

Arboricultural Report
Lands adjacent to The Grange
Brewery Road/Stillorgan Road,
Stillorgan,
Blackrock,
Co Dublin
August 2019

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Associated Drawings

This report should be read with the drawings noted below

<u>Drawing Title</u>	<u>Drawing Subject</u>
1) D1-Grange-TCP-08-19	Tree Constraints Plan A plan depicting the predevelopment location, size, calculated constraints and simplified tree quality category system
2) D2-Grange-AIA-08-19	Tree Impacts Plan A plan representing the likely effects of the proposed development works on the above tree population, denoting those trees being retained and those being removed.
3) D3-Grange-TPP-08-19	Tree Protection Plan A plan depicting the nature, location and extent of tree protection measures required to provide for sustainable tree retention.

Introduction

This report has been prepared by-
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Report Brief and Context

This report was requested by “**Kennedy Wilson**” (KW PRS ICAV acting for an on behalf of its **sub-fund KW PRS Fund 10**). It comprises an Arboricultural review of the proposed development project. The various elements of this report provide an assessment of the sites existing tree population in respect of suitability for retention and sustainability in their current scenario, as well as an assessment of their potential for sustainable retention in the post-development scenario and the effects of the development process. It also provides information in respect of the necessary tree protection and the avoidance of damage to trees during the construction process, required to achieve sustainable tree retention.

This assessment summarises the Arborists findings and recommendations, arrived at after the screening process and considerations defined within the “Implication Assessment Scope” 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 and 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.

This report must be read in conjunction with each of the three tree related drawings.

1. The “Tree Constraints Plan” drawing “D1-Grange-TCP-08-19” that provides a graphic representation of tree survey data, depicting the constraints asserted by the site trees, as well as a categorisation of their condition and potential value.
2. The drawing “Arboricultural Implication Plan” drawing, “D2-Grange-AIA-08-19” depicts the expected impacts by overlaying the tree constraints information with the architectural and engineering information.
3. The “Tree Protection Plan”, “D3-Grange-TPP-08-19” depicts the location and extent of the tree protection measures required to prevent damage and disturbance to trees intended for retention.

Report Limitations

This report is based on the Arborists interpretation of information provided to him prior to 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 based upon the knowledge and expertise of the inspecting Arborist.

The “Implication Assessment” element of the report is currently based 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. In this respect, 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, the accuracy of this assessment is based on all its elements and the omission or alteration of any part can radically alter outcomes in respect of sustainable tree retention.

Report Summary

The extensive nature of the proposed development in conjunction with the existing site topography has meant that much of the site area requires modification to the extent that is contrary to sustainable tree retention. This is compounded by a substantially compromised, and sometimes dangerous tree population, many elements of which are unsuitable for retention or consideration for retention (see photos 1, 2 and 3 at Appendix 3)

These combined factors lead to an early design stage principal of active tree replacement, as opposed to retaining trees that appeared to offer limited sustainability or compatibility with the developed context.

The only trees to be retained within the site area are those immediately north of the Brewery Road entrance. Notwithstanding what appears to be encroachments upon the nominal tree protection areas for these trees, a decision was made to attend retention, based on existing physiological constraints and prior disturbance. This particularly relates to the prior filling and raising up of ground to the south of Beech No.9875 as well as the fact that the same area was excavated to install substantial services runs to the south and south-west of the associated tree group, as illustrated in photo 4 at “Appendix 3”. For this reason and as the proposed new structures only affect the previously amended ground space it was considered that condemning the trees to removal would have been premature and therefore retention is to be attempted by limiting to the zones previously infilled and raised.

Notwithstanding the above, it is noted from the project landscaping proposal provided by Mitchell Associates Landscape Architects, that some 472No. This includes 261no of semi mature trees including natives and more exotic species as accent trees, 30no of standard sized natives, 60no of feathered size natives, 40no additional trees along the park boundary including natives and evergreens, with an additional 81no of ornamental trees for installation on the podium. This effectively provides for a 612% increase over the proposed loss of 77 trees as a result of the site development.

In addition to the above, it is also noted that an additional 760 smaller native whips will be installed as part of the broader tree replacement mix

Site Description

The subject site effectively comprises the western side of the broader “The Grange” development that adjoins Brewery Road and the N11 Bray road.

The site area includes some pre-existing buildings, roads, underground services, completed landscaped areas and what were works areas to the previously completed elements of the broader development.

The site area is of disparate levels, with multiple natural and artificial steps and gradients, typically descending towards the western edge of the site.

The site area is broadly artificial and substantially modified since its previous use as an office headquarters for a commercial fuel supply company.

Pre-Development Arboricultural Scenario

Tree Line 1 - Monterey Cypress Nos.9686 - 9759

It is only the north-westernmost element of this alignment that is pertinent to the survey area, however, the issues affecting the alignment relate to the alignment en-masse and it is advised that broader site management consider the entire line as a single entity, as opposed to on a tree by tree or section by section basis.

This alignment comprises a close-knit planting, presumed to have been installed as a shelter belt/screen/hedge between the original “The Grange” site and the adjoining tennis club. At this stage, the Cypress alignment has become substantially outgrown and comprises a contiguous alignment of poor quality, middle-aged and mature trees. The effect of their proximity to one another has seen notable growth distortions with most trees having developed fan-like crown profiles, exaggerated in a direction perpendicular to the broader alignment. While many trees appear to be maintaining reasonable vigour and vitality. Many show signs of foliar decline and deterioration assumed to be associated with Seiridium Canker attack. The effect of this disease tends to be cumulative over many years and whilst tree death tends to be uncommon, it does occur.

Of greater concern is the extent of what is species-typical mechanical failure and breakage, that is widespread throughout the group. This is an issue that is insurmountable and raises substantial site safety and sustainability issues.

It is advised due consideration be given to a preference towards the phased removal of these trees, in favour of replacement planting. Such phasing must consider exposure and isolation related issues, that are considered likely to exacerbate site safety issues. Accordingly, such works may only be considered if the trees intended for interim retention are managed accordingly.

