



Horticulture & Arboriculture Ltd.

# **Arboricultural Assessment, Arboricultural Impact and Tree Protection Report**

## **St. Vincent's Hospital, Fairview, Dublin 3**

<b>Project No.</b>	TSTV001	<b>Date</b>	22/03/23
<b>Project Name</b>	St. Vincent's Hospital Redevelopment	<b>Revision</b>	F

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## Section 1: Arboricultural Assessment

### 1.1 Client Brief & Methodology

CMK Hort + Arb Ltd. were commissioned by St Vincent's Hospital to undertake an arboricultural assessment of trees on a site located inside the lands located within St. Vincent's Hospital, Richmond Road, Fairview, Dublin 3. The fieldwork was undertaken between the 2nd and 3rd of December 2021.

The tree survey was updated on the 21st of May 2022 to include two areas Crannog and Richmond House (blue hatches image 1).

The survey methodology and documentation follow the recommendations contained within BS 5837 (2012). The analysis of the trees was undertaken using the VTA methodology as developed by Mattheck and Breloer (1994).



Image 1. Site overview with red line outline of survey boundary located at St. Vincent's Hospital, Richmond Road, Fairview Dublin 3. Numbered elements (areas 1-5) are referenced within the general description of trees (Pg. 2-8).

## 1.2. General description of trees

A total of 277 trees were identified and assessed. The majority of the trees have been categorised as being of high (category A 12.6%) to moderate value (category B 68.0%) with the remaining trees (19.4%) of low value (categories C and U, table 1). Tree vigour is predominantly good (table 2) however it should be noted that trees of low value which contain extensive decay or other defects may exhibit high vigour.

The surveyed trees are predominately mature specimens with a smaller number within the early-mature/young age classes (refer to chart 2).

The site contains a rich variety of species, with over 40 different species and cultivars identified (chart 3). The condition and categorisation of individual trees is contained within appendix 1 of this report. The locations of trees are shown on drawings TSTV001 101-103.

The area around the carpark and immediate vicinity of St. Vincent's Hospital near the north-eastern boundary of the site (marked as section 1 on image 1) contains a mixture of 60 early mature Sycamore (*Acer pseudoplatanus*), Swedish whitebeam (*Sorbus aria*), apple cv (*Malus* cv) and Birch (*Betula pendula*) (image 2-4). These have been planted within the last 20 years and are generally in good condition (95% are category 'B').

Category	Number	% of total
A	35	12.6%
B	190	68.6%
C	35	12.6%
U	17	6.1%

Table 1. Tree Category breakdown (see page 19 for tree category explanations).

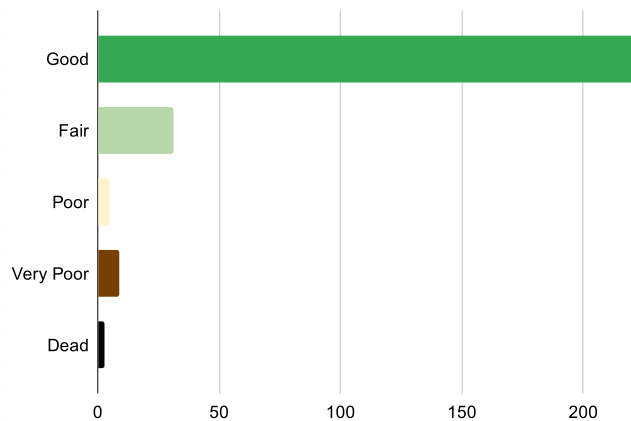


Chart 1. Tree vigour breakdown.

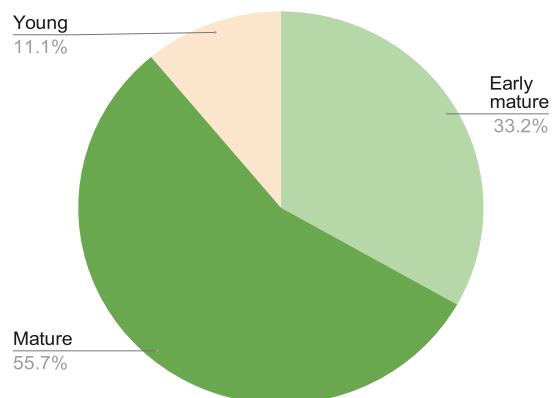


Chart 2. Age class breakdown.

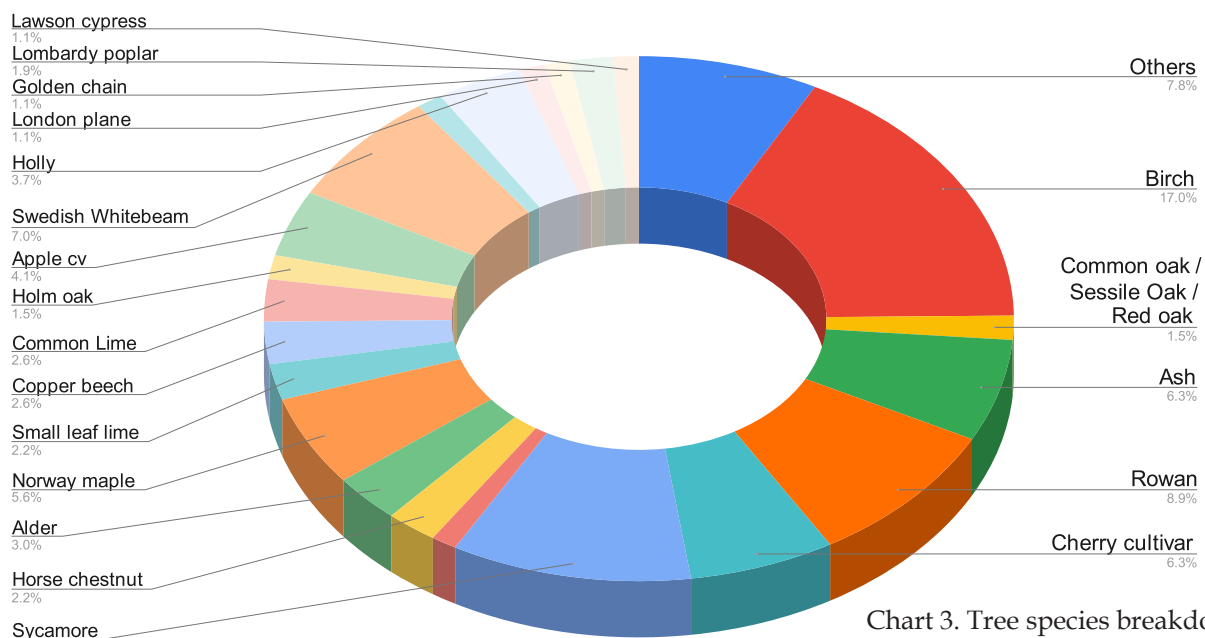


Chart 3. Tree species breakdown.





Image 2. Birch within the car park and the immediate vicinity of St.Vincent's Hospital near the north eastern survey boundary.



Images 3/4. Birch within the car park and the immediate vicinity of St.Vincent's Hospital near the north eastern survey boundary.



Seventy mature trees are located within the south-eastern section of the site (marked as area 2 on image 1). Trees in this area include a very large London plane (*Platanus × hispanica*) (#1792). The south and western boundaries of this open area contain a mix of moderate and high quality mature sycamore, Drummond's Norway maple (*Acer platanoides* 'Drummondii'), horse chestnut (*Aesculus hippocastanum*), and copper beech (*Fagus sylvatica* 'Purpurea'). These trees represent many of the higher value specimens within the survey boundary.

Along the eastern boundary are a single line of early mature trees for approx. 110m (image 6). This planted line contains many smaller form species including whitebeam (*Sorbus intermedia*), holly (*Ilex*), willow (*Salix alba*) and elm (*Ulmus glabra*).



Image 5. London plane (#1792) within an open area north of the Convent Avenue entrance way. Line of Monterey cypress (#1765) in background right.





Image 6. Single line of early mature trees along the eastern boundary.



Image 7. Holm and sessile oak at the northern boundary of area 2 (refer to image 1).



The walled garden located between Richmond House and the main St. Vincents building complex (marked as area 3 on image 1) is approximately 7,000m<sup>2</sup> and contains the highest concentration of high value trees within the site. (image 7).

The mature species present are a mixture of London plane (*Platanus x hispanica*), common lime (*Tilia x europaea*), Drummond's Norway maple

(*Acer platanoides* 'Drummondii'), walnut (*Juglans regia*) and ash (*Fraxinus excelsior*).

The general condition of these trees is good with few exhibiting any significant decay or structural issues (save for two that have failed #1691 and #1693; image 9).



Image 8. Well developed high value trees within the walled garden area (#1689 & #1690).



Image 9. Dead elm adjacent to St.Vincents hospital (#1693).





Image 10. Copper beech #1787 on the western boundary of the wall garden.



To the south of Richmond House (marked as area 4 on image 1) are two lines of trees planted on both sides of the roadway. With the exception of horse chestnut (#1843), these trees are categorised as of moderate to low value, having issues with ash dieback, localised decay and poor formation due to poor historic pruning practices. Though historically trees were located either side of the entrance road to Richmond House these trees were planted during the 20th century.

The grounds of Crannog house (images 1 & 12) contains 44 trees. The majority are early-mature birch and rowan. Seven trees have bark damage at base, the cause of which is most likely due to mower impact.



Image 11. Horse chestnut (right #1834) with sycamore, Norway maple and ash at the entrance to Richmond House.



Image 12. Early mature birch and rowan within the grounds of Crannog.



## Section 2: Historical Context

The majority of the older trees within the survey boundary are located within the walled garden area that pre-dates the current hospital buildings (area 3 on image 1). These comprise of a mix of Norway maple, sycamore, European lime and London plane and are likely to have been planted soon after the construction of Richmond House, circa 1790. These trees are depicted on the 1856 map plan of Richmond house (image 13). An example of one of the oldest such trees is the London plane (#1792; image 5) which is estimated to have been planted in 1815±20.

Dublin City Council within its 2007 Richmond Road Area Action Plan designated the lands between Richmond House and Richmond Road as a “Zone of historic character”. The double line of trees shown along the entrance avenue to Richmond house are a mix of Sycamore, ash and Norway maple. These trees are not contemporary with the original landscape layout associated with this property.

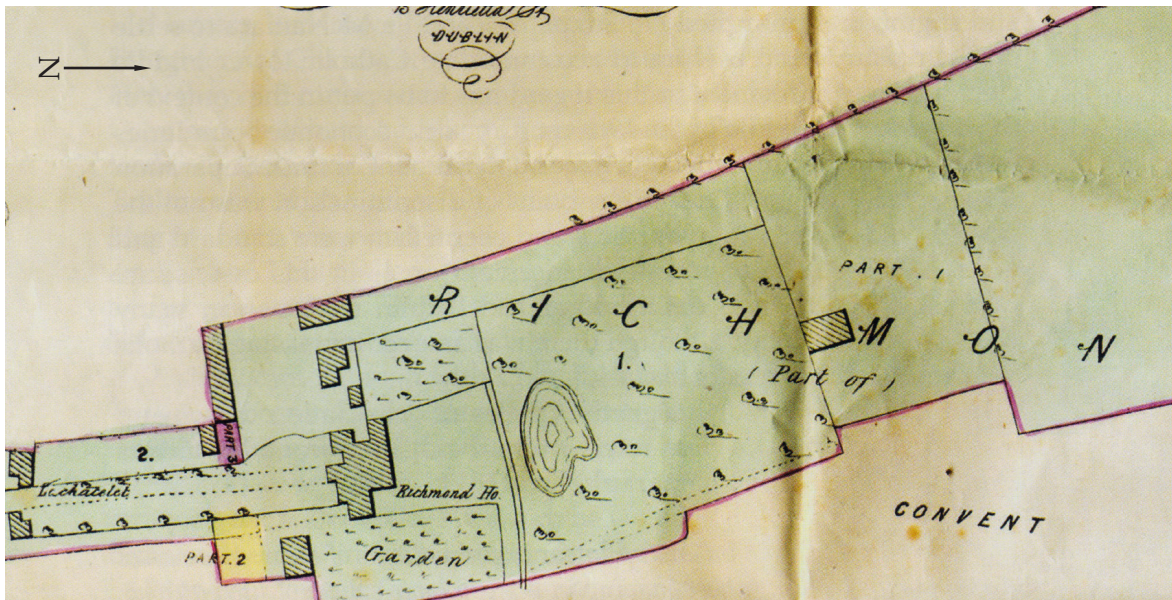


Image 13. 1856 map showing wooded area directly to north of Richmond house.



Image 14. 1913 map showing trees lining the main access from Convent avenue.



These current plantings are from circa 1900±15, replacing the original trees. The exception to this being the horse chestnut (*Aesculus hippocastanum*) (#1834) which dates to 1830±20.

The hospital began operations from Richmond House in May 1857. It later expanded into larger buildings within its current location in 1899. In the early 20th century, a new generation of trees were planted, such as these monterey cypress, holm oak, lime and sycamore (shown below in images 15 and 16).

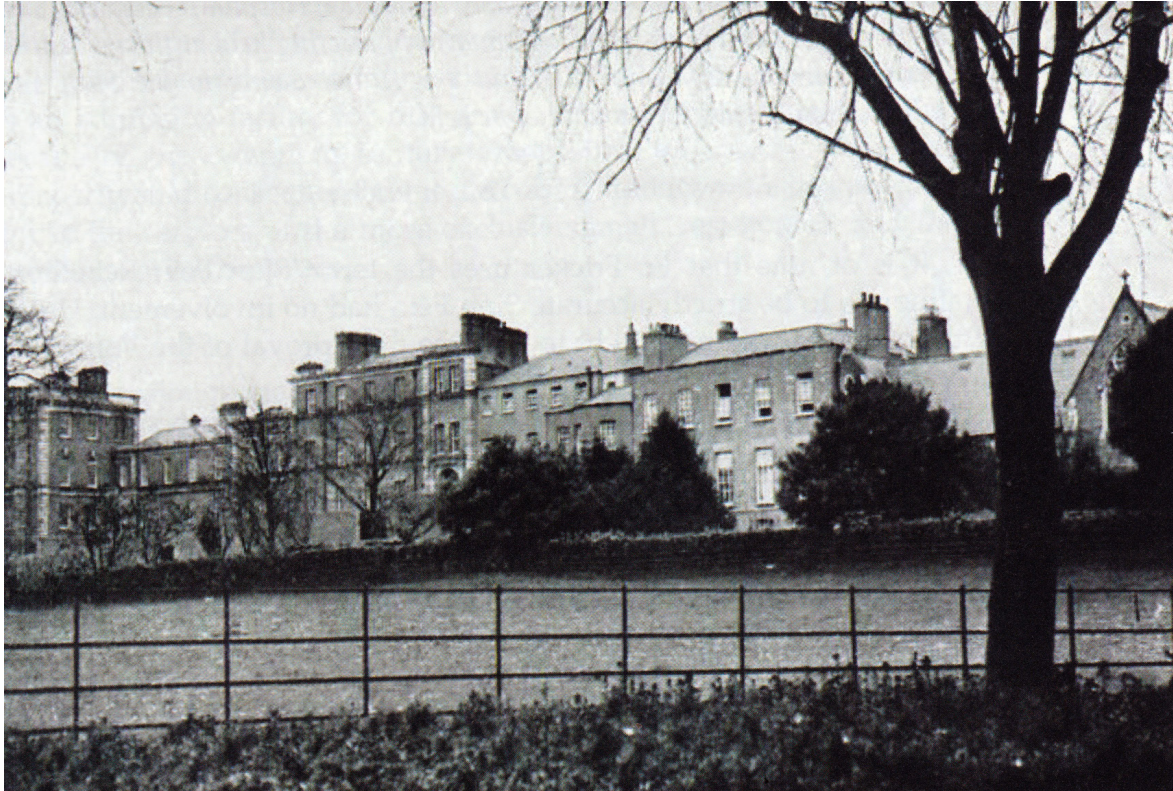


Image 15. Line of trees south of St.Vincent's Hospital during the 1930's. Early-mature Monterey cypress and holm oak trees in background *right*.



