

**Arboricultural Report
Trees at Proposed Site at
Blake's Restaurant
Stillorgan
Co Dublin**

March 2022

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Associated Drawings

This report is for reading in conjunction with the drawings noted below

<u>Drawing Title</u>	<u>Drawing Subject</u>
1) Blake's Tree Constraints Plan	Tree Constraints Plan A plan depicting the predevelopment location, size, calculated constraints, and simplified tree quality category system
2) Stillorgan Tree Impacts Plan	Tree Impacts Plan This plan represents the effects of the proposed development works on the above tree population and depicts trees to be retained and removed.
3) Stillorgan Tree Protection Plan	Tree Protection Plan This plan depicts the nature, location and extent of tree protection measures required for sustainable tree retention.

1 Report Summary

- 1.1 The vegetation associated with the site is limited to areas near to site boundaries. Much of the remaining vegetation has been installed with the previous context use in mind, and now relate to a defunct landscape scenario. To the west of the site, the few remaining plants are associated with embankments and retaining structures that may influence sustainability. Considering some of the species involved, including Deodar Cedar and Sycamore and their potential to achieve immense sizes at maturity, then their sustainability within the existing landscape is highly questionable. Furthermore, and should the existing landscape features require modification, then these trees would be rendered unsuitable for retention.
- 1.2 Notwithstanding development impacts, some trees to the east of the site appear suitable for retention. The tree line is currently dense, comprising a dominating line of Norway Maple, Ash, Lime and Sycamore. These trees are adjoined to the west by a heavily suppressed line of smaller and distorted Silver Birch, growing from a position close to the site boundary railings. Beneath and surrounding both rows of trees, there is a variable but broadly continuous block of shrubbery. Some of these trees are in reasonable health, while others are in decline, and some have suffered mechanical damage and other issues. Particularly, some trees have been severely cut back, to address encroachment issues with street lighting. This issue requires consideration of future sustainability, should this form of management prove to be necessary in an ongoing manner.
- 1.3 In respect of development impacts, the consumption of site space will mean that no material located within the main site area can be retained. Outside of, but immediately adjoining the site's eastern boundary, there is some potential for tree retention through the construction phase. Any such retention must accept several issues, some of which may undermine sustainability, require severe management of the trees, or their suitability for retention in the future.
- 1.4 The overall consumption of space for development would not provide any reasonable ability to retain the line of Silver Birch (Tree Line 1). However, and considering the proposed use of a secant pile construction process, then construction impacts can potentially be restricted to the footprint of the proposed structure. Notwithstanding this, it is expected that piling rig access and facilitation may require some cutting back of the western crowns of some trees. The pile alignment appears to exist within the existing plinth rail structure at the boundary and therefore it is likely that tree root disturbance will be minimal. However, and notwithstanding the fact that the proposed block is slightly set back from the basement wall, it is appreciated that some construction access will be required. This may conflict with minimum requirements for tree protection.
- 1.5 Further to this, issues are known to exist regarding the proximity and location of some trees to street lighting features. Considering the severity of cutting back having occurred to date, then the sustainability of such trees must be questioned. Also, consideration must be given to the young age of the trees and their potential mature size and their proximity to the proposed buildings. Ongoing growth-related encroachment will require constant cutting back in the future and it is likely that the trees will have a notable bearing on light admission to any windows the trees adjoin.

2 Introduction

- 2.1 This report was commissioned by-
Cairn Homes Properties Limited.

This report was prepared by-
Andy Worsnop Tech Arbor A, NCH Arb (PTI LANTRA)
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Report Brief

- 2.2 An Arboricultural report has been requested in respect of the proposed development. As "BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations" is the accepted framework for such reports, its composition, inclusions and recommendations being followed as a general basis for such reporting.

Report Context

- 2.3 This report includes an Arboricultural review of the proposed development project. The report includes an assessment of the sites existing tree population within its current context. The report assesses their potential for sustainable retention in the post-development scenario. The report also describes the likely effects and repercussions of the development and construction process upon those trees. It also provides information regarding the necessary tree protection and the avoidance of damage to trees during the construction process, necessary to achieve sustainable tree retention.
- 2.4 This assessment summarises the Arborists findings and recommendations. These findings were developed after reviewing the proposed project details as provided by the design team, and after an evaluation of trees as defined and described in the tree survey at "Appendix 2". This report also includes a preliminary "Arboricultural Method Statement" at "Appendix 1" as well as a Tree Protection Plan. This plan illustrates the requisite conservation and protection methodologies necessary to maintain tree sustainability. This report is not intended as a critique of the proposed development but is an impartial assessment of the development implications relating to the sustainable retention of trees, whether that be any, some, or all trees. This report is for planning purposes only and may be deficient for construction phase use.

Report Limitations

- 2.5 This report relates the Arborists interpretation of information provided to him before the report compilation and gained by him during the undertaking of the site review and tree survey. The site review data is subject to the limitations set out under "Inspection and Evaluation Limitations and Disclaimers" in "Appendix 2" of this report. The findings and recommendations made within this report are compiled based upon the knowledge and expertise of the inspecting Arborist.
- 2.6 The "Implication Assessment" element of the report builds on assumptions and estimates, particularly in respect of how construction works might proceed on a day to day basis and appreciates the "design" stage of the project, as opposed to "detail design" or "construction" detail.
- 2.7 In line with the "design" stage of the development proposals, many elements of the "Arboricultural Method Statement" are deliberately broad and generic. They will require review, amendment and consolidation at the construction stage, for example, in respect of the size and nature of the equipment, plant and machinery that might be utilised by any potential building contractor and any details as may change at "detail design" or "construction detail" stages.
- 2.8 Accordingly, this assessment is premised on all its elements/recommendations, and the omission or alteration of any part of it, particularly the application of tree protection methodologies, can radically alter outcomes regarding sustainable tree retention.

3 Site Description

- 3.1 The site in question is of irregular shape comprising two now demolished commercial properties. In respect of the northernmost portion of the site this area was substantially developed with much of the ground space comprising either hardstanding/tarmacadam surfaces relating to car parking and access or the principal building itself. The soft landscapes associated with the site were limited and restrictive beds and planters only. In respect of this, much of the vegetation is associated with the site boundaries.
- 3.2 Regarding the commercial property to the south, the tree population associated with this is highly limited and associated with its eastern boundary only.
- 3.3 As mentioned above, the site is in all respects, highly artificial and appears to comprise substantial elements of made ground, most notable in respect of levels disparities between the site and adjoining lands to the north and north-east of the site.

4 Pre-Development Arboricultural Scenario

- 4.1 Subsequent to the demolition of the original buildings, the vegetation associated with the site is limited to areas near to site edges. Much of the vegetation is young and has been installed in line with a now defunct site use and landscape.
- 4.2 Much of the site area is highly artificial. To the west of the site, the few remaining plants are associated with embankments and retaining structures that may influence sustainability.
- 4.3 To the east of the site, we find a mixed tree group, including a belt of young Silver Birch and a mixed line of early-mature Sycamore, Norway Maple, Ash and Lime. These trees arise from a narrow belt between the site's eastern boundary railings and the pavement associated with the Stillorgan By-pass.
- 4.4 Positioned closest to the site boundary railings, we find many Silver Birch ("Silver Birch Group"). These trees tend to be suppressed and distorted. This relates to their being outcompeted by their larger and faster growing Norway Maple, Lime, Sycamore and Ash neighbours to the east.
- 4.5 The dominant alignment of trees located closer to the road vary in health status. Some are in obvious states of deterioration, while others have been harshly cut because of their location close to road lighting fixtures. When considered as a woodland belt, then sustainability is impaired, with less than half of the trees offering sustainability within their existing context.
- 4.6 Notwithstanding the mediocre quality of the larger tree, the area supports substantial shrubbery that combines to provide notable screening between the existing dual carriageway and the site boundary. Some concern exists regarding the proximity of this material and the adjoining trees to the site and the potential for development related disturbance. However, and to possibly mitigate such effects, it is appreciated that the existing rail the boundary stands upon a low-level plinth wall, the foundation of which is considered highly likely as to have influenced tree root development over time.

4.7 As noted above and illustrated by the tree age graphic as Fig 3, the sites tree population is dominated by young trees. This does not appear to relate well to sustainability with more than 70% of trees falling into categories “C” or “U” and more than 40% of trees offering short or no realistic sustainability.