Trees 9759-9774

This area of the site, adjoining the southern boundary with the neighbouring public Park supports of variable population of highly variable conditions. Several trees require removal and others are in a state of decline such as to suggest limited sustainability. There are however a small number of specimens in this area that would appear to offer substantial longevity. Issues of exposure and shelter loss are well illustrated here, in the recent failure and breakage of trees such as tree 9773 and 9774, an issue compounded by the severe decline of adjoining trees such as Nos 9770, 9771 and 9772.

Trees 9786-9863

Located to the south of the “Brewery Road” site entrance road supports a broadly poor and apparently deteriorating tree population.

There are several particularly large, dead or dying specimens that must be removed on the grounds of site safety. Additionally, a notable proportion of the population appears to be exhibiting evidence of decline and deterioration, likely to be attributable to environmental change associated with previous development works. Such trees are considered unsustainable, potentially dangerous and must be removed.

This unavoidable tree loss will create additional issues regarding shelter loss and exposure of other, often poor-quality trees.

This woodland block must be regarded with caution, in that ongoing deterioration and an apparent escalation in decline and exposure related damage suggests limited sustainability and a need for substantial replacement planting. In many instances, concern would exist regarding the attempted retention of isolated or exposed specimens.

Tree Line 2

This line mimics “Tree Line 1”, as many specimens have now been lost. The trees are also affected by Seiridium Canker exists and there is much evidence of ongoing, species-typical mechanical damage and failure.

The current context is also quite like “Tree Line 1” in that the trees adjoin a publicly accessible park to the south-west but is separated from any areas of high use and occupation within the site area, by the woodland area to the north-east.

This alignment should be regarded en-masse and in conjunction with the adjoining tree group, particularly regarding shelter-loss issues. Accordingly, it is advised that the group is of highly limited sustainability and suitability for retention.

Trees 9875-9886

This group of trees is located to the north of the main entrance drive. The area supports a small number of large trees, some of which are exhibiting evidence of prior intervention and decapitation, as well as minor signs of ill-health and possible deterioration. These trees have been substantially disturbed in the past, as evidenced by substantial ground build-up towards the road edge and the installation of substantial underground service piped to the south-west and west of the tree stems, an issue that is considered to have created a substantial, pre-existing constraint to the trees rooting environment.

Trees 9907-9934

This group of trees appears to have comprised a belt located to the south of the original walled garden. The once broader alignment was heavily affected, on its southern side by the fire tender access to “Block G” and a crib-wall, apparently affecting drainage and leading to drying-out. This means that substantial number of trees are either dead or at such a stage of deterioration as to make them unsuitable for retention.

Many have sustained minimal management and others are now wholly suppressed because of coalescing with one another and/or Ivy cover. A large proportion of these trees are now unsuitable for retention and concerns arise regarding the remainder and whether they would be sustainable considering widespread exposure. Additionally, and with reference to the high proportion of conifers, it must be appreciated that many trees support only limited green canopies that once exposed will be most unsightly.

Accordingly, this entire group should be regarded with caution and in respect of the benefits to be gained by way of replacement as opposed to retaining the material noted at present.

Trees 9948-9962

This alignment is dominated by several large Walnuts to the east of the original walled garden. Many of these trees appear to have sustained development related disturbance and many exhibit classic signs of decline and deterioration. The trees have been previously crown reduced though in some instances, deterioration continues. Note is also made in some instances of the effects of pathogen such as Inonotus.

The sustainability of these trees will be highly limited. Towards the northern end of the line, note is made that one smaller Walnut has died and that the adjoining Sycamore and Ash material, is noted to be of particularly low quality and is broadly unsuitable for retention.

Nature of Proposed Works and Likely Impacts

The proposed development shall provide for the demolition (total c. 1, 398 GFA) of 'The Grange Select Marketing Suite' (1 storey), 'Oaktree Business Centre' (2 storeys) and 'The Lodge' (2 storeys); and the construction of a new residential scheme of 287 residential units; residential tenant amenity space of 961.5 sq m; a crèche facility of 658 sq m; and a substation of 111.5 sq m in the form of 6 new blocks (Blocks H, J, M, N, P and Q) ranging in height from 1 - 11 storeys as follows:

The residential development provides for 287 no. units (19 no. studio units, 125 no. 1 bed units and 143 no. 2 bed units) in Blocks H, J, M and N as follows:

- Block H (7 - 11 storeys from Brewery Road) comprising 99 no. apartments (6 no. studios, 50 no. 1 bed units and 43 no. 2 beds);
- Block J (5 - 10 storeys from Brewery Road) comprising 75 no. apartments (36 no. 1 bed units and 39 no. 2 bed units);
- Block M (4 - 9 storeys from podium) comprising 73 no. apartments (38 no. 1 bed units and 35 no. 2 bed units); and
- Block N (6 - 7 storeys from Brewery Road) comprising 40 no. apartments (13 no. studios, 1 no. 1 bed units and 26 no. 2 bed units).

Each residential unit has associated private open space in the form of a balcony/terrace/roof terrace.

The following residential tenant amenity space, crèche facility and substation proposals are also delivered:

- Blocks H (7 - 11 storeys) also contains a Tenant Amenity Space of 961.5 sq m. This area includes a gym space, male and female changing areas, accessible changing areas, a cinema room, entrance lobby, lounge areas, kitchen/dining areas, games area, management suite, 4 no. meeting rooms, co-working space, security/parcels area, storage areas, tea station, toilets, letter box area and all associated extraneous areas, all of which are areas dedicated to use by future tenants.
- Block P (3 storeys) provides for a crèche facility of c.658 sq m and associated outdoor play area in the form of a roof terrace of c.222.9 sq m.
- Block Q (1 storey at basement level/level 00) provides for an ESB substation of 111.5 sq m.

A basement area (total c. 3,317.9 sq m) is also proposed below Blocks H, J & M at Level 00. A total of 100 car parking spaces (16 at surface level and 84 at basement level), 596 bicycle spaces (518 at basement level and 78 at surface level) and 5 motorcycle spaces (all at basement level) are proposed. Waste Management areas and plant areas are also located at basement level.

