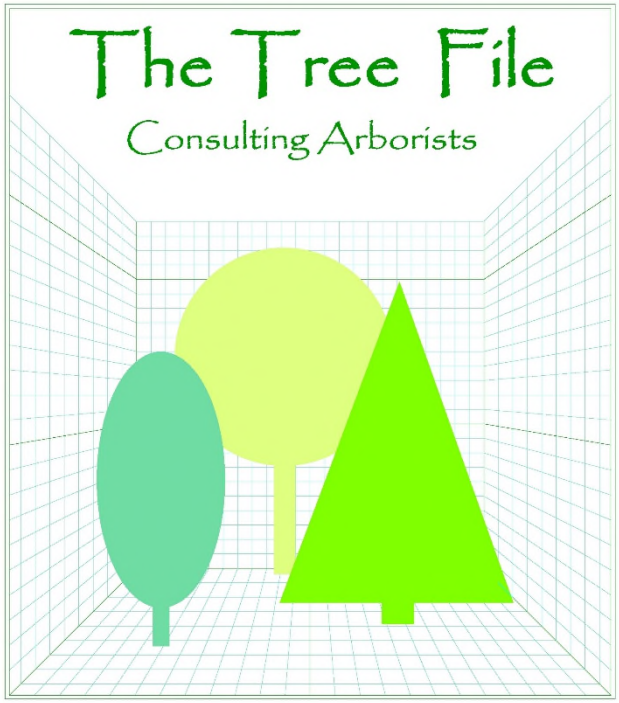

An Arboricultural Assessment of the Site of
Proposed Public Realm Works
Tallaght
Dublin 24

July 2020

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Contents

Associated Drawings

This report must be read in conjunction with the drawings noted below

	Drawing Title	Drawing Subject
1)	**Tallaght Tree Constraints Plan**	**Tree Constraints Plan** A plan depicting the predevelopment location, size, calculated constraints, and simplified tree quality category system
2)	**Tallaght Tree Impacts & protection Plan**	**Tree Impacts Plan** This plan graphically shows the effects of the proposed (and previously permitted) development works on the above tree population and depicts trees to be retained and removed as well as the extent of tree protection required to facilitate thier retention.

Introduction

This report was commissioned by-
Dermot Foley Landscape Architecture
Blackpitts,
The Liberties,
Dublin,
D08 DD56

For and on behalf of
South Dublin County Council

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

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 frameworks for such reports, then its composition, inclusions and recommendations have been followed as a general basis for such reporting.

Report Context

This report comprises an Arboricultural review of the proposed works. This includes an assessment of the sites existing tree population within its current context, as well as an assessment of their potential for sustainable retention in the post-development scenario and 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.

This assessment summarises the Arborists findings and recommendations, arrived at after reviewing the proposed project details as provided, 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 that 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

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 as 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.

The "Implication Assessment" element of the report builds on assumptions and estimates, particularly 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.

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.

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 in respect of sustainable tree retention.

Report Summary

The intent of the proposed project is to renew and replace an existing landscape in line with the works defined in "Project Works and Likely Impacts" below. Fundamentally, the works will require amendments to the existing landscape and its environment and will by its nature, include the removal and replacement of existing trees.

It is noted that the project includes substantial new tree planting. This, in conjunction with the fact that much of the existing tree population is young and of small stature means that much of the visual loss typically associated with tree removal will in fact be mitigated.

Within the existing context, some sustainability issues already exist. Many trees are considered to have the potential for growth that would outstrip their current locations, resulting in damage and disturbance of existing ground features and/or structures. Accordingly, there replacement within a new context could be regarded as being advantageous over the longer-term.

Site Description

The site area for the tree review is highly variable including existing hard landscapes adjoining car parks, roads, and paved areas as well as what are currently open, brownfield sites affected by prior activities and later demolition works.

Orientated on a north-south axis, we have a pedestrianised thoroughfare. This leads from the shopping centre towards the northern most site and includes a previously installed landscape and pedestrian surfaces between the county council offices and the adjoining car park to the east. These landscapes are heavily artificial, man-made and often constrained. In many instances, trees arise from limited soft reserves between areas of hardstanding or pavement. In some instances, the trees arise from within paved areas.

The northernmost part of the site is brownfield in aspect and at the time of review was under widespread and ongoing work. Only a small proportion of this zone now supports vegetation, much in the form of naturally redeveloping thicket in conjunction with some remnant of plantings relating to prior use. This area is heavily disturbed and irregular of surface, including remnants of roads and buildings as well as stockpiles of soil and rubble. Many of the plants arise from demolition rubble or what is the framework of the prior site usage and what is envisaged to have been landscaping pertaining thereto.

Pre-Development Arboricultural Scenario

The information below is based on a site/area tree survey, undertaken as outlined in "Appendix 2" to this report.

The northernmost area of the site is substantially "brownfield" in aspect including what appears to be the partially demolished remnant of an earlier use. In respect of this, there is

evidence of pre-existing underground infrastructure, hard surfaces, building footprints and substantial areas of dumped/stockpiled demolition rubble.

