Arboricultural Assessment Report

Old School House – Masterplan

Porterstown

Clonsilla

Co. Dublin

TREESPACE

Trees • Woodland • Urban Forestry

DOCUMENT CONTROL SHEET

PROJECT NAME: Arboricultural Assessment – *an assessment of trees in relation to development.*

PROJECT REFERENCE: Old School House - Masterplan

PROJECT LOCATION: Porterstown, Porterstown Road, Clonsilla, Dublin 15

PREPARED FOR: ORS Ltd

PREPARED BY: Conor O Callaghan

POSITION HELD: Consulting Arborist

WORK DESCRIPTION: Field Assessor/Author

QUALIFICATIONS: MSc Arboriculture & Urban Forestry, BSc Forestry Management

CONTACT: info@treespace.ie

Version	Date	Status
1	29/07/2024	Submitted
2	22/10/2024	Revised, submitted
3	21/11/2024	Revised, submitted

Contents

List of Figures

List of Tables

1. INTRODUCTION

1.1. Instructions and Brief

1.1.1. Tree-space has been instructed to undertake a tree survey and arboricultural assessment to inform the preparation of a masterplan for a site in Porterstown, Clonsilla, Dublin 15. The site is located close to the Royal Canal, and it has been zoned as a residential area in the Fingal County Development Plan 2023 – 2029. There is a specific objective to prepare a masterplan for the site during the life cycle of the current county development plan.

1.1.2. The field assessment for this report was completed in July 2024. The following documents were provided to Tree-space to inform the tree survey and report:

Table 1: List of drawings to inform the tree survey and report:

Document Title	Document/Drawing Number	Originator
Extent of the tree survey	Aerial image	RMLA
Topographical survey	170239-L6-101019	MGS

1.1.3. The report should be read in conjunction with the following Tree-space plans:

- Tree Constraints Plan: TS_TCP_29_7_24, sheets 1 & 2.

1.2. Aims and Approach

1.2.1. The purpose of this assessment is to quantify and categorise the arboricultural features on the site and assess the potential constraints to development. Trees are a material consideration for local authorities and tree owners. Whether they have statutory protection or not the potential impacts of construction must be considered. Construction activities often exert pressures on pre-existing trees and in some cases trees that have taken decades to mature can be damaged irreparably. The assessment and implementation of protection measures is therefore critical to mitigate against any potential negative impacts.

1.2.2. The arboricultural impact assessment was undertaken in accordance with the British Standard *BS 5837:2012 Trees in relation to design, demolition, and construction – Recommendations*[1]. The British Standard sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures. The assessment process undertaken for this report is described in table two below.

[1] The British Standards Institution (2012) *Trees in relation to design, demolition, and construction – Recommendations.* BSI Standards Limited.

Table 2: Arboricultural Assessment Process

TASK	DESCRIPTION
Tree Location Survey	Record the position of all trees within the site boundary with a stem diameter of 75 mm or more, measured at 1.5 m above highest adjacent ground level. In woodlands or tree groups only trees with a stem diameter of 150 mm or more are recorded. The location of each surveyed tree is recorded in Irish Transverse Mercator (ITM) coordinates. The coordinates are collected using pole mounted GPS receivers and GIS field capture software. The target accuracy for this assessment was 30 cm.
Tree survey	Collect relevant information on all trees included in the tree location survey. Each surveyed tree is allocated a unique ID (tree tag number), the aluminium tree tag number is fixed to the main stem of each tree. The parameters of the tree survey are set out in BS 5837:2012 section 4.4 and are described in more detail in Appendix 2 of this report. The tree survey parameters include reference number, species, height, stem diameter, canopy spread, first significant branch height (FSB), life stage, general observations, remaining contribution, and the retention category.
Tree categorization	Identify the quality and value of the existing tree population. The categorization method set out in table 1, BS 5837:2012 allows informed decisions to be made concerning which trees should be removed or retained in the event of a development occurring. Category A trees are of a high quality, category B trees are of a moderate quality, category C trees are of a low quality and category U trees are of a poor quality. The sub-categories of 1, 2 & 3 relate to arboricultural qualities, landscape qualities & conservation qualities respectively. The full tree category definitions are described in the tree quality assessment table in Appendix 2 of this report.
Impact assessment	Identify the requirements for the successful retention of the retained trees and detail the measures necessary for protection during the development process. Root protection areas (RPA's) are calculated in accordance with section 4.6, BS 5837:2012. The RPA is the minimum area around a tree that needs to remain undisturbed to maintain the tree's viability. The RPAs of each categorized tree will be plotted on relevant scaled drawings.

TASK	DESCRIPTION
Tree protection plan	The tree protection plan indicates the precise location of the protective barriers to be erected to form a construction exclusion zone around the retained trees. The plan will be superimposed on the layout plan, based on the topographical survey.
Outline construction stage tree management strategy	The construction stage tree management strategy sets out brief guidelines for the successful protection of the retained trees during the construction phase. The guidelines will address some or all of the following: Pre commencement site briefing, pre-development tree works, site supervision, protective fencing, ground protection, boundary treatments, services and drainage, and on-site monitoring. The guidelines are intended as a brief outline of the potential tree management tasks required at the construction stage. Detailed construction stage arboricultural method statements may be required.

1.3. The Limitations of the Report

1.3.1. Only those trees specified in the scope of work were assessed. The observations that were made are limited to the requirements of planning and development. The survey is not a tree risk assessment.

1.3.2. The trees were visually assessed from ground level only. No climbing inspections were conducted. No invasive or other detailed internal decay detection devices were used.

1.3.3. The target accuracy for the tree location survey was 30 cm. However, this could not always be achieved due to the heavy canopy conditions. When recording the positions of trees inside tree groups and dense hedges the accuracy levels were reduced. Consequently, the locations of some trees may need additional verifying.

1.3.4. Some of the trees included in the field assessment are established in groups with multi-stem form and heavy ivy. Accurate measurements of stem diameter were sometimes restricted, and the presence of defects or structural weakness could not be accurately assessed.

1.3.5. The conclusions relate to the conditions found at the time of survey. Trees are living organisms that are subject to the stresses of climatic extremes, decay fungi and injurious diseases. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in question may not arise in the future.

2. The Study Area

2.1. General Description of the Study Area

2.1.1. The study area is located on a narrow strip of land close to the northern bank of the Royal Canal in Porterstown, Clonsilla (see figure 1 below for an aerial perspective). The site is accessed from Porterstown Road which defines the eastern boundary. The northern boundary is defined by heavy vegetation and mature trees. The land use adjacent to the northern boundary is primarily residential, The Village and Lambourn Park adjoin the study area to the north. The southern boundary is defined by the Royal Canal and the walking path which separates the site from the northern bank of the canal. Within the site boundary there is a derelict school building which is recorded as a protected structure in the Fingal County Development 2023 – 2029. Kennan's Bridge which crosses over the Royal Canal on Porterstown Road is also listed as a protected structure in the County Development Plan. The study area is under the jurisdiction of Fingal County Council (FCC)

Figure 1: aerial image of the site and its immediate surroundings. The tree survey boundary is highlighted with the red line.

3. Context

3.1. Trees, Woodlands, Statutory and Non-Statutory Designations

3.1.1. Trees are assets that provide many environmental, social, and economic benefits and form a principal element of the green infrastructure in urban, peri-urban, and rural

environments. Trees, woodlands, and hedges can contribute to water quality improvement, wildlife habitat, flood mitigation, erosion reduction, climate change mitigation, recreation and tourism, human well-being, and create features of cultural significance[2]. Fingal County Council (FCC) has acknowledged these benefits in their Forest of Fingal Tree Strategy[3]. The local authority has a clear vision to '*protect and enhance Fingal's trees and woodlands to maximise both the benefits they offer and the character they bring to the county, to ensure a greener and healthier Fingal for now and future generations*'.

3.1.2. The FCC Development Plan 2023 – 2029 includes a framework for managing the Green Infrastructure and Natural Heritage in the county. In response to habitat loss an ecological network of core conservation areas, buffer zones, and nature development areas have been identified. The Royal Canal is a core biodiversity conservation area, and a large portion of the study area is within a '*Nature Development Area*' (see figure 2 below). Additionally, the study area and the surrounding landscape is highlighted as '*Highly Sensitive*' in the County Development Plan.

Figure 2: aerial image illustrating the spatial relationship between the study area and the local designations and conservation areas. The study area boundary is highlighted with the red line. The boundary of the '*Highly Sensitive Landscape*' is

[2] Owuor, J.A., Whitehead, I. and De Vreese, R. (2022). Unlocking the Potential of Urban Forests: Developing a Local Urban Forestry Plan. Erasmus+ Project Uforest Deliverable 3.4.

[3] https://www.fingal.ie/sites/default/files/2022-03/forest-of-fingal_-a-tree-strategy-for-fingal_2022-2032.pdf

defined by the horizontal yellow hatch. The light turquoise shaded area indicates the boundary of the '*Nature Development Area*' and the magenta hatch indicates the boundary of the Royal Canal pNHA.

3.1.3. The primary method of protecting habitats and species in Ireland is through designation of conservation areas. Designation of conservation areas is undertaken by the National Parks & Wildlife Service (NPWS) and is required under European and national legislation. The three primary designations include Natural Heritage Areas (NHAs), Special Areas of Conservation (SACs), and Special Protection Areas (SPAs). Proposed NHAs (pNHAs) have the same level of significance for wildlife and habitat but have not yet been statutorily designated. Approximately 1.45 hectares of the study area are located within the Royal Canal pNHA. All of the arboricultural features established along the southern boundary of the site are within the pNHA.

3.1.4. In Ireland the primary framework for regulating development is the Planning & Development Act, 2000. Under the act local authorities have a responsibility to put in place development plans within which, among other things, trees, woodlands, and hedgerows of social, amenity and environmental value are identified, and their preservation prioritized. The Tree Preservation Order (TPO) is one of the most comprehensive forms of statutory protection for trees and woodland features. The regulations relating to trees with a TPO are outlined in section 205 of the Planning & Development Act, 2000. One of the key points is that unauthorized damage or removal of a tree with a TPO is a criminal offence. There are three TPO's within the jurisdiction of FCC, none have an address near Porterstown. The closest TPO appears to be in Santry Demesne approximately 10.5 km northwest of the study area.