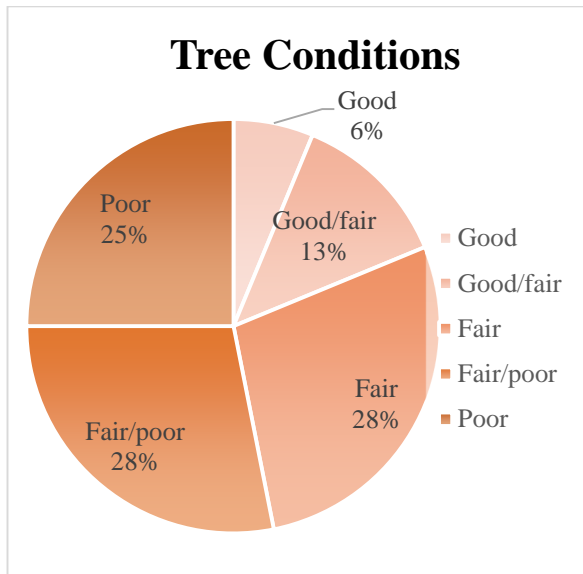


Fig 1

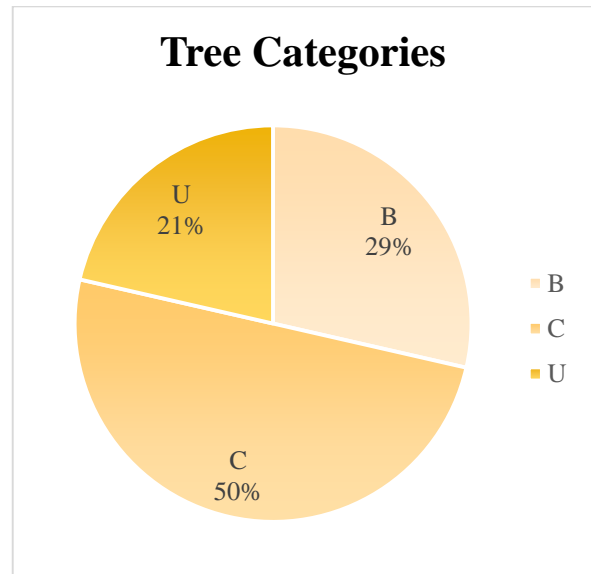


Fig 2

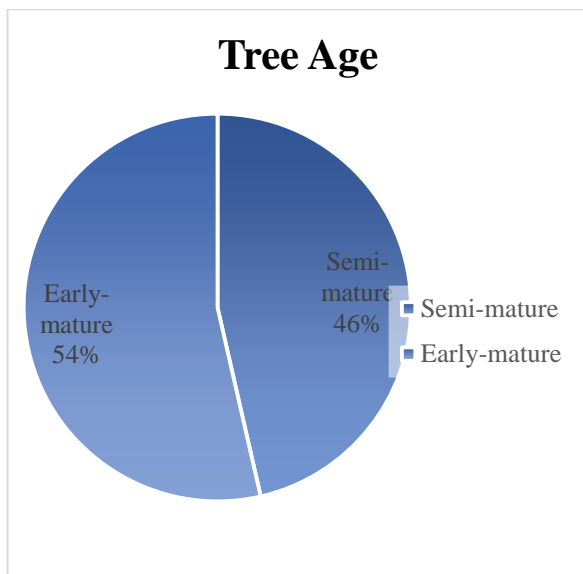


Fig 3

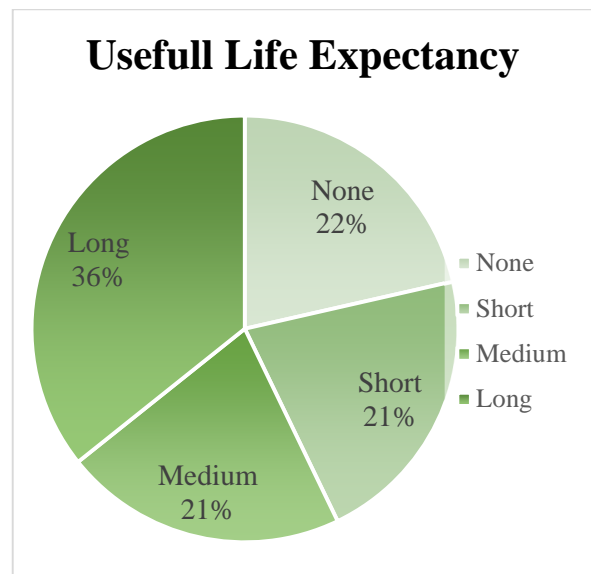


Fig 4

4.8 While the tree species breakdown appears to be dominated by Silver Birch, this relates to the large number of specimens found in “Silver Birch Group”. Other than the silver Birch, the tree population involves a diverse group of species. Many of the trees, including Sycamore, Norway Maple, Lime, Ash Cider Gum and Deodar Cedar are capable of attaining particularly large sizes at maturity and may be regarded as ill-suited to small or limited landscape contexts

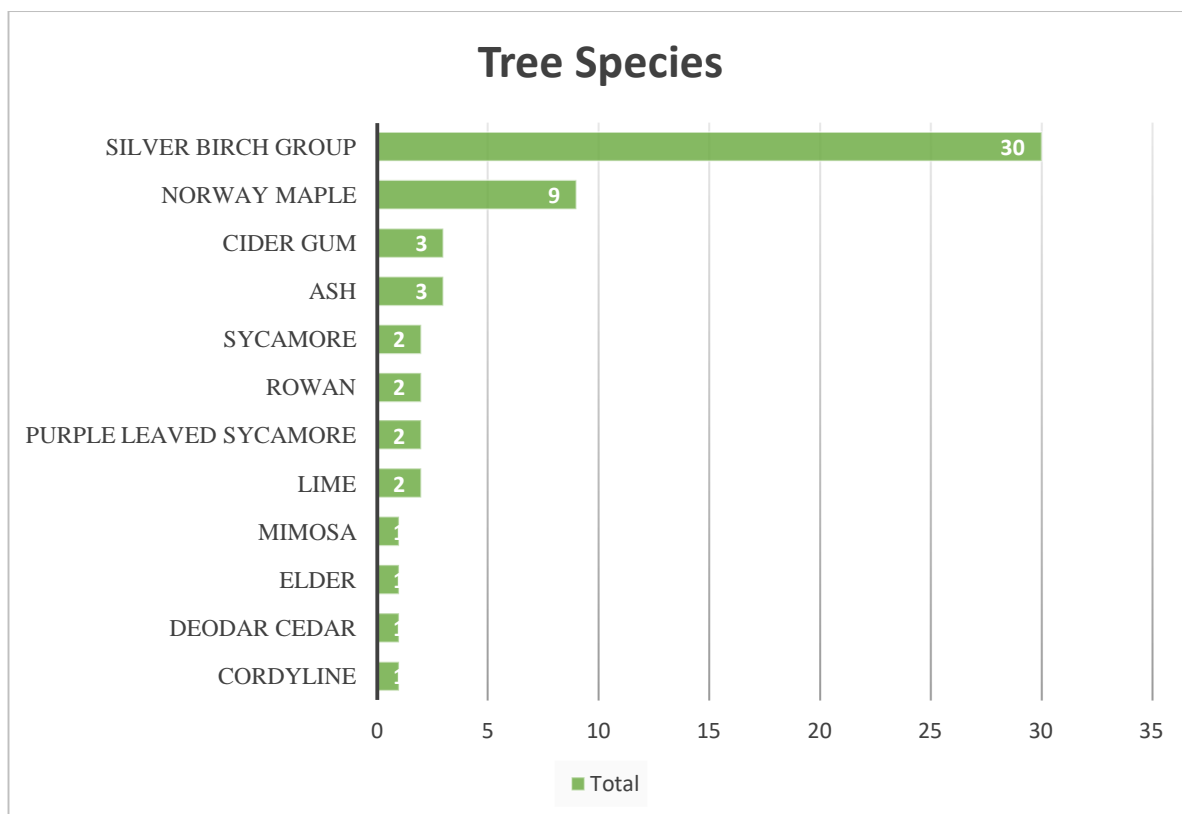


Fig 5

5 Planning Scenario in Respect of Tree

5.1 In respect of planning, it is noted that “Dun Laoghaire Rathdown County Council” includes numerous references to trees and woodlands, as well as their retention, within their planning documentation. Such references include-

5.2 In respect of trees, there are two principal areas of guidance including, the “County Development Plan 2016 – 2022”, and the “DunLaoghaire Rathdown tree strategy document”: “A Tree Strategy for Dún Laoghaire-Rathdown 2011 – 2015”

5.2.1 Chapter 2, Sustainable Communities Strategy

2.1.3.5 Policy RES5: Institutional Lands notes the retention of trees in development proposals

5.2.2 Chapter 4, Green County Strategy

4.1.3.1 Policy LHB19: Protection of Natural Heritage and the Environment*

4.1.3.5 Policy LHB23: Non-Designated Areas of Biodiversity Importance*

4.1.3.6 Policy LHB24: County-Wide Ecological Network*

4.1.3.8 Policy LHB26: Hedgerows*

4.2.2.6 Policy OSR7: Trees and Woodland* (Tree Strategy for the County – ‘DLR TREES 2011-201)

5.2.3 Chapter 8, Principles of Development

8.1.2.4 Policy UD7: Urban Tree Planting* (DLR TREES: A Tree Strategy for Dún Laoghaire-Rathdown 2011 – 2015)

8.2.3.2 Quantitative Standards, (ii) Residential Density (where lower densities may be considered or in sites where mature tree coverage prevents minimum densities being achieved across the entire site)

8.2.3.4 Additional Accommodation in Existing Built-up Areas, (vii) Infill, Infill development shall retain the physical character of the area including features such as boundary walls, pillars, gates/gateways, trees, landscaping, and fencing or railings.