From upon and beside the rubble there are often areas of dense growth combining species that suggest deliberate installation in conjunction with natural regeneration. Some trees would appear to follow what appears to be a prior road network however, these comprise a small proportion of the overall population that is now typically dominated by species such as Goat Willow, Silver Birch and Buddleia that are developing naturally across the site area. Fortunately, much of the material arises from spoil heaps that cannot and would not be retained and equally, the trees that arise from apparently more level ground are associated with defunct, derelict, and partially removed road networks, road edges and footpaths. In respect of these prior structures, their effective removal and any remodelling of the ground would prevent the application of suitable tree protection measures and therefore it is considered likely that any development of this zone will by necessity disturb/destroy the trees existing there at present.

Considering the above, it is worth noting that all trees found are of small stature, the most being between 2 and 8 years of age. In this respect, and appreciating their arising from disturbed, contaminated, and variable ground conditions, there stature is such as to allow ready replacement with freely available nursery stock.

Combining the above issues then notwithstanding the fact that many individual plants are of good condition, an inability to preserve them within the now-defunct landscape and unease with which they might be risk placed with new stock is considered such as to make them no realistic constraint to development. A more practicable alternative would simply be to sacrifice the vegetation existing currently in favour of refurbishing ground conditions and creating any necessary new landscape in conjunction with new planting works that will adopt new positions and species best suited for the new context.

Note should be made that this area of the site is adjoined by vegetation that arises from neighbouring sites. Particularly, attention is drawn to “Tree Line 1” including a close-knit group of Cider Gum growing from a highly constrained ground scenario and offering limited sustainability. Also, to the west of the review area and adjoining the car park of the neighbouring hospital facility “Shrub Group 1” may become pertinent to connectivity works in the future.

To the south of the site, all trees are associated with pre-existing landscape functions. Most trees found, were in good condition and offer substantial longevity however, the context within which they exist raises issues.

Lime Nos.21 to 24 arise from a highly artificial and paved area, with the tree locations protected by suspended tree grills. The trees are still young and offer immense potential for continued size increase over time. They raise concern about existing encroachment on the building to the west, as well as the potential for dislodgement and disturbance of ground surfaces.

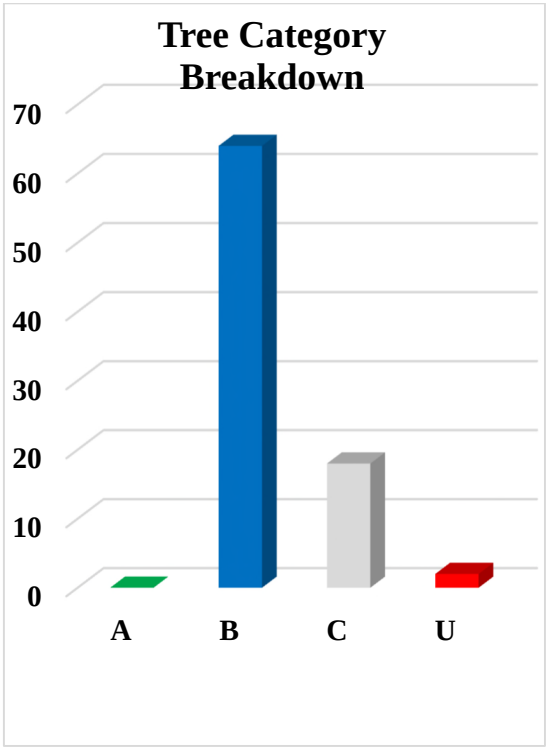
Birch Nos.55 to 58, also arise from an artificial paved surface and from within planter grills. Some localised distortion has been noted though much appears to relate to subsidence as opposed to root growth. General vigour and vitality remain good.

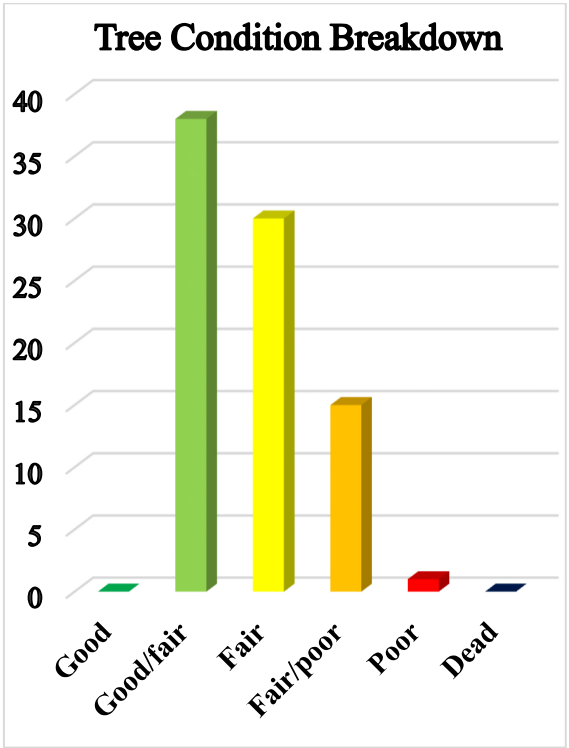
Tree Nos.59 to 74 arise from raised planter structures between the office-adjoining footpath and the car park access road. The trees are still young and offer immense potential for continued size increase over time and are of questionable sustainability within the existing limited and wall-retained landscape

