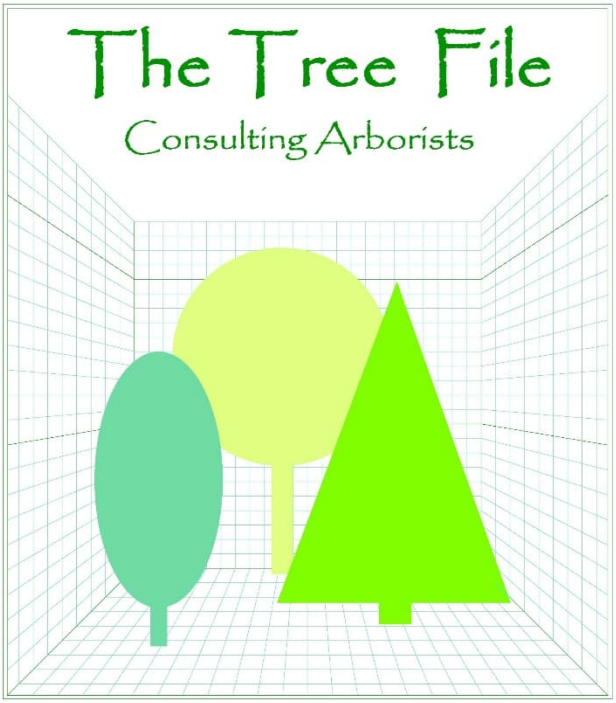

Arboricultural Report

Trees at Proposed Site at
Gowan House
Carriglea Industrial Estate,
Naas Road,
Dublin 12
October 2023

The Tree File Ltd
Consulting Arborists
Ashgrove House
26 Foxrock Court
Dublin 18
D18 R2K1
086-3819011

Contents

Associated Drawings

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

	Drawing Title	Drawing Subject
1)	Naas Road Tree Constraints Plan	Tree Constraints Plan A plan depicting the predevelopment location, size, calculated constraints, and simplified tree quality category system
2)	Naas 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.

1 Report Summary

1.1 The survey describes 44No. trees. The subject site area includes 35No. of the recorded trees, while a further 9No. additional trees arise from the neighbouring site to the east. All trees are relatively young, most having developed sizes suggestive of 30 to 45 years of age. The species encountered, including Ash, Sycamore, Whitebeam, Silver Birch, Ornamental Cherry, Lime and Norway Maple are all common species.

1.2 All trees within the site area have been harshly decapitated in the past. The reason for this is unclear, but it has affected growth patterns, with the crowns of many trees now comprising much sucker regeneration. While many of these trees appear vigorous, some concern attaches to mechanical defects that may develop in later life as a result of the harsh early life intervention. Notwithstanding the above, many of the site's trees offer reasonable sustainability. However, the context within which they exist raises some concern, and tree retention must accept ongoing tree growth-related disturbances, such as the uplifting of parking surfaces and the distortion of kerb edges.

1.3 The proposed development is substantial relative to available site space. The proposals include two large blocks over basements, site access and parking, underground services, as well as a landscape project including the daylighting of the Camac River that exists at a depth of circa 10 metres below existing ground levels.

1.4 The drawn designs, incorporating the elements described in 1.3 above, consume a clear majority of available site space, exacerbated by the splitting of the site required to accommodate the "daylighted" river. Adding to this nominal construction space, the provision of services and a works compound during the construction period, then there is no realistic capacity to provide minimum tree protection for any trees across the site. This will result in the loss of all trees within the red line area.

1.5 In light of the above, tree protection measures within the site are not relevant. In respect of off-site tree protection, this will be provided by the site security fencing that will remain in situ for the duration of the construction project.

2 Introduction

2.1 This report was commissioned by-
Malclose Limited.

This report was prepared by-
Andy Worsnop B.Sc. Env Mngt, Tech Arbor A, NCH Arb, (PTI LANTRA)
The Tree File Ltd
Ashgrove House
26 Foxrock Court
Dublin 18
D18 R2K1

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 1". As this report finds that no trees can be retained on the site, the report does not include any tree protection information or a tree protection plan.

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 1" 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.

3 Site Description

3.1 The subject site is nearly square and supports a building centred slightly north of the site centre. Surrounding the building there are substantial areas of tarmacadam and hardstanding providing vehicular, including truck and lorry access as well as car parking.

3.2 The site perimeter, on all sides, comprises a grass verge. It is from this grass verge that the described trees arise. Typically, the grass verge is separated from the road/car parking surfaces by a kerb edge. The site is separated from neighbouring lands by palisade railings to the west south and east with a plinth railing to the north separating it from the Naas road.

3.3 The site appears to be broadly level and at the time of review exhibited no evidence of drainage issues.

4 Pre-Development Arboricultural Scenario

4.1 The trees on site appear to have been planted in conjunction with the existing development and are all of similar age, with the majority being between 30 and 45 years of age.

4.2 All trees arise from a grass margin that is broadly continuous about the site other than parking bays and vehicular access points. The grass margin is typically 150 – 200 mm above finished tarmacadam levels creating a scenario whereby the landscape supporting trees is above existing structural surfaces. In most instances, the soft landscape is separated from the vehicular access and structural surfaces by concrete kerb stones. Many of these kerb stones where they exist in close proximity to trees show evidence of uplifting and rotation considered likely to be associated with tree growth. This issue must be considered as indicative of a constraint to natural tree root development and the high likelihood that a large proportions of tree roots will have a tendency to run parallel to as opposed to beneath such kerbs. This suggestion is not always the case and evidence of uplifted surfaces prove that in some instances tree roots have penetrated and pass beneath structural surfaces. Nonetheless, intended tree retention must consider that the existing kerb edges will be adjoined by areas of particularly high-density root material that must be conserved and preserved if tree retention is to be affective.