Image 16. Image taken within the walled garden during the 1950's. Mature lime and sycamore trees in background.





Image 17. Aerial photograph from 1954, taken during a flood of Tolka River. This shows mature trees within the walled garden of St.Vincent's Hospital and two lines of trees forming the avenue to Richmond House.



Image 18. View from St.Vincent's Hospital toward Richmond House in 1965 showing London plane (#1686), Drummond's maple (#1684) and Sycamore (#1785).

## Section 3. Arboricultural Impact and Mitigation

### 3.1 Arboricultural Impact

The proposed plans (refer to drawings TSTV001 104-109) include a new two storey mental health facility, associated infrastructure and open space areas. A total of 9 residential blocks are proposed with associated communal open space areas including a central park, a linear park and an entrance plaza, with set down area, at Richmond Road. The proposal also includes car parking (surface and basement level). Refer to appendix VI for detailed development description.

This development will necessitate the removal of 122 trees. A further 17 category 'U' trees should be removed as they have either failed or in a state of advanced decline. The greatest impact on higher value trees is within the area marked area 2 (image 1), where the new two storey mental health facility building is proposed.

The area marked area 3 (image 1), the historic walled garden, which contains the highest concentration of high value trees will be largely unaffected by the proposed development. All 13 category 'A' mature trees located here will be retained under the proposed plans.

Category	No.	% of total	% of category
A	12	4.4%	34.3%
B	92	33.2%	48.4%
C	18	6.6%	51.4%
U	17	5.9%	100.0%

**Table 2.** Tree Removal Categories

### 3.2 Mitigation

Inside the walled garden area minor level changes and a series of new asphalt pathways are proposed. Many of these proposed pathways are within existing RPAs but will be constructed above existing roots using cellular systems such as cellweb to reduce root damage (see appendix II;pg50). Access, where required by machinery to construct these paths will be limited to specific demarcation zones where soil and roots will be protected by bog mats (appendix 2.1.6).

To protect the trees (#1834 - #1846) at the Richmond House entrance during the proposed construction a preliminary investigation using hand tools/Air Spade will be undertaken to identify root systems extents. Dependant on this investigation, levels will be built up as required and a combination of cellweb and a permeable surface shall be placed to facilitate the access roadway to the proposed car park. These measures have been agreed with O'Connor Sutton Cronin Consultant Engineers during the design phase.

Niall Montgomery + Partners Landscape Architects have submitted a landscape plan as part of the planning package. This outlines planting to mitigate for the removal of existing trees with a new generation of proposed trees;

"The proposed new trees are intended to enhance the landscape character & aesthetic quality of the site as well as the biodiversity credentials and will be located along streets and within public & communal spaces with the intention of mitigating existing tree loss.

The trees will vary in specification of size and species. There will be a majority of trees selected from native tree species, be of deciduous & evergreen nature and varying habit. Clusters of trees rather than formal rows will dominate the landscape expression. There will be a total of 420 trees planted."

*Herman de Lange | Creative Director - Niall Montgomery + Partners Landscape Architects*



## 4. Limitations of Survey

This survey should be regarded as a preliminary assessment of the trees and deals with the current condition as identified during this survey only.

Every attempt was made to identify hazardous trees in this report however this survey was carried out from the ground and therefore cannot be held to have identified elements of decay which may be hidden out of sight within the crown or beneath ivy or other obstructions. To counter this limitation in the survey process it is vital that during tree works any additional defects found by the climbing arborist are communicated to the consulting arborist to allow appropriate action to be taken.

The details within this survey are based on the condition of the trees during the survey period only. The findings in this survey cannot be held to be valid after any site disturbance, man-made or natural, which may have an adverse effect on any trees present.

## 5. Relevant legislation and guidelines

There are no Tree Protection Orders (TPOs) on any of the trees on this site. However the assessment of trees and design of dev has been cognisant of the Draft Dublin City Biodiversity Action Plan 2021-2025 and the Draft Dublin City Development Plan 2022-2028.

No Special Areas of Conservation (SACs) are in effect within the site or surrounding area.

### Draft Dublin City Development Plan 2022-2028

#### 10.5.2 Biodiversity (Pg. 360)

Policy of Dublin City Council (GIO8): Draft Dublin City Biodiversity Action Plan 2021 - 2025

To support the implementation of the 'Draft Dublin City Biodiversity Action Plan 2021-2025' (or as updated), which sets out key themes and objectives for biodiversity conservation and restoration and measurable targets and actions, in partnership with all relevant stakeholders.

#### 15.6.10 Tree Removal (Pg. 672)

Where a proposal impacts on trees within the public realm, a revised design will need to be considered to avoid conflicts with street trees. Where a conflict is unavoidable and where a tree, located onstreet, requires removal to facilitate a new development or widened vehicular entrance and cannot be conveniently relocated within the public domain, then when agreed by Parks Services and the Planning Department by way of condition to a grant of permission, a financial contribution will be required in lieu. The financial contribution is calculated by the Capital Asset Value for Amenity Trees (CAVAT) by an Arboriculturist. The payment is required to be lodged with Dublin City Council before the tree can be removed.

#### 10.5.7 Urban Forest (Pg. 378)

Policy of Dublin City Council (GI41): Protect Existing Trees as Part of New Development

To protect existing trees as part of new development, particularly those that are of visual, biodiversity or amenity quality and significance. There will be a presumption in favour of retaining and safeguarding trees that make a valuable contribution to the environment.

Policy of Dublin City Council (GI43): Hedgerows

To protect and enhance the City's hedgerow network, in particular, hedgerows that form townland, parish and barony boundaries. It is Council policy to increase hedgerow coverage

and promote the planting of hedgerows in new developments using native species.

#### **15.6.9 Trees and Hedgerows (Pg. 671)**

Trees and hedgerows add a sense of character, maturity and provide valuable screening, shelter and privacy and will often have a useful life expectancy beyond the life of new buildings. Dublin City Council will seek to protect existing trees and hedgerows when granting planning permission for developments and will seek to ensure maximum retention, preservation and management of important trees, groups of trees, and hedges as set out in Section 10.5.7 of the plan. The Dublin City Tree Strategy 2021 provides the vision and direction for long term planning, planting, protection and maintenance of trees, hedgerows and woodlands within Dublin city. The Ancient and Species Rich Hedgerow Survey of Dublin City as detailed in Policy GI43 also provides a description and assessment of the hedgerows within the city and can be used to identify key lines of hedging.

Dublin City Council will encourage and promote tree planting in the planning and design of private and public developments. New tree planting should be planned, designed, sourced, planted and managed in accordance with 'BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations'. New planting proposals should take account of the context within which a tree is to be planted and plant appropriate tree species for the location.

A tree survey must be submitted where there are trees within a proposed planning application site, or on land adjacent to an application site that could influence or be affected by the development. Information will be required on which trees are to be retained and on the means of protecting these trees during construction works. Where development is proposed, it is essential that existing trees are considered from the very earliest stages of design and prior to an application for planning permission being submitted. Root systems, stems and canopies, with allowance for future movement and growth, need to be taken into account in all projects. The following criteria shall be taken into account by Dublin City Council in assessing planning applications on sites where there are significant individual trees or groups/ lines of trees, in order to inform decisions either to protect and integrate trees into the scheme, or to permit their removal:

- Habitat/ecological value of the trees and their condition.
- Uniqueness/rarity of species.
- Contribution to any historical setting/ conservation area.
- Significance of the trees in framing or defining views.
- Visual and amenity contribution to streetscape.

### **Draft Dublin City Biodiversity Action Plan (2021-2025)**

#### **5.15 Dublin City Tree Strategy (Pg. 65)**

Trees in Dublin City form a major component of its biodiversity and provide vital supports for life in the urban ecosystem. Trees regulate climate and hydrological flows, fix nitrogen and take up soil nutrients and pollutants, sequester carbon, filter rainfall, absorb air pollution, reduce wind speeds and provide shelter and food for wildlife. The woodlands, hedgerows, tree-lines and trees in parks and gardens are vital habitats for the survival of many of our most threatened species. Trees shade watercourses, maintaining cool temperatures for our protected species of fish, such as salmon and trout. They provide resting and nesting areas for birds of European conservation importance, such as Kingfisher, and for bats, which are also protected at European level. Conserving and planting trees is a significant support for biodiversity and climate change. Several native species are threatened by plant diseases and invasive alien species. Therefore, the actions of the draft Dublin City BAP are also



supportive of tree health.

The Dublin City Tree Strategy includes specific policies to support biodiversity, including:

- “3.2.3 Protection of Trees that are a habitat for endangered species: Dublin City Council will use its powers to protect trees that are a potential habitat for (or used by) protected species. The Council will have regard to legislative requirements and the procedures outlined in the Council’s Biodiversity Action Plan.
- 3.2.4 Trees that function as wildlife corridors: Dublin City Council will protect trees, hedgerows or groups of trees which function as wildlife corridors or ‘steppingstones’ in accordance with Article 10 of the EU Habitats directive and the procedures outlined in the Council’s Biodiversity Action Plan.
- 3.2.5 Ancient and Species Rich Hedgerows: The City Council will review Ancient and Species rich hedgerows within the City (as identified in the 2006 Survey of ancient and species rich hedgerows in Dublin City) and protect existing hedgerow sections.
- 3.6.6 Protected species: Where tree works have the potential to affect protected species or their habitat, the Council will have regard to legislative requirements and the procedures outlined in the Council’s Parks Biodiversity Policy.
- 3.6.7 Ivy on trees Ivy on trees is normally retained except where removal is necessary to aid visual tree health assessment or where ivy growth is excessive and adversely affecting tree health.
- 3.6.8 Standing deadwood: Where it is safe and appropriate to do so, standing deadwood will be left in situ to provide a habitat for native species and contribute to local biodiversity.
- 3.8.6 Species Selection: The choice of tree species is dependent on suitability to the planting location and local landscape character. A greater variety of trees can be planted in parks and open spaces than on streets and species will be selected on suitability to setting, biodiversity value and visual appearance.
- 3.8.7 Large Canopied Trees: The Council will also seek to plant large canopy trees, wherever possible, to achieve the maximum benefits that trees provide. Large-growing tree species confer much greater benefits to urban areas than small trees. Where space allows, preference will be given to planting as large a tree as is appropriate for the location.

\*The Dublin City Tree Strategy is currently being updated and will align with this draft Plan to ensure that these policies are continued.

### **Summary response to the Draft Dublin City Development Plan 2022-2028:**

The Draft Dublin City Development Plan 2022-2028 seeks to maximise retention of existing trees in locations of proposed development. In particular, giving preference to higher value trees (i.e. those with higher ecological value, rarity of species, amenity/aesthetic contribution, significance in framing or defining views and contribution to any historical setting). It also sets out criteria where existing trees should be appropriate within the context of the proposed development (i.e. the requirements of root systems, stems and canopies and, allowance for future movement and growth). The document also emphasises the importance of street trees and their retention with the context of any proposed development. Finally, it states the need for a tree survey and the means of protecting these trees during construction works.

This reports aims to provide detail and context for these objectives. CMK Hort + Arb Ltd. have worked with the design teams to highlight the highest value trees located within the survey boundary and recommend measures to ensure their retention in the context of the proposed development. In particular, illustrating root systems requirements on drawings and proposing methods to mitigate any possible adverse impact due to construction (i.e. ground mats, cell web and tree protection fencing).

Impact on street trees won't be of concern for this project as the nearest public street tree is location 90m west of the current Crannóg entrance (at the intersection of Richmond Road and Waterfall Avenue.).

## Bats

Trees may contain bats. Bats are afforded legal protection under Irish and EU legislation and agreements (Wildlife Act (1976), Wildlife (Amendment) Act (2000), S.I. No. 94 of 1997 and S.I. No. 378 OF 2005 implementing the EU Habitats Directive, Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animal) and the Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats).

Trees provide roosting opportunities for bats. Mature trees are the most likely to have potential as roost sites. This may be provided by cavities, crevices, limb fractures, storm damage or mechanical damage and may even be by way of loose bark. Felling of mature trees and even surgery to large limbs may place bats at risk and both procedures remove roosting sites for bats.

Professional advice from a licenced surveyor should be sought prior to any works commencing on trees.

Altamar Ltd. environmental consultancy have undertaken a bat survey with inputs from CMK Hort + Arb Ltd.

