Alnus sp.* *(2 trees)*	13	340/ 340	4	4	7	7	4	Early Mature	Fair / Good	Fair A pair of trees growing up together with a combined canopy. One tree is twin stem from near the base with an acute union formation between the stems. The other tree is growing out of its base. Very heavy Ivy growth extends up into the crown.	Retain for now as part of the bulking of this 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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
1864 - 1866	**Alder** *Alnus sp.* *(3 trees)*	A 13	A 290/ 340	A 5	A 3	A 5	A 7	A 3	Early Mature /Mature	Fair / Good	Fair Three trees growing up together with a combined canopy. Tree No. 1866 leans out to the east for light. Heavy Ivy growth is extending up into the crowns.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10-20	C2
1867	**Alder** *Alnus glutinosa*	A 13	A 290	A 5	A 3	A 5	A 7	A 3	Mature	Fair / Good	Fair A twin stem tree from the base with an acute union formation between the co-dominant stems. Ivy growth is extending up into the crown.	Retain for now as part of the bulking of this area.	10-20	C2
1868	**Alder** *Alnus glutinosa*	A 13	A 290	A 5	A 3	A 5	A 7	A 3	Mature	Fair / Good	Fair/ Poor A twin stem tree from the base with a distorted structure. Ivy growth is extending up into the crown.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10-20	C2
1869	**Alder** *Alnus glutinosa*	A 13	A 290	A 5	A 3	A 5	A 7	A 3	Mature	Fair / Good	Fair A multi-stem tree from the base with minor deadwood in the crown. There is light Ivy growth extending up into the crown.	Retain for now as part of the bulking of this area.	10-20	C2
1870	**Alder** *Alnus glutinosa*	A 13	A 290	A 5	A 3	A 5	A 7	A 3	Mature	Fair / Good	Fair A multi-stem tree from the base with minor deadwood in the crown. There is heavy Ivy growth extending up into the crown.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10-20	C2
Tag Nos. 1871 – 1874 not in use														
1875	**Alder** *Alnus glutinosa*	A 13	A 290	A 5	A 3	A 5	A 7	A 3	Mature	Fair / Good	Fair A single stem tree with very heavy Ivy growth extending up into the crown.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10-20	C2
1876 – 1877	**Alder** *Alnus glutinosa*	A 13	A 290	A 5	A 3	A 5	A 7	A 3	Mature	Fair / Good	Fair A pair of trees growing up together with a combined canopy.	Retain for now as part of the bulking of this area.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
	(2 trees)													
1878	**Ash** *Fraxinus excelsior*	12	280/ 360	7	3	6	6	2	Early Mature	Fair / Good	Fair A single stem tree, it divides at c.1.5m into three stems with an acute union formation between the stems. It leans out to the north for light. Heavy Ivy growth is extending up into the crown.	Retain for now as part of the bulking of this area.	20+	B1
1879	**Willow** *Salix sp.*	9	520	5	6	5	6	2	Mature	Fair	Fair A multi-stem tree from c.2m. The crown is somewhat thin with Ivy growth extending up the main stems.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	20+	C2
		The survey continues on the northern side of the site where there are a number of scrub areas developing along a drainage ditch.												
Scrub Area No. 2	**Willow** *Salix sp.* **Elder** *Sambucus nigra* **Dogrose** *Rosa canina* **Bramble** *Rubus fruticosus*	**Located along a drainage ditch on the northern boundary between two fields.** It consists mainly of Willow with some Elder, Bramble and Dogrose colonizing the area. It consists mainly of young / semi-mature trees which are multi-stemmed. They are developing as a thicket with some Elder and Bramble interspersed through the area.										Retain for now as part of the bulking of the area.		C2
Scrub Area No. 3	**Willow** *Salix sp.* **Dogrose** *Rosa canina* **Bramble** *Rubus fruticosus*	**Located to the east of Scrub Area No. 2, it is developing along a drainage ditch between two fields.** It consists mainly of Willow with some Bramble and Dogrose colonizing the area .It consists mainly of early mature trees, most of which are multi-stemmed. They are forming a thicket along the drainage ditch.										Retain for now as part of the bulking of the area.		C2
Hedge No. 6	**Cherry Laurel** *Prunus*	**It extends along the site boundary with the adjacent housing estate 'Wellesley Manor'.** It is of a mature age class in fair/ good condition physiologically and fair condition structurally. It is continuous along its										It would benefit from cutting on the site side to contain and shape.		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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
	laurocerasus	length except for a small pedestrian gap. It is growing at the top of a small bank. It has been clipped to height and spread on the adjacent landside, but has been allowed to grow unmanaged on the site side. It is cordoned off from the site area by a drainage ditch at the bottom of the slope and on the site side of this ditch there is remnants of an old field hedgerow which has mostly been removed leaving two isolated clumps of Hawthorn. A4 - A3 -												
Tree Group 1880-1883	**Crack Willow** *Salix × fragilis*	**It consists of a short line of large trees growing along a deep drainage ditch to the west of the work yard.** They are visually prominent in the field setting and they have grown up together and share a combined canopy. A4 100 (6 stems) A4 0												
1880	**Crack Willow** *Salix × fragilis*	13	260/ 300/ 340	6	5	6	6	0	Mature	Fair	Fair/ Poor It divides near ground level with an acute union formation between the stems. The west stem divides again with a further acute union formation.	Retain for now as part of the bulking of this area.	10-20	C2
1881	**Crack Willow** *Salix × fragilis*	14	400/ 280/ 360/ 400/ 440	8	5	7	7	0	Mature	Fair	Fair/ Poor A multi-stem tree from near the base and is growing on the side of a deep drainage ditch. There is light deadwood throughout. Heavy Ivy growth is extending up into the crown, increasing the windsail.	Retain for now as part of the bulking of this area.	10-20	C2
Tag No. 1882 is not in use														
1883	**Crack Willow** *Salix × fragilis*	13	460/ 350/ 400	6	8	10	7	0	Mature	Fair	Fair/ Poor A multi stem tree from low down, it is growing on the side of a deep drainage ditch. There is light deadwood throughout. Heavy Ivy growth is	Retain for now as part of the bulking of this area.	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	Remain Contribute in years	Cat. Grade
				N	S	E	W				**N**=North **S**=South **E**=East **W**=West **Phys Con**.=Physiological Condition	**A**= Average **Dia**=Diameter **C-Ht**=Crown Height		
											extending up into the crown, increasing the windsail.			
Notes:														