

Sandyford Road SHD Arboricultural Report
Trees at Proposed Site at
'Karuna' and 'Glenina'
Sandyford Road
Sandyford
Dublin 18
April 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) Sandyford Road Tree Constraints Plan	Tree Constraints Plan A plan depicting the predevelopment location, size, calculated constraints, and simplified tree quality category system
2) Sandyford Road 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) Sandyford Road 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 site area and its tree population are substantially domiciliary in nature, with the attendant tree and hedge populations comprising two adjoining garden contexts. Much of the recorded vegetation relates specifically to the current context and will not necessarily transfer to a new context. This would apply particularly to path and drive edge shrubbery and garden dividing hedges. Equally, a large proportion of the vegetation is relatively small, offering little visual significance beyond its immediate environs, as well as being relatively easy to replace with new stock.
- 1.2 The site is visually dominated by three outgrown alignments of cypress and two eucalypts. The Cypress alignments appear to be ill-advised attempts at creating boundary hedges, that have through a lack of management, attained tree-like proportions. These alignments are beyond any size containment management. Additionally, it is noted that the northern alignment (Tree line 7) has suffered irreparable damage because of work underway on the adjoining site to the north. Accordingly, these trees are considered to offer minimal sustainability.
- 1.3 The two Eucalypts have been found to be in reasonable health and may offer notable sustainability within their current “open” context. However, the species encountered (Blue Gum) develops into a particularly large tree that cannot be regarded as suitable for use or retention in any but the largest of open spaces. Accordingly, the species offered limited sustainability and/or suitability for retention within a developed context.
- 1.4 The review of the proposed development which includes apartments above basement car parking, together with its necessary vehicle and pedestrian access, and drainage/services infrastructure, consumes much of the site area. As sustainable tree retention is based on the preservation of existing ground conditions near trees, we note that this cannot be achieved over much of the site. Accordingly, tree retention is not a realistic option.
- 1.5 The lack of sustainability together with the inability to retain trees within the development zone, then the future of the site’s Arboricultural values will be dependant upon new planting works.

2 Introduction

2.1 This report was commissioned by-
Midsal Homes Limited,
C/O Horan Rainsford Architects
36 Main Street
Blackrock
Dublin A94 E8H1

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 composite site combines two existing dwelling sites located to the east of the existing Sandyford Road and circa 400 metres south of the M 50 motorway. Both sites support existing dwellings and ancillary buildings, and broadly mature gardens, including elements of shrubbery, tree cover and large tree lines and hedges. The site is defined to the west by a wall separating it from the Sandyford Road, and to the east from the neighbouring back gardens. The northern, southern and midline boundaries comprise tree lines with varying degrees of fencing.
- 3.2 The site area supports a gentle slope, descending from its highest point (circa 19.00m) at the south-western corner, down to the north-western corner (circa 12.63m). At the time of review, the site area showed no evidence of drainage issues.

4 Pre-Development Arboricultural Scenario

- 4.1 A graphic representation of tree, shrub and hedge sizes, their constraints and a colour coded representation of the qualitative review is provided in the “constraints plan” drawing “Sandyford Road Tree Constraints Plan” that accompanies this report.
- 4.2 The site area combines two domiciliary gardens that at first sight appear well managed. Lawns, shrubbery, and lower hedges are well-manicured, suggesting ongoing management. Some of the larger belts of trees show evidence of historic management, including decapitation but overall, they provide for a broadly mature aspect.
- 4.3 The site is dominated by several large trees, including two Eucalyptus and three significant alignments of evergreens. The evergreen alignments furnish the northern boundary and they separate the two domiciliary sites. Additionally, there are multiple alignments on and about the southern site boundary.
- 4.4 Each of the three tree lines has been previously decapitated, and their crowns support substantial crown regeneration since that cutting. Some trees show signs of mechanical damage and failure considered typical for the species in later life and raise concerns regarding sustainability. Such concerns are exacerbated in light of generally known issues relating to Lawson and Leyland Cypress Alignments regarding an inability to apply tangible management over time and their ability to outgrow their scenarios. Therefore, each line of trees encountered is mature, large but beyond any reasonable potential for reducing that size. Considering the apparent onset of mechanical failure, then that potential lifespan is considered minimal, and further deterioration must be expected over forthcoming years.
- 4.5 In respect of these conifers, it is appreciated that the southern boundary is adjoined by an additional tree line (tree line 3) that arises from a position south of the apparent site boundary line. These particular trees appear not to have been decapitated and might, in many respects, be regarded as in better condition than Tree Lines 1, 2, 4, 7 and 8. However, physiological constraints and their proximity to Tree Lines 1 and 2, has

resulted in chronic suppression of their northern canopy. While concern exist regarding both appearance and sustainability of such trees if exposed, it is noted that these trees are currently proposed for removal under Reg Ref D21A/0595 which is, at the time of writing, under appeal to An Bord Pleanala (ABP Ref PI06D 312990)

4.6 Within the garden area, we find two particularly significant Eucalyptus. These trees are in broadly good condition; however, both have been interfered with in the past and apparently decapitated. Crown renewal is extensive, and both trees remain vigorous with substantial potential for continued growth over time.