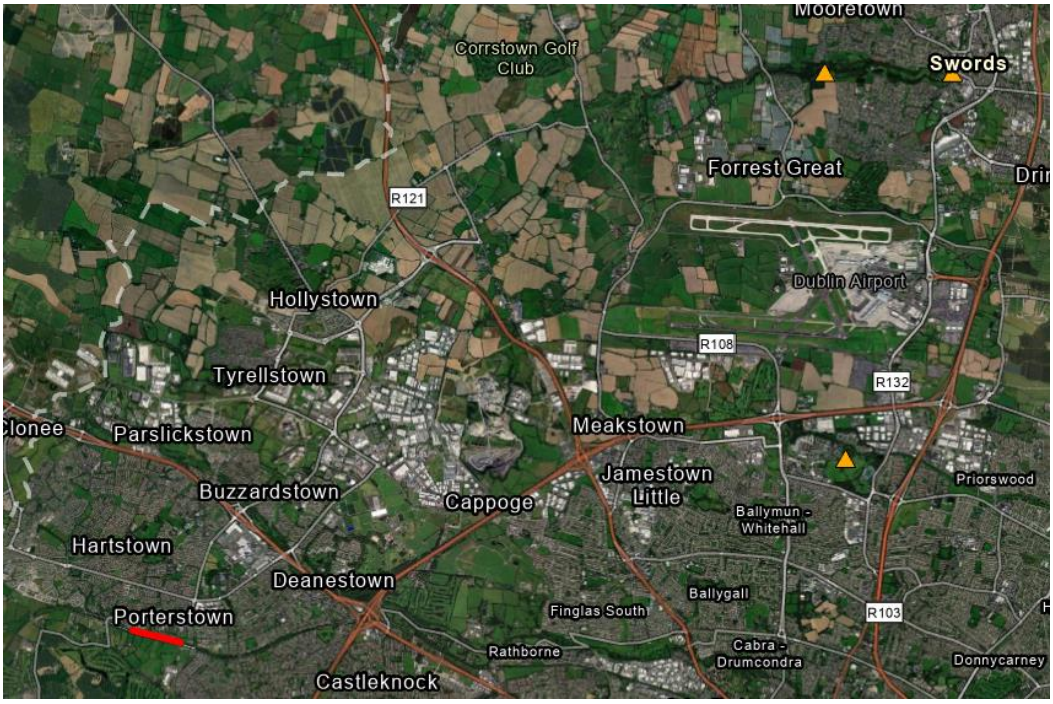


Figure 3: aerial image illustrating the spatial relationship between the study area and the FCC TPO's. The location of the study area is highlighted with the red line. The locations of the TPO's are indicated with the gold triangles.

4. The Trees

4.1. General Description of the Trees

4.1.1. In total seventy-seven individual trees, eight tree groups, and two hedge features were included in the field assessment. There is an image of each feature in the Geotag column of the Tree Survey Schedule in Appendix 3 of this report. Twelve of the individual trees and one tree group were established on the boundary and were highlighted as 'Boundary Trees' on the tree survey plans and in the tree survey schedule. Additionally, two trees were identified as 'Private Trees' as they are established in the rear garden of a neighbouring property. The most common tree species were Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Hawthorn (*Crataegus monogyna*) together accounting for 60% of the surveyed tree population. The other tree species occurred in smaller numbers and the hedges were mostly made up of Elder (*Sambucus nigra*) and Hawthorn (*Crataegus monogyna*). See table 3 below for the full list of tree species identified during the field assessment.

Tree Species	Number of Trees/Features	Percentage of the Total
Ash - Fraxinus excelsior	53	61%
Sycamore - Acer pseudoplatanus	7	8%
Hawthorn - Crataegus monogyna	5	6%
Horse chestnut - Aesculus hippocastanum	3	3%
Silver Birch - Betula pendula	2	2%
Leyland cypress - Cupressocyparis leylandii	2	2%
Common Larch - Larix decidua	2	2%
Grey Alder - Alnus incana	2	2%
Common Beech - Fagus sylvatica	1	1%
Tree Group: Elder, Hawthorn	1	1%
Elder - Sambucus nigra	1	1%
Tree Group: Ash, Silver Birch	1	1%
Pedunculate oak - Quercus robur	1	1%
Whitebeam - Sorbus aria	1	1%
Tree Group: Hawthorn, Elder, Ash, Blackthorn	1	1%
Tree Group: Sycamore, Hawthorn	1	1%
Hedge: Ash, Alder, Elder, Hawthorn	1	1%
Tree Group: Ash, Elder, Hawthorn	1	1%

Tree Species	Number of Trees/Features	Percentage of the Total
Hedge: Hawthorn, Elder, Ash	1	1%
Total	**87**	**100%**

Table 3: list of the tree species identified during the field assessment with the number of trees/features and the percentage of the total.

4.1.2. Most of the surveyed trees (90%) are in the young to early-mature life-stages. Eight trees and one hedge (10%) were in the mature life-stage. Most of the surveyed vegetation (72%) had normal vitality, 11% were assessed as having good vitality, 14% were assessed as having fair vitality and two features (2%) had poor vitality. The structural condition of the trees was mostly moderate (87%). Trees with moderate structural condition will have minor defects or an inferior growth pattern e.g. codominant stems. Four trees (5%) had good structural condition and seven trees (8%) had fair structural condition. The full descriptions of the vitality and structural categories are described in the Tree Schedule Key in Appendix 2 of this report.

4.1.3. The tree survey for this report included a tree quality assessment. The category system that was used followed the definitions described in table 1 of the British Standards publication Trees in relation to design, demolition, and construction - Recommendations[1]. Category A trees are of a high quality with an estimated remaining life expectancy of at least 40 years. Category B trees are of a moderate quality with an estimated remaining life expectancy of at least 20 years. Category C trees are of a low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm. The sub-categories of 1, 2 & 3 relate to arboricultural qualities, landscape qualities and conservation qualities respectively. The full list of tree quality categories and the number of features in each category is described in table 4 below.

Tree Quality Category & Sub-Category	Number of Trees/Features	Percentage of the Total
B	**48**	**55%**
2	48	55%
C	**21**	**24%**
2	21	24%
A	**16**	**18%**
2	14	16%
3	2	2%
U	**2**	**2%**
2	2	2%
Total	**87**	**100%**

Table 4: list of the tree quality categories and sub-categories with the number of trees/features in each category and the percentage of the total.

5. Design & Construction Phase

5.1. General Mitigation

5.1.1. The tree data collected for this report and the associated tree constraints plans can be used to inform the masterplan design process. The ideal scenario would include a design where all of the existing trees and hedges are retained and integrated into any potential proposals arising from the masterplan process. However, it is highly unlikely that this is a realistic option, and some tree removal will be necessary to facilitate a potential change in land use.

5.1.2. The Root Protection Areas (RPAs) for the recorded trees have been highlighted with magenta on the Tree Constraints Plans (TCPs). The RPA is the area around the tree which needs to remain undisturbed to maintain the trees viability, and where the protection of the tree roots and soil structure is treated as a priority. Incursions into the RPA can have negative impacts on the tree's vitality and potentially compromise their structural integrity. The canopy extents of the trees and hedges are highlighted with polygons with a green outline (see figure 4 below for an example). The canopy polygons represent the actual canopy dimensions in the four cardinal directions. Incursions into the tree canopy extents should generally be avoided. However, there is some flexibility as the crown size and shape can be altered using arboricultural techniques e.g. pruning.

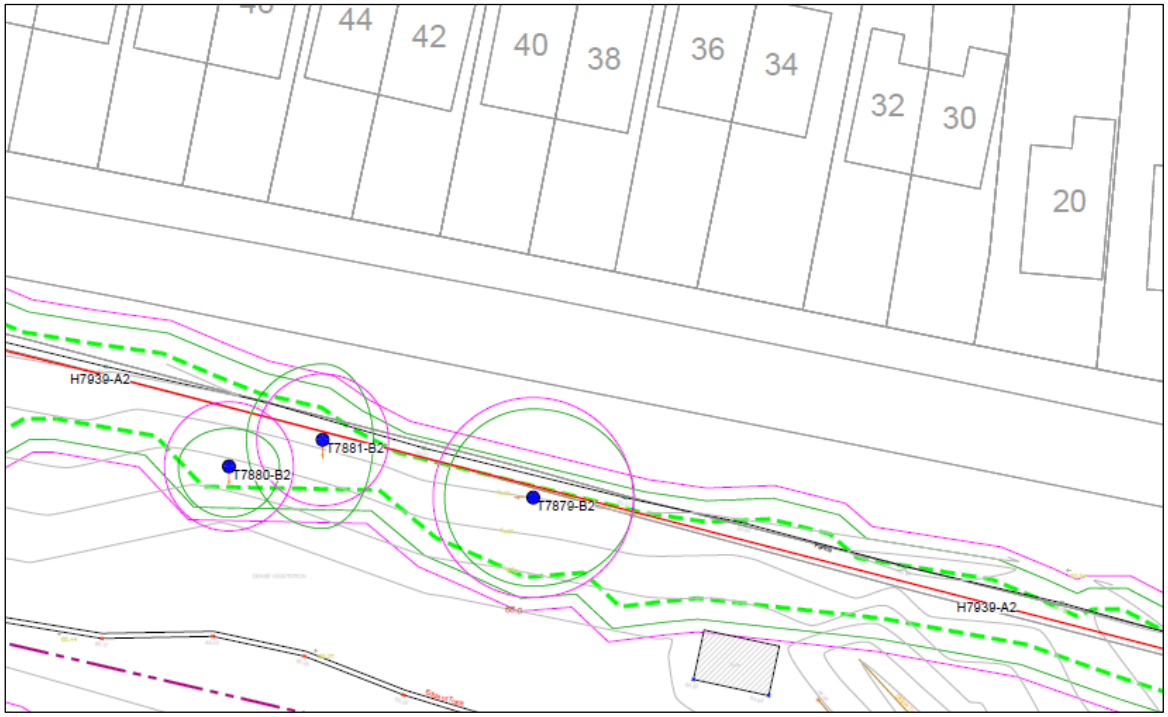


Figure 4: extract from the Tree Constraints Plan. The magenta circles are the Root Protection Areas (RPAs). The polygons with the green outline are the canopy extents

of the trees. The points inside the canopy polygons indicate the position of the tree stems, the tree ID and its category are fixed to the point. The hatched lines indicate a hedge or tree group feature, and they are colour coded according to their tree quality category.

5.1.3. There are two category U trees and twenty-one category C trees in the study area. Category U trees are not suitable for long-term retention and should be targeted for removal. The category C trees are of the lowest quality and are of limited merit. Where there are conflicts between trees and any potential proposals arising from the masterplan process the removal of the lower quality trees should be prioritised.

5.1.4. Category B trees make up the largest proportion of the surveyed tree population with 48 arboricultural features. Category B trees are of a moderate quality with an estimated remaining life expectancy of at least 20 years. All of the category B features were in the sub-category 2, which indicates landscape qualities. Category B trees will generally have an impaired condition; however, their condition can often be improved through pruning or other remedial arboricultural techniques. The retention of the category B trees should be prioritized during the design process.