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
420	Good	Ash Fraxinus excelsior	Early mature	C2	Self seeded and multi stemmed from base. No signs of ash dieback. Canopy well developed.	No action necessary	10_15	140, 140, 130, 120	12	3n	3;2.5;3;2.5
421	Good	Goat Willow Salix caprea	Mature	B2	Trunk codominant from 0.5m with wide union. Well developed canopy with no visible defects.	No action necessary	30-40	410	15	N/A	4;4;4;4
422	Good	Silver birch Betula pendula	Mature	B2	Well developed with no visible defects. Overhead services intrude into upper canopy at 6.5m.	Prune near services	40	300	9	3n	3;3;2;2.5
423	Good	Silver birch Betula pendula	Early mature	B2	Drawn up due to proximity to 5m high wall. No visible defects.	No action necessary	20-30	220	8	3.75w	1.5;1.5;1.5;1.5
424	Good	Silver birch Betula pendula	Early mature	B2	Drawn up due to proximity to 5m high wall. No visible defects.	No action necessary	20-30	230	8	3w	1.5;1.5; 1.5;2.75
425	Good	Red oak Quercus rubra	Young	C2	Young with no visible defects.	No action necessary	10_15	150	6	2n	2;1;1;2
426	Good	Silver birch Betula pendula	Early mature	B2	Well developed with heavy ivy growth extended into lower canopy. No visible defects.	No action necessary	20-30	260	9	4n	2;2;2;2
427	Good	Ash Fraxinus excelsior	Early mature	B2	Well developed with no signs of ash dieback present. Trunk codominant from 2m with a wide union present.	No action necessary	20-30	310	11	6n	4;4;2;3
428	Good	Silver birch Betula pendula	Mature	B2	Well developed with heavy ivy growth extended into lower canopy. No visible defects.	No action necessary	30-40	350	11	2s	2;3;2;2.5
429	Good	Silver birch Betula pendula	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	320	11.5	3s	4;3;3;3
430	Good	Rowan Sorbus aucuparia	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	190	8	3n	2;1;1;2
431	Good	Silver birch Betula pendula	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	280	12	2.75w	1.5;3;3;3
432	Good	Rowan Sorbus aucuparia	Early mature	C2	Codominant trunk from 0.25m which may reduce long-term potential. Canopy well developed.	No action necessary	10_15	180	5	3n	2;1;1;1

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433	Good	Silver birch <i>Betula pendula</i>	Early mature	B2	Well developed with no visible defects.	No action necessary	20-30	220	10	3s	2;2;2;2
434	Fair	Rowan <i>Sorbus aucuparia</i>	Mature	C2	Canopy suppressed east due to proximity of 5m high wall. No defects visible.	No action necessary	20-30	170	7	3w	2;0;1;2
435	Good	Silver birch <i>Betula pendula</i>	Early mature	B2	Well developed with no visible defects.	No action necessary	20-30	220	10	3n	2;2;2;2
436	Good	Silver birch <i>Betula pendula</i>	Early mature	B2	Subdominant within neighbouring tree group. Drawn up as a result.	No action necessary	20-30	220	6	4n	2;2;2;1
437	Good	Cherry spp. <i>Prunus</i> Spp.	Mature	B2	Well developed with minor deadwood in lower canopy.	Deadwood	20-30	280	8.5	2s	2;2;2;1
438	Good	Rowan <i>Sorbus aucuparia</i>	Mature	B2	Minor damage to bark of exposed roots north and south due to mower activity with no associated decay. Small diameter pruning cuts north and south at 1.5m with no associated decay. Well developed canopy.	No action necessary	20-30	220	6	3e	3;3;3;2
439	Good	Cabbage palm <i>Cordyline australis</i>	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	390	7	3.25n	1;1.5;1;0.5
440	Fair	Sycamore <i>Acer pseudoplatanus</i>	Early mature	C2	Self seeded and multi stemmed from base. Trunk adjacent to brick wall of property.	Remove	10	240	7	2s	1;3;3;2
1506	Very Poor	Horse chestnut <i>Aesculus hippocastanum</i>	Mature	U	Very limited crown cover indicating decline. Becoming swamped in ivy.	Fell	<10	450	9	NA	2;1;1;1
1560	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Trunk codominant at 0.4m with a wide union between stems. Upper canopy well developed with no visible defects.	No action necessary	20-30	230	9	2.5r	1;4;4;4
1601	Fair	Leyland cypress <i>Cupressus × leylandii</i>	Mature	C2	Linear planting at 1m spacings. Heavily pruned over gardens in places. Provides screening.	Continue current management regime.	15-20	250	9	0	4;2;2;2
1602	Good	Alder <i>Alnus glutinosa</i>	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	310	12	2.75n	5;3;3;3



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Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1603	Poor	Alder <i>Alnus glutinosa</i>	Early Mature	C2	Subdominant with crown restricted in overall development. Mainly oriented to east. Very limited long-term potential.	No action necessary	10	160	9	4e	0;1;4;1
1604	Good	Alder <i>Alnus glutinosa</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	250	10	8w	3;3;3;3
1605	Very Poor	Norway maple <i>Acer platanoides</i> 'crimson king'	Early Mature	U	In a state of advanced decline.	Fell	0	310	11	NA	4;2;2;4
1606	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Very minimal decay at base. Which is not significant at present. Tight union between stems at 1.25m. Canopy relatively well developed.	No action necessary	30-40	680	16	3	6;8;6;6
1607	Fair	Cherry cultivar <i>Prunus</i> cv	Mature	B2	Relatively well developed. Deadwood in lower crown. Crown restricted toward east due to competition from neighbouring tree.	Dead wood	10_15	420	7.5	2.5w	3;2;4;5
1609	Very Poor	Cherry cultivar <i>Prunus</i> cv	Mature	U	Extensive decay in trunk.	Fell	<10	230	4.5	NA	3;3;2;3
1610	Fair	Cherry cultivar <i>Prunus</i> cv	Mature	U	Poor pruning has led to extensive areas of decay. Form poor.	Fell	<10	310	7	NA	4;3;3;4
1612	Good	Small-leaved lime <i>Tilia cordata</i>	Mature	B2	Slightly sub-dominant to neighbouring tree. Topped in the past with associated decay. Unlikely to be significant at present. Forming an element of low level screening at present.	No action necessary	30-40	590	11	3.5e	6;5;5;3
1613	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A2	A well developed dominant specimen on eastern boundary. No visible defects.	No action necessary	40	520	14	5w	7;5;5;5
1614	Fair	Common Lime <i>Tilia x europaea</i>	Mature	C2	Essentially a stump with basal regrowth.	No action necessary	20-30	800	9	0	3;3;3;3

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1615	Good	Norway maple <i>Acer platanoides</i>	Early Mature	B2	Trunk co-dominant from 1.5m. Union sound at present. Minor storm damage in crown to south. Branch congestion throughout crown.	Dead wood	15-20	350	10	1.5n	5:3;5:3
1616	Good	Norway maple <i>Acer platanoides</i> 'crimson king'	Early Mature	B2	Extensive bark damage to trunk with localised decay possibly due to squirrels. Upper canopy relatively well developed.	Monitor decay	20-30	280	10	2.5e	5:2;3:3
1617	Fair	Common Lime <i>Tilia x europaea</i>	Mature	C2	Essentially a stump with regrowth.	No action necessary	20-30	800	6	0	3:3;3:3
1618	Good	Norway maple <i>Acer platanoides</i> 'crimson king'	Young	B2	Relatively well developed. No visible defects.	Cut ivy	30-40	170	9	3n	3:3;3:3
1619	Good	Holm oak <i>Quercus ilex</i>	Mature	A2	Trunk formerly co-dominant from 2m with stem to south removed. No associated decay visible. Minor decay in trunk at 1.25m to east. Upper canopy well developed. No visible defects.	No action necessary	40	660	10.5	4n	5:5;5:5
1620	Good	Austrian pine <i>Pinus nigra</i>	Mature	A2	Well developed. No visible defects. Very high landscape value	No action necessary	40	680	21	15n	5:5;2:5
1621	Good	Sycamore <i>Acer pseudoplatanus</i>	Young	B2	Very heavy ivy growth present. No visible defects.	Cut ivy and re-assess	30-40	250	8	2.5s	3:3;3:3
1622	Good	Sycamore <i>Acer pseudoplatanus</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	220	9	3n	3:3;4:4
1623	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Very heavy ivy growth present. No visible defects.	Cut ivy	20-30	200	10	3s	2:2;2:2

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1624	Good	Sycamore <i>Acer pseudoplatanus</i>	Early Mature	B2	Very heavy ivy growth present. No visible defects.	Cut ivy	30-40	220	9	3e	3;3;2;3
1625	Good	Weeping apple <i>Malus cv</i>	Early Mature	B2	Very heavy ivy growth present. No visible defects.	Cut ivy	20-30	200	4	2n	2;2;2;2
1626	Fair	Apple cv <i>Malus cv</i>	Young	C2	Basal suckers present at base. Relatively well developed. No visible defects.	Remove basal suckers	10_15	100	3.25	1.75n	2;2;2;2
1627	Good	Apple cv <i>Malus cv</i>	Young	B2	Basal suckers present. Crown congestion present.	Remove basal suckers	10_15	110	2.75	2n	2;1;2;2
1628	Good	Apple cv <i>Malus cv</i>	Early Mature	B2	Basal suckers present. Localised decay from stake in trunk. Unlikely to be significant at present.	Remove basal suckers	20-30	110	2.75	2w	1.5;1.5;2;2
1629	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	20-30	160	6.5	2s	3;3;3;3
1630	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Basal suckers. Well developed with no visible defects.	Remove basal suckers	20-30	160	7	2.15n	3;3;2;3
1631	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	170	8	3w	2;3;2;2.2
1632	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	20-30	210	7	0.5	3;3;;3
1633	Good	Sycamore <i>Acer pseudoplatanus</i>	Early Mature	B2	Within a small group. Crown restricted to north. No visible defects.	No action necessary	40	260	8.5	2s	1;3;4;4
1634	Good	Sycamore <i>Acer pseudoplatanus</i>	Early Mature	B2	A well developed specimen within a small group. No visible defects.	No action necessary	40	280	9	2.5e	4;4;4;3

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1635	Good	Sycamore <i>Acer pseudoplatanus</i>	Early Mature	B2	Well developed in a small group. Crown restricted to south due to competition from neighbouring trees. Not significant at present.	No action necessary	40	280	8.5	2w	6;1;2;6
1636	Good	Rowan <i>Sorbus aucuparia</i>	Mature	B2	Crown slightly congested. Not significant at present.	No action necessary	15-20	200	8	2w	3;3;3;3
1637	Very Poor	Rowan <i>Sorbus aucuparia</i>	Early Mature	C2	In decline with competition from neighbouring trees.	Dead wood	10	150	3.5	1.5n	2;1;1;2
1638	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Within a group of three trees. Crown restricted to north and east. Not significant at present.	No action necessary	20-30	350	14	2.5s	2;4;4;1
1639	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Within a small group. Crown restricted east as a result. Not significant at present.	No action necessary	15-20	340	9	2n	4;1;4;4
1640	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Relatively well developed. Crown restricted south due to competition from neighbouring trees. Tight union between stems in lower canopy.	No action necessary	15-20	260	12	2.15nw	4;4;1;4
1641	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	20-30	290	10.5	2.5e	4;4;2;4
1642	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	220	10	4e	2;4;4;4
1644	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	270	10	3n	4;3;2;2
1645	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Relatively well developed with no visible defects.	No action necessary	30-40	190	10	3.5n	3;1;1;2
1646	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	180	10	3w	2;2;2;2



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1647	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Slightly subdominant crown restricted north due to competition from neighbouring trees.	No action necessary	20-30	220	9	2se	1;2;3;2
1648	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	270	10	2s	4;3;2;2
1649	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	240	10	3n	4;2;2;4
1651	Fair	Birch <i>Betula pendula</i>	Early Mature	B2	Relatively well developed No visible defects.	No action necessary	30-40	170	8	4n	2;2;2;2
1652	Good	Cherry cultivar <i>Prunus</i> cv	Mature	B2	Trunk lean to west. Unlikely to be significant at present. No visible defects.	No action necessary	20-30	250	7.5	4n	2;3;3;4
1653	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Well developed No visible defects.	No action necessary	20-30	300	10	2.5w	3;4;3;4
1654	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Well developed No visible defects.	No action necessary	20-30	330	11	2.5n	3;3;3;4
1655	Good	Apple cv <i>Malus</i> cv	Mature	B2	Well developed No visible defects. Basal suckers present.	Remove basal suckers	20-30	100	2.5	2n	2;2;2;2
1656	Good	Apple cv <i>Malus</i> cv	Mature	B2	Relatively well developed with no visible defects.	No action necessary	20-30	200	3.5	1.5s	3;1;3;3
1657	Good	Apple cv <i>Malus</i> cv	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	140	3	2n	2;2;2;2
1658	Good	Swedish whitebeam <i>Sorbus aria</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	20-30	340	12	2w	2;4;5;5

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Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1659	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	290	12	2.15w	3;4;3;4
1660	Good	Apple cv <i>Malus cv</i>	Early Mature	B2	Relatively well developed with no visible defects.	No action necessary	20-30	170	4	2s	3;1;3;2
1661	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	280	12	3s	3;4;4;4
1662	Good	Cherry cultivar <i>Prunus cv</i>	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	320	9	2.5w	3;3;3;4
1663	Good	Callery pear <i>Pyrus calleryana</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	170	5	2.25s	3;3;3;3
1665	Good	Holly <i>Ilex aquifolium</i>	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	410	8	4n	3;3;3;4
1666	Good	Western red cedar <i>Thuja plicata</i>	Mature	B1	Well developed with no visible defects.	No action necessary	40	450	9.5	0	3;3;3;3
1667	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	Relatively well developed. Minor pockets of decay in crown. Unlikely to be significant at present.	No action necessary	30-40	530	18	6s	5;6;6;6
1668	Good	Horse chestnut <i>Aesculus hippocastanum</i>	Mature	B2	Storm damage to crown to west. No associated decay in crown. Remaining canopy well developed though slightly exposed at point of limb loss.	Cut ivy and re-assess	30-40		18	5w	6;3;7;10
1669	Good	Silver-margined holly <i>Ilex aquifolium Argentea Marginata</i>	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	360	11	4w	2;3;3;3
1670	Good	Walnut <i>Juglans regia</i>	Mature	A1	Well developed with no visible defects.	No action necessary	40	430	18.5	8w	5;8;7

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Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1671	Good	Ash <i>Fraxinus excelsior</i>	Mature	A2	Relatively well developed . No visible defects. Crown slightly restricted toward east, not significant at present. Light suppressed deadwood in lower canopy.	Cut ivy	40	620	24.5	7w	6;3;9;9
1672	Good	Ash <i>Fraxinus excelsior</i>	Mature	C2	Existing decay in trunk to south at point of limb loss from base to 2m. Further less significant decay in trunk to east at 4m. Upper canopy relatively well developed.	Monitor	10	530	22	6e	3;5;7;7
1673	Fair	Holly <i>Ilex aquifolium</i>	Mature	B2	Multi stemmed subdominant specimen. Crown restricted north due to competition from neighbouring trees. No visible defects.	No action necessary	30-40	250	7	2.5s	1;2;3;2
1674	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	Very heavy ivy. Trunk codominant at 3m with a wide union between stems. Upper canopy well developed with no visible defects. Minor light suppressed deadwood in crown.	No action necessary	30-40	670	23	3s	4;7;7;6
1675	Good	Holly <i>Ilex x altadlerensis</i> 'Golden King'	Mature	B2	Relatively large. No visible defects.	No action necessary	30-40	450	9	3n	4;4;4;4
1676	Good	Common Lime <i>Tilia x europaea</i>	Mature	A2	Large mature specimen. Very heavy ivy No visible defects.	Cut ivy and re-assess	40	780	21.5	2n	9;9;7;7
1679	Good	London plane <i>Platanus x hispanica</i>	Mature	A1	Large specimen that is well developed. No visible defects.	No action necessary	40	950	22.5	2.5w	12;10;7;11
1681	Good	Common Lime <i>Tilia x europaea</i>	Mature	A1	Very heavy ivy growth. Large well developed specimen with no visible defects.	Cut ivy	40	880	23	6w	6;7;6;8
1682	Good	Common Lime <i>Tilia x europaea</i>	Mature	A2	Well developed No visible defects. Basal suckers present.	Remove basal suckers.	40	530	14	3s	8;4;8;8