4.7 Elsewhere within the garden, we find many typically smaller feature trees. Most such specimens are small and offer little visual amenity beyond the garden environs. Many of these trees remain in good condition and might warrant retention; however, their small stature would allow for ready replacement with new stock.

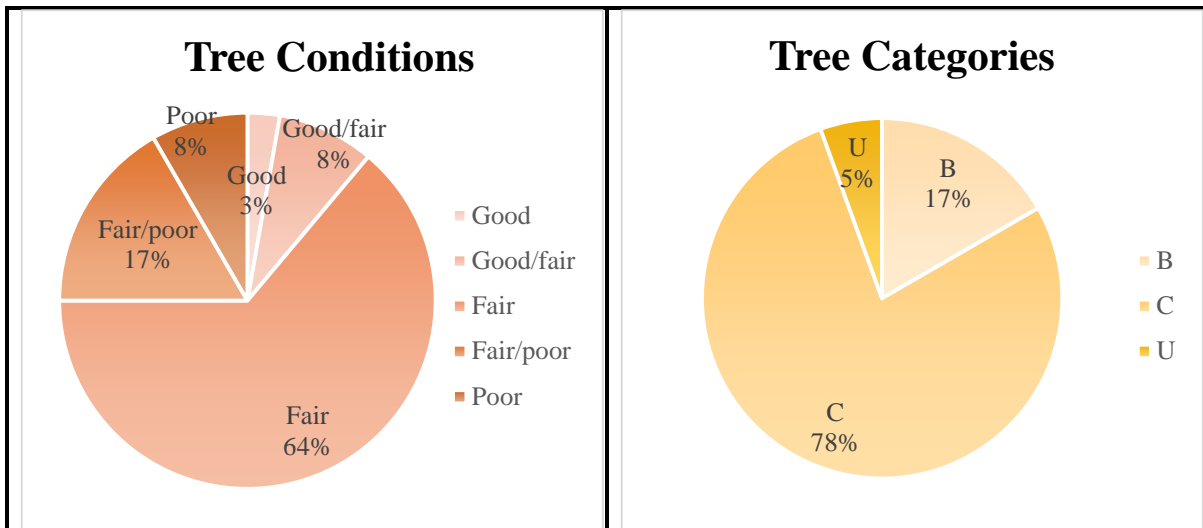


Fig 1

Fig 2

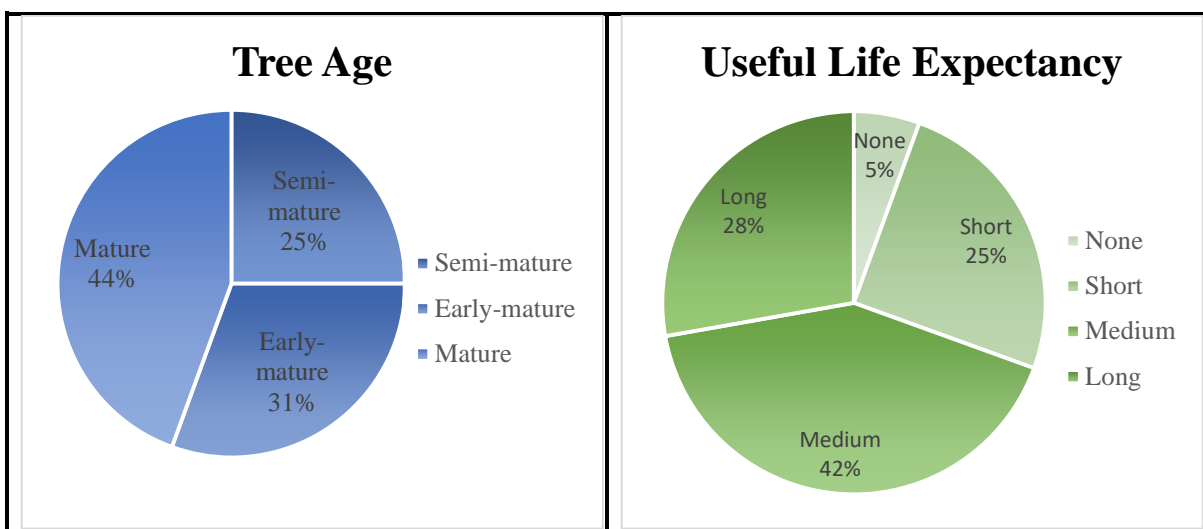


Fig 3

Fig 4

- 4.8 The garden also supports extensive shrubbery and hedging. Such material is contextually related to the current site and may not prove suitable for retention into a new context. Such material should be regarded as beyond any reasonable intervention or management and would require retention as they are as opposed to in any other managed form.
- 4.9 In an attempt to create a graphic representation of the various tree qualities, the graphs above have been created. Unfortunately, this site supports multiple tree groups, each consisting of many individuals. In this respect, the graphs are based on “described items” as opposed to individual trees and therefore many such items include multiple tree specimens. As can be seen from the graphs above, the populations are dominated by “Fair” quality, category “C” trees, with only comparatively small proportions of better-quality trees. This relates to the fact that the site is dominated by alignments of Cypress. The analysis may suggest that the do-nothing scenario offers limited sustainability, when the change of context associated with the proposed development works is considered, then sustainability diminishes greatly.

5 Planning Scenario in Respect of Tree

- 5.1 The Dun Laoghaire Rathdown County Development Plan 2022-28, makes multiple references to trees, woodlands and hedges. Such references occur under multiple headings and serve to highlight the importance of trees, woodlands and hedges to the environment by way of environmental moderation for example regarding carbon sequestration, their ecological importance in respect of the provision of habitats and biodiversity as well as importance with regard to the visual landscape and heritage.
- 5.2 Chapter 3 of the development plan, “Climate Action”, notes, in table 3.1, the important role played by open space, parks and recreation and in reference to this, and under section 3.4.4, “Urban Greening”, policy objective CA18 promotes the planting of trees and hedges as a crucial part of urban greening.
- 5.3 Chapter 9 of the development plan, “Open Space and Recreation”, makes specific note of trees woodlands and forestry under section 9.3.1.3. In respect of this, objective OSR7, “Trees Woodland and Forestry”, acknowledges the importance of trees and notes the ongoing update to the 2011-15 tree strategy. It also affirms that the map-based symbols relating to specific objectives for tree and woodland protection and retention have been reviewed and updated within the 2022-28 development plan mapping. The development plan also notes the value of and intent to make “tree preservation Orders” where suitable.