8.2.3.5 Residential Development – General Requirements, (vi) Bonds To ensure the satisfactory completion of development works, such as roads, surface water drainage, public lighting and open space, including the protection of trees, on a site which has been the subject of a grant of permission, a bond or cash lodgement may be required until the development has been satisfactorily completed.

8.2.4.9 Vehicular Entrances and Hardstanding Areas, Impacts on features like boundary walls and pillars, and roadside grass verges and trees outside properties will require to be considered, and entrances may be relocated to avoid these.

(v) Financial Contributions

Where an existing on-street car parking space requires removal to facilitate a new or widened vehicular entrance, and cannot be conveniently relocated within the public domain, then a financial contribution will be required in accordance with the terms and conditions of the Transportation Section and Water Services Department.

Likewise, where a tree, located on-street, requires removal to facilitate a new or widened vehicular entrance and cannot be conveniently relocated within the public domain then a financial contribution will be required in lieu.

8.2.7.2 Sensitive Landscapes and Site Features

Existing site features such as specimen trees, stands of mature trees, hedgerows, rock outcrops and water features are properly identified and retained where appropriate and new planting or other landscaping appropriate to the character of the area will be provided

8.2.8.3 Public/Communal Open Space – Quality

Fragmented open spaces within a development layout, which result specifically from the necessity to protect existing site features (for example a stand of mature trees) may not be included in the calculation open space requirements, as they are necessary to ensure the protection of existing amenities

8.2.8.6 Trees and Hedgerows

New developments shall be designed to incorporate, as far as practicable, the amenities offered by existing trees and hedgerow and new developments shall have regard to objectives to protect and preserve trees and woodlands as identified on the County Development Plan Maps. Arboricultural assessments carried out by an independent, qualified arborist shall be submitted as part of planning applications for sites that contain trees or other significant vegetation. The assessment shall contain a tree survey, implications assessment and method statement. The assessment will inform the proposed layout in relation to the retention of the maximum number of significant and good quality trees and hedgerows. Tree and hedgerow protection shall be carried out in

accordance with BS 5837 (2012) ‘Trees in Relation to Design, Demolition and Construction – Recommendations’

Where it proves necessary to remove trees to facilitate development, the Council will require the commensurate planting or replacement trees and other plant material. This will be implemented by way of condition. A financial bond may be required to ensure protection of existing trees and hedgerows during and post construction.

Chapter 8 Development Management

8.2.11.2 Architectural Heritage – Protected Structures

(iii) Development in Proximity to a Protected Structure Any proposal for development will be assessed in terms of the following: Impact on existing features and important landscape elements including trees, hedgerows and boundary treatments.

- 5.3 Notwithstanding the county-wide planning objectives note above, review of the current development plan shows the site area supports no tree symbol that would signify a site-specific objective to protect and preserve trees and woodlands.
- 5.4 The site area does not to support any trees that are the subject of tree preservation orders.
- 5.5 Note is made that at earlier stages of the design process and during liaison with Dun Laoghaire Rathdown County Council Parke Department representatives, preferences were expressed regarding the retention of some of the trees adjoining the eastern boundary of the site.

6 Other Legislative and Legal Constraints

- 6.1 Under the Forestry Act 2014, the felling of a tree standing in a county area requires a felling license unless the trees are exempted under Section 19 of the Act. An exemption applies where trees are being felled in line with a specific detail of a grant of planning permission.
- 6.2 Some "Section 19" exemptions are not applicable to the development scenario, for example, those applying to fire control, forest survey or gene pool protection relating to horticultural use or Christmas tree production.
- 6.3 Some exemptions are pertinent to the development scenario, particularly Section 19(1) (M)(ii), where "the removal of which is specified in a grant of planning permission".
- 6.4 Other non-specific exemptions may also be applicable, including-
- Trees standing in an urban area.
 - Trees within 30 metres of a building (other than a wall or temporary structure), but excluding any building built after the trees were planted.
 - Trees removed by a public authority in the performance of its statutory functions.

- A tree that is, in the opinion of the planning authority, dangerous on account of its age, condition or location.
- A tree within 10 metres of a public road and which, in the opinion of the owner (being an opinion formed on reasonable grounds), is dangerous to persons using the public road on account of its age or condition.

6.5 The above derogations do not apply where-

- The tree is within the curtilage or attendant grounds of a protected structure under Chapter 1 of Part IV of the Act of 2000.
- The tree is within an area subject to a special amenity area order
- The tree is within a landscape conservation area under section 204 of the Act of 2000.
- The tree is within a monument or place recorded under section 12 of the National Monuments (Amendment) Act 1994, a historic monument or archaeological area entered in the Register of Historic Monuments under section 5 of the National Monuments (Amendment) Act 1987, or a national monument in the ownership or guardianship of the Minister for the Arts, Heritage and the Gaeltacht under the National Monuments Acts 1930 to 1994 or is within a European Site or a natural heritage area within the meaning of Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011)

6.6 For further clarification, contact should be made with Forest Service (Department of Agriculture, Fisheries and Food). The Felling Section of the Forest Service is based in Johnstown Castle, Co. Wexford

6.7 Other legislation may affect tree cutting and felling. Particular note should be made of the "Wildlife Act 1976 (as amended), as well as the EU Habitats Directive. These offer protection to animals, including Bats that often roost or even breed in trees. The protection afforded by the above legislation means that particular care must be taken in the pruning or felling of trees that may contain Bats. For this reason, specific specialist advice should be sought.

7 Construction Activities and their Effect on Trees

General

7.1 As with all living things, trees are highly reliant upon their environment, the changing of which can undermine health and sustainability. The survival of the plant requires water and various nutrients provided by the soil in which the tree is rooted. The continuity of ground conditions is of particular importance in maintaining tree health and sustainability. Any change to ground conditions extending beyond the short-term, has the potential to affect a tree's metabolism, health, and sustainability.

- 7.2 Development and construction activities can easily result in the loss, alteration or denaturing of the soil upon which a tree is dependant. Any action that removes, disturbs or denatures the existing soil environment in respect of chemistry, pH, gas flux, hydrology, soil strength or bulk density can damage tree roots and render a soil incapable of supporting plant root function. Therefore, these effects must be avoided in the areas upon which a tree is reliant.
- 7.3 Tree retention is costly in respect of available space. There is a substantial difference between physically retaining a tree in situ and gaining any realistic expectation of it surviving into the future. Sustainable tree retention is commonly dependent upon the extent and nature of protection it can be afforded during construction.
- 7.4 Any structure or activity that results in the issues noted above must be regarded as contrary to sustainable tree retention. In many instances where such issues arise within the minimum "root protection area" as defined under "BS5837-2012", then the sustainability of the tree may be affected.

Construction Specific Issues

- 7.5 New structures, their foundations as well as underground infrastructure and services all require the excavation of ground space. These digs are often substantially larger than the footprint of the structure. Some structures, including roads and paths, require that the ground beneath is compacted to provide a necessary bearing ratio. The combination of these activities typically results in the loss or denaturing of the soil volume that a tree may be reliant upon.
- 7.6 Most modern construction involves the use of substantial plant, equipment, and vehicles. The movement and activity of such machinery quickly compacts and denatures the ground, destroying the soil profile upon which trees are reliant.