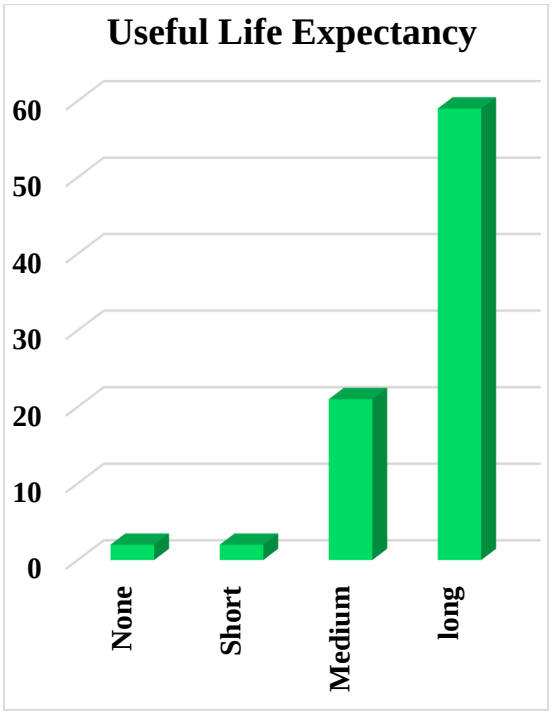
The group of 4 Italian Cypress Nos.75 to 78, arise from a particularly constrained environment between footpath and building. Larger specimens, through wind related movement, already show evidence of crown related abrasion and damage, suggesting that contextual sustainability is at best, questionable.

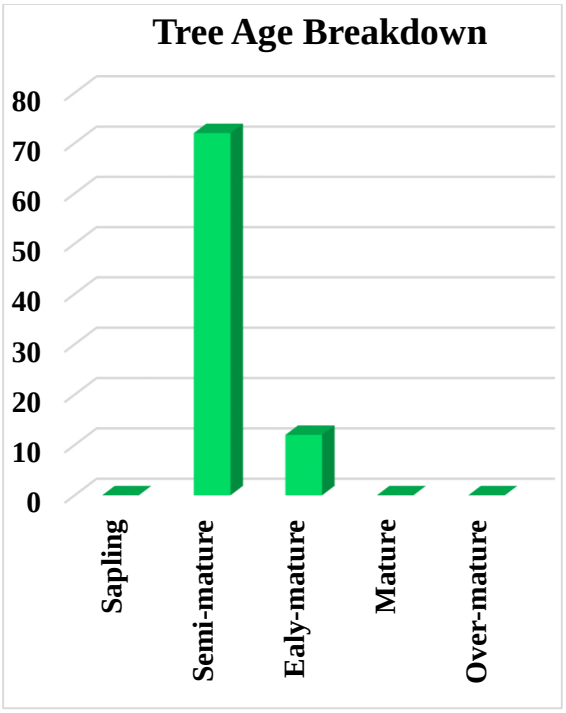
Many of the above trees arise from highly constrained ground conditions and some arising from paved areas. The review at present has already noted areas of uplifting and distortion associated with tree growth, an issue that can only become worse over time. Equally, many species, including Norway Maple, Common Alder, Lime, Hornbeam, all assert immense potential for continued growth over time. Therefore, should they survive and be kept, many present a tangible risk of ground feature distortion and damage, in line with table A1 of BS 5837-2012 that stipulates minimum range is for planting of trees near new structures.

At this stage, their removal would not be considered urgent however, there are many instances where ultimate sustainability is undermined and therefore it would be reasonable to assume that replacement will be needed in the future. Accordingly, the loss of any such trees at this time would be considered of reduced relevance and concern in that their ultimate sustainability is already impaired.









In many instances, the timescale of the issues at hand are often extended and therefore phased removal/replacement could be accounted for.

As can be seen from the graphs above, the greater proportion of the population is in reasonably good health, offering a substantial life expectancy, this relating directly to thier typically young age.

Planning Scenario in Respect of Trees

In respect of trees as they relate to planning within **South Dublin County Council's** area, note is made of two areas of guidance including - **The SDCC Development Plan 2016-2022** and **SDCC's Tree Management Policy 'Living with Trees'.**

SDCC's Tree Management Policy 'Living with Trees' "and the Amendments to Tree Management Policy 2015-2020 'Living With Trees' (as well as an interim internal review in February 2019) that includes substantial amounts of information in respect of tree management, planting and pertinent to this application, information pertaining to trees on development sites as outlined in Section 7, Trees and Development.

Within the **SDCC Development Plan 2016-2022**, trees and tree issues are dealt with regularly, including **Chapter 4, Economic Development and Tourism,** section 4.3.3, ET3 Objective 5 calling for the retention of trees on commercial development sites. Under Chapter 6, Transport and Mobility notes that the design of urban roads and street should incorporate tree planting.

As expected, trees are mentioned widely in **Chapter 8, Green Infrastructure**, with objectives to protect, and preserve trees and woodlands as per G2 Objective 9 and G6 Objective 1 and well as to include new tree planting as per Objective G2 Objective 11.

Also, **Chapter 10, Heritage, Conservation and Landscapes**, mentions trees, particularly HCL10 Objective 3, HCL11 Objective 5, HCL15 Objective 3 and HCL17 Objective 1. Within Chapter 10, trees are also mentioned specifically in respect of Section 9.2.4 Grand Canal where trees are considered an integral part of the canal landscape.