Public open space is also proposed in the form of external residential amenity spaces, play areas, courtyards, gardens and trim trails (c.10,465 sq m). Provision is also made for pedestrian connections to the adjoining park to the south west and the existing 'The Grange' development to the south east.

Nos. 2 and 3 The Grange Cottages (single storey) are retained within the current proposal and works to these residential dwellings relate solely to landscape proposals. No works are proposed to the structure or layout of these units.

The development shall be accessed via the existing vehicular access point from Brewery Road. It is proposed to reconfigure the alignment of this vehicular access point to facilitate the proposed development and provide for improved access and egress for the overall 'The Grange' development.

The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; boundary treatment; internal roads and footpaths; and electrical services.

In respect of the above works, the site trees could be affected by one of three primary impacts including-

- A. Direct conflict with proposed structures, thus requiring tree removal.
- B. 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. A change in site context or a change in occupation or use that that makes a tree unsuitable for retention.

Whilst the footprint of the proposed structures and buildings, access roads, parking area and paths are readily understandable regarding the spatial requirements, additional and ancillary space is commonly required for construction works and associated activities. Additionally, note is made that the proposed development will require substantial amendments to current ground levels across notable areas of the site.

Note is made of the fact that the development proposals include elements and structures and works within the nominal root protection areas associated with trees intended for retention. Examples of this include pedestrian paths to the south of Beech No. 9875 and construction works north-east of 9878.

Elsewhere across the site, construction related tree impacts are irrelevant as most trees will be removed in favour of replacement within the context of the new development.

Design Iterations and Arboricultural Considerations

In comparison to many developments, design considerations in this instance, fully appreciated the typically poor quality and deteriorating state of much of the site's tree population.

For this reason, and at an early stage in the design process, a strategy of tree replacement was adopted.

Where tree retention will be achieved, the encroachments envisaged are fully cognisant of site history and prior disturbance, for example in relation to the prior installation of services and substantial infill and ground level raising to the south and west of trees 9875 and 9878.

This application iteration includes numerous amendments and alterations arrived at through the earlier elements of the planning application.

Identification of Impacts

The review of likely Arboricultural implications is based upon the recommendations and criteria as defined within BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations. The “assessment” tends to concentrate on any activity that affects the tree, its local environment, or the context within which it might be retained.

This report, its findings and recommendations have arisen from the scrutiny of development proposal drawings as provided by O’Mahony Pike Architects, and drainage and levels information as provided by Waterman Moylan Consulting Engineers, as well as proposed landscape information by Mitchell and Associates Landscape Architects in conjunction with the most recent tree survey data (as appended to this report). 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.

In respect of tree impacts, 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. Additionally, the tree specimens have been evaluated in respect of health, sustainability and suitability for retention within the new context and adjoining the proposed development. Such considerations can readily affect the “predevelopment suitability for retention” scenario.

The perceived development impacts have been illustrated graphically on drawing “D2-Grange-AIA-08-19”, where trees denoted with “Broken Red” crown outlines will be removed and those denoted with “Continuous Green” crown outlines will be retained.

Arboricultural Implications of Proposed Development

The extent and nature of the development in conjunction with site topography has unavoidably created substantial conflicts. Many such conflicts were considered irrelevant in that the subject trees were either previously compromised, of poor quality or in a state of deterioration that undermined their suitability for retention and sustainability.

Of concern is the fact that much of the tree population exhibits evidence of decline and deterioration, presumed to be associated with the environmental changes relating to prior development works. The site currently supports several dead trees as well as others in an advanced state of deterioration. Of equal importance are the proportion of trees now suffering mechanical damage and failure as a result of shelter loss and exposure.

Shelter loss and exposure issues are considered of equal importance as the deterioration and death of trees as the removal of currently faulty trees will dramatically compound this issue.

The loss of trees will unavoidably result in a substantial visual change to the local landscape. This change is in part considered unavoidable considering the extent and ongoing nature of decline, deterioration in tree death. For this reason, a specific design rationale of landscaped recreation and replacement planting was adopted.

The proposed works and the changing context of the site will affect those trees that might be retained. Such trees will have an increased capacity to influence new structures, the occupants of the structures or people visiting through structures and thus there will be an ongoing requirement for monitoring and management.

Equally, and as has resulted from the previous phases of this development, the broader environmental change that development works because has the potential to diminish the sustainability of those trees that might be retained. Accordingly, and in line with the above noted requirement for ongoing management, longer term, phased replanting works would also be advised.

In respect of the above, note should be made that the extent of tree planting envisaged across the site will in part mitigate the above losses. Attention is drawn to the detail provided within the proposed landscape details as provided by Mitchell + Associates Landscape Architecture.

Particularly, attention is drawn to “LGRA032 Landscape planting schedule”. This indicates the full extent and nature of planting across the site that includes a total of 472No. larger trees, including 161No. larger “accent semi-mature trees including Walnut, Sweet Gum, Pin Oak, Wild Cherry, Holm Oak, Beech, Sessile Oak and Rowan all to 20-25cm size and Judas Tree to 18-20cm size.

Additionally, 311No. slightly smaller “standard” and “feathered” size trees will be installed using species including Beech, Sessile Oak, Common Alder, Hairy Birch, and Rowan.

At smaller sizes including “whips” a total of 760No. trees will be installed.

The cumulative effect of this planting is to create a substantial numerical improvement on the site’s current tree population, as well as improving biodiversity and at the same time, helping address the visual tree loss issue by including a substantial number of quite large trees that will provide a notable degree of immediate visual impact.

Particulars of Tree Loss

The drawing “D2-Grange-AIA-08-19” 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 red dashed outlines.

The nature and extent of the proposed development and its unavoidable need to convert or otherwise disturb much of the existing site conditions, effectively requires the removal of all site trees as outlined below

Within the review area, the tree survey has identified 108 individual trees.

The site currently supports 33No. category “U” (unsustainable or unsuitable for retention) trees, including Nos. 9766B, 9770, 9771, 9773, 9774, 9787, 9788, 9845, 9847, 9848, 9849, 9853, 9860, 9864, 9884, 9907, 9908, 9909, 9911, 9912, 9913, 9914, 9915, 9916, 9917, 9918, 9919, 9921, 9923, 9960, 9961, 9962 and 9963

The site supports no category “A” trees.