5.1.5. Sixteen arboricultural features were categorized as A, category A features are of the highest quality with an estimated remaining life expectancy of at least 40 years. Fourteen of the category A features were in the sub-category 2 indicating high landscape value and two features were in the sub-category 3 indicating conservation value. Removal of any of the category A features to facilitate the design proposal should be avoided. Retention of all the category A3 trees should be of the highest priority.

5.1.6. There are private trees and boundary trees established close to the boundary of the study area. In the Tree Survey Schedule in Appendix 3 and the Tree Constraints Plans in Appendix 4 of this report the tree numbers are prefixed with PT (Private Tree) and BT (Boundary Tree). Their canopy extents and RPAs extend into the study area. In the east of the site close to Porterstown Road there is a masonry wall separating the study area from the neighbouring dwelling house. There are two Leyland cypress (*Cupressocyparis leylandii*) established in the private garden. The canopies of both of those trees extend into the study area, and it is possible that the root systems extend under the boundary wall and into the study area. The potential proposals arising from the masterplan process will need to consider these above and below ground constraints. In the west of the site there is a line of boundary trees established in Lambourn Park. The extent of their RPAs and canopies will need to be considered during the design process.

5.2. Mature Trees and Conservation Areas

5.2.1. There are forty arboricultural features established within the boundary of the Royal Canal pNHA and the remaining forty-seven arboricultural features are established within the Nature Development Area highlighted in the Fingal Development Plan 2023 – 2029. The site synopsis[4] for the pNHA describes the various habitats that are found along the canal including hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland. Hedgerows with Hawthorn (*Crataegus monogyna*) are one of the key linear features supporting the diversity of species within the pNHA. Removal of any of the vegetation, including the hedges and trees established within the pNHA will need careful consideration.

5.2.2. Two Ash (*Fraxinus excelsior*) trees were categorised as A3 (T7890 & T7894). Both of these trees had a stem diameter at breast height greater than 1 m and they should be considered as 'locally notable' because of their size and developmental stage. Both trees had deadwood, cavities and hollowing which is normal for the life-stage. The presence of these habitat features was the reason for the sub-category 3 classification as they have conservation value.

5.2.3. Hedge number 7939 is established along the northern boundary with The Village and Lambourn Park. The hedge has a broad spreading canopy, and it was categorised as A2. There are some older Hawthorn (*Crataegus monogyna*) and Elder (*Sambucus nigra*) trees within the hedge feature. Most of the older specimens are established in the eastern portion of the hedge along the boundary with The Village. The hedge feature has high nesting potential, and it could develop further conservation value as the trees age.

5.3. No Dig Construction

5.3.1. Ninety percent of a tree's root system is located in the upper metre of the soil profile[5]. The extent of the RPA represents the area where the highest concentration of the root system is found. Excavations of the soil profile within the RPA can result in root severance which in turn can result in tree decline/death or structural damage resulting in tree failure. Cellular confinement systems are an engineering solution which can be utilized to install new hard surfacing within the RPAs of retained trees. The cellular confinement system is a three-dimensional structure that provides strength to confined soils, distributes loads laterally, reduces point loads, and reduces compaction of the underlying soil. Prevention of soil compaction in the RPA is vital to prevent root death or inhibiting new root development.

[4] https://www.npws.ie/sites/default/files/general/pNHA_Site_Synopsis_Portfolio.pdf
[5] Roberts, John, Jackson, Nick & Smith, Mark (2006). *Tree roots in the Built Environment.* Arboricultural Association.

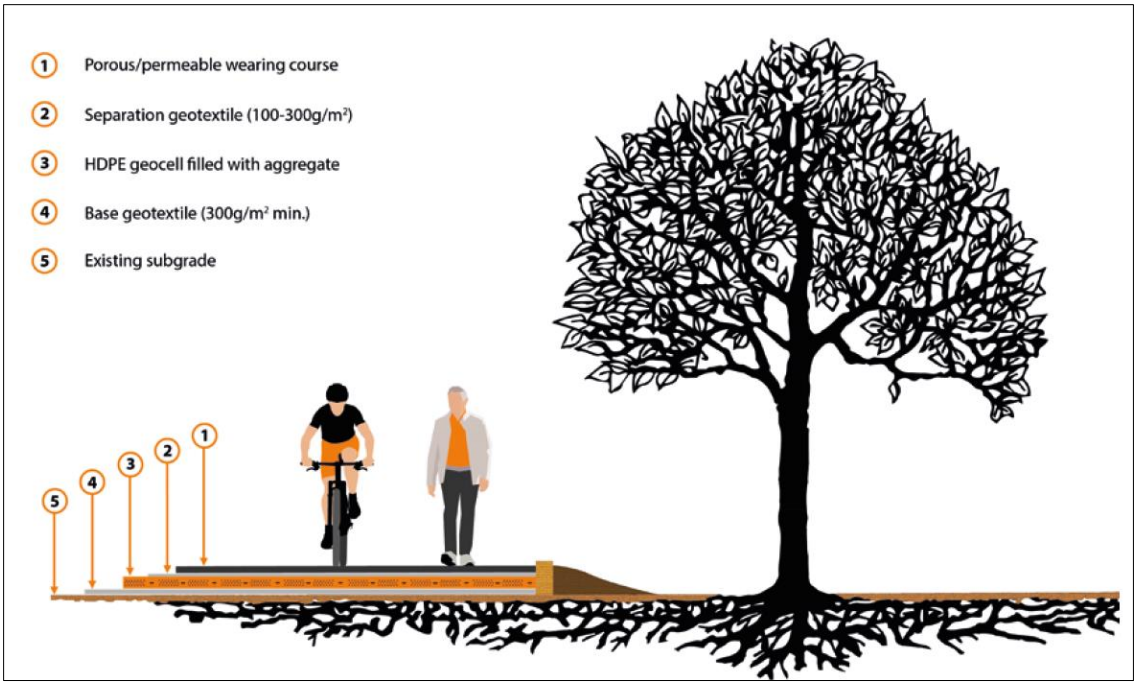


Figure 5: section of the basic approach to using cellular confinement systems around trees. Image (Rose 2020[6])

5.3.2. Geocell systems that are intended for use around trees should be made from high density polyethylene (HDPE). Geocells that are made from flexible geotextiles are not recommended as they tend to deform. When the geocell sheets are spread on the ground the 3-dimensional matrix can be infilled with a range of materials but around trees the preferred aggregate is clean angular stone (4/20 or 20/40). The use of a stone infill promotes permeability and allows water ingress and gaseous diffusion into and out of the soil. The final wearing course also needs to be a permeable material which allows water and air to flow to the tree's root system. Some examples are porous asphalt, loose gravel, resin bound gravel or permeable block paving.

5.3.3. If any of the proposals arising from the masterplan process are in conflict with the RPA of any high quality or moderate quality trees a no-dig cellular confinement system could be considered as a possible design solution.

[6] Rose, Ben (2020). *Guidance Note 12: The use of Cellular Confinement Systems near Trees: Guide to good Practice.* Arboricultural Association.

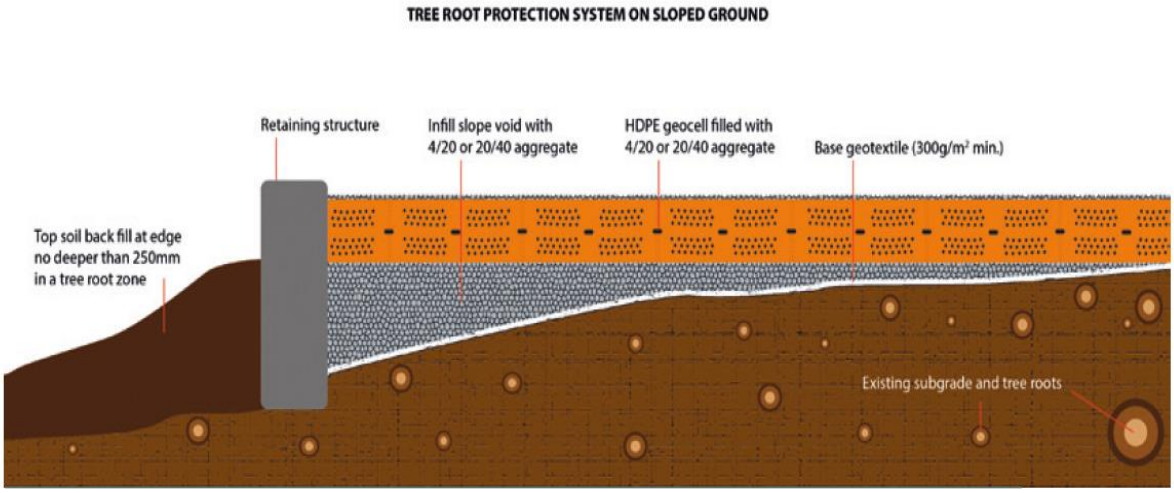


Figure 6: example of how a cellular confinement system can be installed on sloping or uneven ground. Image (Rose 2020[6]).

5.4. Tree Protection Measures

5.4.1. The use of barrier fencing is the standard tree protection method for construction projects. The protective fencing is designed to create a '*Construction Exclusion Zone*' around the retained trees to protect the critical root mass from negative impacts. The layout of the protective fencing can be designed after any potential proposals arising from the masterplan process have been finalised and detailed on the tree protection plans.

5.4.2. The default specification for the protective barriers is described in BS 5837:2012, and an example is provided in figure 7 below. The fencing configuration should consist of steel mesh panels attached to vertical and horizontal scaffold framework. The fencing setup should be well braced to resist impacts and would need to be in place for the duration of the construction phase.