Contextual Issues

- 7.7 Tree removal may be justified because of poor-quality, ill-health or other deterioration that raise safety considerations. Many such trees would be removed regardless of any site development. However, some poorer-quality trees, for example, if located in areas of reduced sensitivity, might offer some degree of limited or interim retention, dependant on the retention context and the threat they may present.
- 7.8 Where the site context changes in respect of occupation and use near trees, repercussions may include a requirement for greater scrutiny and management. Some trees may require specific attention, including structural pruning improve their safety status within the changed context, as well as to deal with issues of exposure and shelter loss.
- 7.9 Trees should be considered in respect of shadow-cast, light admission and blockage of views. Trees can have a material effect on these issues and can lead to post development

request for more tree removal, for example based on a requirement for artificial light during daylight hours.

- 7.10 Foliage shedding can be subject to local wind patterns, creating local drifts and accumulations. This requires management and can lead to drainage issues including the blockage of drains and gullies, or to the creation of slippery surfaces. Similarly, some trees are subject to seasonal insect infestations. Issues such as Aphid "honeydew" and the creation of stick residues and/or slippery surfaces should be considered.

8 Nature of Project Works

- 8.1 The proposed development is described as:

The site of 1.34 hectares is bounded by the Lower Kilmacud Road to the north, The Hill to the south and west and the N11 to the east.

The proposal is a mixed-use scheme of “Built to Rent” BTR apartments, café/restaurant, childcare and residents’ facilities laid out in 6 no. blocks ranging in height from 3-9 storeys (over basement) comprising 377 no. apartment units (21 no. studios, 189 no. 1 beds, 159 no. 2 beds, & 8 no. 3 beds).

Building 1 (Part 3 - 6 & 7 storeys) consists of 77 no. apartments comprising 13 no. studio apartments, 30 no. 1 bedroom apartments, 33 no. 2 bedroom apartments, 1 no. 3 bedroom apartment.

Building 2 (Part 3 – 5, 7 & 8 storeys) consists of 95 no. apartments comprising 7 no. studio apartments, 57 no. 1 bedroom apartments, 24 no. 2 bedroom apartments, 7 no. 3 bedroom apartments.

Building 3 (9 storeys) consists of 54 no. apartments comprising 18 no. 1 bedroom apartments and 36 no. 2 bedroom apartments.

Building 4 (7 storeys) consists of 60 no. apartments comprising 42 no. 1 bedroom apartments & 18 no. 2 bedroom apartments.

Building 5 (7 storeys, with lower ground floor to the west) consists of 62 no. units comprising 1 no. studio apartment, 26 no. 1 bedroom apartments, & 35 no. 2 bedroom apartments.

Building 6 (5 & 6 storeys, with lower ground floor to the south) consists of 29 no. units comprising 16 no. 1 bedroom apartments and 13 no. 2 bedroom apartments.

The development also includes: c. 841 sq.m. restaurant / café floorspace (5 no. units at ground floor/lower ground floor/plaza levels), a (double height part) community sports hall including ancillary areas (c. 906 sq. m), and a creche of c. 215 sq. m:

Residential amenity floorspace (c. 1,257 sq. m).

Public open space, communal open space for resident access only;

Basement car parking spaces (119 no.) and 1 no. set down surface car parking space as well as 771 no. cycle spaces and vehicular access to the site will be from 'The Hill'.

- 8.2 Considering the scope and scale of the proposed development, then many of the issues dealt with at "Construction Works and Trees" above could apply if trees are not protected during construction works, including-
- a) Direct conflict with proposed structures, thus requiring tree removal.
 - b) A partial conflict where the "Root Protection Area" is encroached upon by works or ground amendments and cannot be preserved/protected in full.
 - c) Environmental damage e.g. compaction, capping, sealing – changing the existing ground environment to one that can no longer support tree root function.
 - d) Construction activity and the use of large plant and machinery that can denature the ground.
 - e) A change in site context or a change in occupation or use which makes a tree unsuitable for retention.

9 Development Related Issues and Arboricultural Concerns

- 9.1 The greatest issues affecting trees has been the consumption of site space and encroachment on ostensibly retainable trees and shrubbery. Sustainable tree retention will be subject to the ability to afford minimum levels of tree protection during the construction period.
- 9.2 The age, size and potential for ongoing growth of some trees requires consideration of contextual issues. The current design proposals suggest that tree retention will not be without issue, and problems of encroachment will inevitably require ongoing pruning over time.
- 9.3 The nature and proximity of trees to proposed buildings is likely to result in issues of light blockage.
- 9.4 Prior management of trees, as illustrated by sometimes severe cutting back and decapitation appears to suggest that the trees are already troublesome within their current context. As continued growth will recreate the same issues, then tree sustainability would suggest the consideration of smaller growing species and relocation to positions between as opposed to beneath street lighting.

10 Design Iterations and Arboricultural Considerations

- 10.1 This report relates to clause 4.4.2.1 of BS5837-2012 in that its finding relate to a predefined concept that was issued for review. Accordingly, the report assesses Arboricultural implications and impacts of the proposals, making recommendations in respect of tree protection relating to those trees that might be retained and as outlined below.

11 Identification of Development Impacts to Trees

- 11.1 The expected tree impacts have been represented graphically on the tree impacts drawing "**Stillorgan Tree Impacts Plan**" and within the narrative of this report. This drawing combines the tree constraints plan information with the current stage development details, including the architectural and services layouts below, thereby allowing for simple direct comparisons between the existing site context and the development proposals regarding new structures.
- 11.2 In this drawing, trees denoted with "Broken Pink" crown outlines are to be removed, and those denoted with "Continuous Green" crown outlines are to be retained.
- 11.3 Detail of the development proposals where gained from drawings provided by-
- Waterman Moylan - Consulting Engineers – Drainage and Engineering information overlaid on Masterplan
 - O'Mahony Pike Architects - Architectural Design
 - Kevin Fitzpatrick Landscape Architecture – Landscape Design
- 11.4 The evaluation is primarily based on minimum protection ranges as defined in paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837:2012. Any structure, action or apparent need to enter or otherwise disturb/convert the "root protection area" of a site tree has been considered likely to have a negative impact, with the potential to render a tree wholly unsuitable for retention, unsafe or unsustainable.
- 11.5 Where applicable, this assessment attempts to consider both direct and indirect implications. The assessment is based on perceived construction requirements and how a tree will likely interact with the development. The assessment appreciates issues including growth, hazard development, light blockage and other social concerns regarding the changing context, including its effect on tree amenity value.

12 Tree Retention and Loss

- 12.1 The drawing "Stillorgan Tree Impacts Plan" comprises the tree survey drawings overlaid by the development drawings, thus providing a graphic representation of the relationship between tree constraints and the development elements. In this drawing, the trees that will be removed, are highlighted in "pink dashed" outlines.
- 12.2 As noted within the survey data, the "red line" area supports a total of 27no. individually described trees. Additionally the site supports 1 tree group (Tree Line 1), that comprise multiple specimens. For the purposes of this report the "group" will be regarded as an item. Therefore the site supports 27no. individual trees and 1no. multi-plant group that will be regarded as total of 28no. items. These have been categorised as:
- No category "A" items
 - 8no, category "B" items

- 14no. category "C" items
- 6no. category "U" item

12.3 Normally, all category "U" trees (6 in total across survey area) identified in the survey would be removed. Most such material should be removed regardless of development works. In this instance, this would apply to tree nos. 91, 92, 110, 110a, 117 and 118.

12.4 Of the site's good quality category "B" trees, the development will result in the loss of tree nos.93, 96, 98 and 99.

12.5 Of the site's category "poor" quality "C" trees, the development works appears to require the removal of nos. 94, 95, 97, 100, 106, 111, 112, RS1 and RS2.