Of the site’s 48No. (28No. plus 20 in “Group D”) “fair” quality, category “B” trees, the development works will require the removal of tree Nos. 9759, 9766, 9766c, 9768a, 9768, 9769, 9843, 9878a, 9880, 9885, 9886 and two specimens from “Group D”.

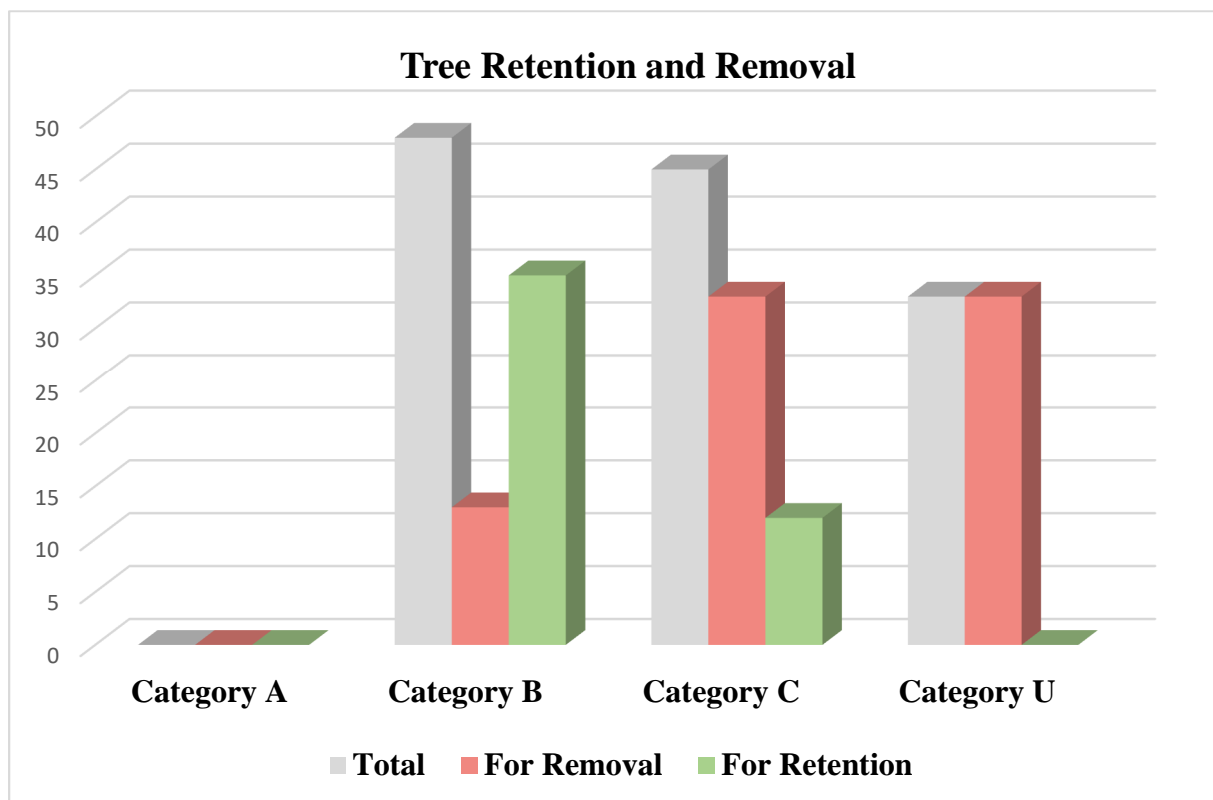
Of the site’s 45No. “poor” quality category “C” trees, the development works appears to require the removal of Nos. 9760, 9761, 9762, 9763, 9764, 9764a, 9765, 9766a, 9772, 9786, 9834, 9835, 9837, 9842, 9844, 9850, 9850a, 9851, 9852, 9854, 9855, 9856, 9857, 9862, 9910, 9933, 9934, 9949, 9950, 9951, 9955, 9956 and 9957.

This provides for a tree loss breakdown of-

33 No. Category U trees

13 No. Category B trees

33 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 “best practice” regarding the selection, retention, protection and management of tree within the scope of a new development.

In respect of tree protection, whether vertical or horizontal, all must conform or equate to the recommendations of Section 9, 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.

In respect of this report, attention is drawn to the provision of a “Preliminary Arboricultural Method Statement” at “Appendix 1” to this report, as well as the associated “Tree Protection Plan” drawing “D3-Grange-TPP-08-19”.

In this drawing, the edges “Construction Exclusion Zone” is defined by the bold “Orange” lines that represent the proposed location of the primary protective “Construction Exclusion Fencing”, with the “Orange” hatched area representing the primary “Construction Exclusion Zone”.

Note should be made that the tree protection plan includes the use of special materials and methodologies intended to minimise the impacts of structures near trees. Examples of this includes the proposed pedestrian footpath and other landscape works near trees 9875 to 9881. In these areas, nominated as “Controlled Work Zones” and depicted by pale blue hatching on the tree protection plan “D3-Grange-TPP-08-19”, it is intended to use manual procedures and low impact methodologies that limit need for excavation or ground disturbance and maintain the drainage and porosity of the ground volume beneath.

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 version of the “Tree Protection Plan” drawing. All recommended protection measures must be installed prior to the commencement of any site works and must remain in situ (unless under the guidance of the site Arborist) until all site works are completed.

Preliminary Management Recommendations

Preliminary Management Recommendations have been made within the tree survey table (Table 1). These recommendations relate to the trees as they existed at the time of the tree review and therefore and in line with the changing context of the site, such recommendations may no longer apply, for example where trees are to be removed or where specific works become necessary to facilitate development requirements.

It should be appreciated that some of the concerns raised in the tree survey were based on evidence suggesting mechanical failure to trees, ill-health or contextual issues. Such issues or deterioration may well continue to a point where the sustainability of retained trees will need to be reviewed. Additionally, the proposed development and particularly its unavoidable loss of trees will raise exposure and shelter loss issues in respect of those tree that will remain.