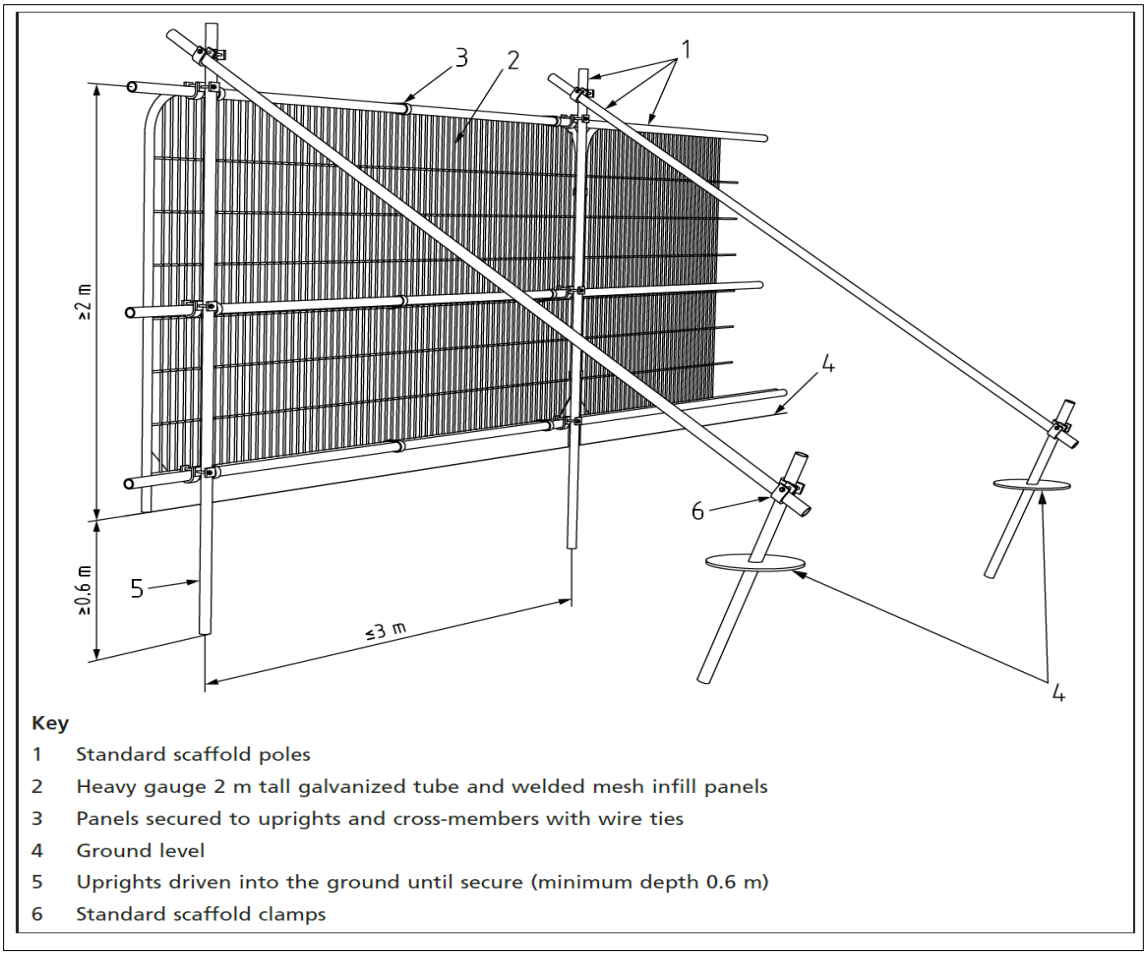


Figure 7: example of a British Standard BS 5837:2012 tree protection fencing specification.

5.5. Tree Works

5.5.1. The preliminary list of recommended tree management works is outlined in the tree survey schedule in Appendix 3 of this report. The list details the observations made during the field assessment and the tree management tasks that might be necessary if there is a change in land use. Some tree management recommendations include the management of ivy to facilitate future tree inspections. However, ivy removal should only be undertaken where there is a change in land use or where a tree management inspection is necessary.

5.5.2. All tree works should be undertaken in accordance with the recommendations given in BS 3998:2010 Tree work - Recommendations[7], and current health & safety guidelines. Preceding any manual management work on trees, the tree and its surroundings should be assessed for the presence of any seasonal nesting sites, potential roost features or protected species. In accordance with Section 40 of the

[7] The British Standards Institution (2010) *BS 3998:2010 Tree work – Recommendations.* BSI Standards Limited.

Wildlife Act 1976 (as amended 2000) the tree works, and removal of hedges and ivy should be scheduled outside of the nesting season (1st of March to 31st of August). The removal of ivy should be undertaken with handsaws (silky saws) to avoid bark and trunk damage.

6. Replacement Tree Planting

6.1.1. In the event that trees need to be removed to facilitate a change in land use or through tree management decisions, adequate compensation measures will need to be put in place. The quantity of trees and vegetation that will require removal to facilitate the masterplan process is currently not known. An assessment of the potential tree loss will need to be undertaken at an appropriate time in the project life cycle. Design changes may be necessary to reduce the number of trees being lost. Where direct loss of trees is unavoidable compensation measures will need to be examined and an appropriate tree planting strategy put in place.

7. Conclusions

7.1.1. The information and tree data presented in this report can be used to inform the masterplan process and mitigate against any unnecessary tree loss.

7.1.2. Retention of the category A arboricultural features, the mature trees with the sub-category 3, and the category B trees should be of the highest priority.

7.1.3. All of the trees and hedges surveyed for this report are established within either the Royal Canal pNHA or the Fingal County Development Plan Nature Development Area. Removal of trees and hedges to facilitate development within these areas will need careful consideration.

7.1.4. An impact assessment on the surveyed tree population should be undertaken at an appropriate time in the project life cycle. Conflicts between the masterplan and the tree population should be assessed in detail.

7.1.5. The arboricultural impact assessment should be supplemented by Tree Protection Plans (TPPs). The TPPs will detail the trees to be removed to facilitate the masterplan and the layout of the tree protection fencing for the construction phase.

7.1.6. An outline construction stage tree management strategy should be developed before any site works begin. The tree management strategy will address some or all of the following: pre commencement site briefing, pre-development tree works, site supervision, protective fencing, ground protection, boundary treatments, services and drainage, and arboricultural monitoring.

7.1.7. The potential loss of trees and vegetation to facilitate the masterplan is currently unknown. Where tree loss does occur, adequate compensation measures will need to

be put in place so there are no negative impacts on the green infrastructure in Porterstown, Clonsilla.

Appendix 1

Glossary of Terms

Glossary of Terms

TERM	EXPLANATION
Ancient Tree	Tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species. Typically, many centuries old (depending on species), the tree will have local significance and conservation is paramount.
Ancient woodland	Areas of woodland believed to have remained continuously wooded since 1660.
Arboriculture	The cultivation, management, and study of individual trees, tree groups and other perennial woody plants.
Arboriculturist/Arborist	Person who is skilled or knowledgeable in the field of arboriculture. Traditionally someone who cares for, manages, and cultivates trees.
Ash dieback	Disease of ash trees caused by the invasive fungal pathogen *Hymenoscyphus fraxineus* (previously known as *Chalara fraxinea).*
Basal sweep/sweep	Tree whose main stem is inclined from the vertical at ground level, then curved upward so that the rest is more upright.
Branch	Any woody stem that is clearly not the main stem (seedling axis) by virtue of its size and orientation, typically larger than a shoot or twig.
Branch union	Structural feature in the architecture of a tree's crown at which one woody stem divides into two.
Breast height	The conventional height (1.3 m above ground level) at which the diameter or girth of the main stem of a tree is measured.
Broadleaf	Trees with leaves that are broad, flat, and thin with networked veins. The tree crowns are generally rounded when mature and more or less spreading if open grown. For woodland to be defined as broadleaf, no more than 10% of the canopy should consist of conifers.
BS 5837 (2012)	'*Trees in relation to design, demolition, and construction - Recommendations'.* The British Standard giving guidelines to avoid excessive conflicts between trees and new developments.
BS 3998 (2010)	'*Tree work – Recommendations'* The British Standard regulating some of the technical operations carried out by tree work contractors.
Bud	Small lateral or terminal protuberance on the stem of a plant that may develop into a flower, leaf, or shoot.

TERM	EXPLANATION
Canopy	Of a single tree its crown, emphasizing its spreading and enclosing character. Of a forest or woodland, the crowns of the larger trees considered collectively.
Cavity	Void in a woody stem or root that may or may not be open to the exterior. If large enough a cavity could potentially be a structural defect.
Construction exclusion zone (CEZ)	Area based on the root protection area from which access is prohibited for the duration of a project.
Co-dominant	Within the crown of a tree branches or stems of approximately equal size above a union. Stems that divide into a gentle U-shape tend to be stronger, unions with a V-shape are considered inferior.
Coppice	Adventitious shoots arising from the stump of a tree, which give rise to a second (or subsequent) generation multi stem tree. Historic silvicultural system used to produce small diameter wood.
Crown	The branches, shoots and foliage of a tree considered collectively.
Crown architecture	The structural features e.g., branching angle and twig density that determine the appearance of the crown of a tree.
Crown break	Zone of the stem from where many or all of the lowest framework branches arise.
Crown cleaning	Tree work operation to remove dead, dying, damaged or diseased branches from the crown of a tree.
Crown raise/crown lifting	The removal of lower branches from a tree to increase the headroom to the base of the crown.
Crown retrenchment	Dieback of the outer crown, as a result of a combination of physiological and biomechanical changes associated with growth and aging.
Defect	Injuries, growth patterns, decay or other conditions that reduce the tree's structural strength.
Diameter (dbh)	The diameter of the main stem of a tree measured at breast height.
Die-back	Progressive death of shoots or roots starting at the extremities.
Formative pruning	Pruning of young trees to improve their form and avoid future structural defects.
Fungi	Organisms of several evolutionary origins, most of which are multicellular and grow as branched filamentous cells (hyphae) within dead organic matter or living organisms. Wood decay fungi are specialized forms which have co-evolved with woody plants.