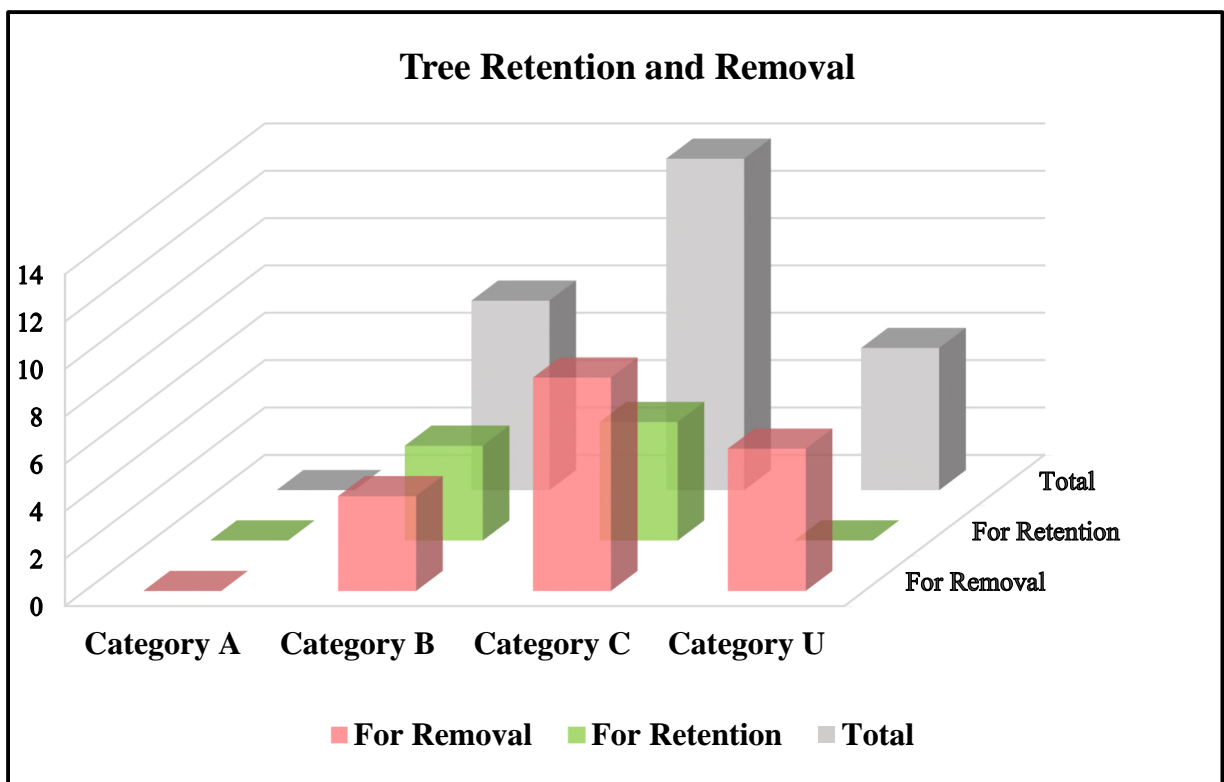


Fig 5 Graphic Representation of Tree Loss/Retention Scenario

12.6 The tree loss breakdown for the proposed developemnt will be-

- 4 Category "B" items
- 9 category "C" items
- 6 category "U" items

In addition to tree losses, the development will require the removal of

- Substantial areas of shrubbery

12.7 Total development related tree loss – 19No. trees/groups

13 Tree Protection within the Scope of a Development

- 13.1 The design and management recommendations as set out in "BS5837:2012" are considered as "best practice" regarding the selection, retention, protection, and management of tree within the scope of new developments.
- 13.2 In respect of tree protection, whether vertical or horizontal, all must conform or equate to the recommendations of Section 6, BS5837: 2012, must be fit for purpose and commensurate with the nature of development and the expected day-to-day activities of the site works.
- 13.3 This report provides a "Preliminary Arboricultural Method Statement" at "Appendix 1" to this report, as well as the associated "Tree Protection Plan" drawing "Stillorgan Tree Protection Plan".
- 13.4 In the drawing, the "Construction Exclusion Zone" is defined by an orange hatching with bold "Orange" lines representing the proposed location of the primary protective "Construction Exclusion Fencing".
- 13.5 The above drawing provides only a representation of the protection locations and extents that must be located, positioned and erected under the guidance of the project Arborist. This drawing may require referral to a figured and dimensioned, "construction stage" version of the "Tree Protection Plan" drawing. All recommended protection measures will be installed before the commencement of any site works and must remain in situ (unless under the guidance of the site Arborist) until the completion of all site works.

14 Preliminary Management Recommendations

- 14.1 Provided in the tree survey table (Table 1) are "Preliminary Management Recommendations". These recommendations relate to the trees as they existed at the time of the tree review. Therefore and in line with the changing context of the site, such recommendations may no longer apply. Examples include where the felling of trees or other specific works are necessary to facilitate development requirements.
- 14.2 Many of the concerns raised in the tree survey relate to evidence suggesting mechanical failure to trees, ill-health or contextual issues. These may continue to a point where the suitability of a tree for retention may change over time.
- 14.3 Additionally, any development related loss of trees can result in exposure and shelter loss issues. Therefore all retained trees must be reviewed immediately after the primary site clearance works. A review will allow for the updating and amending of the "preliminary management recommendations" of the primary survey. Such amendments would address such issues as may arise and may include additional structural pruning

works. Regular reviews of all retained trees must be maintained, so that early and prompt intervention and action can be applied as required.

15 Bibliography

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A1 Appendix 1 - Arboricultural Method Statement (and Tree Protection Plan)

Method Statement Outline

- A1.1 This method statement intends to provide guidance in respect of tree protection on a development site. This is a broad and prescriptive method statement, intended to provide general advice and guidance in respect of trees and tree protection on a typical development site, dealing with issues known at planning stage.
- A1.2 Any inability to conform to the recommendations of this method statement or the associated tree protection plan could readily change the sustainability of trees and/or their suitability for retention.
- A1.3 This method statement addresses, amongst others, two primary issues, those being –
- a) The avoidance/prevention of physical damage to a tree to be retained.
 - b) The avoidance/prevention of physical damage or disturbance to the ground/earth upon which a tree is reliant.

Drawings

- A1.4 This Arboricultural Method Statement must be read with the associated "Tree Protection Plan" drawing, "Stillorgan Tree Protection Plan". The "planning stage" drawing must be updated for "Construction" stage purposes, to include tree protection ranges/dimensions as defined for that tree within the tree survey table or unless otherwise defined by the project Arborist.

Method Statement Use

- A1.5 This Method Statement should be used under the direct guidance of the project Arborist. As limited "construction stage" detail was available at planning stage, it may require amendment and adjustment to address construction stage issues.

Amendments and Modifications to Tree Protection Plan

- A1.6 Any amendment to the tree protection plan must be agreed with the project Arborist, including the adoption of specific methodologies and/or procedures and structures for access into/use of certain parts of the above defined "Construction Exclusion Zones". Such procedures, including the provision of suitable ground protection may allow for the relocation of the "Construction Exclusion Fencing" to provide access to and across the previously protected areas.

Works Related Impacts

- A1.7 In respect of any necessary and unavoidable structures/works required within or entry into the "RPA" zone, all efforts must be made to minimise impacts. Aerial issues may

require "access facilitation pruning" or clearance pruning. Subterranean works that require excavation must, by design, location, and action, minimise impacts to trees.

Tree Works Specification Updates

A1.8 Many of the tree management recommendations stipulated within the "Preliminary Management Recommendation" section of the primary tree survey, relate to the "as was" site scenario. Because of changing site contexts, these may no longer apply and may require modification to account for the changes that the built project will cause.

General Method Statement

1.0) Overview and Implementation

- 1.1 **Prior to any site works or construction/demolition related works or access, this method statement will be addressed and discussed by all member of the construction team management.**
- 1.2 The project Arborist or another suitably qualified person will oversee the application of all tree protection measures and any necessary modifications to this Method Statement (any issues as may have arisen in respect of planning conditions or details as may have changed between the design stage) to provide a basis upon which tree protection will be managed on the construction site.
- 1.3 Any situation that requires entry into the "root protection zones" of a tree intended for retention must be brought to the attention of the Project Arborist regarding the adoption/amendment of suitable tree protection measures.
- 1.4 As unforeseen tree losses may compromise project planning permissions, it is imperative that issues relating to tree protection and/or tree damage be brought to the immediate attention of the project Arborist for review and possible discussion with the relevant planning authority.

2.0) Works Sequence

- 2.1 No construction related works or mechanised site access will occur until the agreed level of tree protection, in accordance with the "Tree Protection Plan", is completed.
- 2.2 The only exception to the above will relate to the undertaking of tree works and felling as defined in the Arboricultural report and/or grant of permission.
- 2.3 On completion of tree felling/site clearance works, the tree management plan will be reviewed, accounting for (if necessary) the updating of the "preliminary Management Recommendations" stipulated in the original Tree Survey.