For these reasons, all retained trees should be reviewed immediately after the primary site clearance works with a view to updating and amending the “preliminary management recommendations” provided in the original tree survey and intending to address such issues as may arise. On an ongoing basis, it is advised that all retained trees must be reviewed regularly so that early intervention and action can be applied in a timely manner.

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

Method Statement Outline

Set out below is a broad and prescriptive method statement, intended to provide advice and guidance for most events, occurrences and issues that arise in respect of trees and tree protection on typical development sites. The intention of this statement is to instruct and to advise regarding the execution of the proposed development works in a manner that will be least detrimental to the retained tree population.

Drawings

This Arboricultural Method Statement must be read in conjunction with the associated “Tree Protection Plan” drawing, “D3-Grange-TPP-08-19”. This drawing, as was submitted as part of the Arboricultural planning package must be updated and confirmed for “Construction” stage purposes, for example by the inclusion of specific tree protection ranges and dimensions. Accordingly, and in respect of tree protection ranges from any tree, reference must be made to the root protection area radius as defined for that tree within the tree survey table.

Method Statement Use

It should be used under the direct guidance of the project Arborist, as site/project specific issues arise, and information becomes available, thus may be amended and adjust by him/her to address project specific issues. In this respect, it must be appreciated that limited “construction management” detail was available at compilation time and therefore this method statement deals with tree protection in its broadest terms and may require modification to deal with project specific details to this development, e.g. to account for specific plant/machinery/access issues.

Amendments and Modifications

In some situations, and with the adoption of specific ground protection procedures and structures, parts of the above defined “Construction Exclusion Zones” might still be utilised during the construction process. In respect of vehicular/plant/machinery access, the provision of suitable ground protection measures that avoid soil compaction and maintain drainage/percolation and breathability and are acceptable to the project Arborist and subject to engineering confirmation, can be utilised. Such might include the various form of “roll-out” temporary access surfaces or might include the “three-dimensional cellular confinement systems that utilise specific forms of confined hard-core. It must be noted that the effective use of either system is subject to the avoidance of excavation and level changes, by use upon existing ground surfaces. Where provided, the above systems would allow for the relocation of the “Construction Exclusion Fencing” to exclude and provide access to and across the newly protected areas.

Works Related Impacts

In respect of any necessary and unavoidable structures 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 requiring excavation must, by design, location and action, minimise impacts to trees. This may require the adoption of “manual only” procedures so that root damage can be minimised, for example by hand digging or the use of “air-spades” for excavation or trenching. All such works must be undertaken under the guidance of the project Arborist who will advise on likely repercussions and necessary tree management issues.

Tree Works Specification Updates

It must be noted that many tree management recommendations, as stipulated within the “Preliminary Management Recommendation” section of the primary tree survey, were made prior to any grant of permission, relate to a changing site context and may no longer be applicable, or may require modification to account for the changes that the built project will cause.

General Method Statement

Note should be made that the 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.

1.0) Overview and Implementation

- 1.1 **This method statement will be addressed and discussed by all member of the construction team management, prior to any site works or construction/demolition related works or access.**
- 1.2 A review must be undertaken to identify any issues as may have arises in respect of planning conditions or details as may have changed between design stage and construction stage development details.
- 1.2 The project Arborist or other qualified person will oversee the application of all tree protection measures and any necessary modifications to this Method Statement to provide a basis upon which tree protection will be managed on the construction site.
- 1.3 The tree constrains (radial range) associated with any tree to be retained on site is to be regarded as sacrosanct and is not to be entered for any reason without confirmation by, and agreement with, the project Arborist.
- 1.4 Any situation that requires entry into the “root protection zones” of a tree intended for retention must be brought to the attention of the Project Arborist regarding the adoption/amendment of suitable tree protection measures.
- 1.5 As unforeseen tree losses may compromise project planning permissions, it is imperative that issues relating to tree protection 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 including tree felling and cutting as defined in the Arboricultural report.
- 2.3 The Project Arborist will oversee and liaise with the tree works contractor regarding the nature and extent of tree/woodland access to facilitate felling works.
- 2.4 On completion of the felling works, the tree management plan will be reviewed by the Project Arborist to address changed context, land use, rates of occupation and use and to account for potential impacts upon the newly built environment, thereby amending (if necessary) the “preliminary Management Recommendations” stipulated in the original Tree Survey.
- 2.5 Any revised pruning/cutting works will be agreed with the local authority and applied at the earliest possibly opportunity.
- 2.6 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.
- 2.7 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”. This must be completed

in a “Progressive” manner, with each section being removed whilst utilizing protection systems still in situ. Such works must be agreed and overseen by the Project Arborist.

- 2.8 At construction works completion stage, all retained trees will be reviewed regarding condition and longer-term management recommendations and regarding site hand-over.

3.0) Tree Protection

- 3.1 All tree protection measures must be agreed, overseen and verified by the Project Arborist prior to works commencement and regarding maintenance for the duration of site works
- 3.2 Tree protection will be based upon drawings “D3-Grange-TPP-08-19” (Construction version) that relates all trees for retention, as well as the location of all tree protection measures.
- 3.3 Unless specifically stipulated by the project Arborist, the default minimum range of protective fencing or construction exclusion fencing is the range stipulated in the primary tree survey for that tree and within the “RPA” (root protection area) column.
- 3.4 If entry into the “RPA” (Root Protection Area) zones becomes unavoidable, ground protection systems agreed with the project Arborist, that allow for the relocation of the “Construction Exclusion Fencing”, will provide for an extension of accessible ground space.
- 3.5 All construction, works or access areas must be enclosed and defined by protective fencing, this comprising the “Construction Exclusion Zone”
- 3.6 Such a fence must be fit for purpose and commensurate with the nature of activity expected upon the site and should be 2.00 metres in height, constructed of robust materials and be suitably braced to withstand impact and may include sheet panels attached to timber posts or weld-mesh panels supported upon a scaffold bar system. All footings must be firm and immobile and must not use mobile rubber or cement footings, (an illustration (Fig 1-facsimile of BS5837: 2012, is appended to this document to illustrate a possible option for the construction of the protective fencing)
- 3.7 The fence should be affixed with notification signs such as “TREE PROTECTION AREA - KEEP OUT”
- 3.8 Where applicable, 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.
- 3.9 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 ground.
- 4.2 Ground protection can comprise the use of proprietary materials/structures or procedures that avoid ground damage/disturbance/compaction, or the use of procedures that avoid such effects e.g. manual/pedestrian installation procedures.
- 4.3 Any system utilised must effectively spread load-weight, avoid compaction, maintain drainage/percolation/aeration and be installed in a manner that avoids these issues.
- 4.4 Newly provided access will be strictly limited to the area of the new structure
- 4.5 Where proprietary ground protection systems are utilised, it is imperative that manufacturer’s specifications and recommendations are adhered to in full regarding the provision and installation of this type of ground protection.
- 4.6 Protection installation will require a progressive laying down of ground protection, with previously laid material providing vehicular access to the next zone will be acceptable as an approved methodology.