- 5.4 Understandably, Chapter 8, “Green Infrastructure and Biodiversity” makes multiple references to trees, woodlands, and hedgerows. Several specific objectives are also listed including GIB15 recreational access routes to advocate the restoration of native woodlands. It also provides an acknowledgement of tree and woodland value in respect of biodiversity. GIB18, acknowledges the protection of Natural Heritage and the

environment must include the protection of existing trees, woodlands, and hedges. GIB21 reasserts the protection provided by existing statutory protection such as pHNAs, SACs and SPA's. GIB22 recognises that many areas of trees woodland and hedgerow do not gain protection from the above statutory protections but should nonetheless, be considered as important and be provided protection through consideration within the planning scheme. GIB23 advocates for countywide ecological networks. This expands on the ecological value of trees woodlands and hedges under article 10 of the habitats directive. GIB29 expands on the importance of trees woodlands and hedges and expands on the value of including the restoration of trees woodlands and hedges to the environment by way of carbon sequestration.

- 5.5 In section 12, “Development Management” which provides the most direct and poignant information regarding trees affected by development works. Section 12.8.11 “Existing Trees and Hedgerows” states that a new development will be designed, as far as practically possible, to retain trees and woodlands, particularly those represented on the development plan by way of the objective tree symbol. It also outlines the requirement for Arboricultural reporting and advice as part of any application. It goes on to state that commensurate planting or replacement planting will be required where development results in tree loss. Sections 12.3.10.2 and 12.3.10.8 both elaborate on the importance of design and retention of hedges within developments. Section 12.7.3 elaborates on the retention where possible of existing site features. Such features could readily include trees and hedges.
- 5.6 In respect of this particular development, we note that the 2022-28 Development Plan map No.5 indicates no tree symbols representing a specific objectives to protect and preserve trees and woodlands within the vicinity of the development site. Equally, the site area supports no trees that are the subject of a Tree Preservation Order.

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

7.1 Retaining trees takes up space. There is a big difference between physically preserving a tree and ensuring its future survival. Sustainable tree retention often depends on the extent and nature of construction protection.

7.2 Like all living things, trees are highly dependent on their environment in which they exist. A tree's continuity in supplies of water and nutrients from the soil. Any long-term

change in ground conditions can easily affect a tree's metabolism, health, and sustainability.