Specifically, **Chapter 10, Heritage, Conservation and Landscapes**, includes Section 9.5.0 Tree Preservation Orders, including their application as well as defining the 4 existing orders located at, St. Brigid's (now Newlands Garden Centre), New Road, Clondalkin, Beaufort Downs, Rathfarnham, Townland of Quarryvale and Brooklawn, Palmerstown and Newcastle Road, Lucan.

In **Chapter 11, Implementation** and under "Masterplan Considerations", "Open Space and Landscape" and particularly "Section 11.5.5 Landscape" again mentions the importance of retaining trees and hedges

In consideration of the above, it can be construed that overall, the proposals are in line with the ethos of the development plan.

This assessment is based primarily on the fact that sustainability issues that undermines long term retention have been noted. Additionally, the fact that the tree's small stature currently offers still limited if developing visual impacts and fundamentally that the lost landscape will be replaced with a better designed and more sustainable landscape including new, replacement trees.

Construction Works and Trees

Modern development works must be designed to comply with necessary development densities as well as to adhere to all modern standards regarding the provision of infrastructure and services.

Modern construction activity and its unavoidable consumption of space contradicts many of the minimum requirements for safe and sustainable tree retention and so, where unavoidable conflicts occur, trees must be lost, but might be replaced.

In respect of sustainable tree retention, the survival and sustainability of the retained tree will be dependent on the conservation and non-disturbance of the ground and ground conditions the tree is reliant upon. For the purposes of this report, such ground space is referred to as the "root protection area" (RPA) as defined by "BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations"

Particularly, such conservation means that the soil structure, bulk density, soil strength, permeability and gas exchange rates are not altered. Therefore, many aspects of construction are contrary to tree conservation.

New buildings and particularly their foundations require the excavation of ground space. Similarly, roads also require excavation for foundations, but additionally, often require that the ground beneath is compacted to provide necessary bearing ratios.

Underground services require excavation and trenching, with the added complication that gravity led systems can often require the modification of ground levels to achieve necessary gradients and minimum overburdens, a factor that can often influence the finished levels of both the roads and building noted above.

Achieving the above typically involves the use of substantial plant, equipment, and vehicles. The movement and activity of such machinery quickly denatures the ground, destroying the soil profile and structure, rendering them inhospitable and of no use the to the supported trees.

Though beyond the scope of this report, consideration might be given the broader changes to the ground environment, for example relating to possible hydrological changes about the development area.

Some tree losses may be of limited concern, because of ill-health or ongoing deterioration. Such trees would offer limited sustainability regardless of any site development. However, some apparently poorer-quality trees, if located in areas of reduced sensitivity might offer some degree of limited retention, dependant on the retention context and the threat they may present.

Also, changes in site context or rates of occupation and use near trees can result in repercussions that require further scrutiny after initial site clearance and felling works. 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.

The extent of tree planting envisaged across the site will in part mitigate the above losses. Details have been provided within the proposed landscape plans as provided by Dermot Foley Landscape Architects.

Identification of Development Impacts

The expected tree impacts have been represented graphically on the tree impacts drawing "**Tallaght Tree Impacts & protection Plan"**, as well as within the narrative of this report. This drawing combines the tree constraints plan information with the development details including the architectural and engineering information below, thereby allowing for direct comparisons to be made between the existing site context and the development proposals in respect of works, structures, and site levels. 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.

Detail of the development proposals were gained from drawings provided by Dermot Foley Landscape Architects.

The evaluation is primarily based on minimum protection ranges as extrapolated from the tree survey data in accordance with paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837: 2012, and any element of the proposed development of works associated with, it that affects the defined protection areas. 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.

The broader assessment attempts to consider both direct and indirect implications, based on perceived construction requirements, as well as how a tree will likely interact with the development over time in respect of growth, hazard development, light blockage and other social concerns in respect of the changing context, including its effect on tree amenity value.

Project Works and Likely Impacts

The proposed works will include-

Public realm works totalling approximately 1.2ha to include proposed new public space at Innovation Square, proposed Pedestrian Crossing on Belgard Cookstown Link Street; proposed new Belgard Square North/Airton East West Pedestrian Link Street; Pedestrian crossings at Belgard Square North and Belgard Cookstown Link Street, redevelopment of County Hall Pedestrian Link; redevelopment and reprofiling of levels within Chamber Square. Proposed works to include the reconfiguration of existing County Council carpark including widening of County Hall Pedestrian Link with additional planting, seating and relocation of wheelchair accessible parking spaces, a new pedestrian crossing and associated amendments to the carpark. Proposed works to include a new advertising totem in Innovation Square extending to a maximum height of 2.4m x 1.5m.

Proposed works to include all ancillary site development and landscaping works, including public lighting, play equipment, furniture and sports equipment, cycle parking, seating, pathways, planting, surface water drainage and boundaries.

Considering the scope and scale of the proposed works, then it is likely that most of the issues dealt with at “Construction Works and Trees” above, will apply at various points and particularly regarding-

a) Direct conflict with proposed structures/surfaces, 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.