- 2.4 Any revised pruning/cutting works will be agreed with the local authority and applied at the earliest possible opportunity.
- 2.5 After the completion of primary tree clearance, but prior to the commencement of construction works, all "Construction Exclusion" and "Protective" fencing must be erected and "signed-off" as complete, by the Project Arborist.
- 2.6 Only on completion of all construction works will any/all tree protective measures be removed, and only then in a manner, that does not compromise the "Protection Zones". Such works must be agreed and overseen by Project Arborist.
- 2.7 At construction works completion stage, all retained trees will be reviewed regarding their condition and longer-term management recommendations and regarding site hand-over,

3.0) Tree Protection

- 3.1 All tree protection measures and locations must be agreed, overseen, and verified by the Project Arborist prior to works commencement.
- 3.2 All construction, works or access areas must be enclosed and defined by protective fencing, this comprising the "Construction Exclusion Zone" based upon drawings "Stillorgan Tree Protection Plan" (Construction Stage version).
- 3.3 Unless specifically stipulated by the project Arborist, the default minimum range of the protective fencing from a tree is the range stipulated for that tree within the "RPA" (root protection area) column of the original survey.
- 3.4 Such a fence must be fit for purpose and commensurate with the nature of activity expected upon the site and should comply with "Section 6.2" of BS5837: 2012.
- 3.5 The fence should be affixed with notification signs such as "TREE PROTECTION AREA - KEEP OUT"
- 3.6 Structures such as "lock-ups", offices or other temporary site building, not requiring excavation or underground ducting, might be positioned such as to comprise part of the "Construction Exclusion Zone" fencing. All remaining fencing must be continuous with such features and effectively prevents access to protected ground.
- 3.7 If entry into the "RPA" (Root Protection Area) zones becomes unavoidable, ground protection systems agreed with the project Arborist, will be utilised.
- 3.8 No amendment, alteration, relocation, or removal of the tree protection fencing shall occur without prior liaison and approval from the Project Arborist.

4.0) Provision of Ground Protection (If Required)

- 4.1 No vehicular/mechanised access whatsoever will be allowed onto unprotected "Construction Exclusion Area" ground.
- 4.2 Ground protection can comprise the use of proprietary materials/structures (installed to manufacturer's specifications and recommendations) or procedures that avoid ground damage/disturbance/compaction, or the use of procedures that avoid such effects e.g. manual/pedestrian installation procedures.
- 4.3 Any system utilised must effectively spread load-weight, avoid compaction, maintain drainage/percolation/aeration, and be installed in a manner that avoids these issues.
- 4.4 Newly provided access will be strictly limited to the area of the new protection structure.
- 4.6 Protection installation will require a progressive laying down of ground protection, with previously laid material providing vehicular access to the next zone will be accepted as an approved methodology.

5.0) Works within "RPA" Zone

- 5.1 Only works and construction practices, agreed with the Project Arborist prior to commencement, will be allowed in the "RPA" area.
- 5.2 All works will be undertaken under the supervision and guidance of the Project Arborist who will have the authority to stop works if activities are considered such as to have the potential to damage trees.
- 5.3 Preference must be given to manual labour and techniques within the fenced "RPA" zone.
- 5.4 On completion of the required works, the area will be inspected by the Project Arborist regarding the reinstatement of the original protection and the relocation of the protective fencing to a position relating to the original "RPA" area.

6.0) Service Installation

- 6.1 The "Project Arborist" must be consulted for advice and procedural recommendations, in respect of any installation of services within or requiring entry into the "Root Protection Area" of any tree intended for retention.
- 6.2 Any such works found to be unavoidable, must be undertaken with special care, incorporating the recommendations of both "BS5837: 2012 and the National joint utility groups, guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG 10)

- 6.3 Preference must be given to trench-less techniques including Mole-piping, Directional-drilling manual hydro-trenching (high-pressure water), "Air-Spade" or broken-trench techniques.

7.0) Tree Management and Works

- 7.1 All tree works should be undertaken under the guidance of the project Arborist
- 7.2 The primary site clearance and felling should be undertaken at the earliest stage of the overall development works, to enable the re-assessment of all ostensibly retainable trees and the updating of the "Preliminary Management Recommendations" to account for context changes and construction access and/or other issues coming to light.
- 7.3 All Tree Works must adopt safe work procedures and must be undertaken by staff suitably trained for the purpose at hand and compliant with all legislative, safety and insurance requirements.
- 7.5 All additional works will be agreed with the local authority and/or other stakeholders and applied at the earliest possible opportunity.
- 7.6 On completion of site works, the retained tree population will be reviewed and re-evaluated regarding its ongoing condition and the likely requirements of any ongoing or future monitoring or management needs.

8.0) Demolition

- 8.1 All demolition procedures must be agreed and overseen by the Project Arborist or other suitably skilled staff to monitor for damage and to protect exposed roots/cut-trim exposed roots/oversee backfilling of exposed roots.
- 8.2 Where access into unprotected "RPA" zone becomes unavoidable then suitable ground protection, provided in accordance with an engineer's direction and agreed with the Project Arborist will be installed.
- 8.3 Care will be taken to avoid damage to soil volumes beneath and adjoining demolished structures that may contain tree root material.
- 8.4 Whilst existing foundations/structures may provide temporary protected access to areas within the "RPA" zone, preference must be given to the location of demolition plant outside of the "RPA" zone.
- 8.5 Where tree(s) exist near a structure to be demolished then the demolition should be undertaken inwards within the footprint of the existing building (top down, pull back).
- 8.6 Underground structures (services etc.) within the "RPA" zone should be reviewed with regards to decommissioning and retention in situ in the interest of avoiding tree damage.

8.7 Preference should be given to the retention existing sub-bases where hard surfaces are removed, particularly if the hard surface is to be replaced.

9.0) Ancillary Precautions

- 9.1 The methodologies as set out in this document apply to all undertakers of work upon or adjoining the site as may require access to the "Construction Exclusion Zone" or the "RPA" area of any tree.
- 9.2 This document will be disseminated to all persons requiring access to the work site, with all persons undertaking works either before or after the principal development (site investigation works, Landscape Contractors) are subject to the above requirements
- 9.3 Works outside the "Construction Exclusion Zone" must be controlled to create no potential secondary hazard to tree health.
- 9.4 Large loads accessing the site must be reviewed regarding clearance and potential tree damage.
- 9.5 Care must be taken regarding materials that may contaminate the ground. No concrete mixings, diesel or fuel, washings or any other liquid material may be discharged within 10 metres of a tree.
- 9.6 No fires can be lit within 5 metres of any tree canopy extent.
- 9.7 No tree will be used for support regarding cables, signs etc.
- 9.8 The trees should be reviewed on a regular basis throughout the development process and on completion. At that time, additional recommendations regarding tree management may be required.
- 9.9 Any issue that has the potential to affect site trees must be brought to the attention of the Project Arborist for review and comment.
- 9.10 Any circumstances that become known whilst the development project is ongoing that either involves trees or access to/works within the construction exclusion zone must be brought to the attention of the Project Arborist for evaluation and advice regarding approach and methodology.
- 9.11 It is possible that liaison/agreement will be required with the Local Planning Authority regarding compliance with, as well as the verification of the required tree protection measures.

A2 Appendix 2 - Tree Survey

Nature of Survey

- A2.1 The criteria put forward in "BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations" have provided a basis for this report.
- A2.2 The data collected has been represented in table form as "Table 1" within "Appendix 1" to this report. This appendix includes a Survey Methodology, Survey Key, Survey Abbreviations, Condition Category Definitions and a brief resume of the typical application of Tree Protection measures as defined within the above standard and as relates to the "RPA" zones defined both within the survey table and on the "TCP" drawing.
- A2.3 The survey, its findings and management recommendations relate to the site and the conditions thereon at the time of the survey. It relates to a "do nothing" or "as is" scenario and intends to provide an impartial representation of the site's tree population, regardless of any possible development works. It is likely that changes in site usage, development or other environmental changes will require an amendment of any tree's potential retention status and its preliminary management recommendations, and in some instances, may require the re-classification of a tree's suitability for retention.

Drawing References

- A2.4 The survey must be read with the "Tree Constraints Plan" drawing "Stillorgan Tree Constraints Plan" regarding the representation of tree positions, crown forms, "RPA" extents and colour reference to category systems. Trees omitted from the supplied drawing may be "sketched in" to "Stillorgan Tree Constraints Plan". Any such trees should be located and plotted by professional means to identify the constraints such trees have upon the site.
- A2.5 A green coloured outline represents each tree crown. It is scaled to represent the north, east, south, and west crown radii as denoted in the survey table. Each tree (categories A-green, B-blue, and C-grey only) have been apportioned a "Root Protection Area" (RPA see below) denoted as a dashed orange circle.
- A2.6 The development of a Tree Constraints Plan (TCP) provides a design tool regarding tree retention. Such a plan combines the topographical land survey drawing with additional information as provided by the tree survey. The aspects of the tree's existence recorded on the "TCP" are, firstly, the tree canopies, represented by the four cardinal compass point radii (Sp: R in survey Table 1). Secondly, and following paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837: 2012, we represent each tree's "Root Protection Area" (RPA). For design purposes, it approximates the position of the tree protection fencing to be erected before the commencement of any site works, thus excluding all site

activities other than those dealt with by way of the "Arboricultural Implication Assessment" and "Arboricultural Method Statement".