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1683	Good	Common Lime <i>Tilia x europaea</i>	Mature	A1	Large well developed specimen with no visible defects. Crown slightly restricted south due to competition from neighbouring trees.	No action necessary	40	880	20.5	4n	9;9;4;8
1684	Good	Drummond Norway maple <i>Acer platanoides</i> 'Drummondii'	Mature	A2	Large specimen. Well developed with no visible defects.	No action necessary	40	740	20.5	3.5w	8;9;8;9
1685	Good	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature	A2	Large mature well developed specimen. Minor decay in base of trunk. Not significant at present.	No action necessary	40	700	24.5	4e	9;8;9;8
1686	Good	London plane <i>Platanus x hispanica</i>	Mature	A1	Large mature specimen. No visible defects.	No action necessary	40	1000	26.5	8w	13;13;12;9
1687	Good	Purple leaf cherry <i>Prunus x cistena</i>	Mature	B2	Trunk with a strong lean toward east. Canopy vertical. Tree likely to be stable.	No action necessary	15-20	370	12	2.25e	6;6;6;5
1688	Good	Ash <i>Fraxinus excelsior</i>	Young	B2	Well developed with no visible defects.	No action necessary	40	150	7.5	2n	3;2;2;2
1689	Good	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature	A2	Large specimen well developed specimen with no visible defects.	No action necessary	40	950		4.5n	10;9;9;10
1690	Good	Common Lime <i>Tilia x europaea</i>	Mature	A1	Large specimen well developed specimen with no visible defects. Basal suckers present.	Remove basal suckers	40	840	22.5	5w	6;6;6;6
1691	Very Poor	Holly <i>Ilex aquifolium</i>	Mature	U	In decline	Fell	<10	190	6	NA	0;2;2;2
1692	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Multi stemmed self seeded specimen. Tight union between stems.	Cut ivy and re-assess	30-40	500	12	0	5;5;5;5



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1693	Dead	Elm <i>Ulmus glabra</i>	Mature	U	Failed	Fell	0	700	10	NA	4;4;4;4
1694	Good	Norway maple <i>Acer platanoides</i> 'crimson king'	Mature	A2	Bars embedded on base. Well developed. No visible defects.	No action necessary	40	420	14	4e	6;6;5;4
1695	Poor	Cherry cultivar <i>Prunus</i> cv	Mature	U	Becoming shaded out by neighbouring tree with extensive deadwood in crown.	Fell	<10	370	11	NA	3;5;5;3
1696	Good	Norway maple <i>Acer platanoides</i>	Early Mature	B2	Relatively well developed. Congestion in crown. Not significant at present.	No action necessary	30-40	370	12	2w	5;4;5;6
1697	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	A2	Cavity at base to north but Unlikely to be significant at present. Very heavy ivy. Minor deadwood in lower crown. Canopy well developed. No visible defects.	Cut ivy and re-assess	40	1020	24	4w	10;10;6;10
1698	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	Canopy restricted north due to competition from neighbouring trees. Decay in stem to east at 4m. Small insignificant areas of decay at points of limb loss in lower canopy.	Monitor	15-20	680	21	3sw	3;5;9;9
1699	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	Root to east overlapping kerb. Minor pockets of decay at pruning points. Not significant at present.	No action necessary	30-40	430	14	2.75w	7;7;5;9
1700	Good	Ash <i>Fraxinus excelsior</i>	Early Mature	B2	Very heavy ivy. Relatively well developed. No visible defects.	Cut ivy	30-40	410	14	4n	4;6;6;4
1701	Very Poor	Cherry cultivar <i>Prunus</i> cv	Mature	U	Extensive decay in trunk	Fell	<10	340	10	2e	1;5;7;4

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Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1702	Dead	Cherry cultivar <i>Prunus</i> cv	Mature	U		Fell	0	320	5	NA	2;2;2;2
1703	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Decay related crack in major limb to north with further decay in minor limb to south. Trunk lean to north but canopy vertical.	Removed decayed limb.	10_15	500	10	2s	6;4;7;7
1704	Fair	Cherry cultivar <i>Prunus</i> cv	Mature	U	Decay in trunk. Crown poorly developed.	Fell		250	5	NA	2;2;2;2
1705	Good	Swedish whitebeam <i>Sorbus aria</i>	Mature	B2	Well developed. Localised decay at points of limb loss to east and west in lower canopy. Upper canopy well developed.	No action necessary	15-20	420	13	3n	3;7;6;6
1706	Poor	Cherry cultivar <i>Prunus</i> cv	Mature	U	A sub-dominant specimen with extensive basal decay.	Fell	<10	250	6	NA	4;4;4;3
1707	Good	Golden chain <i>Laburnum anagyroides</i>	Mature	B2	Trunk with a strong lean toward east but root plate appears stable. Upper canopy well developed though. Restricted toward north and east. No visible defects.	No action necessary	20-30	390	10	0.5e	1;8;6;1
1708	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A2	Trunk co-dominant from 2m Tight union between stems. Not significant at present. Upper canopy well developed with no visible defects.	No action necessary	40	630	19	3s	10;9;7;6
1709	Good	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	B2	Relatively well developed No visible defects. Very heavy ivy growth.	Cut ivy	10_15	880	27	2n	1;1;1;1
1710	Good	Ash <i>Fraxinus excelsior</i>	Young	U	In contact with boundary wall.	Fell	<10	210	8	NA	3;3;4;4
1711	Good	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	B2	Very heavy ivy. Well developed with no visible defects.	Cut ivy	15-20	860	24	3w	1;1;1;1



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1712	Good	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	B2	Well developed with no visible defects.	No action necessary	15-20	790	24	10e	1;1;1;1
1713	Fair	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	B2	Crown slightly sparse to north due to competition from neighbouring trees. No visible defects.	No action necessary	15-20	600	24	18e	0.5;1;1;1
1714	Good	Monterey cypress <i>Cupressus macrocarpa</i>	Mature	B2	Large section of upper crown lost in the past with localised decay. Light suppressed deadwood in crown. Soil disturbance at base to east.	Dead wood	20-30	1180	19	3.5w	8;4;8;8
1715	Fair	Monterey cypress <i>Cupressus macrocarpa</i>	Mature	B2	Crown restricted toward west due to competition with neighbouring tree. No visible defects.	No action necessary	20-30	560	25	5s	6;5;8;2
1716	Good	Ash <i>Fraxinus excelsior</i>	Early Mature	B2	Light suppressed deadwood in lower crown. Upper crown well developed. No visible defects.	Dead wood	20-30	340	17	4e	7;7;5;6
1717	Good	Small-leaved lime cultivar <i>Tilia cordata</i> CV	Early Mature	B2	Well developed with no visible defects.	No action necessary	40	550	16	2.5e	5;5;5;5
1718	Good	Ash <i>Fraxinus excelsior</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	420	18	2.5e	6;5;6;6
1719	Good	Horse chestnut <i>Aesculus hippocastanum</i>	Mature	A2	Well developed. Surface roots raising tarmac to south. Upper canopy well developed. No visible defects.	No action necessary	30-40	660	19.5	2.5e	5;10;8;6
1720	Good	Maple cv	Mature	A2	Basal suckers present. Upper canopy well developed. No visible defects.	Remove basal suckers.	40	520	17	2s	8;8;8;6
1722	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Multi-stemmed from base with wide unions between stems. Canopy restricted toward east due to competition from neighbouring tree.	No action necessary	30-40	600	17	0	5;1;5;5
1723	Fair	Hawthorn <i>Crataegus monogyna</i>	Early Mature	B2	Over-shadowed by neighbouring tree but well developed. No visible defects.	No action necessary	30-40	250	8	0	3;3;3;3

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Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1724	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Relatively well developed though crown restricted toward east due to competition from neighbouring trees. Cavity and extensive decay in base of trunk to south. Surrounding wood sound.	No action necessary	40	750	16.5	0	5;2;7;4
1725	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	C2	Extensive decay in trunk to east extending from 0.5-2.5m. Sheltered by neighbouring tree but likely to reduce long-term potential.	Monitor	10_15	390	17	4.5e	5;5;5;2
1726	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Well developed. Crown restricted towards south due to competition from neighbouring trees. No visible defects.	No action necessary	40	440	17	2.2n	6;7;3;6
1727	Good	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature	A2	A large well developed specimen. Very heavy ivy up trunk. Trunk three-stemmed from 4m with area obscured by ivy. Upper canopy well developed. No visible defects.	Cut ivy and re-assess	40	1020	23	5n	7;7;6;7
1728	Good	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature	B2	A very large specimen with Very heavy ivy. A basal cavity with decay present to north. Surrounding wood sound. Upper canopy well developed. No visible defects.	Cut ivy and re-assess	30-40	970	26	7s	5;9;9;9
1729	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	U	A sub-dominant specimen. Extensive decay in trunk. Surrounding wood sound.	Fell	<10	350	11	NA	2;3;0;1
1730	Good	Ash <i>Fraxinus excelsior</i>	Mature	B	Located within an open area near the south east corner of the site. Trunk co-dominant at 5.5m with sound union present. Canopy light suppressed west due to neighbouring competition. Minor bark damage at 0.5m north with no associated decay.	No action necessary	20-30	680	18	NA	5;6;5;4
1731	Good	Holly <i>Ilex x altadacensis</i> 'Golden King'	Mature	B2	Forming an element of undercanopy. Trunk co-dominant from base. No visible defects.	No action necessary	20-30	220	12	0	3;3;4;4
1732	Fair	Holly <i>Ilex</i>	Early Mature	C	Located within an open area near the south east corner of the site. Co-dominant from base. Forms an element of understory.	No action necessary	10-20	190	7	NA	2;1;1;3

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1733	Fair	London plane <i>Platanus x hispanica</i>	Mature	B	Located within an open area near the south east corner of the site. Heavy ivy growth extended into upper canopy. No visible defects at base obscures assessment of upper trunk. Deadwood in lower canopy east. Light suppression north due to neighbouring competition. No visible defects at base.	Suitable for retaining in current tree group only	20-30	700	19	NA	1;7;7;6.5
1734	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B	Located within an open area near the south east corner of the site. Canopy has been reduced significantly east to facilitate a neighbouring construction development. However remaining canopy cover is sufficient to promote recovery. No visible defects.	Retain maximum canopy cover	30-40	740	19	NA	6;5;5;8
1735	Fair	Willow <i>Salix alba</i>	Early Mature	C	Located within an open area near the south east corner of the site. A slight specimen with canopy growth extended north due to light suppression south. Light deadwood in lower canopy.	Deadwood	10-20	330	9	NA	7;5;0;3
1736	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Cavity in trunk at 2.15m at point of branch removal in the past. Upper canopy well developed. No visible defects.	No action necessary	30-40	910	22	4s	8;8;6;10
1737	Good	Elm <i>Ulmus glabra</i>	Mature	C	Located within an open area near the south east corner of the site. A very large specimen. Three stems from 0.25m. Growth extended south due to light suppression north. Decay present in western stem from 0.25m to 1.25m.	Consider for removal with view to extending life of neighbouring copper beech	<10	760	21	NA	2;4;4;8.5
1738	Good	Copper beech <i>Fagus sylvatica</i> <i>Atropinicea</i>	Mature	B	Located within an open area near the south east corner of the site. Decay in trunk east at 0.5m for 0.5m high. Area has been largely compartmentalised. Light deadwood in lower canopy.	Monitor area of decay	20-30	700	17	NA	4;6;6.5;5



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1739	Fair	Holly <i>Ilex</i>	Mature	B	Located within an open area near the south east corner of the site. Multi stemmed at 2m with heavy ivy growth extended throughout the canopy. No visible defects.	Cut ivy	30-40	530	8	NA	2;1;2.5;2
1740	Good	Ash <i>Fraxinus excelsior</i>	Mature	B	Located within a 5m wide verge 3.5m from internal roadway. A dominant specimen with a well formed crown. Multi stemmed from 7m sound unions visible. Minor deadwood in lower canopy due to light suppression.	No action necessary	40	980	20	NA	6;5;5;5.5
1741	Good	Holly <i>Ilex</i>	Mature	B	Located within a 3m wide verge 1.5m from internal roadway. Minor deadwood in lower canopy due to light suppression. Crown somewhat drawn up due to local competition. Minor co-dominant stem west that has a tight V shaped attachment.	Monitor stem west and consider for removal	30+	430	7	NA	1;2.5;1;3
1742	Good	Common lime <i>Tilia x europaea</i>	early mature	B	Located within a 3m wide verge 1.5m from internal roadway. Relatively well developed though heavy ivy growth obscures assessment of branch attachments in upper canopy. No visible defects at base. Dominant within neighbouring tree group.	Cut ivy	30-40	460	13	NA	4;3;2;3
1743	Good	Hawthorn <i>Crataegus monogyna</i>	Early Mature	B	Located within a 3m wide verge 1.5m from internal roadway. Growth of canopy extended west due to neighbouring competition. Canopy extended into overhead lighting services. No visible defects.	Cut back near overhead lighting services.	30-40	310	6	NA	2;3;0.5;3
1744	Good	Whitebeam <i>Sorbus intermedia</i>	Early Mature	B	Located within a 2m wide verge .5m from internal roadway. Crown somewhat drawn up due to local competition. Trunk multi stemmed and crowded as a result.	No action necessary	30-40	360	7.5	NA	2;3;2;3.5

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1745	Good	Whitebeam <i>Sorbus intermedia</i>	Mature	B	Located within a 2m wide verge .5m from internal roadway. Crown somewhat drawn up due to local competition. Trunk multi stemmed and crowded as a result.	No action necessary	25-35	440	8.5	NA	2.5;3;2;3.5
1746	Good	Norway maple <i>Acer platanoides</i> 'Crimson King'	Early Mature	B	Located within a 2m wide verge 1.5m from internal roadway. Crown somewhat drawn up due to local competition. Trunk co-dominant at 2.5m with a sound union. Bark damage at 1m north which is not significant at present.	No action necessary	30-40	480	12	NA	2;3;2;3
1747	Good	Cherry cv	Mature	B	Located within a 2m wide verge 1.5m from internal roadway. Crown somewhat drawn up due to local competition. Trunk co-dominant at 3m. Small diameter pruning cuts in lower canopy with no associated decay visible. No visible defects at base.	No action necessary	30-40	390	12.5	NA	3;4;2;4.5
1748	Good	Norway maple <i>crimson king</i>	Early Mature	B	Located within a 2m wide verge 1.5m from internal roadway. Crown somewhat drawn up due to local competition. Trunk co-dominant at 4m. Heavy ivy growth to 4.5m that obscures assessment of stem unions. No visible defects at base.	Cut ivy	20-30	460	12	NA	3;2;1;2
1749	Good	Sycamore <i>Acer pseudoplatanus</i>	Early Mature	B	Located within a 2m wide verge 1.5m from internal roadway. Crown somewhat drawn up due to local competition. Heavy ivy growth to 5m that obscures assessment of stem unions. No visible defects at base.	Cut ivy	20-30	480	11.5	NA	3;3;2;5;3
1750	Good	Ash <i>Fraxinus excelsior</i>	Early Mature	B	Located within a 2m wide verge 1.5m from internal roadway. Tall and drawn up due to local competition. Exhibits an 18 degree lean east from 4.25m with canopy extended east over neighbouring residential gardens. However this corrects towards upper canopy. No visible defects at base.	No action necessary	20-30	280	13	NA	2;5;2;1