The nature of the proposed works and its fundamental intention to change, adjust and amend the current ground environment means that no realistic potential exists for tree retention within the works area.

Design Iterations and Arboricultural Considerations

From an early stage, the design team was made aware of the nature and extent of trees both upon and adjoining the site area. Accordingly, there was an early appreciation of the fact that much of the main site area to the north, supported no realistically sustainable trees and that to the south, the trees that would be affected, are of limited stature, thereby offering some potential for replacement with new stock, as is the case regarding the proposed landscape scheme.

Arboricultural Issues, Conflicts and Mitigations

As the fundamental intent of the project is to renew and replace the existing landscape, then tree loss is both unavoidable, but at the same time, is intentional.

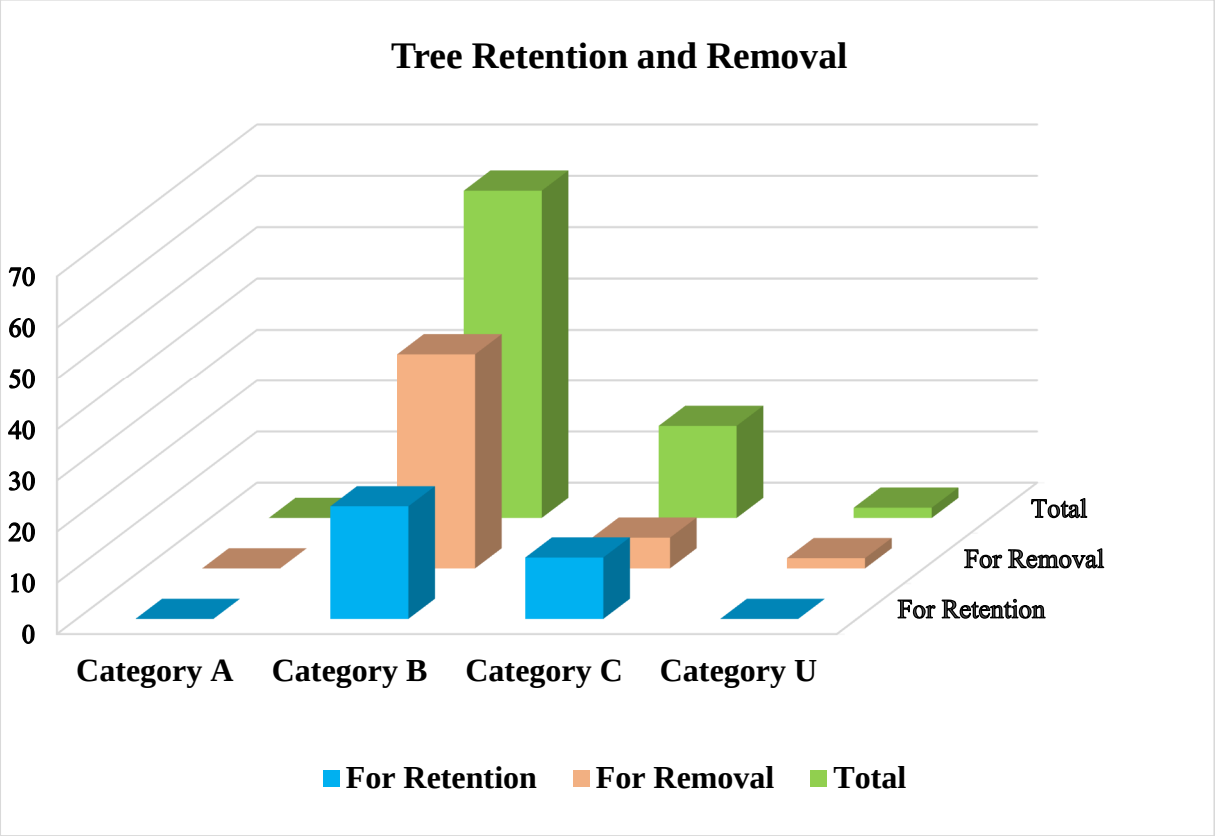
Tree Retention and Loss

The proposed development has been designed in such a way as to comply with necessary development densities as well as to adhere to all modern standards regarding the provision of infrastructure and services. Where possible, this has been achieved whilst retaining trees.

The drawing “Tallaght Tree Impacts & protection Plan” comprises the tree survey drawings overlaid by the development drawings, thus providing a graphic representation of the tree related impacts, with those trees that will be removed, being denoted by pink dashed outlines.

As noted within the survey data, the review area supports a total of 84No. individual trees, though the review area also includes zones that include multiple plant specimens.

- No category “A” trees,
- 46 No, category “B” trees/groups,
- 16 No. category “C” trees/groups
- 2 No. category “U” trees/groups



Normally, all category “U” trees will be removed (many require removal regardless of development). However, there are some scenarios where category “U” trees might be kept, for example on ecological grounds or where any perceived levels of threat are considered acceptable. This might include tree Nos.-

25 and 79

Of the site’s “fair” quality, category “B” trees, the development works will require the removal of tree Nos.-

21, 22, 23, 24, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74,

Of the site’s category “poor” quality “C” trees, the development works requires the removal of Nos.-

75, 76, 77 and 78

The tree loss breakdown for the proposed developemnt will be-

- 2 No. Category U trees
- 24 No. Category B trees
- 4 No. category C trees

Tree Protection within the Scope of a Development

The design and management recommendations as set out in "BS5837:2012" are considered as "best practice" for the retention, protection, and management of trees within the scope of new developments.