4.3 A clear majority of trees on site have been previously pruned. In some instances, this pruning has been particularly harsh. Notwithstanding this, many trees have already suckered and regrown. Such pruning may lead to structural issues in later life and predisposition towards failure. In some instances, the extent of tree pruning has been both disfiguring and structurally harmful and for this reason, many trees have been downgraded from potential category “B”, to category “C” trees.

4.4 It should be appreciated that all trees on site are relatively young. In light of this, most specimens afford great potential for size increase in the future. This must be considered

in combination with existing structural damage, for example to structural surfaces and kerb edges and the likelihood of such damage to continue and become worse over time. Equally, some of the species encountered are destined to become particularly large this would include Lime, Sycamore and Ash.

4.5 The site is directly adjoined by trees arising from neighbouring lands. These trees have been described as Trees “A” to “I” inclusive. Of these, Tree I to the northeast of the site appears to be naturally arising from a position close to the boundary where its sustainability is considered highly questionable. The remaining trees (A to H) appear to be in reasonably good condition and are located at a range from the boundary to suggest no realistic impacts from any development of the subject site.

4.5 Note has been made that the site supports several Ash trees. Some of these are already in particularly poor condition because of attack by Ash Canker and subsequent decay while others on site remain vigorous. Caution must be exercised in retaining such trees in light of the development and spread of Ash Dieback disease across the country. In this respect and regardless of attempted retention, it should be considered likely that these trees will be lost of the disease over the next decade.

4.6 Overall and with regard to the entire site's tree population, and while appreciating the visual amenity provided by the trees at present, it must be acknowledged that the existing site context as well as prior management will undermine and obstruct any intent and potential to retain trees. Disparate ground levels and existing site and tree constraints including the existence of known underground services will complicate tree retention.

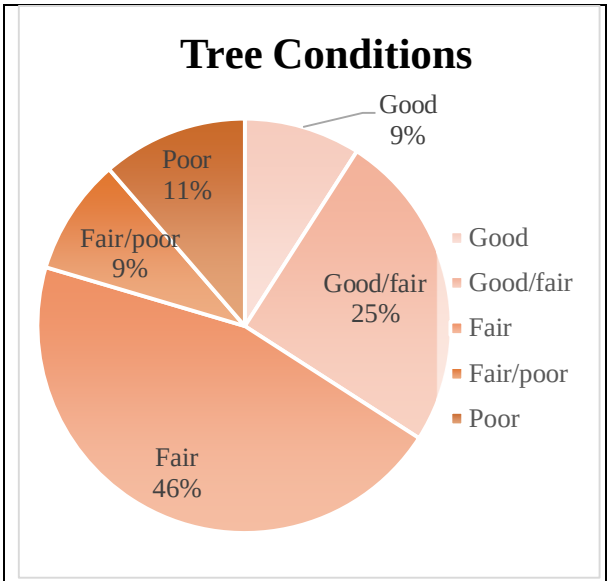

Fig 1

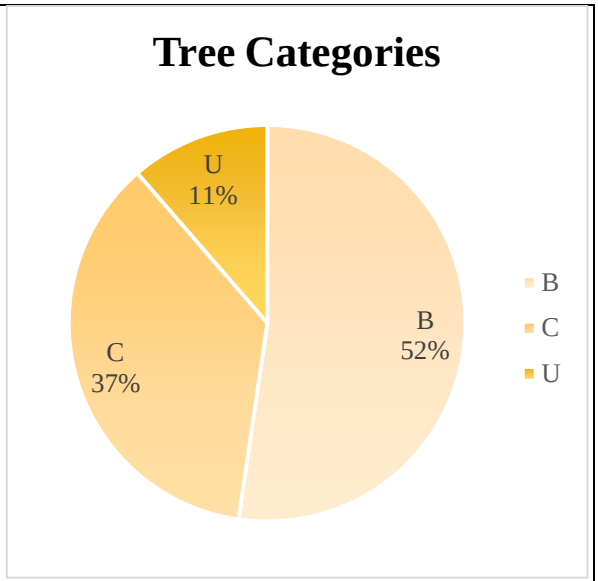

Fig 2

4.7 While some trees on the site offer reasonable or interim potential for tree retention, it is advised that considering all existing contract constraints and prior actions trees that are more sustainable approach must place an emphasis on new and replacement planting as

opposed to attempting to retain elements from what is a substantially less than perfect existing tree population.

4.8 Overall and as illustrated by graphs 1 to 4, the qualitative review of the typically young tree population, has been significantly downgraded, often in respect of past management and harsh cutting that is perceived to have curtailed overall sustainability.