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1751	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B	Located within a 2m wide verge 1.5m from internal roadway. Three stems from 4m with sound unions. Limited crown due to topping activity.	No action necessary	20-30	700	12	NA	2;3;3;5;2
1752	Fair	Norway maple <i>Acer platanoides</i> 'Crimson King'	Mature	C	Located within a 2m wide verge 1.5m from internal roadway. Three stems from 0.5m with sound unions. Limited crown due to topping activity.	No action necessary	10-20	640	7	NA	3;2;5;3;3
1753	Good	Austrian pine <i>Pinus nigra</i>	Mature	A	Located within a 6m wide verge 2m from internal roadway. Single stemmed with no visible defects. Heavy ivy growth extended to 6m.	Cut ivy	40	700	19	NA	5;3;4;5
1754	Good	Sycamore <i>Acer pseudoplatanus</i> 'Variegatum'	Mature	U	Located within a 6m wide verge 4m from internal roadway. Extensive decay at base to 2.5m north. Some compartmentalisation is present, it has not sealed however.	Fell	<10	500	10	NA	
1755	Dead	Elm <i>Ulmus glabra</i>	Early Mature	U		Fell	0			NA	
1757	Very Poor	Cherry cultivar <i>Prunus cv</i>	Mature	U	In decline	Fell	<10	320	3.5	NA	3;3;3;3
1758	Good	Golden chain <i>Laburnum anagyroides</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	20-30	220	5	0.3	3;3;3;3
1759	Good	Sawara cypress <i>Chamaecyparis pisifera</i> 'Boulevard'	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	200	4	0	1;1;1;1
1760	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Relatively well developed No visible defects.	No action necessary	30-40	430	12	4e	5;5;4;4



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1761	Good	Sessile Oak <i>Quercus petraea</i>	Early Mature	B2	Crown slightly restricted to north due to competition from neighbouring trees. No visible defects.	No action necessary	40	400	11	2s	2;5;5;5
1762	Good	Holm oak <i>Quercus ilex</i>	Early Mature	B2	A multi-stemmed specimen forming an element of under canopy. No visible defects.	No action necessary	30-40	320	10	0	5;5;4;5
1763	Fair	Golden chain <i>Laburnum anagyroides</i>	Mature	C2	A sub-dominant specimen becoming swamped by neighbouring trees.	Remove competition from neighbouring trees.	10	280	8	0	3;3;4;3
1764	Good	Holm oak <i>Quercus ilex</i>	Mature	B2	Crown very limited toward north due to loss of major limb. Remaining canopy relatively well developed .	No action necessary	30-40	620	11	2w	1;8;7;7
1765	Fair	Monterey cypress <i>Cupressus macrocarpa</i>	Mature	B2	Line of 6 trees at 1m spacings. Light suppressed deadwood scattered throughout canopies.	Dead wood	20-30	460	15	4n	3;1;3;1
1766	Good	Purple leaf cherry <i>Prunus x cistena</i>	Mature	B2	Relatively well developed . No visible defects.	No action necessary	15-20	320	9	2.25e	5;5;4;5
1767	Good	Holly <i>Ilex aquifolium</i>	Mature	B2	Heavy accumulation of debris in lower canopy. No visible defects.	Dead wood	20-30	460	10	2e	3;4;2;2
1768	Good	Deodar cedar <i>Cedrus deodara</i>	Mature	A1	Large well developed specimen. No visible defects.	Dead wood	40	800	15	3s	7;8;6;6
1770	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A1	A large well developed specimen. Very heavy ivy obscuring view for assessment. No visible defects. Crown slightly restricted to south and west due to competition from neighbouring trees.	Cut ivy and re-assess	40	820	21		10;10;7;5
1771	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	A2	Trunk multi stemmed from 2.5m with tight union between stems. Unlikely to be significant at present. High landscape value.	No action necessary	40	800	23	2.5e	10;10;9;12

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1772	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed. No visible defects. Very heavy ivy growth.	No action necessary	10_15	150	5	4n	2;2;2;2
1773	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed. No visible defects. Very heavy ivy growth.	No action necessary	20-30	220	5	4n	3;3;3;3
1774	Good	Birch <i>Betula pendula</i>	Young	B2	Well developed with no visible defects.	No action necessary	20-30	180	5	3n	3;2;4;3
1775	Good	Birch <i>Betula pendula</i>	Young	B2	Well developed with no visible defects.	No action necessary	20-30	150	5	4n	2;2;2;2
1776	Good	Birch <i>Betula pendula</i>	Young	B2	Well developed with no visible defects.	No action necessary	20-30	150	4.5	3n	2;2;1;2
1777	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	Remove stake	20-30	160	4.5	4n	2;2;2;2
1783	Fair	Cherry cultivar <i>Prunus</i> cv	Young	C2	A self seeded multi stemmed specimen with multiple basal suckers.	No action necessary	15-20	190	7	0	4;2;2;3
1784	Good	Cherry cultivar <i>Prunus</i> cv	Early Mature	B2	Well developed No visible defects.	No action necessary	30-40	170	6	0	3;3;2;3
1785	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Well developed multi stemmed tree with no visible defects.	No action necessary	40	920	15.5	3.5e	7;8;6;7
1786	Good	Walnut <i>Juglans regia</i>	Mature	A1	Trunk with typical basal lean. Vertical from 3m. Localised decay at pruning points in lower canopy.	No action necessary	40	560	15.5	3e	9;8;5;5

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1787	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A2	Multiple occluded pruning cuts in lower canopy. A large pruning cut with localised decay at 5m to east. Unlikely to be significant at present. Upper canopy well developed with no visible defects.	No action necessary	40	1000	18	6n	7;10;12;12
1788	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A2	One of three. Well developed with no visible defects.	No action necessary	40	420	16.5	4w	5;5;2;4
1789	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A2	One of three. Well developed with no visible defects.	No action necessary	40	400	16	4n	4;3;3;5
1790	Good	Copper beech <i>Fagus sylvatica</i>	Mature	A2	One of three. Well developed Localised areas of decay at pruning points. Unlikely to be significant at present.	No action necessary	40	540	16	5w	7;6;5;4
1792	Good	London plane <i>Platanus × hispanica</i>	Mature	B2	A very large wide spreading lawn specimen. Crown formed from three large scaffold stems from 6m. Very heavy ivy. Pockets of decay in trunk but not significant at present. Leaf die-back indicative of anthracnose disease. Leaf size generally small and crown sparse overall.	Monitor	20-30	1560	26.5	7e	7;13;12;7
1801	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	260	4	2.25s	4;4;4;4
1802	Good	Birch <i>Betula pendula</i>	Mature	B2	Well developed with no visible defects.	No action necessary	30-40	320	13.5	3n	4;4;4;4
1803	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	A2	Well developed specimen. Crown slightly restricted toward west due to competition from neighbouring trees. No visible defects.	No action necessary	40	540	18.5	4s	7;6;6;3
1804	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	Relatively well developed though crown development very restricted toward east due to competition from neighbouring tree. Localised pockets of decay present at pruning points in crown.	Dead wood	15-20	640	19.5	4w	5;1;5;5



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1805	Good	Birch <i>Betula pendula</i>	Mature	B2	Well developed with no visible defects. Trunk co-dominant from 0.75m with wide union between stems.	No action necessary	30-40	450	13.5		
1807	Good	Holm oak <i>Quercus ilex</i>	Mature	A1	A large specimen with short trunk forming a multi-stemmed specimen from 1.75m. Old occluded wounds and light suppressed deadwood in crown.	Dead wood	40	1050	20.5	3w	7;11;10;6
1808	Good	Holly <i>Ilex aquifolium</i>	Mature	B2	Well developed. No visible defects. Basal suckers present.	Remove basal suckers	30-40	350	9	0	4;4;4;4
1809	Good	Lawson cypress <i>Chamaecyparis lawsoniana</i>	Young	B2	Well developed with no visible defects.	No action necessary	40	210	7	0	2;2;2;2
1810	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Cavity with decay at base to south. Unlikely to be significant at present. Trunk co-dominant from 4m with a wide union between stems. Upper canopy well developed No visible defects.	No action necessary	30-40	680	19	4s	12;8;6;6
1811	Very Poor	Cherry cultivar <i>Prunus cv</i>	Mature	U	In a state of advanced decline.	Fell	<10	280	4	NA	4;2;3;3
1811	Good	Gray alder <i>Alnus incana</i>	Early Mature	B2	Basal suckers present. Minor areas of bark damage present. Crown well developed. No visible defects.	Remove basal suckers	40	190	9	2.15w	3;2;3;3
1812	Good	Gray alder <i>Alnus incana</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	40	210	9	2.15w	2;2;2;2
1813	Good	Gray alder <i>Alnus incana</i>	Early Mature	B2	Basal suckers present. Well developed. No visible defects.	No action necessary	40	200	7.5	2.5s	2;2;2;2
1821	Good	Manna ash <i>Fraxinus ornus</i>	Young	B2	Well developed with no visible defects.	No action necessary	40	160	8	2n	3;3;2;2

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1825	Good	Alder <i>Alnus glutinosa</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	240	10	2.15s	4;4;4;4
1833	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	A multi-stemmed self-seeded specimen enmeshed in railing and undermining wall.	Choose tree or wall	40	750	16	0	5;6;6;6
1834	Good	Horse chestnut <i>Aesculus hippocastanum</i>	Mature	A2	A large well developed specimen. 0.3m from boundary wall. Extensive growth on trunk obscuring view for assessment. Leaf miner infestation present. Canopy appears well developed with no visible defects.	Remove stem suckers to facilitate further inspection.	40	1050	20	4n	6;6;6;7
1835	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Well developed. No visible defects.	Remove basal suckers	40	460	20	5n	5;4;4;6
1836	Fair	Cherry cultivar <i>Prunus</i> cv	Mature	C2	Trunk three-stemmed from 1m. Crown a little sparse which may be indicative of decline.	No action necessary	10_15	360	8	2.5n	5;4;4;5
1837	Fair	Cherry cultivar <i>Prunus</i> cv	Mature	B2	Decay in stem to east at 1.5m. Remaining tree relatively well developed.	Remove decayed stem.	20-30	350	8	1.5w	5;5;5;5
1838	Good	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature	B2	Well developed. Occluded pruning points and cuts with small areas of localised decay. Upper canopy well developed.	No action necessary	40	660	22	9n	7;7;6;6
1839	Fair	Ash <i>Fraxinus excelsior</i>	Mature	C2	Die-back in crown could be indicative of ash dieback. Canopy relatively well structured.	Monitor for ash dieback	10_15	720	24	4s	5;6;6;5
1840	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Crown restricted toward south and east. Trunk lean toward north. Unlikely to be significant at present.	No action necessary	30-40	670	23	6n	7;2;2;6
1841	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	A tall slender well developed specimen. No visible defects.	No action necessary	30-40	440	22	13n	4;4;3;5

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1842	Good	Norway maple <i>Acer platanoides</i> 'crimson king'	Mature	B2	A sub-dominant specimen. Ocluded pruning cuts and pockets of localised decay in trunk. Crown restricted toward north and south due to competition from neighbouring trees.	No action necessary	20-30	300	10	5e	2;4;2;5
1843	Good	Ash <i>Fraxinus excelsior</i>	Mature	B2	Major pruning cut to trunk at 5m to north. Crown restricted toward south due to competition from neighbouring trees.	No action necessary	20-30	510	26	5s	5;4;2;5
1844	Good	Sycamore <i>Acer pseudoplatanus</i>	Mature	B2	Relatively well developed though crown restricted toward south due to competition from neighbouring trees. Very heavy ivy present.	Cut ivy and re-assess	30-40	520	21.5	5e	5;5;2;4
1845	Good	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	670	22	4s	5;5;5;5
1846	Good	Holly <i>Ilex x altadensis</i> 'Golden King'	Mature	B2	A short specimen which appears to have been heavily pruned in the past. Trunk three-stemmed from 1m with tight unions between stems. Deadwood in canopy to south.	Dead wood	15-20	490	8.5	5e	3;3;3;3
1847	Fair	Birch <i>Betula pendula</i>	Early Mature	B2	Crown restricted toward west due to competition from neighbouring trees. Remaining crown relatively well developed.	No action necessary	15-20	250	11	4n	2;2;2;1
1848	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	250	10	3s	2;1;2;2
1849	Fair	Birch <i>Betula pendula</i>	Young	B2	Slightly sub dominant to neighbouring trees. Crown mainly oriented toward east as a result.	No action necessary	20-30	140	6	3e	1;3;1;1
1850	Good	Birch <i>Betula pendula</i>	Early Mature	B2	Well developed with no visible defects.	No action necessary	30-40	200	14	3s	2;4;2;2



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Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1851	Good	Rowan <i>Sorbus aucuparia</i>	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	180	4.5	2n	2;2;2;2
1852	Good	Apple cv <i>Malus cv</i>	Mature	C2	Relatively well developed but cankerous growth and basal suckers reducing overall vigour.	Remove basal suckers	10	180	5	0	2;3;3;3
1853	Poor	Apple cv <i>Malus cv</i>	Early Mature	C2	Heavy cankerous growth throughout canopy. Likely to reduce long-term potential.	No action necessary	10	150	4	0	1;1;2;3
1854	Good	Apple cv <i>Malus cv</i>	Early Mature	B2	Mower impact damage at base of trunk. Basal suckers reducing overall vigour.	Remove basal suckers	20-30	150	4	0	2;2;2;2
1855	Good	Silver birch <i>Betula pendula</i>	Mature	B2	Trunk codominant at 0.5m with wide union present. Minor bark damage on exposed roots north which is not significant at present. Growth suppressed west due to neighbouring competition.	No action necessary	20-30	320	15	4e	2;3;4;1
1856	Fair	Silver birch <i>Betula pendula</i>	Early mature	C2	Subdominant within neighbouring tree group. Growth suppressed south west as a result. Bark damage at base with associated localised decay present.	Monitor decay	10_15	120	6	4n	1;2;1;0
1857	Good	Silver birch <i>Betula pendula</i>	Mature	B2	Well developed with minor bark damage at base from likely mower activity which is not significant at present.	No action necessary	20-30	370	15	2.75n	4;2;1.5;1
1858	Good	Silver birch <i>Betula pendula</i>	Mature	A2	Well developed with no visible defects.	No action necessary	20-30	430	16	3n	5.5;1;1;4
1859	Good	Silver birch <i>Betula pendula</i>	Mature	B2	Relatively well developed with canopy growth extended west due to neighbouring competition.	No action necessary	20-30	260	14	5w	2;1;1;4.5
1860	Good	Silver birch <i>Betula pendula</i>	Mature	B2	Subdominant within neighbouring tree group with a kink developed at 2m as a result. Relatively well developed with no defects visible.	No action necessary	15-25	290	12	8e	3;3;0;0
1861	Good	Silver birch <i>Betula pendula</i>	Mature	B2	Well developed with no visible defects.	No action necessary	20-30	330	14	3s	1;2;3;2