5.0) Works within “RPA” Zone

- 5.1 Only works and construction practices, agreed with the Project Arborist prior to commencement,

will be allowed in the “RPA” area.

- 5.2 The “RPA” zone associated with all retained trees must be protected from the effects of construction works.
- 5.3 Amended tree protection measures as agreed with the Project Arborist and including the relocation of fencing and the provision of ground protection will be installed in accordance with the tree protection measures prior to commencement.
- 5.4 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.
- 5.5 Preference must be given to manual labour and techniques within the fenced “RPA” zone.
- 5.6 On completion of the required works, the area will be inspected by the Project Arborist regarding the reinstatement of the original protection and the relocation of the protective fencing to a position relating to the original “RPA” area.

6.0) Service Installation

- 6.1 The “Project Arborist” must be consulted for advice and procedural recommendations, in respect of any installation of services within or requiring entry into the “Root Protection Area” of any tree intended for retention.
- 6.2 Any such works found to be unavoidable, must be undertaken with special care, incorporating the recommendations of both “BS5837: 2012 and the National joint utility groups, guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG 10)
- 6.3 No open trenching will be allowed. All works must be commensurate with the preservation of the effected tree root system.
- 6.4 Preference will be given to trench-less techniques including Mole-piping, Directional-drilling manual hydro-trenching (high pressure water), “Air-Spade” or broken-trench techniques.
- 6.5 All works carried out within the “RPA” zone or “Construction Exclusion Zone” must be agreed with and supervised by the Project Arborist.

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 in respect of possible amendments to the “Preliminary Management Recommendations” and 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.
- 7.4 Additional works including formative pruning, crown reduction etc., may be nominated for various trees in the interests of mitigating the potential effects of exposure and isolation.
- 7.5 All additional works will be agreed with the local authority and/or other stakeholders and applied at the earliest possible opportunity.
- 7.6 All Tree Surgery/Pruning works will be undertaken under the guidance of the Project Arborist; the precise nature and extent of work being agreed before commencement.
- 7.7 On completion of site works, the retained tree population will be reviewed and re-evaluated regarding ongoing condition and the likely requirements of any ongoing or future monitoring or management needs.

8.0) Demolition

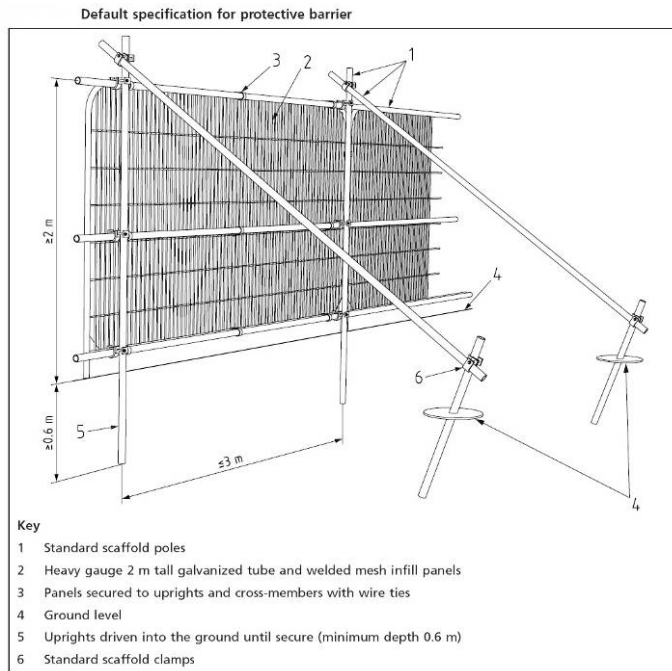
- 8.1 All demolition procedures must be agreed and overseen by the Project Arborist or other suitably skilled staff to monitor for damage and to protect exposed roots/cut-trim exposed roots/oversee backfilling of exposed roots.

- 8.2 Where access into unprotected “RPA” zone becomes unavoidable then suitable ground protection, provided in accordance with an engineer’s direction and agreed with the Project Arborist will be installed.
- 8.3 Care will be taken to avoid damage to soil volumes beneath and adjoining demolished structures that may contain tree root material.
- 8.4 Whilst existing foundations/structures may provide temporary protected access to areas within the “RPA” zone, preference must be given to the location of demolition plant outside of the “RPA” zone.
- 8.5 Where tree(s) exist near a structure to be demolished then the demolition should be undertaken inwards within the footprint of the existing building (Top Down, Pull Back).
- 8.6 Underground structures (services etc.) within the “RPA” zone should be reviewed with regards to decommissioning and retention in situ in the interest of avoiding tree damage.
- 8.7 Preference should be given to the retention existing sub-bases where hard surfaces are removed, particularly if the hard surface is to be replaced.