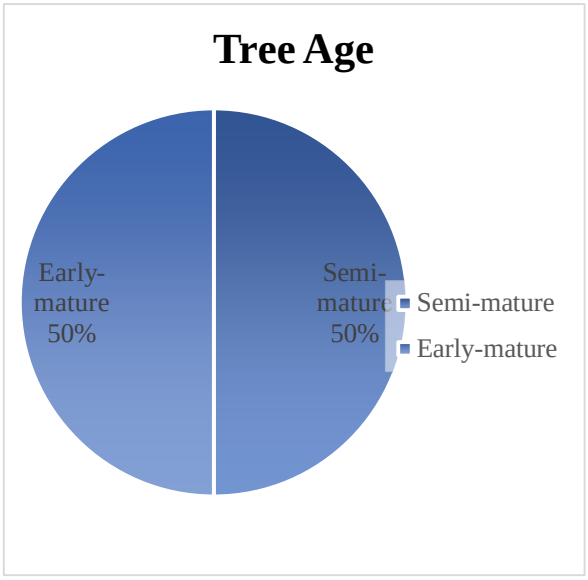

Fig 3

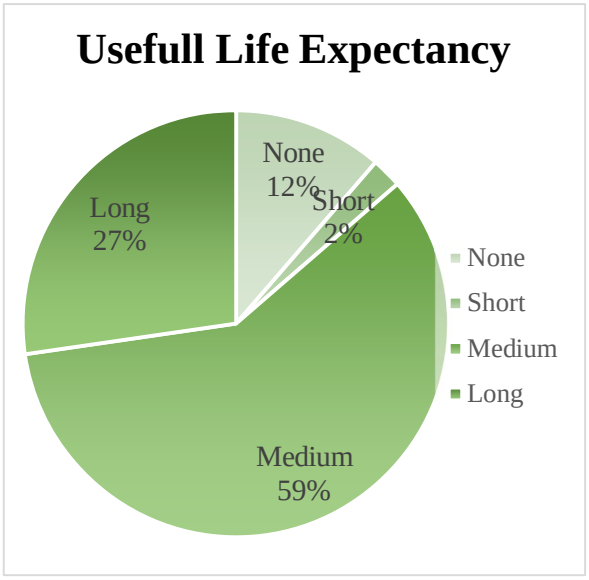

Fig 4

4.9 As noted in the survey summary, the species encountered on the site include no rarities. The population does include some particularly large growing species such as Sycamore Lime and Ash. Additionally, the proportionately large number of Ash raises some concern in light of the spread of Ash Dieback Disease and the likelihood that these trees might be lost over forthcoming years.

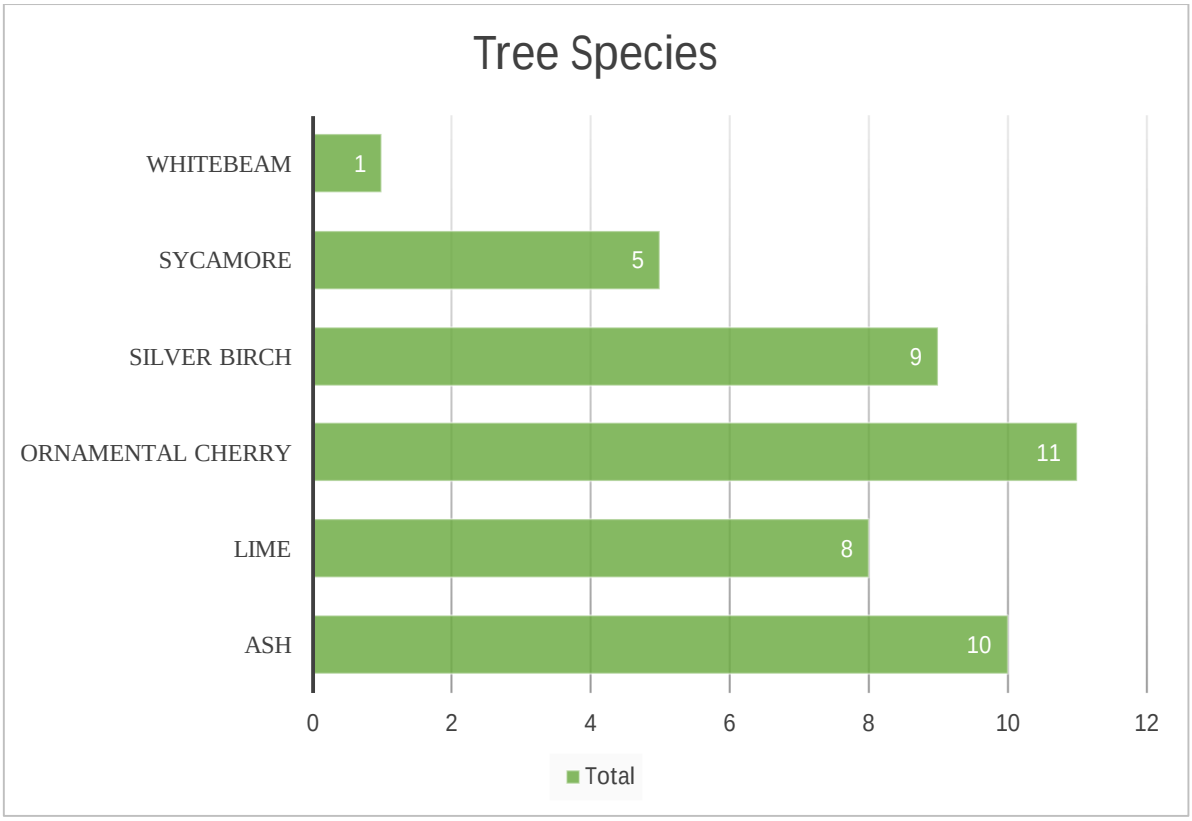

Fig 5

5 Planning Scenario in Respect of Tree

5.1 In respect of trees as they relate to planning within the **Dublin City Council** area, note is made of two areas of guidance including – **The Dublin City Council Development Plan 2022-2028** and **Dublin City Council's Tree Management Policy 'Living with Trees' (2021-2026).**

5.2 In their development plan, **Dublin City Council** have made numerous references to trees in respect pf planting, retention and protection. Trees and tree planting is specifically mentioned in Chapter 3 – Climate Action, Chapters 7 – The City Centre, Urban Villages and Retail, Chapter 9 – Sustainable Environmental Infrastructure and Flood Risk and Chapter 13 – Strategic Development Regeneration Areas. Tree retention and management is dealt with in, Chapter 15 – Development Standards, but most of the guidance relating to tree retention and management is to be found in Chapter 10 – Green Infrastructure and Recreation.