- A2.7 The "Tree Constraints Plan" (TCP) depicts the extent and location of constraints, placed upon the site by the trees. The "TCP" represents both the true canopy form (north, east, south, and west radii) but also the "RPA" as defined above. These constraints are provided to advise regarding the design and layout of a proposed development.

Survey Intent and Context

- A2.8 This document intends to highlight the extent and nature of the material of Arboricultural interest on the site in question.

Survey Data Collection and Methodology

The Survey

- A2.9 An earlier survey was updated in March 2021. This survey portion of the overall report is not an Implication Assessment though but provided some of the basic information regarding its compilation. The compilation of this survey was guided by the recommendations of BS 5837: 2012. This survey typically includes trees of stem diameters exceeding 150mm at approximately 1.50 metres from ground level. The survey relates to current site conditions, setting and context.
- A2.10 Each tree in the survey has a consecutive number that relates directly to the survey text. Measurements are metric and defined in metres and millimetres. All trees referred to in the survey text have been measured to provide information regarding canopy height and canopy spread (north, east, south, and west radii), level of canopy base and stem diameter at 1.50 meters from ground level. The dimensions provided are intended to provide a reasonable representation of a tree's size and form. While efforts are made to maintain accuracy, visual obstruction, especially regarding trees in groups, requires that some tree dimensions be estimated only.

Inspection and Evaluation Limitations and Disclaimers

- A2.11 The information set out in this report relates to the review of a tree population on the site in question. As such, the information provided is based on a general review of trees and does not constitute a detailed review of any one of the individual specimens. Such an evaluation (tree report) would require the gathering of substantially more information than that dealt with in this survey.
- A2.12 The survey is not a safety assessment and the parameters reviewed within this survey context would be substantially deficient in extent to provide for a reliable safety assessment. The survey is intended to provide a general and qualitative review to assist

in gauging the suitability of an individual tree for retention within a development context. All trees are subject to impromptu failure and damage. The assessment of risk as may be presented by a tree requires the review of numerous factors more than those noted herein and as such, remains outside the scope of this document and any attempt to use the information herein for such purposes will render the information invalid.

A2.13 A competent and experienced Arborist has completed all inspection and tree assessment. The inspection involves visual tree assessment (Mattheck and Breloer 1994) only, which has been carried out from ground level. No below ground, internal, invasive, or aerial (climbing) inspection has been carried out.

A2.14 Trees are living organisms whose health, condition and safety can change rapidly. All trees should be re-evaluated regarding their condition on an annual basis or after substantial trauma such a storm event, other damage, or injury. The results and recommendations of this survey will require review and reassessment after one year from the date of execution. This survey does not constitute a review of tree or site safety. Attempts to use the contents herein for such purposes will render the contents invalid.

A2.15 Throughout the undertaking of the survey, several factors acted against the inspectors, contriving to reduce the accuracy of the survey.

Seasonality

A2.16 Various surveys have been completed during different seasons. Some of the signs, typically symptomatic of ill-health or defect within a tree, may not have been available to view at the time of the survey or may have been obscured by seasonality related factors. Some of the fruiting bodies of various fungi, parasitic upon or causing decay or disease in trees, may have been out of season and unavailable to view. This survey can only comment upon symptoms of ill-health or defects visible at the time of the inspection.

Survey Key

Species	Refers to the specific tree species
Age	Referred to in generalised categories including: -
Y - Young	A young and typically small tree specimen.
S/M - Semi-Mature	A young tree, having attained dimensions that allow it to be regarded independently of its neighbours but typically, would be less than 50% of its ultimate size.
E/M - Early-Mature	A specimen, typically 50% - 100% of ultimate dimensions but with substantial capacity for mass and dimensional increase remaining.
M - Mature	A specimen of dimensions typical of a full-grown specimen of its species. Future growth would tend to be extremely slow with little if any dimensional increase.

O/M - Over-Mature An old specimen of a species having already attained or exceeded its naturally expected longevity.

V - Veteran An extremely old, veteran specimen of a species, usually of low vigour and typically subject to rapid decline and deterioration or of very limited future longevity.

Tree Dimensions All dimensions are in meters. See notes regarding limitation of accuracy.

Ht. Tree Height

CH Lowest canopy height

N, E, S, W Tree Canopy Spread measured by radii at north, east, south, and west

Dia. Stem diameter at approx. 1.50m from ground level.

RPA Root Protection Area, as a radius measured from the tree's stem centre.

Con Physical Condition

G Good A specimen of generally good form and health

G/F Good/Fair

F Fair A specimen with defects or ill health that can be either rectified or managed typically allowing for retention

F/P Fair/Poor

P Poor A specimen whom through defect, disease attack or reduced vigour has limited longevity or maybe un-safe

D Dead A dead tree

Structural Condition Information on structural form, defects, damage, injury, or disease supported by the tree

PMR – Preliminary Management Recommendations Recommendation for Arboricultural actions or works considered necessary at the time of the inspection and relating to the existing site context and tree condition. Works considered as urgent will be noted.

Retention Period

S – Short Typically, 0 -10 years

M – Medium Typically, 10 -20 years

L – Long Typically, 20 – 40 years

L+ Typically, more than 40 years

Category System The Category System is intended to quantify a tree regarding its Arboricultural value as well as a combination of its structural and physical health.

Category U Particularly poor quality, dangerous or diseased trees that offer no realistic sustainability

Category A A typically a good quality specimen, which is considered to make a substantial Arboricultural contribution

Category B Typically including trees regarded as being of moderate quality

Category C Typically including generally poor-quality trees that may be of only limited value.

The above categories are further subdivided regarding the nature of their values or qualities.

- Sub-Category 1 Values such as species interest, species context, landscape design or prominent aspect.
- Sub-Category 2 Mainly cumulative landscape values such as woods, groups, avenues, lines.
- Sub-Category 3 Mainly cultural values such as conservation, commemorative or historical links.