- 7.3 Particularly, development and construction activities can easily damage the soil environment. Removing, disturbing or denaturing soil can irreparably damage tree roots and can render the soil incapable of supporting plant root function. Most modern construction requires large plants, equipment, and vehicles. Such machinery causes soil profile destruction and compaction that denatures the soil.
- 7.4 Where the above issues occur within the minimum "root protection area" as defined by "BS5837-2012", the tree's sustainability and safety may be compromised.
- 7.5 Sustainable tree retention must accept changing contexts and increased management in the future. Where rates of occupation and use increase, then any retained trees have a potential to cause harm or damage. This issue may be exacerbated where shelter-loss and exposure occur regarding the retention of individual trees.
- 7.6 Retained trees should be considered in respect of shadow-cast, light admission, and view-blocking. Wind patterns can affect leaf shedding, causing drifts and accumulations creating management issues around drains and gullies, or the creation of slippery surfaces.

8 Nature of Project Works

- 8.1 The proposed development has been defined as:
 - 8.1.1 Midsal Homes Limited intend to apply to An Bord Pleanála for permission for a strategic housing development at this site of 0.829 Ha approx. comprised of the properties known as 'Karuna' and 'Glenina' at Sandyford Road, Dublin 18, D18 C2H6 and D18 X5T7 respectively. The site is generally bound by a residential development known as 'Coolkill' to the east, a detached dwelling known as 'The Pastures' to the south, Sandyford Road (R117) to the west and a residential development (which is under construction) known as 'Cul Cuille' to the north. Works are also proposed at Sandyford Road, which include the removal of a wall and the creation of a new pedestrian connection to the existing cul-de-sac adjacent to 'Cul Cuille' to the north (0.016 Ha approx.) and at the footpath at Sandyford Road to provide a new multi-modal entrance, pedestrian/cycle entrances and landscaping (0.015 Ha approx.). In addition, works are proposed for water services (0.05 Ha approx.): water supply to be sourced by way of a new connection to the existing 250 mm diameter water main across from the proposed main entrance at Sandyford Road; surface water drainage network to discharge to the existing 525 mm diameter surface water sewer located to the north of the site at Sandyford Road via a new 150 mm surface water sewer; and foul water to discharge to the 225 mm diameter foul sewer under construction at Sandyford Road. An additional 0.01 ha has been assigned for Dún Laoghaire-Rathdown County Council to undertake road works to upgrade Sandyford Road. The residential development site,

pedestrian connection, entrance works, water services and road works area will provide a total application site area of 0.92 Ha.

The proposed development principally consists of the demolition of the existing dwelling and ancillary buildings known as 'Glenina', the existing dwelling known as 'Karuna' and the existing boundary wall fronting Sandyford Road, and the construction of a residential development principally comprising 137 No. apartments (32 No. 1-bed units, 78 No. 2-bed units and 27 No. 3-bed units) in 4 No. blocks ranging in height from part-1 No. storey to part 6 No. storeys with a part-basement/part-undercroft level (at Blocks B, C and D).

The proposed development which has a gross floor space of 13,144 sq m (over a part basement/part-undercroft level measuring 4,508 sq m, principally providing car and cycle parking and plant) also includes: internal communal amenities and support facilities (404 sq m); 137 No. car parking spaces, which include 127 No. spaces and 6 No. GoCar spaces located at basement level (accessed beneath Block B) and 4 No. set down spaces located at surface level adjacent to Block A; motorcycle parking spaces; cycle parking spaces; bin store; substation; switch room; meter rooms; plant rooms; new telecommunications infrastructure at rooftop level including microwave link dishes concealed in shrouds; hard and soft landscaping, including communal amenity space; private amenity space with balconies facing north, south, east and west; boundary treatments; and all associated works above and below ground.

- 8.2 Considering the scope and scale of the proposed development, it is considered likely that most of the issues dealt with at "Construction Works and their Effects on Trees" above will apply at various points and particularly regarding-
- 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 that makes a tree unsuitable for retention.

9 Development Related Issues and Arboricultural Concerns

- 9.1 The greatest issues affecting trees on this development is the overall consumption of space.
- 9.2 Contextual issues are pertinent to this site in that a substantial proportion of the larger, visually significant vegetation offers little sustainability and would not be regarded as being suitable for retention within the context of a new development. This relates most particularly to the site's large alignments of Cypress.

9.3 Overall, the sites existing tree population will be removed and therefore the future Arboricultural potential of the site will be wholly reliant on new and replacement planting.

10 Design Iterations and Arboricultural Considerations

10.1 Much of this report relates to clause 4.4.2.1 of BS5837-2012 in that its findings relate to a predefined concept that was issued for review. This report therefore assesses the Arboricultural implications and impacts of the proposals of the site's tree population.

10.2 The earlier provision of a tree survey served to identify tree constraints on the site, as well as the fact that a large proportion of the sites tree population offered minimal sustainability or suitability for retention within the developed context. For this reason, it was decided to effectively clear the site, make efficient use of the available space and to include replacement planting as part of the development proposal.