5.3 Chapter 13 outlines a desire to retain and increase tree canopy cover throughout the county. This is to be achieved by a combination of new planting and the management of existing trees. In this respect, particular attention is drawn to policies GI40, GI41, GI42, GI43 and GI44 and to objectives GIO41, GIO42 and GIO43.

5.4 In addition to tree planting, it is also noted that Chapter 15 – Development Standards also requires specific Arboricultural reporting where sites support trees (sections 15.6.8 and 15.6 9). Section 15.6.10 deals with tree loss and stipulated methodologies for the

financial evaluation of public realm trees and section 15.6.11 deals with financial securities relating to non-compliance and the non-protection of trees on sites

5.5 Particular note is made of the Dublin City Council "Tree Management Policy 2021 – 2026", "Living With Trees". This document outlines and enshrines the broader development plan objectives, but provides more detail in respect of ecological, environmental and amenity background. Particular note is made of "Section 7 - Trees and Development". This section includes and overriding policy objective (Section 7.1 Trees on development Sites) stating, "The Council will use its powers to ensure that where it is conducive with the objectives of the Dublin City Development Plan, and other planning objectives, there is maximum retention of trees on new development sites". It is also this section (Section 7.1) that stipulated the use of "British Standard 5837 (2012): Trees in Relation to Design, Demolition and Construction – Recommendations" in respect of trees on construction sites. In this respect and in line with "Section 7.2 - Development of the built environment (including residential extensions or annex developments) in close proximity to established trees", particular note is made of the Policy statement: "Where there are trees within a proposed planning application site or on land adjacent to it that could influence or be affected by proposed development, including street trees in the ownership or management of the Council, the planning application must include a detailed submission prepared by a suitably qualified Arboriculturist in accordance with British Standard 5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations"

5.6 Other than the specific objectives noted throughout the development plan, it is noted that the subject site supports no specific tree related objectives of "Tree Preservation Orders".

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 In light of the above and specifically in respect of “Trees standing within an Urban Area”, then note should be made that the restrictions imposed by the Act would appear not to apply to this site.

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 root or even breed in trees. The protection afforded by the above legislation means that particular care must be taken in the pruning of 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 requires 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 the environment in which they exist, and particularly on a 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 The sustainability of a tree's health and safety can be compromised where the above issues occur within the minimum "root protection area" defined by "BS5837-2012", then the affected tree is likely to be regarded as unsustainable and unsuitable for retention.

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 the 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 creating slippery surfaces.

8 Nature of Project Works

8.1 The proposed development is described as:

Malclose Limited intend to apply to Dublin City Council for permission for a large-scale residential development principally comprising student accommodation at this 0.962 Ha site at Gowan House, Carriglea Business Park, Naas Road, Dublin 12, D12 RCC4.

Works to upgrade of the access road to the west of the site on an area measuring c. 0.087 Ha are also proposed comprising new surfacing to the carriageway, the provision of inbound and outbound bicycle lanes from the development entrance to the Naas Road, the provision of a controlled pedestrian crossing on the access road at the Naas Road junction, and the provision of a further uncontrolled pedestrian and bicycle crossing linking the subject site with the approved Concorde SHD development (ABP Ref: TA29S.312218) to the west.

On the Naas Road, works are proposed on an area measuring c. 0.062 Ha comprising the realignment of the existing pedestrian footpath along the outbound carriageway of the Naas Road to facilitate a possible future bicycle lane, including the provision of linkages from the realigned footpath to the development site.

The development site area and roadworks areas will provide a total application site area of c. 1.11 Ha.

The proposed development will principally consist of: the demolition of the existing two-storey office/warehouse building and outbuilding (5,172 sq m); and the construction of a development in two blocks (Block 1 (eastern block) is part 2 No. storeys to part 15 No. storeys over lower ground floor and basement levels with roof plant over and Block 2 (western block) is part 9 No. storeys to part 11 No. storeys over basement with roof plant over) principally comprising 941 No. Student Accommodation bedspaces (871 No. standards rooms, 47 No. accessible studio rooms and 23 No. studios) with associated facilities, which will be utilised for short-term lets during student holiday periods. The 871No. standard rooms are provided in 123 No. clusters ranging in size from 3 No. bedspaces to 8 No. bedspaces, and all clusters are served by a communal living/kitchen/dining room.

The development also provides: ancillary internal and external communal student amenity spaces and support facilities; cultural and community floor space (1,422 sq m internal and 131 sq m external) principally comprising a digital hub and co-working space with ancillary cafe; a retail unit (250 sq m); public open space; the daylighting of the culverted River Camac through the site; an elevated walkway above the River Camac at ground floor level; a pedestrian bridge link at first floor level between Blocks 1 and 2; vehicular access at the south-western corner; the provision of 7 No. car-parking spaces, 2 No. motorcycle parking spaces and 2 No. set down areas; bicycle

stores at ground and lower ground floor levels; visitor cycle parking spaces; bin stores; substations; hard and soft landscaping; a student amenity roof terrace at second floor level of Block 1, principally facing north, east and west; green and blue roofs; new telecommunications infrastructure at roof level of Block 1 including antennas and microwave link dishes, 18 No. antennas and 6 No. transmission dishes, together with all associated equipment; boundary treatments; plant; lift overruns; and all associated works above and below ground.