TERM	EXPLANATION
Fungal fruit body	The reproductive (spore-bearing) part of a fungus, taking various forms depending on species e.g., mushroom like, bracket like etc.
Girth	The measurement of the circumference of the tree stem normally taken at breast height.
Included bark	Is bark that is embedded between a branch and its parent stem or between codominant stems. It decreases the strength of the union.
Main stem	The stem of a woody plant that arises at ground level and supports the crown.
Method statement	Detailed written description of how a particular task or activity should be carried out to ensure that a particular outcome or standard is reached, to take account of any associated risk etc.
Necrosis	The death of a specific area of living tissue.
No-dig	Surface built largely on top of the ground, whose thickness is minimized by the use of a geocell or similar ground reinforcement cellular system to spread load. The aim is generally to avoid damage to underlying tree roots.
Notable tree	Tree that is locally significant because it is special or particularly large compared with the trees growing around it.
Occlusion	The continued radial growth of new wood, including wound wood, that gradually grows over wounds to the woody parts of trees.
Physiological condition	Qualitative term from BS 5837 (2012), on a scale of good to dead, broadly equivalent to vigour or vitality.
Plant morphology	The form of a plant, particularly variation in structure, external form, and development.
Pruning	The cutting off or cutting back of tree stems or branches to direct growth, remove an obstructing or diseased part, abate a nuisance, reduce tree risk, assist establishment, increase longevity, simulate natural damage, maintain ornamental value, improve timber quality, enhance habitat for wildlife etc.
Root protection area (RPA)	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Shoot	The stem of a plant (normally very small diameter) with an appreciable rate of extension growth, in woody plants typically young enough to be furnished with leaves. Shoot

TERM	EXPLANATION
	extension growth rate can be used as an indicator of tree vitality.
Stem	In a tree, the principal portion of the woody structure (i.e., the trunk), or one of a number of such portions with similar size and status.
Stub/stub cuts	That part of a decapitated or broken branch protruding beyond the branch collar. Stub cuts are pruning cuts which are made at some length beyond the branch bark ridge and are associated with poor quality tree work.
Tree constraints plan	Plan to detail the tree-related constraints to a proposed development, as envisaged in BS 5837 (2012).
Tree assessment plan	Plan to illustrate the tree dimensions including the root protection areas and the masterplan layout. The plan is used to assess the impacts/conflicts on the tree population.
Tree removal & protection plan	Plan to highlight the trees for removal and the layout of the tree protection fencing for the construction stage of a development.
Tree preservation order (TPO)	An order made by a local authority or other planning authority to protect a tree, group of trees, area of trees or woodland under section 205 of the Planning and Development Act 2000.
Tree work	Term used to describe the manual operations used to manage trees e.g., tree pruning, tree climbing & aerial pruning. Normally undertaken by a tree surgeon or tree work contractor.
Trunk	The lower part of the main stem of a tree, visually well-defined and usually lacking side branches.
Veteran tree	Tree that has features associated with advanced chronological age for its species. The age of the tree might be as much as 800 years for yew or as little as 150 years for birch. Veteran features include hollowing, cavities, cracks, splits, other crevices, partial collapse, deadwood, loose bark, water pockets, sap runs fungal fruit bodies and epiphytes, all of which create habitat for wildlife. Veteran trees have conservation significance.

SOURCES:

- Wilson, P (ed 3) (2020). *A-Z of tree terms: A companion to British arboriculture.* Ethelburga House, High Street, Lyminge, Kent CT18 8EN. ISBN: 978-0-9571784-2-7.
- Lonsdale, D (ed.) (2013). *Ancient and other veteran trees: further guidance on management.* The Tree Council, London. ISBN: 978-0-904853-09-04.
- Dunster, A. Julian, Smiley, E. Thomas, Matheny, Nelda, & Lilly, Sharon, (ed 2) (2017). *Tree risk assessment manual.* International Society of Arboriculture, 270 Peachtree St. NW, Suite 1900, Atlanta, GA 30303. ISBN: 978-1-881956-99-0.

TERM	EXPLANATION
	• The British Standards Institution (2012) *Trees in relation to design, demolition, and construction – Recommendations.* BSI Standards Limited. ISBN: 978-0-580-69917-7.

Appendix 2

Tree Schedule Key

Tree Schedule Key

Parameter	Brief description
Feature ID	Physical reference number attached to individual trees or groups of trees, prefixed by T (Tree), TG (Tree Group), TL (Tree Line), W (Woodland), H (Hedge) or S (Shrub) to indicate the type of feature.
Tree Count – No of Trees	Number of trees recorded within a group feature, a tree line or woodland, with the default value of 1 for single trees.
Stem Count	Number of stems. Stem count indicates whether the tree is single-stemmed or multi-stemmed and informs the RPA calculation.
Stem Diameter (mm)	Stem diameter in millimetres measured at 1.5 m above adjacent ground level in accordance with Annex C of BS 5837:2012.
Tree Species	Tree species common name followed by the scientific name.
Height (m)	Estimated max height of the feature.
Crown Spread (N, E, S, W)	Distance from the stem position to the crown periphery in the four cardinal directions, north, east, south, and west.
First Significant Branch Height (FSB-m) – Direction of growth (FSB – Dir)	Distance between the ground and lowest significant branch and the direction of growth.
Canopy Clearance Height (m)	Distance between the ground and the lowest point of the crown periphery, estimated to the nearest half metre.
Life-stage	Young, Semi-mature, Early mature, Mature, Late Mature, Ancient or Veteran
Physiological Condition – Vitality Class	**Good** – a tree with little or no obvious physiological defects; leaf density and colour are typical for the species, bud, flower, and fruit production are good and there are no signs of dieback anywhere around the tree. **Normal** – normal for the species, the life-stage, and the growing conditions. The tree may have some minor physiological defects. The leaf density and vigour might be slightly below optimal, but the inferior physiological state is presumed to be temporary. The tree should have the potential to reach a 'good' physiological state. **Fair** – a tree with moderate physiological defects; leaf density is less than typical for the species, leaf cover is chlorotic, bud, flower or fruit

Parameter	Brief description
	production are deficient, there are signs of dieback in the crown, there is a moderate degree of deadwood within the crown. **Poor** – a tree with major or multiple physiological defects; evidence of extensive crown thinning, bud, flower, or fruit production is poor or missing, there are signs of advanced dieback throughout the crown, there is extensive or major deadwood throughout the crown. **Dead** – a tree that has died due to either old age, drought, disease, pest infestation, physical damage to the main stem or rooting system, or a combination of these factors.
Structural Condition	**Good** – the tree shows no tendencies for weakness, there are no visible defects on the tree. The branch unions appear sound. The tree does not have any risky growth patterns, diseases or fungal activity that might affect tree stability. The life-stage of the tree may be young or semi-mature and it is too small to pose any risk. **Moderate** – the tree may have minor defects and an inferior growth pattern e.g., codominant stems. The branch unions will generally appear good, but some smaller branches may have bark inclusions. Minor deadwood may be present in the crown. The trunk and bark may have minor damage but should be occluding. **Fair** – there will be a number of visible defects on the tree. Bigger branches may be poorly attached and have defective unions with bark inclusions. Numerous dead branches in the crown and possibly some dieback in the upper crown. Potentially some trunk damage with a visible cavity. The tree may need remedial tree work if it is established close to a target. **Poor** – the tree has a number of major defects, large branches with included unions. Partially fractured limbs hanging in the crown and a large amount of big diameter deadwood. The tree may be partially uprooted or there are visible signs of decay in the large roots, or evidence of fungal activity. If the tree is established close to a target, it is highly likely that it will require remedial tree work or removal. Most likely to be a category U tree. **Dead** – the entire tree is dead and is still standing (snag). If the snag is near a target categorize as U and highlight for removal or partial removal.
Observations	General description of the tree or tree group, including basic features and morphology, structural and physiological condition, growing conditions and surroundings.
Recommendations	Management recommendations for tree works to address immediate unacceptable risks, or to facilitate development proposals.

Parameter	Brief description
Estimated Remaining Contribution (years)	Estimated number of years for which the tree will continue to make a positive contribution to the site, banded as <10, 10+yrs, 20+yrs, 40+.
Retention Category	Quality and value category as defined in table 1 of BS5837:2012 (see following page for full description)
Retention Sub-category	One or more sub-categories as defined in table 1 of BS5837:2012 (see following page for full description)
Geotag	Image of the feature with ITM location information.
RPR (m)	Root Protection Radius, the radius of the root protection area in metres, when it is plotted as a circle around the tree stem.
RPA (m^3)	Root protection area calculated from the stem diameter according to the formula in BS 5837:2012. The RPA is the minimum area required to maintain tree viability. The RPA will be highlighted with magenta on the tree survey plans.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Appendix 3

Tree Survey Schedule

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7873	1	1	400	Common Larch - Larix decidua	12	5	3	4	3	4	NE	1	Early-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, strong sweep in the upper stem, light deadwood, evidence of historic branch failures.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-6BQ-95-GIR-GeoTag-LtADqoXn.jpg	4.8	72
T7874	1	1	420	Common Larch - Larix decidua	12	5	4	4	3	4	S	0.5	Early-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, codominance higher in the crown, union is not visible, light to medium sized deadwood, sweep in the upper crown.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-XJQ-79-T8P-GeoTag-aAaTpl9o.jpg	5.0	80
T7875	1	1	740	Common Beech - Fagus sylvatica	15	5.5	5	6	6	4	W	0.5	Mature	Normal	Moderate	Trunk has a lean to the east, heavy ivy coverage, appears to have been a change in ground levels close to the base of the stem, crown breaks around 4 m from ground level, branch unions are not visible, visible crown structure generally appears good.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-7A9-135-MA9-GeoTag-6sEjNgsT.jpg	8.9	248
PT7876	1	2	743	Leyland cypress - Cupressocyparis leylandii	16	6	7.5	7.5	4	2	S	1.5	Early-mature	Normal	Moderate	Established in a private garden, codominant stems at ground level, union is not visible, crown breaks around 2 m from ground level, branch unions generally appear good, crown structure generally appears good.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-5LI-112-7L3-GeoTag-VlTJoEl3.jpg	8.9	250
PT7877	1	1	300	Leyland cypress - Cupressocyparis leylandii	11	3	1	3	3	3	S	4	Semi-mature	Normal	Moderate	Established in a private garden, stem has a minor sweep, codominance around 4 m from ground level, moderate union, crown breaks around 5 m from ground level, branch unions generally appear good, crown is suppressed by neighbouring trees.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-YZR-117-OXN-GeoTag-Bbx5dDBu.jpg	3.6	41
BTG7878	8	8	250	Ash - Fraxinus excelsior, Silver Birch - Betula pendula	18	2	2	2	2	4	S	4	Semi-mature	Normal	Moderate	Group of trees established in the neighbouring property, most stems are obscured by ivy, branch unions are not visible, mostly a light branch framework.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-X4F-192-UL1-GeoTag-YHdp4pHs.jpg	3.0	28
H7939			300	Hawthorn - Crataegus monogyna, Elder - Sambucus nigra, Ash - Fraxinus excelsior	5					0	N	0	Mature	Normal	Moderate	Mature hedgerow established along the northern boundary of the site, most trees are multi stemmed with heavy ivy coverage, unions are generally not visible, some of the elders and hawthorn are large diameter close to ground level, good crown volume with high nesting potential.	No work presently required	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-6AN-117-692-GeoTag-P9mC0c7B.jpg	3.6	41
T7879	1	4	661	Ash - Fraxinus excelsior	14	7	8	7	7	2	W	1	Early-mature	Normal	Moderate	Multi stem close to ground level, unions are obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, upper crown structure generally appears good, light deadwood and over extension.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-ZLF-101-4LJ-GeoTag-QK0Cbm6s.jpg	7.9	198
T7881	1	3	433	Elder - Sambucus nigra	8	6	4	7	6	2	S	0	Mature	Normal	Moderate	Large lower trunk, multi stemmed 0.5 m from ground level, unions are not visible, stems are obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, light to medium sized deadwood in the crown.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-261-110-Q33-GeoTag-S7Fl4eQ0.jpg	5.2	85
T7880	1	2	424	Ash - Fraxinus excelsior	11	3	4	4	4	2	S	2	Semi-mature	Normal	Moderate	Codominant stems at ground level, union is not visible, stems are heavily obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, light deadwood and dieback around the crown periphery.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-M7H-101-MRH-GeoTag-3ueMypRd.jpg	5.1	81