9.0) Ancillary Precautions

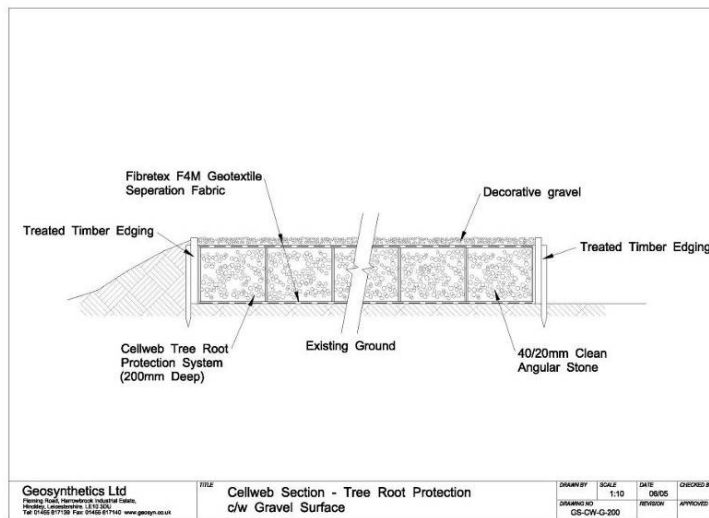
- 9.1 The methodologies as set out in this document apply to all undertakers of work upon or adjoining the site as may require access to the “Construction Exclusion Zone” or the “RPA” area of any tree.
- 9.2 This document will be disseminated to all persons requiring access to the work site.
- 9.3 All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

Fig 1



This image illustrates one possible option for the construction of the “Construction Exclusion Zone” protective fencing.

Fig 2



This image shows a proprietary brand of “Cellular Confinement” system that will provide load bearing capacity for vehicular passage whilst preserving the ground environment beneath the system.

Appendix 2 - Tree Survey

Nature of Survey

This survey has been based upon many of the criteria put forward in BS 5837: 2012 – Trees in Relation to Design, Demolition and Construction – Recommendations.

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.

The survey, its findings and management recommendations relate to the site and the conditions thereon at the time of the survey. It is likely that changes in site usage, development or other environmental changes will require an amendment of a tree’s potential retention status and/or 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 in conjunction with the “Tree Constraints Plan” drawing “D1-Grange-TCP-08-19” regarding the representation of tree positions, crown forms, “RPA” extents and colour reference to category systems. Where tree positions were not indicated on the supplied drawing, their positions may have been given “sketched” locations within “D1-Grange-TCP-08-19”. It is advised that any such trees are accurately located by professional means so that the constraints such trees have upon the site can be accurately gauged.

Each tree crown is represented by a green coloured outline, 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.

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 in accordance with the four cardinal compass point radii (Sp: R in survey Table 1). Secondly, each tree’s Root Protection Area (RPA) is represented in accordance with paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837: 2012. For the purposes of design, it should be considered as approximating the position of the tree protection fencing that must be erected prior to 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 true canopy form (north, east, south and west radii) but also the “RPA” as defined above. These constraints must be considered regarding the design and layout of a proposed development.

Survey Intent and Context

Intention of this document is to highlight the extent and nature of material of Arboricultural interest on the site in question.

Survey Data Collection and Methodology

The Survey

The trees have been surveyed on multiple occasions, including December 2018 and January of 2019. This survey portion of the overall report is not an Implication Assessment though but provided some of the basic information regarding its compilation. The survey has been undertaken under the recommendations of BS 5837: 2012. This survey includes only trees of a stem diameters exceeding 150mm at approximately 1.50 metres from ground level. The survey relates to current site conditions, setting and context.

Identification

Each of the trees described within the text has been affixed with a consecutively numbered, alloy disk that relates directly to the survey text, positioned at approximately 1.50m from ground level.

Measurements

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. Whilst efforts are made to maintain accuracy, visual obstruction, especially regarding trees in groups, requires that some tree dimensions are 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 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.

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 and 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.

All inspection and tree assessment have been completed by a competent and experienced Arborist. 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. It is recommended that all trees should be re-evaluated regarding their condition on an annual basis or after substantial trauma such as a storm event, other damage or injury. It is advised that 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.