The gross floor area of the development is c. 33,140 sq m comprising c. 30,386 sq m above lower ground and basement level.

8.2 Considering the scope and scale of the proposed development, then many of the issues dealt with at "Construction Works and Trees" above could apply if trees are not protected during construction works, including-

a) Direct conflict with proposed structures, thus requiring tree removal.
b) A partial conflict where the "Root Protection Area" is encroached upon by works or ground amendments and cannot be preserved/protected in full.
c) Environmental damage e.g. compaction, capping, sealing – changing the existing ground environment to one that can no longer support tree root function.
d) Construction activity and the use of large plant and machinery that can denature the ground.
e) A change in site context or a change in occupation or use which makes a tree unsuitable for retention.

8.3 Principally, the poor quality of many of the trees on the site, combined with the consumption of space, exacerbated by the separation of the proposed blocks to accommodate the daylighting of the River Camac means that tree retention is not practicable within this development.

9 Development-Related Issues and Arboricultural Concerns

9.1 The greatest issues affecting trees have been the consumption of site space and encroachment on otherwise retainable trees and hedges.

9.2 This means that successful tree retention will be subject to the limitation of construction-related disturbance and the provision of suitable tree protection during the construction phase.

10 Design Iterations and Arboricultural Considerations

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

11 Identification of Development Impacts to Trees

11.1 The expected tree impacts have been represented graphically on the tree impacts drawing "**Naas 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 denoted with "Broken Pink" crown outlines are to be removed, and those denoted with "Continuous Green" crown outlines are to be retained.

11.3 Detail of the development proposals were gained from drawings provided by Stephen Diamond Landscape Architecture, overlaid with the architectural masterplan.

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 "Naas 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 "red line" area includes a total of 35no. individually described trees, with an additional 9 arising from outside of but close to the boundary line. This provides a total of 44 surveyed trees. These have been categorised as:

- No category "A" items
- 23no, category "B" items
- 16no. category "C" items
- 5no. category "U" items

12.3 Normally, all category "U" trees (5 in total within or adjoining site area) identified in the survey would be removed. Most such material should be removed regardless of development works. In this instance, this would apply to trees 1003, 1006, 1021, 1022

and 1029, that has partially enveloped the boundary railings to the south of the site.

12.4 Of the site's good quality category "B" trees, the development will result in the loss of tree nos. 1002, 1004, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017 and 1018.

12.5 Of the site's category "poor" quality "C" trees, the development works appear to require the removal of nos. 1001, 1005, 1019, 1020, 1023, 1024, 1025, 1026, 1027, 1028, 1030, 1031, 1032, 1033, 1034 and 1035.

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

- 14 Category "B" trees
- 16 category "C" trees
- 5 category "U" trees

12.7 Total development related tree loss – 35No. trees

13 Tree Protection within the Scope of a Development

13.1 As no trees will be retained on the site, then on-site tree protection will not be required. However, it is noted that the neighbouring site to the east supports a number of trees, These trees will be afforded protection by the site's perimeter hoarding, which will restrict all works to the subject site only.

14 Preliminary Management Recommendations

14.1 While "Preliminary Management Recommendations", were provided in some instances, within the primary tree survey table, these will become irrelevant if all existing trees on the site are removed for development.

15 Bibliography

15.1 British Standards Institution (2010) BS 3998:2010: Tree Work - Recommendations. London: British Standards Institution.

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15.7 Strouts, R.G. and Winter, T.G. (1994) Diagnosis of Ill-Health in Trees, London, HMSO

15.8 Teagasc (2021) Development of ash tree genetic resources, https://www.teagasc.ie/crops/forestry/research/ash-resistance-to-ash-dieback/

15.9 Woodland Trust (2021) Ash Dieback, https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/tree-pests-and-diseases/key-tree-pests-and-diseases/ash-dieback/

A1 Appendix 1 - Tree Survey

Nature of Survey

A1.1 The criteria put forward in "BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations" have provided a basis for this report.

A1.2 The data collected has been represented in table form as "Table 1" within "Appendix 1" to this report. This appendix includes a Survey Methodology, Survey Key, Survey Abbreviations, Condition Category Definitions and a brief resume of the typical application of Tree Protection measures as defined within the above standard and as relates to the "RPA" zones defined both within the survey table and on the "TCP" drawing.

A1.3 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

A1.4 The survey must be read with the "Tree Constraints Plan" drawing "Naas 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 "Naas 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.

A1.5 A green coloured outline represents each tree crown. It is scaled to represent the north, east, south, and west crown radii as denoted in the survey table. Each tree (categories A-green, B-blue, and C-grey only) have been apportioned a "Root Protection Area" (RPA see below) denoted as a dashed orange circle.

A1.6 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".

A1.7 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

A1.8 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

A1.9 This survey was compiled in April of 2023. 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.

A1.10 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

A1.11 The information set out in this report relates to the review of a tree population on the site in question. As such, the information provided is based on a general review of trees and does not constitute a detailed review of any one of the individual specimens. Such an evaluation (tree report) would require the gathering of substantially more information than that dealt with in this survey.

A1.12 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 proposes will render the information invalid.

A1.13 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.

A1.14 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.

A1.15 Several factors acted against the tree inspector, contriving to reduce the accuracy of the survey. Particularly, the survey have been completed during specific seasons. Some of the signs, typically symptomatic of ill-health or defect within a tree, may not have been available to view at the time of the survey or may have been obscured by seasonality related factors. Some of the fruiting bodies of various fungi, parasitic upon or causing decay or disease in trees, may have been out of season and unavailable to view. This survey can only comment upon symptoms of ill-health or defects visible at the time of the inspection.