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1862	Fair	Rowan <i>Sorbus aucuparia</i>	Early mature	B2	Well developed with no visible defects.	No action necessary	20-30	140	7	3e	2;2;1;1
1863	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Early mature	B2	Well developed with no visible defects.	No action necessary	30-40	160	8	3e	2;2;1.5;1
1864	Fair	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Minor damage to exposed roots west due to mower activity. Canopy suppressed north and south due to neighbouring competition.	No action necessary	10_15	130	5	3e	1;3;1;1
1865	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	B2	Well developed with no visible defects.	No action necessary	20-30	160	5.5	2.5n	1;1.5;1;1
1866	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Early mature	B2	Minor pruning cuts at 2m west with no associated decay. Well formed canopy.	No action necessary	30-40	210	6.5	2.5e	2;2;2.5;1
1867	Fair	Rowan <i>Sorbus aucuparia</i>	Young	C2	Young with no visible defects	No action necessary	10_15	70	2.5	2e	0.5;0.5;0.5;0.5
1868	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	B2	15mm diameter pruning cuts east at 1.75m with no associated decay. No visible defects.	No action necessary	20-30	130	3.5	2.5	1;2;1;0.5
1869	Fair	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Subdominant within neighbouring tree group, canopy suppressed south as a result. Deadwood in lower canopy.	Deadwood	10_15	130	4.5	2.5e	1;2.5;1;0.5
1870	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Early mature	B2	Well developed with no visible defects.	No action necessary	20-30	170	5.5	2.5e	3;2;2;2
1871	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Bark damage west at base due to likely mower activity which is likely to reduce long term potential.	Monitor base	10_15	110	3.5	2.75e	1;1;1;0.5
1872	Fair	Rowan <i>Sorbus aucuparia</i>	Young	C2	Young with no visible defects	No action necessary	10_15	80	4	2.5e	1;1;1;0.5

## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1873	Good	Rowan <i>Sorbus aucuparia</i>	Young	C2	Mower damage to bark at base west which is not significant at present. Small diameter pruning cuts west at 1.75m with minor localised decay that is not significant at present.	No action necessary	10_15	100	4	2.5e	1;1;1;0.5
1874	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Well developed with no visible defects.	No action necessary	10_15	100	4	2.5e	1;1;1;1
1875	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Subdominant and drawn up as a result. No visible defects.	No action necessary	10_15	110	4	2.5e	1;1;1;1
1876	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Early mature	B2	Well developed with minor bark damage at base with associated localised decay which is not significant at present.	Monitor base	20-30	190	7	2.5e	2;3;2;2
1877	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Well developed with no visible defects.	No action necessary	10_15	110	5	2.5e	1;1.5;1;1.5
1878	Good	Rowan <i>Sorbus aucuparia</i>	Young	C2	Young with damage to exposed roots south	Monitor root damage	10_15	100	4	2.5n	1;1;1;1
1879	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Mature	B2	Well developed with no visible defects	No action necessary	30-40	190	6.5	2.5n	2;1;1;2
1880	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Early mature	B2	Well developed with no visible defects	No action necessary	20-30	180	5	2n	2;2;2;2
1881	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Young with damage to exposed roots west	Monitor root damage	10_15	90	2.75	1.5e	1;1;1;0.5
1882	Good	Rowan <i>Sorbus aucuparia</i>	Early mature	B2	Small specimen with no visible defects	No action necessary	15-20	130	3	2n	2;1;1;1.5
1883	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Mature	B2	Well developed with small diameter pruning cuts south with no associated decay.	No action necessary	20-30	220	5	2n	3;2;2;2



## APPENDIX I: INDIVIDUAL TREE SCHEDULE

Tag Number	Vigour	Species	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (metre)	Crown spread NESW (metre)
1884	Fair	Rowan <i>Sorbus aucuparia</i>	Early mature	C2	Bark damage at base south with localised decay that is not significant at present.	Monitor base	10_15	130	4	2.5n	2;1;1;1
1885	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Mature	B2	Minor cavity at base north which is sealing with reactionary growth. Well developed with no other defects.	No action necessary	30-40	240	6	2n	3;2;2.5;2
1886	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Mature	B2	Relatively well developed with small diameter pruning cuts at 2m east.	No action necessary	30-40	240	7.5	3s	3;1;3;2
1887	Good	Swedish Whitebeam <i>Sorbus intermedia</i>	Early mature	B2	Well developed specimen with canopy reduced south. Root flare obscured with soil and mulch build-up.	Expose root flare	30-40	190	6	2.25n	2;3;5;2;1
1888	Fair	Rowan <i>Sorbus aucuparia</i>	Mature	C2	Drawn up due to local competition. Multi stemmed from base.	Remove ivy and reasses	10_15	180	7	2.5n	2;1;1;1
1889	Good	Lawson cypress <i>Chamaecyparis lawsoniana</i>	Early mature	B2	Well developed with no visible defects	No action necessary	40	200	7.5	N/A	2;2;2;2
1890	Good	Lawson cypress <i>Chamaecyparis lawsoniana</i>	Early mature	B2	Well developed with no visible defects	No action necessary	40	190	7.5	N/A	2;2;2;2
1891	Good	Himalayan birch <i>Betula utilis</i> <i>Jaquemontii</i>	Mature	B2	Damage to exposed roots south due to likely mower activity which is not significant at present. Canopy north resting on property 3m north	Raise canopy north	30-40	260	7	2.25e	3.5;3;2.5;2.5
1892	Good	Himalayan birch <i>Betula utilis</i> <i>Jaquemontii</i>	Mature	A2	Well developed specimen with canopy resting on roof of property 3m north.	Raise canopy north	40	280	8	2.5e	3.5;4.5;2.75;3
1893	Good	Norway maple <i>Acer platanoides</i> 'Crimson King'	Early mature	B2	Minor bark damage on exposed roots south and west due to mower activity with is not significant at present. 15mm diameter pruning cut to trunk at 1.75m east which display compartmentalised recovery.	Monitor pruning cuts for decay	30-40	310	10.5	3s	2.5;3;4;3
1894	Good	Small-leaved lime <i>Tilia cordata</i>	Early mature	B2	Minor bark damage on exposed roots south due to mower activity with is not significant at present. Trunk codominant at 1.75m with a poor close union present.	Monitor stem union	30-40	290	10	2.5s	3;3;2.5;3

\*Refer to drawing TSTV001 101-103 for locations of trees within report.

## Appendix II Arboricultural Method Statement

This section gives general guidance on methods of work to minimise damage to trees. The local authority (or for privately owned trees, the owner or their agent), should be consulted at an early stage prior to the commencement of any works. This will reduce the potential for future conflict between trees and works.

### II.I Below Ground

Wherever trees are present, precautions should be taken to minimise damage to their root systems. As the shape of the root system is unpredictable, there should be control and supervision of any works, particularly if this involves excavating through the surface 600mm, where the majority of roots develop.

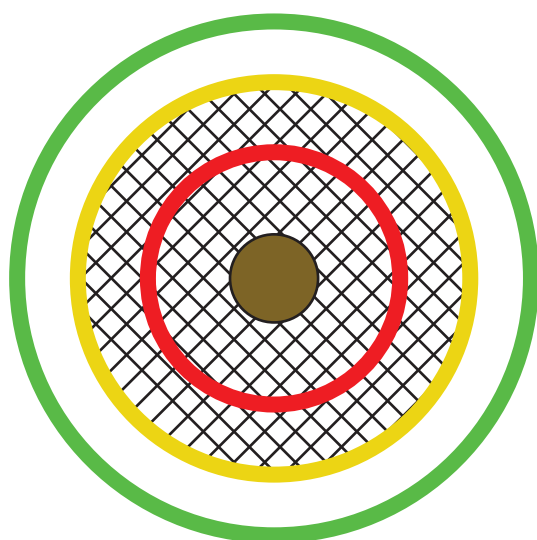
#### II.I.I Fine Roots

Fine roots are vulnerable to desiccation once they are exposed to the air. Larger roots have a bark layer which provides some protection against desiccation and temperature change. The greatest risk to these roots occurs when there are rapid fluctuations in air temperature around them e.g. frost and extremes of heat. It is therefore important to protect exposed roots where a trench is to be left open overnight where there is a risk of frost. In winter, before leaving the site at the end of the day, the exposed roots should be wrapped with dry sacking. This sacking must be removed before the trench is backfilled.

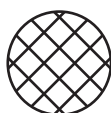
#### II.I.II Precautions

The precautions referred to in this section are applicable to any excavations or other works occurring within the Prohibited or Precautionary Zones as illustrated in Figure 1 – ‘Tree Protection Zone’.

FIGURE 1 – Tree Protection Zone

**Key**

Trunk of tree



Canopy or branch spread



**PROHIBITED ZONE** – 1m from trunk. Excavations of any kind must be avoided within this zone. Materials, plant and spoil must not be stored within this zone.



**PRECAUTIONARY ZONE** – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone.



**PERMITTED ZONE** – outside of the precautionary zone. Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

**II.I.III Realignment**

Whenever possible works should always be diverted or re-aligned outside the Prohibited or Precautionary Zones. Under no circumstances can machinery be used to excavate open trenches within the Prohibited Zone.

The appropriate method of working within the Precautionary Zone should be determined in consultation with the local authority (or for privately owned trees the owner or their agent) and may depend on the following circumstances;

- 1.1.3.1 the scope of the works (e.g. one-off repair or part of an extensive operation)
- 1.1.3.2 degree of urgency (e.g. for restoration of supplies)
- 1.1.3.3 knowledge of location of other apparatus



## 2.1.3.4 soil conditions

## 2.1.3.5 age, condition, quality and life expectancy of the tree

Where works are required for the laying or maintenance of any apparatus within the Prohibited or Precautionary Zones there are various techniques available to minimise damage.

Acceptable techniques in order of preference are;

**a ) Trenchless**

Wherever possible trenchless techniques should be used. The launch and reception pits should be located outside the Prohibited or Precautionary Zones.

In order to avoid damage to roots by percussive boring techniques it is recommended that the depth of run should be below 600mm. Techniques involving external lubrication of the equipment with materials other than water (e.g. oil, bentonite, etc.) must not be used when working within the Prohibited Zone. Lubricating materials other than water may be used within the Precautionary Zone following consultation and by agreement.

**b) Broken Trench - Hand-dug**

This technique combines hand dug trench sections with trenchless techniques if excavation is unavoidable. Excavation should be limited to where there is clear access around and below the roots. The trench is excavated by hand with precautions taken as for continuous trenching as in (c) below. Open sections of the trench should only be long enough to allow access for linking to the next section. The length of sections will be determined by local conditions, especially soil texture and cohesiveness, as well as the practical needs for access. In all cases the open sections should be kept as short as possible and outside of the Prohibited Zone.

**c) Continuous Trench - Hand-dug**

The use of this method must be considered only as a last resort if works are to be undertaken by agreement within the Prohibited Zone. The objective being to retain as many undamaged roots as possible.

Hand digging within the Prohibited or Precautionary zones must be undertaken with great care requiring closer supervision than normal operations.

After careful removal of the hard surface material digging must proceed with hand tools. Clumps of roots less than 25mm in diameter (including fibrous roots) should be retained in situ without damage. Throughout the excavation works great care should be taken to protect the bark around the roots.

All roots greater than 25mm diameter should be preserved and worked around. These roots must not be severed without first consulting the owner of the tree or the consulting arboriculturist. If after consultation severance is unavoidable, roots must be cut back using a sharp tool to leave the smallest wound.

## II.I.IV Backfilling

I.1.4.1 Backfilling should be carefully carried out to avoid direct damage to roots and excessive compaction of the soil around them. The backfill should, where possible, include the placement of an inert granular material mixed with top soil or sharp sand (not builder's sand) around the roots. This should allow the soil to be compacted for resurfacing without damage to the roots securing a local aerated zone enabling the root to survive in the longer term.

II.1.4.2 Backfilling outside the constructed highway limits should be carried out using the excavated soil. This should not be compacted but lightly "tamped" and usually left slightly proud of the surrounding surface to allow natural settlement. Other materials should not be incorporated into the backfill.

## II.I.V Additional Precautions near Trees

II.1.5.1 Movement of heavy mechanical plant (excavators etc.) must not be undertaken within the Prohibited Zone and should be avoided within the Precautionary Zone, except on existing hard surfaces, in order to prevent unnecessary compaction of the soil. This is particularly important on soils with a high proportion of clay. Spoil or material must not be stored within the Prohibited Zone and should be avoided within the Precautionary Zone.

II.1.5.2 Where it is absolutely necessary to use mechanical plant within the Precautionary Zone care should be taken to avoid impact damage to the trunk and branches. A tree must not be used as an end-stop for paving slabs or other materials nor for security chaining of mechanical plant. If the trunk or branches of a tree are damaged in any way advice should be sought from the supervising arboriculturist.

See table 3 - 'Prevention of Damage to Trees Below Ground' below for summary details regarding causes and types of damage to trees and the implications of the damage and the necessary precautions to be taken to avoid damage.

**TABLE 3 - Prevention of Damage to Trees Below Ground**

Causes of Damage	Type of Damage	Implications to Tree	Precautions
Trenching, mechanical digging etc.	Root severance	<ul style="list-style-type: none"> <li>The tree may fall over</li> <li>Death of the root beyond the point of damage</li> <li>Potential risk of infection of the tree</li> </ul> <p>The larger the root the greater the impact on the tree.</p>	<p>Hand excavate only within the Precautionary Zone. Work carefully around roots. Do not cut roots over 25mm in diameter without referring to the consulting arborist.</p> <p>For roots less than 25mm in diameter use a sharp tool and make a clean cut leaving as small a wound as possible.</p>

Causes of Damage	Type of Damage	Implications to Tree	Precautions
Trenching, mechanical digging, top soil surface removal etc.	Root bark damage	<ul style="list-style-type: none"> <li>The tree may fall over</li> <li>If the damage circles the root it will cause the death of the root beyond that point</li> <li>Potential risk of infection of the tree</li> </ul> <p>The larger the root the greater the impact on the tree.</p>	<p>Do not use mechanical machinery to strip the top soil within the Precautionary Zone.</p> <p>Hand excavate only within the Precautionary Zone. Work carefully around roots. Do not cut roots over 25mm in diameter without referring to the consulting arborist.</p> <p>For roots less than 25mm use a sharp tool and make a clean cut leaving as small a wound as possible.</p>
Vehicle movement and plant use. Material storage within the precautionary area.	Soil compaction & water saturation	Restricts or prevents passage of gaseous diffusion through soil, the roots are asphyxiated and killed affecting the whole tree.	Prevent all vehicle movement, plant use or material storage within the Precautionary Zone. Use tree root protection mats where this is not possible (refer to 5.1.6).
Top-soil scouring, excavation or banking up.	Alterations in soil level causing compaction or exposure of roots.	Lowering levels strips out the mass of roots over a wide area. Raising soil levels asphyxiates roots and has the same effect as soil compaction.	Avoid altering or disturbing soil levels within the Precautionary Zone.
Use of herbicides.	Poisoning of the tree via root absorption	<ul style="list-style-type: none"> <li>Death of the whole tree</li> <li>Death of individual branches</li> </ul> <p>Damage to leaves and shoots.</p>	The selection and application of herbicides must be undertaken by a competent person in accordance with COSHH regulations.
Spillage of oils or other materials.	Contamination of soil	Toxic and asphyxiation effects of chemicals, oils, building materials (cement, plaster, additives etc.) on the root system can kill the tree.	Never store oils, chemicals or building materials within the Precautionary Zone or within the branch spread of a tree, whichever is the greater.
Placement or replacement of underground apparatus.	Various	Death of all or part of the tree.	Effective planning and liaison with the consulting arborist, taking into consideration the position of trees, and their future growth potential and management.