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.

This report provides a "Preliminary Arboricultural Method Statement" at "Appendix 1" to this report, as well as the associated "Tree Protection Plan" drawing "Site Tree Protection Plan".

In the drawing, the "Construction Exclusion Zone" is defined by an orange hatching with bold "Orange" lines to show the proposed location of the primary protective "Construction Exclusion Fencing".

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 and may require referral to a figured and dimensioned, "construction stage" version of the "Tree Protection Plan" drawing.

In the case of this project and appreciating that trees to be retained are often distant to the proposed works, it is likely that tree protection will coincide with site or works hoarding, for example, hoarding that will separate the works area from the broader car parking area to the east of the council offices

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.

Preliminary Management Recommendations

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.

Many of the concerns raised in the tree survey relate to evidence suggesting mechanical failure to trees, ill-health or contextual issues that may continue to a point where a trees suitability for retention may change over time.

Additionally, any development related loss of trees may result in exposure and shelter loss issues in respect of those trees that will remain. Therefore all retained trees must be reviewed immediately after the primary site clearance works with a view to updating and amending the “preliminary management recommendations” and intending to address such issues as may arise. On an ongoing basis, all retained trees must be reviewed regularly so that early intervention and action is applied promptly.

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

Method Statement Outline

This method statement intends to provide guidance in respect of tree protection on a typical development site. In respect of this project, much of its advice will be unnecessary, but is provided in the unlikely case that unforeseen, or ancillary works become necessary near trees

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.

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.

This method statement addresses, amongst others, two primary issues, those being –

a) The avoidance/prevention of physical damage to a tree to be kept.
b) The avoidance/prevention of physical damage or disturbance to the ground/earth upon which a tree is reliant.

Drawings

This Arboricultural Method Statement must be read with the associated "Tree Protection Plan" drawing, "Tallaght Tree Impacts & 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

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

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

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

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, this method statement will be addressed and discussed by all members of the construction team management, prior to any site works or construction/demolition related works or access**.

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 for 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 kept trees will have their condition and longer-term management recommendations reviewed before site hand-over.

3.0) Tree Protection

3.1 All tree protection measures, and location 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 the minimum extents note in drawing "Tallaght Tree Impacts & 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 follow "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 include 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 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 supporting vehicular access to the next zone will be accepted as an approved method.

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 about 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 other 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 for ongoing condition and the 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 watch 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 hold 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 issued 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 for clearance and potential tree damage.

9.5 Care must be taken of 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 for cables, signs etc.

9.8 The trees should be reviewed on a regular basis throughout the development process and on completion. At that time, other tree management recommendations 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 for compliance with, as well as the verification of, the required tree protection measures.

Appendix 2 - Tree Survey

Nature of Survey

The criteria put forward in "BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations" have provided a basis for this report.

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. It also includes brief definition of the typical application of the tree protection location as defined within the above standard and defined as the root protection area (RPA), defined both within the survey table and on the "TCP" drawing.

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 give an impartial representation of the site's tree population, regardless of any 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

The survey must be read with the "Tree Constraints Plan" drawing "Tallaght Tree Constraints Plan" for 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 "Tallaght Tree Constraints Plan". Any such trees should be located and plotted by professional means to show the constraints such trees have upon the site.

A green coloured outline represents each tree crown. It is scaled to show 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.

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 other 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, the drawing represents 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".

The "Tree Constraints Plan" (TCP) depicts the extent and location of constraints, placed upon the site by the trees. The "TCP" represents both the 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

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

The original survey was carried out in May of 2020. This survey is not an Implication Assessment, though it supplied some of the basic tree information for 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 1.50 metres from ground level. The survey relates to current site conditions, setting and context.

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 supply information about 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 supplied are intended to provide a reasonable representation of a tree's size and form. While efforts are made to keep accuracy, visual obstruction, such as for trees in groups, requires that some tree dimensions be estimated only.

Inspection and Evaluation Limitations and Disclaimers

The information set out in this report relates to the review of a tree population on the site in question. As such, the information supplied 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 more information than that dealt with in this survey.

The survey is not a safety assessment and the parameters reviewed within this survey context would be deficient in extent to support a reliable safety assessment. The survey intends to give a general and qualitative review, to help 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.

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

Trees are living organisms whose health, condition and safety can change rapidly. All trees conditions should be re-evaluated 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 form a review of tree or site safety. Attempts to use the contents here for such purposes will make the contents invalid.