Survey Key

Species	Refers to the specific tree species
Age	Referred to in generalised categories including: -
Y - Young	A young and typically small tree specimen.
S/M - Semi-Mature	A young tree, having attained dimensions that allow it to be regarded independently of its neighbours but typically, would be less than 50% of its ultimate size.
E/M - Early-Mature	A specimen, typically 50% - 100% of ultimate dimensions but with substantial capacity for mass and dimensional increase remaining.
M - Mature	A specimen of dimensions typical of a full-grown specimen of its species. Future growth would tend to be extremely slow with little if any dimensional increase.
O/M - Over-Mature	An old specimen of a species having already attained or exceeded its naturally expected longevity.
V - Veteran	An extremely old, veteran specimen of a species, usually of low vigour and typically subject to rapid decline and deterioration or of very limited future longevity.

Tree Dimensions

	All dimensions are in meters. See notes regarding limitation of accuracy.
Ht.	Tree Height
CH	Lowest canopy height
N, E, S, W	Tree Canopy Spread measured by radii at north, east, south, and west
Dia.	Stem diameter at approx. 1.50m from ground level.
RPA	Root Protection Area, as a radius measured from the tree's stem centre.
Con	Physical Condition
G Good	A specimen of generally good form and health
G/F Good/Fair	
F Fair	A specimen with defects or ill health that can be either rectified or managed typically allowing for retention
F/P Fair/Poor	
P Poor	A specimen whom through defect, disease attack or reduced vigour has limited longevity or maybe un-safe
D Dead	A dead tree
Structural Condition	Information on structural form, defects, damage, injury, or disease supported by the tree
PMR – Preliminary Management Recommendations	Recommendation for Arboricultural actions or works considered necessary at the time of the inspection and relating to the existing site context and tree condition. Works considered as urgent will be noted.
Retention Period	
S – Short	Typically, 0 -10 years
M – Medium	Typically, 10 -20 years
L – Long	Typically, 20 – 40 years
L+	Typically, more than 40 years
Category System	The Category System is intended to quantify a tree regarding its Arboricultural value as well as a combination of its structural and physical health.
Category U	Particularly poor quality, dangerous or diseased trees that offer no realistic sustainability
Category A	A typically a good quality specimen, which is considered to make a substantial Arboricultural contribution
Category B	Typically including trees regarded as being of moderate quality
Category C	Typically including generally poor-quality trees that may be of only limited value.
	The above categories are further subdivided regarding the nature of their values or qualities.
Sub-Category 1	Values such as species interest, species context, landscape design or prominent aspect.
Sub-Category 2	Mainly cumulative landscape values such as woods, groups, avenues, lines.
Sub-Category 3	Mainly cultural values such as conservation, commemorative or historical links.

Table 1 – Tree Data Table

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
1001	Ornamental Cherry *(Prunus variety)*	E/M	F	7.50	2.00	3.00	3.00	2.50	2.00	1	436	5.23	Heavily cut in past with majority of crown comprising sucker regeneration. Centre crown supports numerous stubs. Growth has resulted in uplifting about lower stem and adjoining the existing kerb edge.	Review regularly.	M	C2
1002	Ash *(Fraxinus excelsior)*	S/M	F	6.00	2.25	2.50	2.50	2.00	2.50	1	315	3.78	Heavily cut back in past with high proportion of crown comprising sucker regeneration. Current vigour and vitality remains good though concerns exist surrounding likelihood of tree contracting Ash Dieback disease.	Review regularly.	M	B2
1003	Ornamental Cherry *(Prunus variety)*	E/M	P	5.00	2.25	1.50	1.50	1.50	1.50	1	309	3.71	Heavily cut back. Is in state of ongoing decline with extensive bark necrosis about lower stem and dieback within crown suggestive of Silverleaf disease.	Remove.	N/A	U
1004	Ash *(Fraxinus excelsior)*	E/M	F	11.00	2.00	5.00	4.50	3.50	3.50	1	407	4.89	Vigorous but heavily cut back with large proportion of crown comprising sucker regeneration. Proximity to kerb edge has resulted in structural deformation of kerb. concerns exist regarding susceptibility to Ash Dieback disease.	Review regarding retention context.	M	B2
1005	Whitebeam *(Sorbus aria)*	E/M	F	7.00	2.00	3.50	3.50	3.00	2.50	1	427	5.12	Heavily cut back in past with majority of crown comprising new sucker regeneration. Central crown retains numerous stubs. tree exists within small amateur against to areas of hard standing.	Review regarding retention context.	M	C2
A	Silver Birch *(Betula pendula)*	S/M	G	8.00	2.00	2.00	1.50	4.50	1.50	1	175	2.10	Remains vigorous. Arises from neighbouring site.		L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
B	Silver Birch *(Betula pendula)*	S/M	G	9.00	2.00	2.50	2.00	4.50	1.50	1	185	2.22	Remains vigorous. Arises from neighbouring site.		L	B2
C	Silver Birch *(Betula pendula)*	S/M	F	6.00	2.25	4.50	1.00	0.50	0.50	1	121	1.45	Young, tall and slender specimen. Arises from neighbouring site.		L	B2
D	Silver Birch *(Betula pendula)*	S/M	F	6.00	2.25	0.50	0.50	1.00	1.00	1	127	1.53	Young, tall and slender specimen. Arises from neighbouring site.		L	B2
E	Silver Birch *(Betula pendula)*	E/M	G/F	11.00	2.50	2.00	2.00	2.25	2.00	1	220	2.64	Young and vigorous. Arises from neighbouring site.		L	B2
F	Silver Birch *(Betula pendula)*	E/M	G/F	10.00	3.00	2.50	2.00	2.00	2.00	1	207	2.48	Young and vigorous. Arises from neighbouring site.		L	B2
G	Silver Birch *(Betula pendula)*	S/M	G	10.00	3.00	2.50	2.00	1.50	1.50	1	197	2.37	Young and vigorous. Arises from neighbouring site.		L	B2
H	Silver Birch *(Betula pendula)*	S/M	G	11.00	2.50	2.00	2.00	2.00	2.00	1	188	2.25	Young and vigorous. Arises from neighbouring site.		L	B2
I	Sycamore *(Acer pseudoplatanus)*	S/M	F	9.00	1.25	2.25	2.50	3.00	2.50	1	229	2.75	A young specimen arising from fence line suggesting natural arising as opposed to being planted. Lower crown is already entangled in fence entries encroaching upon adjoining building. Longer term sustainability is questionable.	Review regarding retention context.	M	B2
1006	Ornamental Cherry *(Prunus variety)*	E/M	P	5.50	2.00	3.00	2.50	2.50	3.50	1	398	4.77	Heavily decapitated in past with new crown comprising sucker regeneration. Regeneration is limited and irregular with substantial portions of canopy already dead suggesting Silverleaf disease. Tree appears to be unsustainable.	Remove.	N/A	U