11 Identification of Development Impacts to Trees

11.1 The expected tree impacts have been represented graphically on the tree impacts drawing "**Sandyford Road 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, hedges and shrubbery denoted with "Broken Pink" crown outlines are to be removed, and those denoted with "Continuous Green" crown outlines will remain and be protected.

11.3 Detail of the development proposals were gained from drawings provided by-

- Horan Rainsford Architects – Architectural Design and Site Layout
- Torque Consulting Engineers – Drainage and Engineering information overlaid on Masterplan
- Murphy Sheehan Landscape Architects – 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 "Sandyford Road 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 survey review area supports a total of 27no. individually described trees and 14 tree groups/hedge that comprise multiple specimens. For the purposes of this report, the 27 trees and 14 groups will be regarded as 41no. items that have been categorised as:

- No category "A" trees or groups
- 6no, category "B" trees or groups
- 33no. category "C" trees or groups
- 2no. category "U" trees or groups

12.3 Normally, all category "U" items (Tree Line 2 and tree line 8) identified in the survey would be removed. Typically, these should be removed regardless of development works.

12.4 Of the site's category "good" quality "B" trees, the development works require the removal of nos. 315, 318, 366, 368, Tree Line 3 and Tree Line 5.

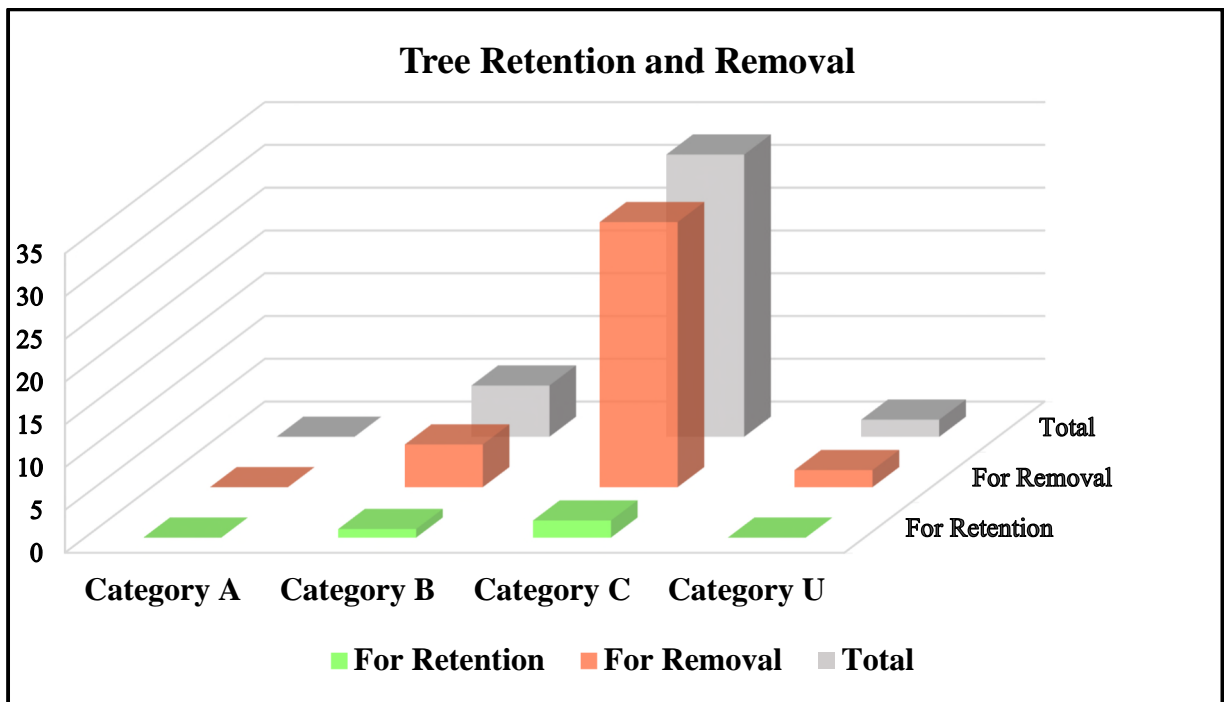


Fig 5 Graphic Representation of Tree Loss/Retention Scenario

- 12.5 Of the site's category "poor" quality "C" trees, the development works appears to require the removal of nos. A, B, 306, 307, 308, 309, 316, 317, 318a, 318b, 319, 320, 321, 322, 323, 324, 362, 363, 364, 365, 367, Tree Line 1, Tree Line 4, Tree Line 6, Tree Line 7, Tree Line 9, Shrub Group 1, Shrub Group 2, Shrub Group 3, Shrub Group 4, Shrub Group 5 and Hedge 1
- 12.6 The tree loss breakdown for the proposed developemnt will be-
- 6 Category "B" items
 - 32 category "C" items
 - 2 category "U" items
- 12.7 Total development related tree loss - 40 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 "Sandyford Road 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 must be updated with figures and dimensions, to create a "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, "Sandyford Road 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 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 "Sandyford Road 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 unavoidable works 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 "Tree Constraints Plan" 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 "Sandyford Road 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 "Sandyford Road 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 (none on site), 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 The original survey was carried out in March and April of 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 in accordance with BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations. It 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. The original survey was carried out during the late winter/early spring periods. 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
A	Cordyline (<i>Cordyline australis</i>)	M	F	3.00	0.50	1.00	1.00	1.00	1.00	3	430	5.16	Small and squat comprising typical drive side ornamentation.		M	C2
B	Cordyline (<i>Cordyline australis</i>)	M	F	3.00	0.50	1.50	1.25	0.50	0.50	1	379	4.55	Small and squat comprising typical drive side ornamentation.		M	C2
304	Lime (<i>Tilia europea</i>)	S/M	F	5.00	0.00	1.50	1.50	1.50	1.50	1	0.11	1.32	A young tree, recently installed in roadside position. Small stature make tree readily replaceable, hence “C” categorisation.		L	C2
305	Hornbeam (<i>Carpinus betulus</i>)	S/M	F	5.00	0.00	1.50	1.50	1.50	1.50	1	0.11	1.32	A young tree, recently installed in roadside position. Small stature make tree readily replaceable, hence “C” categorisation.		L	C2
306	Hornbeam (<i>Carpinus betulus</i>)	S/M	F	5.00	0.00	2.00	2.00	2.00	2.00	1	0.18	2.16	Young and vigorous but a relatively recent installation. Small stature make tree readily replaceable, hence “C” categorisation.		L	C2
307	Italian Alder (<i>Alnus cordata</i>)	S	F	2.20	1.25	0.50	0.50	0.50	0.50	1	0.06	0.72	A young tree, recently installed in roadside position. Small stature make tree readily replaceable, hence “C” categorisation.		L	C2