Seasonality

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

As the original survey was carried out during the spring period. 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 generalized categories including: -
Y - Young	A young and typically small tree specimen.
S/M - Semi-Mature	A young tree, having reached 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 about 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 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 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's Arboricultural value as well as a combination of its structural and physical health.
Category U	Typically relates to trees that are dead, dying, or dangerous. Such trees may present a threat or suffer from a defect or disease that is considered irremediable.
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 poor-quality trees that may be of only limited value.
	The above categories are further subdivided by 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
21	Lime *(Tilia europea)*	S/M	G/F	6.50	2.00	2.25	2.25	2.25	2.25	1	159	1.91	Young and vigorous with immense potential for continued growth over time. Current vigour and vitality appear good.		L	B2
22	Lime *(Tilia europea)*	S/M	G/F	6.50	2.00	2.25	2.25	2.25	2.25	1	137	1.64			L	B2
23	Lime *(Tilia europea)*	S/M	G/F	6.50	2.00	2.25	2.25	2.25	2.25	1	143	1.72			L	B2
24	Lime *(Tilia europea)*	S/M	G/F	6.00	2.00	2.25	2.25	2.25	3.00	1	159	1.91			L	B2
25	Norway Maple *(Acer platanoides)*	S/M	F-F/P	5.00-5.50	2.00-2.25	1.00	1.00	1.00	1.00	1	127	1.53	An alignment of young trees arising from a limited soft landscape strip between a car Park and the car park access road. Most trees appear to be in reasonable condition however some exhibit evidence of decline and deterioration. Concern relates to No.25 this is stag headed and unbalanced suggesting limited sustainability. No.27 supports a below average crown density with evidence of twiggy deadwood relating to what appears to be dieback during the 2019 growing season. Other trees such as numbers 29, 31, 33, 34, 37, 40, 42, 43, 44, 45, 49, exhibit evidence of minor decline and the support of Twiggy deadwood. Apart from the former two trees, all would be suitable for retention however, it		N/A	U
26						1.75	1.75	1.75	1.75	1	127	1.53			L	B2
27						1.75	1.75	1.75	1.75	1	127	1.53			M	C2
28						1.00	1.00	1.00	1.00	1	127	1.53			L	B2
29						0.75	0.75	0.75	0.75	1	127	1.53			M	C2
30						1.25	1.00	0.50	1.00	1	127	1.53			L	B2
31						1.50	1.50	1.50	1.50	1	127	1.53			M	C2
32						1.50	1.00	1.00	1.00	1	127	1.53			L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
33						1.00	1.00	1.00	1.00	1	127	1.53	would be advised as all are reviewed on a regular basis in respect of the potential for continued deterioration and decline.		M	C2
34						1.00	1.00	1.00	1.00	1	127	1.53			M	C2
35						1.00	1.50	1.50	1.50	1	127	1.53			L	B2
36						1.00	1.00	1.00	0.50	1	127	1.53			L	B2
37						1.00	1.50	1.00	1.00	1	127	1.53			M	C2
38						1.25	1.25	1.25	1.25	1	127	1.53			L	B2
39						1.00	1.00	1.00	1.00	1	127	1.53			L	B2
40						1.00	1.00	1.00	1.00	1	127	1.53			M	C2
41						1.00	1.00	1.00	1.00	1	127	1.53			L	B2
42						0.75	1.00	1.50	1.00	1	127	1.53			M	C2
43						1.00	1.00	1.50	1.00	1	127	1.53			M	C2
44						0.50	1.00	1.50	1.00	1	127	1.53			M	C2
45						0.75	0.75	0.75	0.75	1	127	1.53			M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
46						1.25	1.25	1.25	1.00	1	127	1.53			L	B2
47						1.50	1.50	1.50	1.00	1	127	1.53			L	B2
48						1.50	2.00	1.00	1.50	1	127	1.53			L	B2
49						1.50	1.50	1.50	1.50	1	127	1.53			M	C2
50						1.25	1.25	1.25	1.25	1	127	1.53			L	B2
51						1.00	1.00	1.00	1.00	1	127	1.53			L	B2
52						1.50	1.50	1.50	1.50	1	127	1.53			L	B2
53						1.25	1.25	1.25	1.25	1	127	1.53			L	B2
54						1.50	1.00	0.75	0.50	1	127	1.53			L	B2
55	Silver Birch *(Betula pendula)*	S/M	G/F	6.00	2.00	1.75	1.50	1.00	1.00	1	134	1.60	Young and still vigorous.		L	B2
56	Silver Birch *(Betula pendula)*	S/M	G/F	6.00	2.00	1.50	1.50	1.25	1.00	1	127	1.53	Appears to be keeping reasonable vigour and vitality but has suffered lower crown branch breakage.		L	B2
57	Silver Birch *(Betula pendula)*	S/M	G/F	6.00	2.00	2.00	1.50	1.25	1.00	1	140	1.68	Young and vigorous.		L	B2
58	Silver Birch *(Betula pendula)*	S/M	G/F	6.00	2.00	1.75	1.50	1.25	1.25	1	134	1.60	Young and vigorous.		L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
59	Hornbeam *(Carpinus betulus)*	S/M	G/F	8.00	2.00	2.50	3.00	2.00	2.25	1	210	2.52	Young and vigorous.		L	B2
60	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.50	3.50	2.00	2.50	1	236	2.83	Young and vigorous.		L	B2
61	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	4.00	3.00	2.00	4.00	1	169	2.02	Young and vigorous. Is developing fanlike crown profile, perpendicular to alignment as result of suppression by near neighbours.		L	B2
62	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.00	3.50	2.50	4.00	1	194	2.33	Young and vigorous.		L	B2
63	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.50	3.00	2.50	2.50	1	204	2.44	Young and vigorous.		L	B2