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7882	1	1	300	Ash - Fraxinus excelsior	12	4	4	5	2	5	SW	4.5	Semi-mature	Normal	Moderate	Stem has a slight lean and is heavily obscured by ivy, crown breaks around 5 m from ground level, visible branch unions generally appear good, crown is partially suppressed by a neighbouring tree.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-O3U-118-LCO-GeoTag-wRU9aNk1.jpg	3.6	41
T7883	1	2	532	Ash - Fraxinus excelsior	14	5	4	5	5	4	SE	5	Early-mature	Good	Moderate	Codominant stems close to ground level, union is obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, upper crown structure generally appears good, light deadwood.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-QI3-151-J18-GeoTag-aVse6cq.jpg	6.4	128
T7884	1	5	504	Ash - Fraxinus excelsior	16	7	7	7	3	3	S	3	Early-mature	Normal	Moderate	Multi stem close to ground level, unions are not visible, stems are obscured by ivy, crown breaks around 3 m from ground level, visible branch unions generally appear good, light over extension, light to medium sized deadwood in the crown.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-A4U-158-T2P-GeoTag-z84WfNfD.jpg	6.0	115
T7885	1	6	347	Ash - Fraxinus excelsior	16	6	2	4	3	5	S	5	Early-mature	Normal	Moderate	Multi stem close to ground level, unions are not visible, stems are obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-5MB-125-G13-GeoTag-hGbu18t2.jpg	4.2	54
T7886	1	3	307	Ash - Fraxinus excelsior	14	5	2	4	3	7	S	7	Semi-mature	Fair	Moderate	Multi stem at ground level, unions are not visible, stems are obscured by ivy, crown breaks around 7 m from ground level, branch unions are not visible, light deadwood and dieback accumulating in the crown.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-TVO-104-Y0H-GeoTag-HAEyTbcE.jpg	3.7	43
T7887	1	4	400	Ash - Fraxinus excelsior	15	6	3	5	4	5	SW	5	Semi-mature	Fair	Moderate	Multi stem at ground level, unions are not visible, stems are heavily obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, light dieback around the crown periphery.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-RUL-111-7Q8-GeoTag-41HsmpTQ.jpg	4.8	72
TG7940	6		150	Ash - Fraxinus excelsior, Elder - Sambucus nigra, Hawthorn - Crataegus monogyna	11					1	S	1.5	Semi-mature	Normal	Moderate	Small group of multi stemmed trees, most of the stems are obscured by ivy, unions are not visible, crown structures are mostly moderate, one of the ash trees has dieback.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-4VK-115-10V-GeoTag-rqQCpP4N.jpg	1.8	10
TG7941	25		250	Hawthorn - Crataegus monogyna, Elder - Sambucus nigra, Ash - Fraxinus excelsior, Blackthorn - Prunus spinosa	6					0	S	0	Early-mature	Normal	Moderate	Dense group of multi stemmed trees, most of the stems are inaccessible and heavily obscured by ivy, crown volumes mostly appear good, good nesting potential.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-G22-104-SIA-GeoTag-f2esMGkk.jpg	3.0	28
T7888	1	2	482	Ash - Fraxinus excelsior	16	7	7	4	7	2	N	3	Early-mature	Normal	Fair	Trunk is obscured by ivy, fungal activity at the base of the stem, one of the main stems has failed at the main junction, crown breaks around 2 m from ground level, unions are not visible, light deadwood and dieback in the crown.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-7DN-112-WYH-GeoTag-qKh2Exyy.jpg	5.8	105
T7889	1	2	492	Ash - Fraxinus excelsior	14	6	5	7	7	2	S	3	Early-mature	Fair	Moderate	Codominant stems at ground level, unions are not visible, stems are obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, light deadwood and dieback accumulating in the crown.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-EEV-84-P99-GeoTag-5z3ogWs2.jpg	5.9	109

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7890	1	1	1190	Ash - Fraxinus excelsior	16	6	6	5	5	2	NW	1.5	Mature	Normal	Moderate	Large lower trunk breaks into three major stems around 1.5 m from ground level, unions generally appear good, large cavity in the trunk, crown breaks around 2 m from ground level, visible branch unions generally appear good, light deadwood and very light dieback around the crown periphery.	No work presently required	40 +	A	3	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-AAM-185-OIQ-GeoTag-WucKs0M3.jpg	14.3	641
T7891	1	4	800	Sycamore - Acer pseudoplatanus	16	8	8	8	7	0	S	0	Mature	Good	Moderate	Multi stem at ground level, unions are not visible, stems are obscured by ivy, dense branching in the lower crown, upper crown structure generally appears good, good leaf area and vigour.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-1K8-95-XXQ-GeoTag-F0s26T2x.jpg	9.6	289
T7892	1	1	560	Ash - Fraxinus excelsior	17	5	9	7	5	5	S	3	Early-mature	Normal	Good	Straight lower stem, codominance around 4 m from ground level, union is not visible, stems are obscured by ivy, crown breaks around 5 m from ground level, visible branch unions generally appear good, over extension in some of the limbs, light deadwood in the crown.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-6A5-150-PGR-GeoTag-QxcJg2l3.jpg	6.7	142
T7893	1	1	1000	Ash - Fraxinus excelsior	14	5	6	5	4	2	SE	2.5	Mature	Normal	Moderate	Large lower trunk, heavy epicormic growth, trunk breaks into multiple stems around 1.5 m from ground level, unions are not visible, stems are obscured by ivy, light deadwood in the crown.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-X4W-159-ICS-GeoTag-1rHYWQHt.jpg	12.0	452
T7942	1	5	267	Hawthorn - Crataegus monogyna	6	3	3	4	4	0	E	0	Early-mature	Normal	Moderate	Multi stem at ground level, unions are not visible, stems are heavily obscured by ivy, crown breaks close to ground level, branch unions are not visible.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-C4A-99-C3Z-GeoTag-ImFsDI2z.jpg	3.2	32
T7894	1	1	1100	Ash - Fraxinus excelsior	18	6	6	7	7	3	S	4	Mature	Good	Moderate	Large lower trunk heavily obscured by ivy, cavities and hollowing in the trunk, trunk breaks into 4 major stems around 1.7 metres from ground level, junctions are heavily obscured by ivy, crown breaks around 3 m from ground level, branch unions are not visible, light to medium sized deadwood in the crown.	Ivy management to facilitate future tree inspections	40 +	A	3	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-SGA-117-RGR-GeoTag-8pvPeGBm.jpg	13.2	547
T7895	1	5	674	Sycamore - Acer pseudoplatanus	14	5	5	7	7	2	S	0.5	Early-mature	Good	Moderate	Multi stem around 0.5 m from ground level, unions are not visible, stems are heavily obscured by ivy, crown breaks around 2 m from ground level, visible branch unions generally appear good, crown is partially suppressed by a neighbouring tree.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-AKQ-128-6ZY-GeoTag-HEGSUSU4.jpg	8.1	205
T7896	1	1	450	Sycamore - Acer pseudoplatanus	14	4	2	4	4	4	W	6	Early-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-LZ7-136-E00-GeoTag-kjUasXg0.jpg	5.4	92
T7897	1	1	450	Ash - Fraxinus excelsior	12	3	5	8	5	2	S	2.5	Semi-mature	Normal	Moderate	Stem has a strong sweep and is partially obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees, weighted to the south, light deadwood.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-7GP-89-H1N-GeoTag-r9sUoI3h.jpg	5.4	92

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7899	1	4	271	Hawthorn - Crataegus monogyna	6	1	2	2	2	1	S	1	Semi-mature	Normal	Moderate	Multi stem close to ground level, unions are not visible, stems are obscured by ivy, crown is partially suppressed by neighbouring trees.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-3SH-93-PV2-GeoTag-ELK2FEXt.jpg	3.3	33
T7900	1	1	270	Hawthorn - Crataegus monogyna	6	1.5	2	2	1	2	E	2	Semi-mature	Normal	Moderate	Stem has a lean to the east, codominance around 1.5 m from ground level, union is not visible, stems are obscured by ivy, crown is partially suppressed by a neighbouring tree.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-P4H-77-G6A-GeoTag-0vqrk0H1.jpg	3.2	33
T7898	1	1	350	Sycamore - Acer pseudoplatanus	12	4	5	5	4	2	S	1.5	Semi-mature	Good	Moderate	Stem has a lean to the south, codominance around 2 m from ground level, junction is not visible, stems are obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-QHC-111-U3L-GeoTag-AKhuX2gk.jpg	4.2	55
TG7901	4	7	320	Hawthorn - Crataegus monogyna	6					0	E	0	Early-mature	Normal	Moderate	Small group of elder and hawthorn, most of the stems are heavily obscured by ivy, two of the trees are multi stemmed, good crown volumes with good nesting potential.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-PIU-162-YKF-GeoTag-WshNDC5S.jpg	3.8	46
T7902	1	1	750	Ash - Fraxinus excelsior	17	7	8	7	5	4	S	2	Mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 4 m from ground level, junctions are not visible, light deadwood in the crown.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-MPX-101-FBN-GeoTag-wwhUpocz.jpg	9.0	254
T7903	1	6	714	Sycamore - Acer pseudoplatanus	16	4	3	8	8	2	S	0.5	Early-mature	Good	Moderate	Multi stem at ground level, unions are not visible, stems are heavily obscured by ivy, crown breaks around 2 m from ground level, branch junctions are not visible, crown is partially suppressed by neighbouring trees, weighted to the south and west.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-UXW-109-GAK-GeoTag-wu8D5jsA.jpg	8.6	231
TG7904	3	7	300	Hawthorn - Crataegus monogyna	9					1	S	1	Early-mature	Normal	Moderate	Small group of hawthorn, mostly multi stemmed trees, stems are obscured by ivy, good crown volume.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-S2L-112-A5Y-GeoTag-aWg4dN1h.jpg	3.6	41
T7905	1	1	500	Ash - Fraxinus excelsior	16	6	3	7	5	5	N	4	Early-mature	Normal	Moderate	Stem is obscured by ivy, codominance around 2.5 m from ground level, junction is not visible, crown breaks around 5 m from ground level, branch unions are obscured by ivy, light deadwood in the crown.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-N9R-84-IYR-GeoTag-eY0lmRLj.jpg	6.0	113
T7906	1	1	300	Ash - Fraxinus excelsior	15	4	2	4	4	7	N	2	Early-mature	Normal	Moderate	Stem has a lean to the north and is heavily obscured by ivy, crown breaks around 7 m from ground level, branch junctions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-IZ5-130-S9I-GeoTag-8W8MSbum.jpg	3.6	41
TG7907	6	8	200	Sycamore - Acer pseudoplatanus, Hawthorn - Crataegus monogyna	12					2	N	0.5	Semi-mature	Normal	Moderate	Small tree group, most of the stems have sweep and a lean, ivy coverage on all of the stems, the Ash tree has poor vitality.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-6LT-63-9TU-GeoTag-wzPI7k80.jpg	2.4	18