### II.1.6 Tree root protection mats

Protective matting (AKA ground mats or bog mats) such as Rola-Trac™ (image 19) should be placed over the initial work zone areas near tree root systems to mitigate any adverse effects from the presence of machinery and associated construction activity by works personnel. These also have the benefit of protecting the soil from any potential works contaminants due to works.



Image 19 Rola-Trac™ protective matting.

### II.1.7 Cellweb tree root protection system

Cellweb is a cellular confinement system that confines aggregate materials and makes them stronger, thus increasing the bearing capacity of the sub base materials. Cellweb acts as a stiff raft to distribute wheel loads and reduce their magnitude at the base of the construction, thus maintaining the soil bulk density at levels that are suitable for tree root growth.

The pore spaces between the aggregate particles are greater than 0.1mm in diameter. This open structure is far more permeable than typical soils and allows the free movement of water and oxygen so that supplies to trees are maintained.

#### ROOT PROTECTION SYSTEM

**BS 5837 : 2005 TREES IN RELATION TO CONSTRUCTION,  
Demolition and construction in proximity to existing trees**

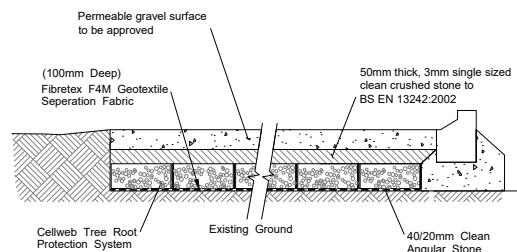


Image 20 Cellweb tree root protection system.

## II.II Above Ground

### II.II.I Damage by Pruning

Trees (including shrubs and hedges) can be damaged by inappropriate or excessive pruning. The aim of pruning should be to achieve vegetation clearances in ways which minimise the aesthetic and physical impact on retained trees and shrubs.

Reasonable care should be taken to avoid unnecessary damage to flora and fauna and to access ways.

Work should comply with BS3998. Pruning is a skilled job which should be undertaken by appropriately trained and experienced staff.

Given constraints often imposed by others it is not always possible to prune in an aesthetically pleasing way. However an effective Utility Arborist adjusts the work carried out for each plant to achieve the best possible standard, given the prevailing constraints.

- Ideally vegetation is left well balanced with natural crown shapes
- Pruning must also take into account the vegetation re-growth expected in the interval between cuts. This will vary widely between plant species and sites.

- Vegetation management: tree selection for retention and replanting at an early stage can be used to prevent the need for much more intrusive and damaging work in the future when the vegetation grows closer to the overhead line. Good practice often involves interventions over a number of cutting cycles to manage trees and shrubs so that future conflict with local infrastructure is minimised.

Where reasonably possible avoid recognised injurious practices such as:

- o Topping or lopping to an arbitrary height or branch length
- o Unbalancing a tree crown by excessive one-sided pruning
- o Pollarding. Unless pollarding is the existing recognised management technique.
- o Inappropriate use of flailing.
- o Climbing damage - Care should be taken to avoid injuring thin and weak barked species by inappropriate use of rope access techniques.
- o Access damage - Vehicle access and treatment of arisings should avoid injury to low branches, stems, root buttresses and feeder roots.
- o Spreading Disease - Appropriate regard should be given to avoid spreading fungal diseases.
- If the only pruning option is to severely reduce or unbalance a tree, then coppicing, or felling and replacement planting are often better options.

See table 4 - 'Prevention of Damage to Trees Above Ground' below for summary details regarding causes and types of damage to trees and the implications of the damage and the necessary precautions to be taken to avoid damage.

**TABLE 4 - Prevention of Damage to Trees Above Ground**

Causes of Damage	Type of Damage	Implications for the Tree	Precautions
Impact by vehicle or plant Physical attachment of signs or hoardings to the trunk Storage of materials at base of tree Rubbing by winch or pulling cables	Bark bruising, bark removal, damage to the wood, damage to buttress roots, abrasion to trunk	Wounding with the potential for infection ultimately resulting in death of all or part of the tree.  Structural failure of the tree	Surround the trunk with protective free-standing barrier. Exclude vehicles, plant or material storage from the Precautionary Zone. Ensure sufficient clearance of cables or ropes.
Impact by vehicle or plant Rubbing by overhead cables	Bark damage to branches, breakage and splitting of branches, abrasion to branches	Structural failure of the branch.  Wounding or loss of a branch with the potential for infection ultimately resulting in death of all or part of the branch or tree.	Exclude vehicles, plant or material storage from the Precautionary Zone. Ensure sufficient clearance of cables or ropes. All pruning should be carried out in accordance with BS3998 (prune affected branches to give appropriate clearance from cables)

Causes of Damage	Type of Damage	Implications for the Tree	Precautions
Inappropriate siting of overhead apparatus, such as CCTV, lighting fixtures and communications masts and dishes.	Inappropriate pruning, unnecessary tree removal	Severely pruning tree to acquire line of sight signal for communications dish etc.	Effective planning and liaison with arboriculturist, taking into consideration the position of trees, and their future growth potential and management.
Lack of forethought in design and location of apparatus and services entries on new developments	Complete tree removal	The tree is removed unnecessarily	Agree the location and installation of services at the design stage. Consideration should be given to the creation of dedicated service routes wherever possible.
Use of herbicides	Poisoning of the tree via absorption through bark, leaves and shoots	Death of the whole tree, death of individual branches, damage to leaves and shoots	The selection and application of herbicides must be undertaken by a competent person in accordance with COSHH regulations.

### II.II.I Chemical Damage to Trees

Chemical damage to trees adjacent to utility premises and operational land can be avoided if;

- the risk is identified when planning any work involving herbicides or other chemicals ensuring that only appropriate chemicals are used. Particular care should be exercised when considering the use of herbicides recommended for “non crop areas” as many of these also specify “do not use where there may be roots of desirable plants”,
- herbicides are applied only at the rate and in the manner recommended by the manufacturer,
- follow-up applications are not undertaken until weeds reappear on the operational land,
- alternative methods of weed control are considered.

### **APPENDIX III. Tree Protection Strategy**

This section is designed to outline the procedures which will be undertaken to effectively retain trees free from adverse construction impacts for the duration of the construction period on the site of the proposed St. Vincent's Hospital and residential blocks at Richmond Road, Fairview, Dublin 3. The section is divided into sub-sections which begin at the pre-construction planning stage and follows on to post construction re-assessment of retained trees.

#### **3.1 Key issues**

Appointment of an arborist (Site Arborist) to oversee all works relevant to trees.

Scheduling of tree and construction works.

Establishment of tree protection (refer to drawings TSTV001 Tree Protection 110-115).

Monitoring of tree protection (adherence to the Tree Protection Code of Practice).

Supervision of works in the vicinity of trees.

Post construction re-assessment of retained trees.

#### **3.2 Consulting Arborist**

A Site Arborist shall be appointed prior to the commencement of site construction works and will be responsible for the setting up and monitoring of tree protection, liaising with local authority tree/planning officers and providing feedback and advice to the design construction teams on issues relevant to trees. The Site Arborist shall be retained for the duration of construction works and should be appointed to carry out a post-construction tree survey/assessment.

#### **3.3 Scheduling of works**

##### **3.3.1 Pre-construction meetings/tree works**

- An onsite meeting will be held if required, with all relevant parties; including the Developer and or his Agents, Site Arborist and Local Planning Authority
- Remedial works to trees throughout the site where indicated as necessary within the Tree Works Schedule. All works will be undertaken to BS 3998 2010 Tree Work and/or to current best practice.
- Erection of tree protection fencing as per recommendations contained within BS 5837:2012 Trees in relation to design, demolition and construction-Recommendations. Tree protection to be erected under supervision of Site Arborist prior to main construction works being undertaken on site (refer to drawings TSTV001 Tree Protection 110-115).



### 3.3.2 Construction period

- The Site Arborist shall monitor tree protection.
- The Site Arborist shall specify any necessary remedial works to trees which may arise due to construction works.
- The Main Contractor shall carry out any instructions made by the Site Arborist with regard to the protection of retained trees and ensure where necessary that these instructions are followed by any sub-contractors.

### 3.3.3 Post construction works will consist of:

- Re-survey of retained trees and the implementation of measures contained with the survey document.

## 3.4 Preservation of Trees

### 3.4.1 Contractors obligations

The Contractor shall take all precautions to ensure that any trees which are not required to be taken down under the contract shall remain undisturbed and undamaged. All works to trees and all operations adjacent to trees should be undertaken in accordance with the Code of Practice. The Contractor must appoint a qualified arboricultural contractor to undertake all tree works subject to approval by the Consulting Arborist. The Contractor shall undertake no works to trees unless instructed by the Contract Administrator. All works on or within the Construction Exclusion Zone are to be supervised by the site arborist. Five working days notice of intention to undertake works to be given.

### 3.4.2 Setting out: Protected Tree Zone/Construction Exclusion Zone

The tree protection zone shall be set out in accordance with the Code of Practice (5) and as per drawings TSTV001 Tree Protection 110-115. A notice 'Construction Exclusion Zone' shall be placed on tree protection fencing at regular intervals along the protective fencing. This notice shall include contact details for the Site Arborist. Strictly no access should be permitted to this zone unless instructed by the Site Arborist.

The Contractor is to maintain the protective fencing in good condition to the satisfaction of the Site Arborist for the duration of the contract. Any damage to fencing is to be reported to the Site Arborist immediately. Damaged fencing is to be repaired within 2 hours of the damage occurring. All works within the vicinity of the damaged fencing are to be suspended until the fencing is repaired.

### 3.4.3 Maintenance of Protected Tree Zone

The Site Arborist should be given 5 days notice of any works within or access required to this zone. The 'Protected Tree Zone' should under no circumstances be used for storage of materials, equipment, or site debris. No fires should be lit within the "Protected Tree Zone", or equipment washed or cleaned.

### 3.5 Code of Practice for the preservation of trees

The following specification is intended for the preservation of trees.

These guidelines will help sustain vigour and minimise adverse growing conditions for trees set out for retention.

#### 3.5.1 Code of Practice notifications

The Code of Practice will be brought to the attention of all site personnel including those of the Main Contractor, Sub-Contractors and Engineering Specialists associated with the project.

All operations to be in accordance with BS 5837:2012 Trees in relation to design, demolition and construction -Recommendations.

The Contractor should purchase and make available on site a copy of the above

#### 3.5.2 The Site Arborist:

- Supervise the installation of tree protection fencing.
- Supervise all tree works and assess on-going tree protection.
- Liaise with the relevant authorities during the project.
- Constantly monitor the project with regard to tree health to ensure that no damage is caused to the subject trees during the operational works.
- Report any negligent damage to trees which will prejudice their health.
- Monitor, where necessary, all works carried out by the Arboricultural Contractor and Main Contractor within the 'Protected Tree Zone'.

#### 3.5.3 Arboricultural Contractor:

- Submit a full method statement containing machinery to be used, removal of wood etc. to the Site Arborist.
- Carry out works to the most up to date arboricultural practices available e.g. BS 3998. Recommendations for tree work (as amended).
- Undertake work only with suitably qualified operatives in constant consultation with the Site Arborist.
- Trees identified for removal will be section felled in wooded areas so as not to damage remaining trees.

#### 3.5.4 Main Contractor:

- Appoint a member of staff to be responsible for tree protection and this person shall be the point of contact between the Main Contractor and the Site Arborist.
- Undertake all work in accordance with this specification.
- Ensure that all personnel, operatives, sub-contractors etc. are aware of this specification and operate accordingly
- Notify the Site Arborist of any potential conflicts that may affect the health, vigour and viability of trees.

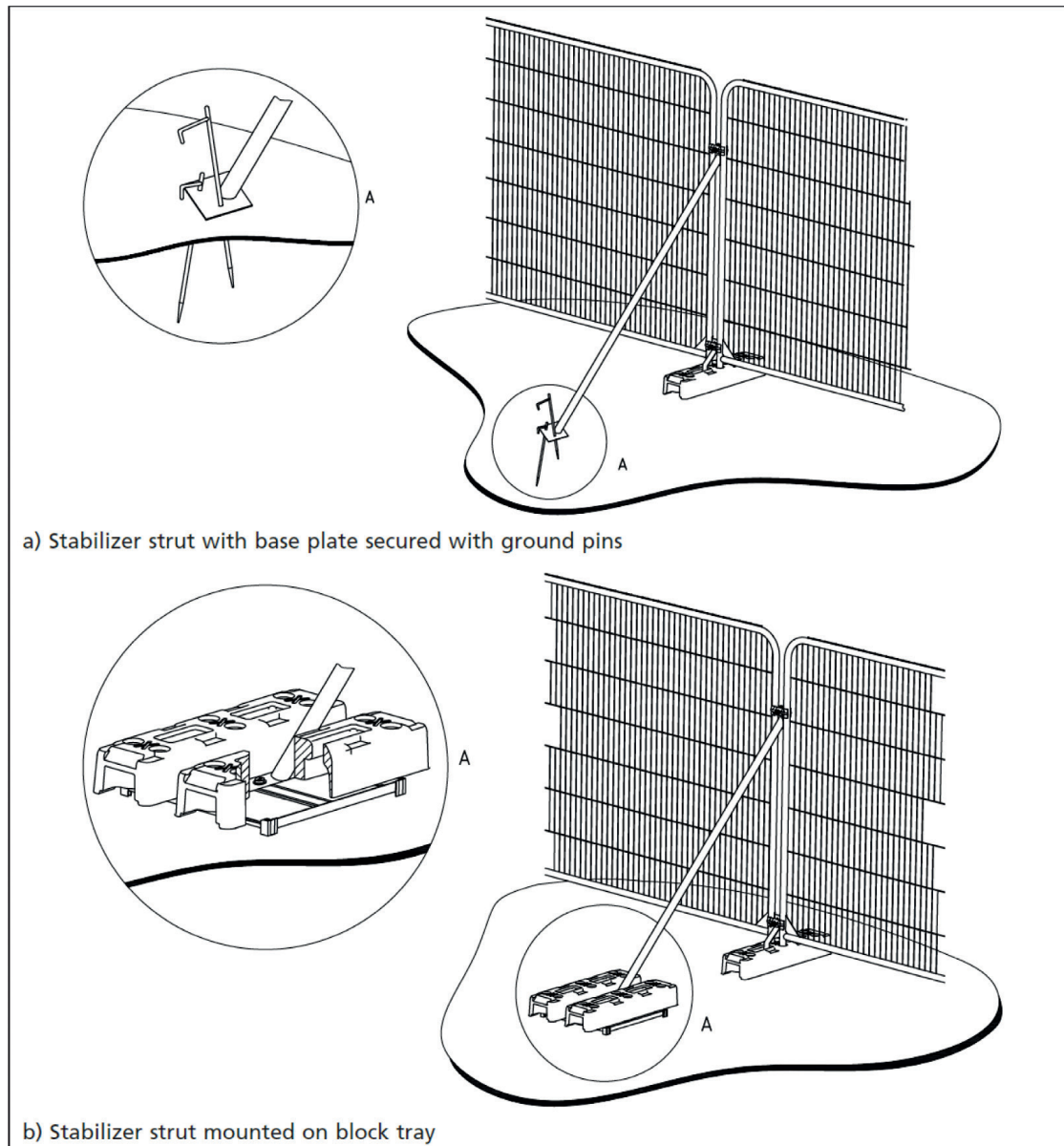
#### 3.5.5 Access:

Access to the site and service roads shall be agreed with the Site Arborist prior to commencement of works. Where it is deemed necessary for heavy machinery access the contractor shall refer to the guidelines within BS 5837 2012 and liaise with the Site Arborist to instigate the most appropriate root protection system.