64	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.50	3.00	2.00	2.50	1	178	2.14	Young and vigorous.		L	B2
65	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.00	3.50	2.50	3.00	1	204	2.44	Young and vigorous.		L	B2
66	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.50	3.00	2.50	3.00	1	204	2.44	Young and vigorous.		L	B2
67	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.00	3.50	2.25	2.50	1	175	2.10	Young and vigorous.		L	B2
68	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.00	4.00	2.00	3.00	1	216	2.60	Young and vigorous.		L	B2
69	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.00	4.00	2.00	3.00	1	242	2.90	Young and vigorous.		L	B2
70	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.50	4.00	2.50	3.50	1	210	2.52	Young and vigorous.		L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
71	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.50	4.00	2.50	3.00	1	220	2.64	Young and vigorous.		L	B2
72	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	3.00	4.00	2.50	3.00	1	236	2.83	Young and vigorous.		L	B2
73	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.50	4.00	3.00	3.50	1	216	2.60	Young and vigorous.		L	B2
74	Lime *(Tilia europea)*	S/M	G/F	7.00	2.00	2.50	2.25	1.75	2.00	1	220	2.64	Young and vigorous.		L	B2
75	Italian Cypress *(Cupressus sempervirens)*	S/M	F	6.00	0.00	0.40	0.40	0.40	0.40	1	143	1.72	A young specimen recently installed however vigour and vitality is impaired with substantial crown decline in evidence. Tree supports minor imbalance to north.		M	C2
76	Italian Cypress *(Cupressus sempervirens)*	S/M	F/P	6.00	0.00	0.40	0.40	0.40	0.40	1	143	1.72	A young specimen recently installed however vigour and vitality is impaired with substantial crown decline in evidence. exhibiting evidence of localised crown decline and possible for a damage against adjoining building.		M	C2
77	Italian Cypress *(Cupressus sempervirens)*	S/M	F	4.00	0.00	0.40	0.40	0.40	0.40	1	83	0.99	Young and still vigorous.		M	C2
78	Italian Cypress *(Cupressus sempervirens)*	S/M	F	4.00	0.00	0.40	0.40	0.40	0.40	1	83	0.99	Young and still vigorous.		M	C2
79	Lime *(Tilia europea)*	S/M	P	4.50	1.50	1.50	1.50	1.50	1.50	1	111	1.34	Easternmost specimen has suffered extensive excavation damage excavation root damage with visible root loss and chronic wilting time of review.	Remove	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
80	Lime *(Tilia europea)*	S/M	G/F	4.50	1.50	1.50	1.50	1.50	1.50	1	111	1.34	A group of young plants installed within a narrow reserve of circa 800 mm width as part of the landscape scheme to adjoining apartment complex. Most trees are of good condition however suitability for retention will be dependent on regular review.	Review regularly	M	B2
81	Lime *(Tilia europea)*	S/M	G/F	4.50	1.50	1.50	1.50	1.50	1.50	1	111	1.34			M	B2
82	Lime *(Tilia europea)*	S/M	G/F	4.50	1.50	1.50	1.50	1.50	1.50	1	111	1.34			M	B2
83	Lime *(Tilia europea)*	S/M	G/F	4.50	1.50	1.50	1.50	1.50	1.50	1	111	1.34			M	B2
84	Lime *(Tilia europea)*	S/M	G/F	4.50	1.50	1.50	1.50	1.50	1.50	1	111	1.34			M	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
TL1	Tree Line 1 Cider gum *(Eucalyptus gunnii)*	E/M	F/P	13.00-15.00	1.00-4.00	Spread 6.00-8.00m Contiguous				1	1.20		A particularly dense and close-knit alignment of trees installed at a position between an existing car Park edge and boundary wall. Ground space between the two structures is highly limited, often being less than 500 mm. Additionally, many of the trees have been planted at positions so close to the boundary wall structure as to see ongoing growth resulting in stem contact. Already, there is extensive uplifting and kerb edge distortion to the car park zone and evidence of wall fracture to the west. In respect of the wall fracture, note is made of apparently disparate levels between the adjoining site to the east and the subject site to the west with the subject site being lower to the south but becoming elevated to the north. While staying young and vigorous, these trees cannot be regarded as being sustainable and indeed are already affecting the existing structures is adjoined. Considering their capacity for size increase over time then it is reasonable to assume that the existing structures will be lost and furthermore, any attempt to remove or amend the existing hard structures that directly adjoin them will fundamentally affect the trees and particularly their stability. In this respect, the trees cannot be regarded as being sustainable beyond the lifespan of the current ground/structure context.		S	C2
SG1	Shrub Group 1 Gelder Rose *(Viburnam opulus)* *Pyrocantha* Hazel *(Corylus avellana)* *Rosa* *Rowan* *(Sorbus aucuparia)* Portuguese Laurel *(Prunus lusitanica)*	E/M	G/F	3.50-5.00	0.00	Spread Contiguous				m/s	0.50		A boundary belt of material planted to give screening demarcation to the existing hospital car parking area. Shrubbery is well established with most plants coalescing to create a solid and continuous corridor of growth. General conditions appear good however, some smaller trees, most notably Rowan appear to be in decline.		M	B2