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7908	1	2	531	Ash - Fraxinus excelsior	15	5	4	5	5	5	W	3	Early-mature	Normal	Moderate	Codominant stems 1 m from ground level, junction is not visible, stems are obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, light deadwood in the inner crown, upper crown structure generally appears good.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-M1I-156-9HH-GeoTag-uUKjsle9.jpg	6.4	128
T7909	1	1	200	Ash - Fraxinus excelsior	13	2	1.5	2	1	6	N	6	Semi-mature	Normal	Moderate	Stem has a slight lean and is heavily obscured by ivy, crown breaks around 6 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees, light dieback.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-IBK-131-3L0-GeoTag-5BVYrgAX.jpg	2.4	18
TG7910	3	4	260	Ash - Fraxinus excelsior	16					4	NE	3	Semi-mature	Normal	Moderate	Small group of Ash, stems are obscured by ivy, codominance in one of the trees, union is not visible, crown breaks around 4 m from ground level, branch unions are obscured by ivy.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-JCA-58-QWR-GeoTag-IS6nknbh.jpg	3.1	31
T7911	1	1	210	Ash - Fraxinus excelsior	13	4	3	2	4	4	N	1	Semi-mature	Good	Good	Stem has a slight sweep, crown breaks around 4 m from ground level, visible branch unions generally appear good, crown is partially suppressed by neighbouring trees, weighted to the north, crown structure generally appears good.	No work presently required	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-8K3-59-7P8-GeoTag-obzmezAb.jpg	2.5	20
T7912	1	1	300	Ash - Fraxinus excelsior	12	4	3	3	4	3	N	1.5	Semi-mature	Normal	Moderate	Stem is obscured by ivy, codominance 1.5 m from ground level, union is not visible, crown breaks around 2 m from ground level, branch unions are not visible, light dieback around the crown periphery.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-VBQ-127-T8P-GeoTag-d6tmnTWJ.jpg	3.6	41
T7916	1	1	260	Sycamore - Acer pseudoplatanus	13	2	2	4	5	2	W	2	Semi-mature	Normal	Moderate	Stem is obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, codominance higher in the crown, union is obscured by ivy, light deadwood.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-JYM-76-N4W-GeoTag-TD4qU24F.jpg	3.1	31
T7917	1	3	259	Ash - Fraxinus excelsior	14	4	2	4	2	4	S	5	Semi-mature	Fair	Moderate	Multi stem at ground level, moderate unions with partial bark inclusions, stems have sweep and a spiral growth pattern, light to medium sized deadwood in the crown, crown is partially suppressed by neighbouring trees.	Clean crown of deadwood and defective branches	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-HMP-88-WXU-GeoTag-7RzLvs1g.jpg	3.1	30
T7918	1	4	310	Ash - Fraxinus excelsior	13	4	5	3	1.5	3	E	4	Semi-mature	Normal	Fair	Multi stem close to ground level, unions are fair, one union has a large bark inclusion, crown breaks around 3 m from ground level, visible branch unions generally appear good, light deadwood in the lower crown.	No work presently required	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-F9K-149-E81-GeoTag-bUVuWoKY.jpg	3.7	43
T7913	1	1	230	Ash - Fraxinus excelsior	13	2	2	2	2	3	W	4	Semi-mature	Fair	Fair	Stem is obscured by ivy, codominance around 4 m from ground level, junction is not visible, deadwood accumulating in the lower crown, dieback around the crown periphery.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-JJ3-149-LYA-GeoTag-5wzTTxpm.jpg	2.8	24
T7914	1	2	262	Ash - Fraxinus excelsior	13	4	1.5	2	1.5	6	N	6	Semi-mature	Normal	Moderate	Codominant stems at ground level, union is not visible, stems are heavily obscured by ivy, crown breaks around 6 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-NCV-152-WQJ-GeoTag-6lpxaXPV.jpg	3.1	31

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7915	1	1	150	Ash - Fraxinus excelsior	12	3	2	2	2	5	N	5	Semi-mature	Normal	Moderate	Stem is heavily obscured by ivy and has a lean to the north, crown breaks around 5 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-CC1-59-7BI-GeoTag-emCSYGY5.jpg	1.8	10
T7943	1	1	250	Ash - Fraxinus excelsior	13	4	4	4	1.5	6	S	5	Semi-mature	Good	Moderate	Stem has a slight lean and is heavily obscured by ivy, crown breaks around 6 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-JQ1-119-XTQ-GeoTag-F8LhqUBS.jpg	3.0	28
T7944	1	1	250	Ash - Fraxinus excelsior	11	2	2	2	1	5	N	3	Semi-mature	Fair	Moderate	Stem is heavily obscured by ivy and has a lean to the north, crown breaks around 5 m from ground level, branch unions are not visible, dieback and deadwood accumulating in the crown.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-RLX-35-I2Q-GeoTag-gJQ92gxv.jpg	3.0	28
T7919	1	2	381	Ash - Fraxinus excelsior	14	3	4	5	5	5	S	5	Early-mature	Good	Moderate	Codominant stems at ground level, union is not visible, stems are obscured by ivy, both stems have a spiral growth pattern, crown breaks around 5 m from ground level, branch unions are not visible.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-YRD-153-ZJZ-GeoTag-oSuJMFFn.jpg	4.6	66
T7920	1	1	200	Ash - Fraxinus excelsior	11	2	3	1	2	4	NW	6	Semi-mature	Poor	Fair	Stem has a lean to the north and is heavily obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, extensive dieback and deadwood in the crown.	Removal recommended	< 10	U	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-Q3R-73-LNL-GeoTag-SXKSJzWB.jpg	2.4	18
T7921	1	1	400	Ash - Fraxinus excelsior	14	4	4	5	4	5	W	4	Early-mature	Normal	Moderate	Stem has a slight lean, codominance 2 m from ground level, union is not visible, stems are heavily obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, light deadwood in the lower crown.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-UEY-112-WIP-GeoTag-lmKc2nsW.jpg	4.8	72
T7922	1	1	180	Ash - Fraxinus excelsior	10	2	1	3	5	6	S	4	Semi-mature	Normal	Fair	Stem has a strong sweep and is heavily obscured by ivy, crown is suppressed by neighbouring trees, heavily weighted to the west.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-ZRZ-184-64Q-GeoTag-2M4BngPn.jpg	2.2	15
T7923	1	2	350	Ash - Fraxinus excelsior	15	4	5	5	5	4	S	4	Semi-mature	Normal	Moderate	Codominant stems at ground level, union is not visible, stems are obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-MNW-83-G6Z-GeoTag-4g3eVpPy.jpg	4.2	55
T7924	1	2	360	Ash - Fraxinus excelsior	16	3	3	4	5	4	N	5	Early-mature	Normal	Moderate	Codominant stems at ground level, union is not visible, stems are obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, light deadwood.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-RV1-169-QKQ-GeoTag-VhEsLU5m.jpg	4.3	59
T7925	1	1	220	Ash - Fraxinus excelsior	12	2.5	3	4	3	3	S	4	Semi-mature	Fair	Moderate	Stem is heavily obscured by ivy, crown breaks around 3 m from ground level, branch unions are not visible, dieback accumulating around the crown periphery.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-8LI-104-MIS-GeoTag-95B95TyV.jpg	2.6	22

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7926	1	5	452	Whitebeam - Sorbus aria	12	5	5	5	5	0	N	0	Mature	Normal	Moderate	Multi stem close to ground level, unions are not visible, heavy epicormic growth around the base of the stem, dense inner crown, branch unions are obscured by ivy.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-KSQ-115-F6C-GeoTag-XweHfPKh.jpg	5.4	92
T7927	1	1	250	Pedunculate oak - Quercus robur	10	4	2	4	4	3	S	3	Semi-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 3 m from ground level, branch unions are not visible, crown is partially suppressed by a neighbouring tree.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-0XS-157-RWX-GeoTag-N5y3dgqk.jpg	3.0	28
T7928	1	1	280	Ash - Fraxinus excelsior	14	3	4	4	2.5	6	S	5	Semi-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 6 m from ground level, branch unions are not visible, codominance higher in the crown, union is obscured by ivy.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-E8X-102-WZT-GeoTag-LPYBmJ3H.jpg	3.4	35
TG7929	5		250	Elder - Sambucus nigra, Hawthorn - Crataegus monogyna	6					0	N	0	Early-mature	Normal	Moderate	Small group of multi stemmed hawthorn and elder, most stems are obscured by ivy, crown volume is good, good nesting potential.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-VHE-74-AKJ-GeoTag-gLRzM6VA.jpg	3.0	28
H7945			200	Ash - Fraxinus excelsior, Alder - Alnus glutinosa, Elder - Sambucus nigra, Hawthorn - Crataegus monogyna	8					0	N	0	Early-mature	Normal	Moderate	Hedge established along the southern boundary, gaps in the hedge in places, mostly multi stemmed hawthorn and elder with a few younger alder and Ash.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-JJH-171-G9H-GeoTag-sv9soaEW.jpg	2.4	18
T7930	1	2	226	Ash - Fraxinus excelsior	10	4	3	3	3	3	N	1.5	Young	Normal	Moderate	Codominant stems close to ground level, junction is not visible, stems are obscured by ivy, crown breaks around 3 m from ground level, branch unions are not visible.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-97K-153-8DT-GeoTag-yuReX3Pz.jpg	2.7	23
T7931	1	1	170	Ash - Fraxinus excelsior	9	3	2	2	2	2	NW	2	Young	Normal	Moderate	Stem has a slight lean, crown breaks around 2 m from ground level, visible branch unions generally appear good, crown structure generally appears good.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-RF6-102-V9X-GeoTag-myuPPHao.jpg	2.0	13
T7932	1	1	200	Ash - Fraxinus excelsior	12	2	2	3	3	2	E	1.5	Young	Normal	Moderate	Stem is obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, codominance higher in the crown, union is not visible.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-LBM-134-FPW-GeoTag-CGBD8mES.jpg	2.4	18
T7933	1	1	250	Ash - Fraxinus excelsior	11	3.5	3.5	4	4	3	W	3.5	Semi-mature	Normal	Moderate	Stem is obscured by ivy, partial codominance around 2 m from ground level, union is not visible, crown breaks around 3 m from ground level, branch unions are obscured by ivy, light deadwood and dieback around the crown periphery.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-AT2-158-XUM-GeoTag-k7KRg75K.jpg	3.0	28
T7934	1	2	393	Ash - Fraxinus excelsior	14	5	4	5	5	5	N	1.5	Early-mature	Normal	Moderate	Codominant stems at ground level, union is not visible, stems are heavily obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, leaf area and vigour appear normal.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-6H9-108-HZ1-GeoTag-lbd22YUn.jpg	4.7	70