308	Mimosa (<i>Acacia dealbata</i>)	E/M	G/F	7.00	1.50	4.00	5.50	3.50	4.00	2	376	4.51	Two adjoining stems combined to create a singular crown form. Crown is suppressed and typically unbalanced to the north. Lower northern crown has already suffered substantial mechanical failure of a type considered typical for species brittle nature. Remaining tree remains vigorous. Suitability of retention will be context dependent and may be limited by expectation of further damage.		M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
309	Lawson Cypress (<i>Chamaecyparis lawsoniana-weeping</i>)	S/M	F	5.00	0.00	2.00	3.00	3.50	1.50	1	229	2.75	Heavily suppressed and unbalanced to the southeast. Crown appears to have been previously decapitated. Tree offers limited sustainability.		M	C2
315	Jacquemont's Birch (<i>Betula jacquemontii</i>)	S/M	G	6.00	1.75	3.50	3.50	3.50	3.50	1	239	2.86	A close-knit group of 3 stems combining to create a singular crown form. General vigour and vitality appear excellent at this time.	Review regularly.	L	B2
316	Chusan Palm (<i>Trachycarpus fortunei</i>)	E/M	F/P	5.00	3.50	0.50	0.50	0.50	0.50	1	229	2.75	A poor-quality specimen with limited poor-quality foliage retained at higher levels only.		S	C2
317	Italian Cypress (<i>Cupressus sempervirens</i>)	E/M	P	5.50	0.50	1.50	1.50	1.00	1.00	1	388	4.66	Once larger tree has suffered substantial loss of southern canopy with minor lower crown damage to retained northern stem. Is of poor quality, disfigured and offers little sustainability.		S	C2
318	Blue Gum (<i>Eucalyptus globulus</i>)	M	F	15.00	1.50	8.00	6.00	5.00	6.00	1	812	9.74	A relatively young and still vigorous specimen. Central crown evidence suggests early life decapitation and crown rejuvenation. Lower south-western crown has suffered localised storm damage. General vigour and vitality remain good. Ivy development is notable to 4.50 m.	Cut Ivy and review retention context.	L	B2
318 a	Cordyline (<i>Cordyline australis</i>)	M	F	3.00	0.50	1.25	1.25	1.25	1.25	1	398	4.77	Young and still vigorous but of a stature that allow for ready replacement.		M	C2
318 b	Italian Cypress (<i>Cupressus sempervirens</i>)	S/M	F	4.50	0.00	0.30	0.30	0.30	0.30	1	175	2.10	Young and vigorous comprising typical element of garden planting. Small stature would allow for ready replacement.		M	C2
319 - 321	Chusan Palm (<i>Trachycarpus fortunei</i>)	S/M	F	2.50	0.00	0.75	0.75	0.75	0.75	1	271	3.25	Young and still vigorous. Small stature would allow for ready replacement.		L	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
322 - 324	Dwarf Thuja (<i>Thuja</i> "Brabant")	E/M	F	3.50	0.00	0.50	0.50	0.50	0.50	1	175	2.10	Young and broadly vigorous though of a size that would allow for ready replacement if required.		L	C2
362	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	F/P	7.00	0.00	2.00	1.00	4.50	2.25	1	267	3.21	Part of a prior hedge. Has been clipped at lower levels and decapitated at circa 4.00 m resulting in multi-stemmed regrowth. Tree remains vigorous and that current small stature presents limited threat.	Review regarding retention context.	M	C2
363	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	F/P	7.00	0.00	2.25	3.00	1.50	1.00	5	366	4.39	Part of a prior hedge. Has been clipped at lower levels and decapitated at circa 4.00 m resulting in multi-stemmed regrowth. Tree remains vigorous and that current small stature presents limited threat.		M	C2
364	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	F/P	7.00	0.00	2.00	4.00	2.00	2.50	3	452	5.42	Multi-stemmed from ground level. Crown is affected by developing Ivy encroachment.		S	C2
365	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M		6.00	0.00	2.00	2.50	3.50	2.00	3	430	5.16	An unkempt and distorted specimen having received notable cutting at lower levels as well as decapitation. Central crown area is enveloped in Ivy cover with central crown effectively missing since decapitation. Is of particularly poor-quality specimen.		S	C2
366	Blue Gum (<i>Eucalyptus globulus</i>)	M	G/F	23.00	2.50	5.50	5.50	5.00	5.50	1	875	10.50	A large and visually imposing specimen. Tree has been previously decapitated at circa 13.00 m in past though substantial crown renewal has superseded this level. General vigour and vitality appear good.	Review regarding retention context.	L	B2
367	Western Red Cedar (<i>Thuja plicata</i>)	S/M	F	4.50	0.00	2.50	2.00	1.00	2.00	1	175	2.10	A small shrubby specimen adjoining existing drive side. Has been cut on lower southern side to maintain clear access. Growth potential remains immense.	Review regarding retention context.	M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
368	Mimosa (<i>Acacia dealbata</i>)	E/M	F	8.00	1.25	3.00	4.00	4.50	5.00	1	337	4.05	Entire tree is typically unbalanced to south-west. Crown apex and mid crown have already sustained species typical mechanical failure attributable to particularly brittle nature. Tree remains vigorous but is likely to suffer mechanical issues and ongoing impromptu failure.	Review with regard to retention context.	M	B2