Table 1 – Tree Data Table

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
91	Cordyline (<i>Cordyline australis</i>)	E/M	P	3.50	2.00	0.50	0.50	0.50	0.50	1	175	2.10	Heavily encroached upon by adjoining ash. Is already subject to decline and damage.	Remove.	N/A	U
92	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	P	5.00	0.50	0.00	2.50	2.50	1.50	1	175	2.10	Previously cut and comprising sucker regeneration. Is distorted and typically unbalanced to south-east. Is unsuitable for retention.	Remove	N/A	U
93	Ash (<i>Fraxinus excelsior</i>)	S/M	G/F	5.50	1.00	3.00	3.00	3.00	3.00	1	229	2.75	Is compromised by location on notable embankment that descends to adjoining road side pavement levels. Tree becomes substantially multi-stemmed at 2.50 m suggesting prior decapitation and possible structural weakness. Tree is located circa 400 mm from retaining wall. Tree additionally raises concern with regard to development of Ash Decline within broader area, exacerbated by evidence of small-scale twig decline within crown.	Review on regular basis and regarding retention context.	M	C2
94	Cider gum (<i>Eucalyptus gunnii</i>)	E/M	F	11.00	1.75	5.00	6.00	3.50	4.00	1	548	6.57	A young specimen supporting pronounced imbalance to the east. Growth potential for future is immense but has already resulted in substantial disturbance to surrounding ground surfaces.	Review regarding retention context.	M	C2
95	Cider gum (<i>Eucalyptus gunnii</i>)	S/M	P	10.00	1.00	3.00	3.00	2.00	2.00	1	293	3.51	Typically unbalanced to north-east. Appears to be subject to notable decline in deterioration. Species potential for continued growth would be immense raising concerns in respect of sustainable surfaces.	Review regarding retention context.	S	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
96	Cider gum (<i>Eucalyptus gunnii</i>)	S/M	F	6.00	1.75	2.00	3.00	2.50	2.00	1	376	4.51	A typically upright but compromised by secondary fork arising from near base. Young and vigorous, asserting immense potential for continued growth over time.	Review regarding retention context.	L	B2
97	Mimosa (<i>Acacia dealbata</i>)	E/M	P	5.50	2.00	3.50	4.00	2.50	2.50	1	229	2.75	Heavily distorted and divided at 1.50 m. Brittle nature in conjunction with distorted form raises concern regarding mechanical integrity and sustainability.	Consider replacement.	S	C2
98	Norway Maple (<i>Acer platanoides</i>)	S/M	G/F	6.50	2.00	2.50	2.50	2.50	2.50	1	229	2.75	Young and vigorous with immense potential for continued growth over time. Proximity to car park edge. Raises concern regarding potential for distortion of ground surfaces.		L	B2
99	Norway Maple (<i>Acer platanoides</i>)	S/M	G	7.00	2.25	3.00	3.00	3.00	3.00	1	248	2.98	Young and vigorous with immense potential for continued growth over time. Proximity to car park edge. Raises concern regarding potential for ground disturbance.	Review regarding retention context.	L	B2
100	Norway Maple (<i>Acer platanoides</i>)	S/M	F	5.50	2.00	2.50	2.50	2.50	2.50	2	261	3.13	Heavily divided from ground level with southernmost stem compromised by prior decapitation and development of multi-stem stature. Remains young and vigorous presents limited threat at present.	Review regarding retention context.	M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
106	Deodar Cedar (<i>Cedrus deodara</i>)	E/M	F	12.00	1.50	3.00	4.00	3.00	3.00	2	462	5.54	Slightly distorted and compromised by twin stemmed formation. Heavy Ivy cover at lower levels prevents detailed review at present. General vigour and vitality appear good. Tree arises from a raised and disturbed earth and embankment. Trees potential for growth in future combined with the symmetry of existing local topography raises concerns regarding the potential retention of this tree, notwithstanding its good condition.	Review regarding retention context.	M	C2
110	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F/P	5.00	0.00	2.50	2.50	2.50	2.50	5	175	2.10	Young and vigorous though compromised by multi-stem stature. Growth potential for this tree makes it unsustainable in this position.	Consider early removal.	N/A	U
110a	Elder (<i>Sambucus nigra</i>)	E/M	F/P	3.50	0.00	2.50	2.50	2.50	2.50	5	175	2.10	A naturally arising weed species associated with retaining wall scenario. Is unsuitable for retention.	Remove.	N/A	U
111	Norway Maple (<i>Acer platanoides</i>)	E/M	P	11.00	1.75	4.50	3.00	2.50	2.50	3	417	5.00	Multi-stemmed and distorted having been severely decapitated. A once larger tree has been substantially decapitated. Upper crown comprises pole-wood and much of southern canopy has been crudely cut back to facilitate clearance of adjoining lamp standard. Position appears untenable.		S	C2
112	Norway Maple (<i>Acer platanoides</i>)	E/M	P	9.00	2.00	2.00	2.00	2.00	4.00	1	293	3.51	Young and still vigorous but crippled by crude decapitation as result of position beneath streetlight. Position appears untenable.		S	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
113	Norway Maple (<i>Acer platanoides</i>)	E/M	F	9.00	2.50	3.00	4.00	4.00	4.00	1	404	4.85	Slightly one-sided and distorted, typically unbalanced to east. General vigour and vitality is good. Tree has undergone prior pruning particularly at lower levels to maintain clearance over footpath.	Review regard retention context.	L	B2
114	Lime (<i>Tilia europea</i>)	E/M	F	9.00	2.50	4.00	4.50	3.50	3.00	1	283	3.40	Suppressed and slightly distorted having developed imbalance to east because of proximity to Birch group. Tree is maintaining good general vigour and vitality and asserts immense potential for continued growth over time.		L	B2
115	Norway Maple (<i>Acer platanoides</i>)	E/M	G	9.00	2.50	5.50	5.00	4.00	3.50	1	290	3.48	Crown supports minor amounts of deadwood. Vigour and vitality whilst remaining reasonable is slightly reduced with twiggy decline noted about central crown apex and at various points throughout crown periphery.	Clean-out. Review annually.	M	C2
116	Norway Maple (<i>Acer platanoides</i>)	E/M	G/F	8.50	2.00	4.00	5.00	5.00	4.00	1	366	4.39	Slightly distorted with primary stem supporting notable imbalance to north-east. General vigour and vitality is good. Crown has undergone substantial cutting back about lower eastern side. General vigour and vitality remains good though primary stem and lower crown is now subject to Ivy development.	Clean-out and cut Ivy.	L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
117	Ash (<i>Fraxinus excelsior</i>)	E/M	P	10.00	2.50	4.00	2.50	4.00	4.00	1	350	4.20	Wholly one-sided having been severely pruned on eastern side in respect of encroachment on streetlight. Tree's position and context is considered untenable. Lower stem below fork at 1.75 m is subject to chronic splitting.	Remove.	N/A	U
118	Norway Maple (<i>Acer platanoides</i>)	E/M	P	10.00	2.50	5.00	5.50	5.00	5.00	1	427	5.12	Central and western canopy is subject to chronic decline and dieback, the cause of which is not currently apparent. Tree correction leaving tree is now heavily one-sided and unbalanced towards roadway. Tree appears to offer no reasonable sustainability.	Remove.	N/A	U
119	Lime (<i>Tilia europea</i>)	S/M	G/F	7.50	2.00	4.00	3.50	3.50	3.00	1	363	4.35	Young and vigorous with immense potential for continued growth over time. Ivy is becoming notable on principal stem.	Cut Ivy and review regularly.	L	B2
120	Ash (<i>Fraxinus excelsior</i>)	E/M	F/P	8.00	2.00	4.50	4.50	4.00	4.00	1	363	4.35	Tree appears to be entering into a state of decline with deadwood development and canopy decline throughout crown form. Tree appears to offer minimal sustainability.	Review during 2022 regarding suitability for ongoing retention.	S	C2
121	Purple Leaved Sycamore (<i>Acer pseudoplatanus purpureum</i>)	S/M	F	7.00	2.25	2.50	2.50	2.00	2.50	1	261	3.13	Young and still vigorous. Ivy cover is smothering much of central crown.	Cut Ivy and re-evaluate.	L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
122	Purple Leaved Sycamore (<i>Acer pseudoplatanus purpureum</i>)	S/M	F/P	7.00	2.25	2.00	2.50	3.00	2.50	1	248	2.98	Severely cut back in past because of position encroaching upon streetlight. Position is considered untenable and contextually of suitable. Ivy cover is smothering much of central crown.	Review regard retention context.	S	C2
RS1 + RS2	Rowan (<i>Sorbus aucuparia</i>)	S/M	F	3.00	1.75	0.50	0.50	0.50	0.50	1	64	0.76	Two recently installed specimens arising from roadside verge. Most appear to be of reasonable vigour and vitality at present however, the small stature raises the consideration, the ease with which they can be replaced if required.		L	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
TL1	Silver Birch Group (<i>Betula pendula</i>)	E/M	F/P	5.00-7.00	1.00-2.00	Spread Contiguous group-form				1	191	2.29	A broadly continuous alignment of trees apparently planted in zigzag fashion with most stems existing within 1.50 – 2.00 m of each other. The tree alignment appears to be setback from the existing site boundary railing by between 0.50 and 1.25 m. It appears that the trees were planted in conjunction with the Norway Maples with the intention of creating a shelter belt/screen. At present, trees must be regarded as being in highly variable condition ranging from a small number of particularly small, suppressed and distorted specimens through some specimens that have sustained chronic mechanical failure but also including a substantial number of specimens that can considered to be of good form, vigour and sustainability. Note is made that within the middle section, there appears to be a deficit of trees suggesting possible vandal damage/removal. In this area, the adjoining shrubbery remains though this tends to be substantially diminished as result of suppression by the larger Norway maple No.118.	A substantial number of the Birch would be regarded as suitable for retention however in equal proportion of such poor quality as to suggest that consideration should be given to their removal/replacement.	M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
SG1	Griselinia (<i>Griselinia littoralis</i>) Cotoneaster (<i>Cotoneaster Sp</i>) Holly (<i>Ilex aquifolium</i>) Hazel (<i>Corylus avellana</i>) Viburnam (<i>Viburnam Sp.</i>)	E/M	F	2.00-4.00	0.00	Spread Contiguous				m/s	111	1.34	Presumed to have been planted in block fashion intending to create a lower-level thicket like cover beneath the canopy is of the Norway maples, lime and Birch located the same general area. In many instances regarding species such as Viburnam and Holly, a generally continuous thicket like development remains however continuity within the broader thicket is sporadic because of disparate growth rates and suppression. Retention is likely to require additional replanting.		M	C2
SG2	Cherry Laurel (<i>Prunus laurocerasus</i>)	M	F	4.00-5.00	0.00	Spread Contiguous				m/s	255	3.06	Partially managed hedge defining car park edge. Lower levels of been clipped to maintain access. However higher levels have developed notable overhang to both north and south. Vigour and vitality are good and species is known to be tolerant of severe pruning if required for rejuvenation. Management in future.	Review regarding retention context.	M	C2