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
T7935	1	1	370	Ash - Fraxinus excelsior	13	4	4	5	5	4	S	1	Semi-mature	Normal	Moderate	Stem has sweep and is obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, leaf area is below optimal.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-3PD-123-AU8-GeoTag-7rnoKgVT.jpg	4.4	62
T7936	1	1	450	Ash - Fraxinus excelsior	13	6	6	7	6	3	E	1.5	Early-mature	Normal	Moderate	Stem has a slight lean and is heavily obscured by ivy, crown breaks around 3 m from ground level, branch junctions are not visible, light to medium sized deadwood in the inner crown, light over extension in the limbs.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-ZWV-138-ZF0-GeoTag-vV0RHbYn.jpg	5.4	92
T7937	1	3	446	Ash - Fraxinus excelsior	12	6	5	4	5	4	N	1	Early-mature	Poor	Fair	Multi stem close to ground level, unions are not visible, stems are heavily obscured by ivy, extensive dieback in the crown, most stems are dead, deadwood accumulating.	Removal recommended	< 10	U	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-RWB-144-95C-GeoTag-0850r7sp.jpg	5.4	90
T7838	1	3	538	Sycamore - Acer pseudoplatanus	14	5	5	5	5	4	E	3	Early-mature	Normal	Moderate	Multi stem close to ground level, junctions are not visible, stems are heavily obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, light over extension.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-WE4-83-VGP-GeoTag-DSENEjvN.jpg	6.5	131
BT7946	1	1	330	Silver Birch - Betula pendula	14	4	3	4	4	4	E	1.5	Early-mature	Good	Good	Light ivy coverage on the stem, crown breaks around 4 m from ground level, visible branch unions generally appear good, crown structure generally appears good.	No work presently required	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-19Y-164-3WR-GeoTag-tVJ1gAF3.jpg	4.0	49
BT7947	1	1	285	Ash - Fraxinus excelsior	14	5	2.5	5	2.5	2	W	2	Semi-mature	Normal	Moderate	Straight lower stem, crown breaks around 2 m from ground level, branch unions generally appear good, codominance 3 m from ground level, union appears good, light dieback around the crown periphery.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-GIP-27-BCG-GeoTag-3AgI4Eye.jpg	3.4	37
BT7948	1	1	200	Ash - Fraxinus excelsior	14	7	5	5	2.5	5	N	2	Semi-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, codominance in the crown, union is not visible, crown is partially suppressed by neighbouring trees, over extension to the north.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-NFL-96-UH9-GeoTag-KNrmYwqP.jpg	2.4	18
BT7949	1	1	350	Ash - Fraxinus excelsior	17	4	4	4	2	5	N	1	Early-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 4 m from ground level, branch unions are not visible, codominance higher in the crown, union is not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-WBE-49-UW1-GeoTag-vY0TjRNp.jpg	4.2	55
BT7950	1	1	250	Silver Birch - Betula pendula	17	3	1	1	2	4	N	1.5	Semi-mature	Normal	Moderate	Stem is obscured by ivy and has a slight lean, crown breaks around 4 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-QXK-91-3CU-GeoTag-793MKbg5.jpg	3.0	28
BT7951	1	1	260	Ash - Fraxinus excelsior	14	4	2	3	3	7	N	6	Semi-mature	Normal	Moderate	Stem is heavily obscured by ivy, codominance around 4.5 m from ground level, union is not visible, crown breaks 7 m from ground level, branch unions are obscured by ivy, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-473-105-2VP-GeoTag-5aQAWH5V.jpg	3.1	31

Feature ID	No of Trees	Stem Count	Stem Diameter (mm)	Tree Species	Height (m)	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	FSB-ht (m)	FSB-Dir	Canopy clearance ht (m)	Life-stage	Vitality Class	Structural Condition	Observations	Preliminary management recommendations	Remaining contribution in yrs	Retention Category	Retention Sub-category	GeoTag	RPR-Root Protection Radius (m)	RPA-Root Protection Area (m²)
BT7952	1	1	370	Ash - Fraxinus excelsior	16	8	5	3	2	2	E	2	Early-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees, over extension to the north.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-NDV-119-744-GeoTag-oqtEnJs6.jpg	4.4	62
BT7953	1	1	400	Grey Alder - Alnus incana	14	4	4	4	2	5	E	2.5	Semi-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks around 5 m from ground level, branch unions are not visible, crown is partially suppressed by neighbouring trees.	Ivy management to facilitate future tree inspections	40 +	A	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-70Q-81-RVI-GeoTag-F5EsJVTl.jpg	4.8	72
BT7954	1	1	350	Ash - Fraxinus excelsior	12	6	5	3	3	3	S	1	Semi-mature	Fair	Moderate	Stem is heavily obscured by ivy and has a lean to the north, crown breaks around 2 m from ground level, branch unions are not visible, light deadwood and dieback accumulating around the crown periphery.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-F23-133-ICK-GeoTag-V2L4LUCJ.jpg	4.2	55
BT7955	1	1	320	Ash - Fraxinus excelsior	13	3	2.5	4	2	3	E	0.5	Semi-mature	Fair	Fair	Stem is heavily obscured by ivy, crown breaks around 3 m from ground level, branch unions are not visible, partial codominance in the crown, union is obscured by ivy, deadwood and dieback accumulating in the crown.	Ivy management to facilitate future tree inspections	10 +	C	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-QHN-53-7N8-GeoTag-HwqXQ02W.jpg	3.8	46
T7956	1	1	420	Horse chestnut - Aesculus hippocastanum	14	6	4	5	3	3	N	1.5	Semi-mature	Fair	Moderate	Stem has a slight lean to the north and is heavily obscured by ivy, crown breaks around 3 m from ground level, branch junctions are not visible, crown is partially suppressed by neighbouring trees, light over extension to the north, leaf blotch on the foliage.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-HMF-145-4HF-GeoTag-3eF3ykcx.jpg	5.0	80
BT7957	1	1	400	Grey Alder - Alnus incana	14	5	2	5	5	0	N	0	Early-mature	Normal	Moderate	Stem is heavily obscured by ivy, crown breaks close to ground level, branch unions are not visible, crown is partially suppressed by neighbouring tree.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-NVU-119-5HD-GeoTag-R7hQFYuj.jpg	4.8	72
BT7958	1	1	510	Horse chestnut - Aesculus hippocastanum	13	5.5	5	6	3	3	S	1.5	Early-mature	Fair	Good	Buttress development appears normal, stem has a slight lean, crown breaks around 3 m from ground level, branch unions generally appear good, crown structure generally appears good, leaf blotch on the foliage.	No work presently required	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-OZG-81-KW6-GeoTag-qEN56bjC.jpg	6.1	118
T7959	1	1	380	Horse chestnut - Aesculus hippocastanum	11	6.5	5	5	5	2	N	1	Semi-mature	Fair	Moderate	Stem is heavily obscured by ivy, crown breaks around 2 m from ground level, branch unions are not visible, leaf blotch on the foliage.	Ivy management to facilitate future tree inspections	20 +	B	2	https://kstore.k-matic.com/kstore/TreeSpace/BS5837-L9C-138-BYK-GeoTag-WT70tEpQ.jpg	4.6	65

Appendix 4

Tree Survey Plans

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.

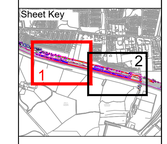
The prefixes that are attached to the feature number indicate T (Tree), TG (Tree Group), TL (Tree Line), W (Woodland), H (Hedge) or S (Shrub) to identify the type of feature. Additional prefixes indicate the potential ownership of the feature, B (Boundary), P (Private, third party tree).

LAMBOURN PK
LAMBOURN AVE
LAMBOURN RD
Royal Canal - An Chanáil Ríoga

Key

- Trees — Showing Canopy extents, category colour and tag number (with category) with optional FSB direction arrow.
- Category A — Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B — Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C — Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
- Category U — Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- Tree Groups — Shown as dashed centre/boundary line. Colour represents category (see above).
- BS 5837:2012 Root Protection Area
- Study Area Boundary
- Royal Canal pNHA

Sheet Key



Drawing Title
Tree Constraints Plan - Sheet 1

Client
ORS Ltd

Main Project
Old School House - Masterplan

Scale/Sheet	Date
1:400 - A0	29/07/2024

Drawing No.	Rev	Drawn by	Checked By
TS_TCP_29_7_24	1	CS	CO

TREESPACE
Trees + Woodland + Urban Forestry
Email: info@treespace.ie Tel: 087 6759427

N
1:400
0 10 20m

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.

The prefixes that are attached to the feature number indicate T (Tree), TG (Tree Group), TL (Tree Line), W (Woodland), H (Hedge) or S (Shrub) to identify the type of feature. Additional prefixes indicate the potential ownership of the feature, B (Boundary), P (Private, third party tree).

THE VILLAGE

THE VILLAGE

ES

LC

Clubhouse

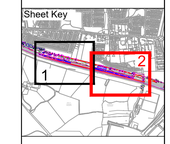
Royal Canal - An Chanáil Ríoga

Royal Canal - An Chanáil Ríoga

Key

- Trees
  Showing Canopy extents, category colour and tag number (with category) with optional FSB direction arrow.
- Category A
  Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B
  Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C
  Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
- Category U
  Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- Tree Groups
  Shown as dashed centre/boundary line. Colour represents category (see above)
- BS 5837:2012 Root Protection Area
- Study Area Boundary
- Royal Canal pNHA

Sheet Key



Drawing Title
Tree Constraints Plan - Sheet 2

Client
ORS Ltd

Main Project
Old School House - Masterplan

Scale/Sheet	Date
1:400 - A0	29/07/2024

Drawing No.	Rev.	Drawn By	Checked By
TS_TCP_29_7_24	1	CS	CO

TREESPACE
Trees + Woodland + Urban Forestry
Email: info@treespace.ie Tel: 087 6759427

N

1:400
0 10 20m