### 3.6 Post Construction

A post construction report on the condition of trees should be undertaken and all recommendations made within this report should be carried out to BS3998 Tree Works.

#### Examples of above-ground stabilizing systems



**Image 9** Tree Protection Detail (Herras type fencing or similar approved).

## Appendix IV. Terminology

### Tree categories

<b>A</b>	Trees of high quality and value due to their size, age, condition, historical/visual merit and/or conservation potential (a minimum of 40 years).
<b>A1</b>	Mainly arboricultural values. Particularly good examples of species, essential components of groups or of formal or semi-formal arboricultural features.
<b>A2</b>	Mainly landscape values. Trees, groups or woodlands which provide a definite screening or softening effects to the locality in relation to views into or out of site, or those of particular visual importance.
<b>A3</b>	Mainly cultural values, including conservation. Trees, groups or woodlands of significant conservation, historical, comparative or other value (e.g. veteran trees or wood-pasture).
<b>B</b>	Trees of moderate quality and value (a minimum of 20 years).
<b>B1</b>	Mainly arboricultural values. Trees that might be included in high categories but are downgraded because of impaired condition (e.g. presence of remedial defects including unsympathetic past management and minor storm damage)
<b>B2</b>	Mainly landscape values. Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal features (e.g. trees of moderate quality within an avenue that includes better A category specimens) or trees situated internally to the site, therefore individually having little visual impact on the wider locality.
<b>B3</b>	Mainly cultural values including conservation. Trees with clearly identifiable conservation or other cultural benefits.
<b>C</b>	Trees of low quality and value (a minimum of 10 years).
<b>C1</b>	Not qualifying in higher categories
<b>C2</b>	Trees present in groups or woodlands but without conferring on them greater landscape value and/or trees offering low or only temporary screening benefit.
<b>C3</b>	Trees with very limited conservation or other cultural benefits.
<b>U</b>	Trees in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management. Trees that are dead, dying or showing immediate and irreversible decline.



## Terminology (cont.)

**Comments:** Refers to the tree's condition and suitability for the site.

**Common name:** Most widely used non botanical name.

**Co-dominant:** Two branches assuming the role of leading shoots. When growing close together may form a weak attachment (included bark) at their point of contact. Trees with this defect may be in danger of splitting at this weak attachment.

**Crown Spread:** Measured in metres north, east, south, and west.

**Decay fungi:** Refers to those species of fungi which degrade living wood and which may, depending on the degree of degradation, render the tree structurally unsound.

**Defects:** Refers to cracks, storm damage and any other damage mechanical or biological.

**Diameter:** Diameter of the trunk (millimetres) at 1.5m. M.S. after the measurement refers to the tree being multi-stemmed.

**Genus & Species:** Refers to the botanical names for the tree.

**Height:** Measured in metres.

**Monitor:** Refers to trees which need to be re-surveyed on a yearly basis to assess their condition. This timescale may be sooner where works or adverse weather conditions have impacted negatively on the trees.

**Overhaul:** A reference to standard tree surgery work which consists of the removal of deadwood, crossing branches and balancing where appropriate.

**Recommendations:** Indicates surgery work necessary for the retention or, where necessary, removal of the tree.

**RPA:** Root Protection Area. The area surrounding a tree that should not be excavated, compacted, surfaced, driven over or any other form of disturbance during any phase of the construction process.

**Tree No.:** Refers to numbered tag fixed to tree during survey.

BS 5837 (2012). Trees in Relation to Design Demolition and Construction

BS3998 (2010) Recommendations for Tree Work

Mattheck and Breloer (1994). The body language of trees

Draft Dublin City Development Plan (2022-2028)

Draft Dublin City Biodiversity Action Plan (2021-2025)

Dublin City Council (2007) Richmond Road Area Action Plan

Aidan Collins (2007) St. Vincent's Hospital, Fairview: Celebrating 150 Years of Service :  
[an Illustrated History 1857-2007]

**Project Title:** St. Vincent's Hospital Redevelopment

**Address:** St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Dublin 3

**Applicant Name:** St. Vincent's Hospital

**Detailed address:** The subject site is located at St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Dublin 3. The site contains protected structures under RPS Ref.: 2032 (St. Vincent's Hospital), 8788 (Richmond House) and 8789 (Brooklawn).

The site is bound by the Grace Park Wood residential development to the northwest, Griffith Court and the 'Fairview Community Unit' nursing home to the north, the An Post depot on Lomond Avenue and residential properties on Inverness Road to the east, existing residential and commercial properties on Richmond Road and Convent Avenue to the south and Charthouse Business Centre, Dublin Port Stadium / Stella Maris FC and Ierne Sports and Social Club to the west of the site.

**Site area:** 8.79 hectares

### Summary Description:

In summary, a ten year planning permission is being sought for a proposed development comprising of the following:

- Provision of a new 2 storey mental health facility building accommodating a total of 73 no. beds, a facilities management building, associated car parking and open space.
- Retention and repurposing of existing buildings on site including Brooklawn (RPS Ref.: 8789), Richmond House (RPS Ref.: 8788), the laundry building, Rose Cottage and other buildings for ancillary uses associated with the new mental health facility.
- Retention and change of use of the existing hospital building (part of which is a protected structure under RPS Ref.: 2032) to provide residential amenity areas, a gym, a café, co-working units, a childcare facility and a community hall (referred to as Block K).
- Demolition of westernmost range of the hospital building, which is within the curtilage of RPS Ref.: 2032, and all other existing buildings and associated structures on the site.
- Provision of 9 no. residential blocks (Blocks A, B, C, D-E, F, G, H, J and L) providing a total of 822 no. residential units, including 494 no. standard designed apartments (in Blocks A, B, C, G, H, J and L) and 328 no. Build to Rent apartments (in Blocks D-E and F). Residential amenities and facilities are proposed in Block C, D & E and K. A retail unit is proposed in Block A. Block J is proposed as an extension of the existing hospital building (protected structure RPS Ref.: 2032- referred to as Block K).
- Building heights of the proposed residential blocks range from 2 to 13 storeys.
- Access to the hospital is provided from Richmond Road and Convent Avenue, with separate internal access points. A separate access to the residential development is provided from Richmond Road. The development includes a pedestrian/cycle connection to Griffith Court and potential future connections to Lomond Avenue/ Inverness Road and Grace Park Wood.
- The proposal includes communal open space and public open space, including a central park, a linear park and an entrance plaza, with set down area, at Richmond Road. The proposal includes communal roof terraces on Block C and Blocks D-E.
- The proposal also includes internal access roads, pedestrian and cycle infrastructure, car parking (surface and basement level), cycle parking, bin storage, plant rooms, ESB substations and associated set down area, landscaping, boundary treatment, lighting, heat pumps, site services and all associated site works.

## 7.1 General description of historic trees

Historic trees are defined as being contemporary with Richmond House and St. Vincent's Hospital (until the 1890s). Table 5 provides a category breakdown of the 23 trees identified as being historic and the schedule on page 62 lists individual trees with their approximate planting date (under age class).

The highest concentration of historic trees is located between Richmond House and St. Vincent's Hospital (area 3; image 10). These trees have generally developed well due to adequate distances between tree within the open garden area.

East of this location (see area 2; image 10) are a number of historic trees which follow the original entrance road from Convent Avenue. This group contains a higher number of lower category tree due to issues such as cavities and denser available planting space.

Area 4 (image 10) contains a single tree identified as historic, the horse chestnut (#1834). The other trees along this entrance have been planted after the originals were removed.

The locations of historic trees are shown on drawing YSV001 Historic Tree Assessment 116-118.

Category	Number	% of total
A	15	65.2%
B	7	30.4%
C	1	4.3%
U	0	0%

Table 5. Historic trees category breakdown.

## 7.2 Arboricultural Impact on historic trees

Of the total 23 trees identified as being of historic origins, 7 will be impacted by the proposed development (refer to drawing YSV001 Historic Trees Impact 119-121). Refer to section 3 of this report for details overall arboricultural impacts and mitigation.

Category	Number	% of total
A	5	21.7%
B	2	8.7%
C	0	0%
U	0	0%

Table 6. Impact on historic trees category breakdown.



Image 10. Site overview with red line outline of survey boundary located at St. Vincent's Hospital, Richmond Road, Fairview Dublin 3.



ID	Species	Age class	Category	Description	DBH (mm)	Height
1676	Common Lime <i>Tilia x europaea</i>	Mature (approx 1840s)	A2	Large mature specimen. Very heavy ivy No visible defects.	780	21.5
1679	London plane <i>Platanus x hispanica</i>	Mature (approx 1890s)	A1	Large specimen that is well developed. No visible defects.	950	22.5
1681	Common Lime <i>Tilia x europaea</i>	Mature (approx 1830s)	A1	Very heavy ivy growth. Large well developed specimen with no visible defects.	880	23
1683	Common Lime <i>Tilia x europaea</i>	Mature (approx 1830s)	A1	Large well developed specimen with no visible defects. Crown slightly restricted south due to competition from neighbouring trees.	880	20.5
1684	Drummond Norway maple <i>Acer platanoides</i> 'Drummondii'	Mature (approx 1880s)	A2	Large specimen. Well developed with no visible defects.	740	20.5
1685	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature (approx 1890s)	A2	Large mature well developed specimen. Minor decay in base of trunk. Not significant at present.	700	24.5
1686	London plane <i>Platanus x hispanica</i>	Mature (approx 1880s)	A1	Large mature specimen. No visible defects.	1000	26.5
1689	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature (approx 1850s)	A2	Large specimen well developed specimen with no visible defects.	950	27
1690	Common Lime <i>Tilia x europaea</i>	Mature (approx 1840s)	A1	Large specimen well developed specimen with no visible defects. Basal suckers present.	840	22.5
1697	Sycamore <i>Acer pseudoplatanus</i>	Mature (approx 1840s)	A2	Cavity at base to north but Unlikely to be significant at present. Very heavy ivy. Minor deadwood in lower crown. Canopy well developed. No visible defects.	1020	24
1724	Sycamore <i>Acer pseudoplatanus</i>	Mature (approx. 1880s)	B2	Relatively well developed though crown restricted toward east due to competition from neighbouring trees. Cavity and extensive decay in base of trunk to south. Surrounding wood sound.	750	16.5
1727	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature (approx 1830s)	A2	A large well developed specimen. Very heavy ivy up trunk. Trunk three-stemmed from 4m with area obscured by ivy. Upper canopy well developed. No visible defects.	1020	23
1728	Drummond Norway Maple <i>Acer platanoides</i> 'Drummondii'	Mature (approx 1840s)	B2	A very large specimen with Very heavy ivy. A basal cavity with decay present to north. Surrounding wood sound. Upper canopy well developed. No visible defects.	970	26

ID	Species	Age class	Category	Description	DBH (mm)	Height
1734	Sycamore <i>Acer pseudoplatanus</i>	Mature (approx 1880s)	B2	Located within an open area near the south east corner of the site. Canopy has been reduced significantly east to facilitate a neighbouring construction development. However remaining canopy cover is sufficient to promote recovery. No visible defects.	740	19
1736	Sycamore <i>Acer pseudoplatanus</i>	Mature (approx 1850s)	B2	Cavity in trunk at 2.15m at point of branch removal in the past. Upper canopy well developed. No visible defects.	910	22
1737	Elm <i>Ulmus glabra</i>	Mature (1870s)	C2	Located within an open area near the south east corner of the site. A very large specimen. Three stems from 0.25m. Growth extended south due to light suppression north. Decay present in western stem from 0.25m to 1.25m.	760	21
1740	Ash <i>Fraxinus excelsior</i>	Mature (approx 1860s)	B2	Located within a 5m wide verge 3.5m from internal roadway. A dominant specimen with a well formed crown. Multi stemmed from 7m sound unions visible. Minor deadwood in lower canopy due to light suppression.	980	20
1770	Copper beech <i>Fagus sylvatica</i>	Mature (approx 1870s)	A1	A large well developed specimen. Very heavy ivy obscuring view for assessment. No visible defects. Crown slightly restricted to south and west due to competition from neighbouring trees.	820	21
1771	Sycamore <i>Acer pseudoplatanus</i>	Mature (approx 1870s)	A2	Trunk multi stemmed from 2.5m with tight union between stems. Unlikely to be significant at present. High landscape value.	800	23
1785	Sycamore <i>Acer pseudoplatanus</i>	Mature (approx 1850s)	B2	Well developed multi stemmed tree with no visible defects.	920	15.5
1787	Copper beech <i>Fagus sylvatica</i>	Mature (approx 1840s)	A2	Multiple occluded pruning cuts in lower canopy. A large pruning cut with localised decay at 5m to east. Unlikely to be significant at present. Upper canopy well developed with no visible defects.	1000	18
1792	London plane <i>Platanus × hispanica</i>	Mature (approx 1820s)	B2	A very large wide spreading lawn specimen. Crown formed from three large scaffold stems from 6m. Very heavy ivy. Pockets of decay in trunk but not significant at present. Leaf die-back indicative of anthracnose disease. Leaf size generally small and crown sparse overall.	1560	26.5

ID	Species	Age class	Category	Description	DBH (mm)	Height
1834	Horse chestnut <i>Aesculus hippocastanum</i>	Mature (approx 1860s)	A2	A large well developed specimen. 0.3m from boundary wall. Extensive growth on trunk obscuring view for assessment. Leaf miner infestation present. Canopy appears well developed with no visible defects.	1050	20