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
1007	Silver Birch *(Betula pendula)*	E/M	F	9.00	2.00	2.50	2.00	2.00	2.00	1	239	2.86	Heavily cut in past but appears be maintaining reasonable vigour and vitality. Tree retains some deadwood.	Cleanout.	M	B2
1008	Lime *(Tilia europea)*	S/M	F	9.00	3.25	2.00	2.00	2.25	2.00	1	277	3.32	Heavily cut in past resulting in slightly one-sided effect. Arises from limited planting configuration, raised relative to adjoining parking.	Review regarding retention context.	L	B2
1009	Sycamore *(Acer pseudoplatanus)*	E/M	F	11.00	3.00	4.00	4.00	3.00	2.50	1	417	5.00	Young and vigorous specimen having been heavily cut back in past with majority of crown comprising sucker regeneration. Proximity to car parking and with regard to growth has resulted in substantial deformation of kerbs and uplifting of car park surface.	Review regarding retention context.	M	B2
1010	Ornamental Cherry *(Prunus variety)*	E/M	G/F	8.00	2.00	2.00	3.00	3.00	2.50	1	363	4.35	Previously pruned but maintaining good vigour and vitality. Arises from elevated planter configurations relative to adjoining car parking surfaces.	Review regarding retention context.	M	B2
1011	Sycamore *(Acer pseudoplatanus)*	S/M	G/F	10.00	2.50	2.50	2.50	2.00	2.00	1	255	3.06	Young and still vigorous. Has undergone prior reduction type pruning. Arises from elevated bed within car parking scenario.	Review regarding retention context.	L	B2
1012	Ash *(Fraxinus excelsior)*	E/M	F	11.00	3.00	4.50	3.50	3.50	3.00	1	344	4.13	Heavily cut in past. Arises from grass strip elevated relative to the car parking area where lower stem and buttress growth has resulted in uplifting of car parking surface and shifting of car parking kerb edges. concerns exist regarding tree's susceptibility to Ash Dieback disease.	Review regarding retention context.	M	B2
1013	Lime *(Tilia europea)*	S/M	G/F	9.00	2.00	3.00	3.00	3.00	3.00	1	306	3.67	Young and vigorous having undergone only minor pruning in past. Tree arises from raised grass bed between car parking context.	Review regarding retention context.	L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
1014	Norway Maple *(Acer platanoides)*	E/M	F	11.00	2.00	4.50	4.50	4.00	4.00	1	404	4.85	Young and vigorous. Tree has undergone prior reduction type pruning. Crown supports some deadwood and evidence of prior storm damage. Tree arises from elevated grass bed within car parking area.	Cleanout and review regarding retention context.	M	B2
1015	Ornamental Cherry *(Prunus variety)*	E/M	G/F	11.00	2.25	5.00	5.00	4.00	4.50	1	477	5.73	Apparently vigorous but has undergone prior pruning. Crown supports minor deadwood and stubs from prior pruning. Tree arises from grass bed elevated from adjoining car parking context.	Review regarding retention context.	M	B2
1016	Ash *(Fraxinus excelsior)*	S/M	F	10.00	3.00	3.50	3.00	3.00	2.50	1	322	3.86	Previously reduced but apparently maintaining good vigour. Concerns exist regarding susceptibility to Ash Dieback disease. Tree arises from elevated position adjoining within car parking context.	Review regarding retention context.	M	B2
1017	Ornamental Cherry *(Prunus variety)*	E/M	F	8.00	2.00	4.50	4.50	3.50	3.00	1	360	4.32	Previously pruned appears be maintaining good vigour and vitality. Arises from raised grass bed within car parking scenario and is adjoined by known underground services.	Review regarding retention context.	M	B2
1018	Lime *(Tilia europea)*	S/M	G/F	9.00	2.00	3.50	3.50	3.50	3.50	1	325	3.90	Young and vigorous having been previously pruned to reduce size. Tree arises from raised grass bed within car parking scenario.	Review regarding retention context.	L	B2
1019	Ornamental Cherry *(Prunus variety)*	E/M	G/F	6.00	2.00	3.50	3.00	3.00	3.00	1	439	5.27	Previously crown reduced. Crown comprises ornamental pink form as well as reverted white form. General vigour and vitality appears good. Tree exist in close proximity to existing services manhole immediately to west of stem.	Review regarding retention context.	M	C2
1020	Lime *(Tilia europea)*	S/M	F	6.00	2.00	2.50	3.00	3.25	2.50	1	283	3.40	Heavily cut in past with harsh decapitation wounds. General vigour and vitality remains good.	Review regarding retention context.	M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
1021	Ash *(Fraxinus excelsior)*	S/M	P	5.50	2.00	2.50	2.00	2.25	2.00	1	302	3.63	Heavily affected by Ash Canker with widespread secondary decay. Unsuitable for retention.	Remove.	N/A	U