Tree Lines, Groups and Hedges

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
TL1	325-345 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	F/P	12.00	0.00	Spread (asymmetric) 5.00m (North 4m, south 1m)	1	430	5.16	A continuous alignment of trees effectively furnishing the southern edge of an existing loan scenario. Trees appear to be of reasonable vigour and vitality but are mechanically poor, having been decapitated at circa 4.00 m in the past. Crown structure is comprised regenerative poll would with many specimens suffering decay at original cutting point that is undermining higher crown forms and leaving them subject to mechanical failure. Crown systems are heavily one-sided with canopy extent limited to north because of suppression to rear by adjoining collection of trees including the Cyprus and Spruce. Trees are of dubious sustainability, would not tolerate isolation or exposure and will be subject to ongoing deterioration regardless of development.		S	C2
TL2	346-358, 359, 360 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>) Sitka Spruce (<i>Picea sitchensis</i>)	E/M	P	12.00	2.00	Spread 2.00-3.00m	1	382	4.58	An intermediate alignment of trees located circa 1.50 m south of Tree Line 1. In many respects, it mimics Tree Line 1 however being suppressed to both the north and south, trees have not developed one-sided canopy but instead, canopy is limited to higher levels only. Similar distortions through stems and associated decay are noted in all trees with some specimens now existing only in stump form having broken at cutting point in the past. These trees are of particularly poor quality would not tolerate any degree of isolation and offer little amenity value because of their diminished and restricted high crown forms. At the eastern end of the line there are 2 freestanding specimens (359 and 360) assumed to be the only remnants of Tree Line 2 as it originally continued to the east. In this respect, 2 suppressed spruce remain. These trees would not be suitable for retention in isolation.		N/A	U