1022	Ash *(Fraxinus excelsior)*	S/M	P	5.00	2.00	1.50	3.00	2.50	2.00	1	309	3.71	Widely affected by Ash Canker with secondary decay and dieback of original higher crown. Unsuitable for retention.	Remove.	N/A	U
1023	Ornamental Cherry *(Prunus variety)*	E/M	F/P	4.50	2.00	1.50	3.00	2.00	1.00	1	315	3.78	Crudely decapitated in past. Is now misshapen and comprising much regenerative sucker.	Review regarding retention context.	M	C2
1024	Lime *(Tilia europea)*	S/M	F/P	4.50	1.50	2.00	2.00	3.00	3.00	1	280	3.36	Heavily decapitated in past creating flat-topped affect from which new suckers are regenerating. Review regarding retention trees also affected by three-way compression fork at 2.0 m.	Review regarding retention context.	M	C2
1025	Sycamore *(Acer pseudoplatanus)*	S/M	F/P	6.00	2.50	3.00	3.00	2.50	2.50	1	325	3.90	Crudely decapitated with entire upper crown comprising sucker regeneration.	Review regarding retention context.	M	C2
1026	Ash *(Fraxinus excelsior)*	S/M	F/P	7.00	2.00	2.50	3.00	3.00	2.50	1	392	4.70	Heavily decapitated in past with entire upper crown comprising sucker regeneration. Concerns exist regarding susceptibility to Ash Dieback disease.	Review regarding retention context.	M	C2
1027	Ornamental Cherry *(Prunus variety)*	E/M	F	6.00	2.00	4.00	4.00	4.00	3.50	1	388	4.66	Heavily cut back in past with widespread sucker regeneration including reversion to white form. Tree supported on broad buttress system including numerous distal surface running roots.	Review regarding retention context.	M	C2
1028	Silver Birch *(Betula pendula)*	E/M	F	7.00	2.00	4.40	4.00	2.50	4.00	1	261	3.13	Heavily cut back and notably unbalanced to North. General vigour and vitality remains good.	Review regarding retention context.	M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
1029	Ornamental Cherry *(Prunus variety)*	S/M	P	6.00	1.75	3.00	1.50	1.00	2.00	1	337	4.05	Base of tree is partially enveloping boundary palisade railing. Tree has been subject to widespread prior cutting and is affected by ongoing construction works including creation of compacted pathway across root system up to stem. Tree offers little sustainability.	Consider early removal.	N/A	U
1030	Lime *(Tilia europea)*	S/M	F	9.00	2.00	3.50	4.00	3.50	3.00	1	372	4.47	Crudely decapitated with much of upper crown comprising sucker regeneration. Tree arises from constrained area between brick-built boundary wall and a cement hard standing. Potential for retention into new landscape appears limited.	Review regarding retention context.	M	C2
1031	Lime *(Tilia europea)*	E/M	F	10.00	3.50	3.50	3.00	3.00	3.00	1	446	5.35	Previously decapitated. Arises from limited scenario between area of hardstanding and underground infrastructure associated with sliding security gate. Potential to retain tree into new landscape appears limited. Concerns also exist regarding potential tree to be affected by ash and dieback disease.	Review regard retention context.	M	C2
1032	Lime *(Tilia europea)*	S/M	G/F	9.00	4.50	3.00	2.50	3.00	3.00	1	318	3.82	Young and still vigorous but heavily cut back on eastern side. Tree is constrained between existing roadside cement footpath and kerb edge tarmacadam road that appears to have resulted in restriction of East-West root development. Proximity disturbance of public footpath is noted to west that may be associated with tree growth.	Review regarding retention context.	M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
1033	Sycamore *(Acer pseudoplatanus)*	E/M	G/F	10.00	2.00	4.00	4.00	4.50	4.00	1	401	4.81	Young and vigorous but heavily cut back on eastern side. Tree is constrained between existing roadside cement footpath and kerb edge tarmacadam road that appears to have resulted in restriction of East-West root development.	Review regarding retention context.	M	C2
1034	Ornamental Cherry *(Prunus variety)*	E/M	F	9.00	2.50	2.50	3.00	2.50	3.00	1	382	4.58	Crudely cut back on eastern side leaving tree on balance to road. Tree is constrained between cement public footpath to west and kerb edge road to east.	Review regarding retention context.	S	C2
1035	Sycamore *(Acer pseudoplatanus)*	E/M	G/F	12.00	2.00	5.50	5.00	4.50	4.50	1	465	5.58	Relatively large specimen constrained within narrow grass corridor between cement public footpath to west and kerb edge road structure to east. Public footpath show signs of uplifting possibly associated with tree growth. Tree has undergone prior pruning with large proportion of crown comprising sucker regeneration.	Review regarding retention context.	M	C2