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
TL3	Tree Line 3 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	F	16.00	0.00	Spread (asymmetric) 6.00-7.00 (North 2m- South 4.5m)	1	446	5.35	A continuous and apparently complete alignment of trees position circa 1.25 m south of the fenced boundary. Trees have not suffered early life intervention and or decapitation and appear to remain intact. Most specimens appear to be of good general health however, their proximity to and being affected by Tree Lines 1 and 2 has seen massive suppression of their northern face. Accordingly, the northern face of these trees supports little viable canopy what remains tend to be restricted to higher levels only. By comparison, there southern canopy appears to be intact and extending from ground level to apex.		L	B2
TL4	Tree Line 4 283-307 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>) Leyland Cypress (<i>Cupressocyparis leylandii</i>)	M	F	16.00	0.00	Spread 7.00-8.00m	1	462	5.54	A continuous alignment effectively creating a hedge like format. Individual trees have distorted forms, resulting from early life decapitation at circa 3.00 m. Extensive re-suckering and regrowth has occurred since this point with the majority of canopy now comprising regenerative pole wood. Trees remain vigorous but are mechanically compromised, there multi-stemmed and drawn up form is predisposing to higher rates of mechanical failure. Trees should be regarded as offering short-term or interim value only.		S	C2
TL5	Tree Line 5 Lawson Cypress (<i>Chamaecyparis lawsoniana</i> - Golden Form)	S/M	G/F	4.50	0.00	Spread 5.00-6.00m	1	239	2.86	A young and vigorous alignment of trees that have effectively coalesced to provide a broad hedge like structure. Comprising 4 dominant specimens, these trees remain young and vigorous. Sustainability will be dependent upon retention context as current growth form and size will limit ability to manage by pruning.		M	B2
TL6	Tree Line 6 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	2.50-6.00	0.00	Spread 2.25m	1	207	2.48	A partially managed hedge adjoining boundary wall. Lower level of hedge (2 m) has been clipped though hedge portions above this height overhang lower. Prior clipping has resulted in some elements of balding. Though trees have been harshly decapitated in past, some have rejuvenated with substantial crown regeneration above the original 2.50 m cotton level. Concerns exist regarding long term management and viability of such hedges.		S	C2

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
TL7	Tree Line 7 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	6.00-8.00	0.00	Spread 5.00	1	344	4.13	A close-knit and contiguous group of trees effectively creating a hedge along the northern and western roadside boundary. General vigour and vitality remain good however, all trees have been previously decapitated with crown forms above 4.0 m comprising regenerative pole wood. Trees are considered to be of dubious sustainability and do not offer any realistic potential for formative management.		M	C2
TL8	Tree Line 8 Leyland Cypress (<i>Cupressocyparis leylandii</i>)	M	P	15.00	0.00	Spread (asymmetric) 10-12.00m (North 4.00- South 7.00)	1	598	7.18	These trees have been substantially cut back on their northern side to facilitate ongoing works within the neighbouring site to the north. This created a scenario where the bulk of canopy is retained to the south of the tree crowns. In the past, the trees have been heavily decapitated at circa 4.00 m with much of their current higher crown comprising pole wood regeneration. Inspection reveals that some elements of this regeneration has already failed and illustrates the likelihood of mechanical issues in the future. Tree number 279 has been partially cut and the northern element of its root plate has been ground out. Excavations in respect of ongoing works for neighbouring site to north has seen excavation and root damage within 250 mm of stem of 267. This tree line cannot be regarded as being sustainable and would be unsuitable for retention if fragmented as required by prior damage and intervention.	Remove.	N/A	U

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
TL9	Tree Line 9 Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	S	F	3.00	0.00	Spread 2.00	1	0.15	1.80	An alignment of young trees. Small stature makes them readily replaceable, hence "C" grade categorisation.		L	C2
SG 1-2	Shrub Group 1, 2 Fuchsia	M	F	2.00	0.00	Spread Contiguous	m/s	95	1.15	Two masses dominated by shrubby fuchsia now invaded by both Bramble and Ivy.		M	C2
SG 3	Shrub Group 3 <i>Senecio Sp.</i>	M	F	1.50	0.00	Spread Contiguous	m/s	95	1.15	A large, sprawling shrubby mass		S	C2
SG 4	Shrub Group 4 Cryptomeria (<i>Cryptomeria japonica</i>) Cupressus Common Yew (<i>Taxus baccata</i>)	S/M	F	0.50-2.00	0.00	Spread Contiguous	m/s	127	1.53	A mixed group of clipped shrubbery associated with a patio area. Individual plants are of particularly small stature and would allow for ready replacement.		M	C2
SG 5	Shrub Group 5 <i>Elaeagnus</i>	M	F	4.00	0.00	Spread Contiguous	m/s	271	3.25	An untidy specimen previously affected by erection of mast.		S	C2
<p>General note for shrubbery.</p> <p>Throughout the garden, note is made of spurious elements of shrub planting and hedges. Such elements tend to be dispersed and are typically of small stature. Accordingly, their value with regard to retention is minimised by the ease with which they could be replaced or possibly, relocated.</p>													
H1	Hedge 1 Cherry Laurel (<i>Prunus laurocerasus</i>)	E/M	F	1.75	0.00	Spread 1.00m	m/s	0.40		Young and vigorous apparently clipped on regular basis. Context is particular to existing environment.		M	C2