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

Seasonality

The latest survey was commenced during the winter 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 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 a limited longevity or may be 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. Note is also made of works considered as urgent.
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.....	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 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
9759	Ash (<i>Fraxinus excelsior</i>)	E/M	F	12.00	3.00	5.00	2.50	4.50	4.50	1	398	4.77	Slightly suppressed and one-sided, typically unbalanced to north-west. General vigour and vitality remain good however, much of primary stem and middle-crown is wholly obscured by dense Ivy cover.	Cut Ivy and rereview.	L	B2
9760	Cordyline (<i>Cordyline australis</i>)	M	F	5.50	1.75	1.00	1.00	0.50	1.00	1	216	2.60	Squat and suppressed by adjoining shrubbery. Remains vigorous but sees development of Ivy at lower levels.	Clean-out.	M	C2
9761	Ash (<i>Fraxinus excelsior</i>)	S/M	F	10.00	2.50	4.00	4.00	4.00	3.00	2	337	4.05	Twin stemmed from ground level suggesting possible sucker regeneration from stump of previous tree. Vigour and vitality are fair but reduced and less than that expected for tree of this age with significant twiggy decline in evidence. Middle-crown is obscured by dense Ivy cover.	Cut Ivy and review on regular basis (annually) regarding ongoing decline in deterioration.	M	C2
9762	Ash (<i>Fraxinus excelsior</i>)	E/M	F	13.00	4.00	4.00	4.50	4.50	3.50	1	369	4.43	Canopy density is notably reduced raising concerns regarding possible pathogen attack and ill health. Crown supports notable dead-wood. Principal stem and middle-crown are obscured by Ivy cover.	Clean-out and cut Ivy. Review regularly (annually) regarding continued deterioration of health and suitability for retention.	M	C2
9763	Cordyline (<i>Cordyline australis</i>)	M	P	7.00	2.00	2.00	2.00	1.50	2.00	1	334	4.01	Comprises remnant of a once larger tree having suffered substantial mechanical failure and subsequent decay. Small stature presents limited threat however, continued mechanical failure must be expected.	Clean-out and review regularly regarding ongoing suitability for retention.	S	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9764	Strawberry Tree (<i>Arbutus unedo</i>)	M	F/P	6.00	1.00	4.00	3.50	3.50	3.00	1	388	4.66	Once larger specimen has sustained notable mechanical damage. Additionally, extensive dieback exists, particularly about eastern crown, the cause of which is unknown. Remaining canopy appears to be maintaining reasonable vigour and vitality though is distorted and misshapen.	Clean-out to remove existing dead-wood and broken material. Cut Ivy near ground level. Undertake minor structural pruning to reshape crown form. Review regularly.	M	C2
9764a	Ash (<i>Fraxinus excelsior</i>)	S/M	F/P	13.00	4.00	3.00	3.00	3.00	3.00	1	229	2.75	Two adjoining stems of small stature and reduced vigour. Both specimens support substantial twiggy dead-wood raising concern regarding health and sustainability. South-western most stem supports developing Ivy cover.	Cut Ivy and review on annual basis regarding ongoing health status and suitability for retention.	M	C2
9765	Ash (<i>Fraxinus excelsior</i>)	E/M	F	12.00	3.50	5.00	6.50	4.50	5.00	4	516	6.19	A sprawling, multi-stemmed specimen of raised-up aspect considering erosion of originally supporting stone wall. Tree remains vigorous though mechanical form is poor. Ivy development is widespread.	Review regularly.	M	C2
9766	Common Yew (<i>Taxus baccata</i>)	S/M	F	4.00	4.00	2.50	3.00	2.50	2.00	1	194	2.33	Heavily suppressed being located beneath canopy of ash 9765. Remains vigorous.	Review regularly.	L	B2
9766a	Ash (<i>Fraxinus excelsior</i>)	S/M	F	10.00	3.50	2.50	1.50	2.50	2.00	1	216	2.60	Tall and columnar. Supports extensive Ivy cover and is of lower than expected vigour.	Cut Ivy and review regularly.	M	C2
9766b	Ash (<i>Fraxinus excelsior</i>) Holly (<i>Ilex aquifolium</i>)	M	F/P	9.50	1.50	4.50	4.00	4.00	3.50	3	477	5.73	The multi-stemmed Ash is a particularly poor condition with substantial dieback in evidence throughout crown. Underlying Holly has been heavily suppressed and has suffered prior mechanical damage. Holly stem and ash have been divided by existing chain-link netting fence.	Review regarding ownership. Consider early removal.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9766c	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	G/F	10.00	3.50	2.50	3.00	2.50	2.50	1	229	2.75	Young and still vigorous but has sustained minor localised bark damage to lower stem.	Review regularly.	L	B2
9768a	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	G/F	10.00	3.50	2.50	3.00	2.50	2.50	1	229	2.75	Young and still vigorous but has sustained minor localised bark damage to lower stem.	Review regularly.	L	B2
9768	Holly (<i>Ilex aquifolium</i>)	M	F	7.00	1.25	2.25	2.25	2.25	1.50	1	223	2.67	Slightly suppressed because of position beneath canopy of larger trees but is maintaining reasonable vigour and vitality.	Review regularly.	L	B2
9769	Beech (<i>Fagus sylvatica</i>)	E/M	G/F	16.00	1.50	5.50	5.50	5.50	5.50	1	452	5.42	A relatively young specimen maintaining reasonable vigour and vitality.	Review regularly.	L	B2
9770	Western Red Cedar (<i>Thuja plicata</i>)	M	P	13.00	2.50	3.00	3.00	3.00	3.00	1	334	4.01	Almost completely dead and unsuitable for retention as is adjoining one-sided cypress stump to north-west.	Remove.	N/A	U
9771	Western Red Cedar (<i>Thuja plicata</i>)	M	P	13.00	2.50	2.50	3.00	3.00	4.00	1	567	6.80	Rapidly approaching death.	Remove immediately.	N/A	U
9772	Common Yew (<i>Taxus baccata</i>)	M	F/P	13.00	2.50	5.00	5.50	4.00	3.00	1	684	8.21	A large, twin stemmed specimen divided from low level. Vigour and vitality are highly variable with substantial dieback in evidence. Much of middle-crown is obscured by developing Ivy cover. Remaining elements of viable foliage maintaining reasonable vigour.	Cut Ivy near ground level to facilitate better review over time. Clean-out remove existing dead-wood and monitor on annual basis in respect of any potential continued deterioration.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9773	Scots Pine (<i>Pinus sylvestris</i>)	M	P	14.00	7.00	1.00	1.00	3.50	3.50	1	471	5.65	Exists as a fragment of a prior tree that has suffered widespread in chronic storm damage and retained 1 hi level limb only. Continued damage and failure are unavoidable. Is unsuitable for retention.	Remove.	N/A	U
9774	Beech (<i>Fagus sylvatica</i>)	S/M	P	9.00	1.00	4.00	4.00	3.50	2.50	1	306	3.67	A once larger specimen has suffered catastrophic failure of higher crown by failure of principal stem at circa 5.00 m. Resultant wound undermines any tangible degree of sustainability.	Remove.	N/A	U
9786	Hawthorn (<i>Crataegus monogyna</i>)	M	F/P	7.00	2.50	0.75	1.25	1.50	1.50	1	204	2.44	Drawn up and notably suppressed with apex obscured by Ivy development.	Cut Ivy and review regarding suitability for retention.	M	C2
9787	Cordyline (<i>Cordyline australis</i>)	M	P	10.00	4.50	1.00	1.00	1.00	1.50	1	283	3.40	Tall and drawn-up with limited viable crown remaining. Is of particularly poor quality generally obscured by Ivy cover. Is considered unsuitable for retention.	Remove.	N/A	U
9788	Douglas Fir (<i>Pseudotsuga menziesii</i>)	M	P	17.00	3.00	4.50	4.00	4.00	4.00	1	449	5.39	A large specimen in a state of progressive decline with entire apex already dead and substantial dead-wood noted throughout crown. Is unsuitable for retention.	Remove.	N/A	U
9834	Sycamore Group (<i>Acer pseudoplatanus</i>)	E/M	F	13.00	1.25	3.50	4.00	4.00	3.00	2	439	5.27	Slightly suppressed being located beneath canopies of 935 and 936. Comprises two adjoining stems creating a singular crown profile. General vigour and vitality appear good however easternmost stem supports notable wound and developing decay at 4.00 m that undermine sustainability.	Crown reduce easternmost stem and review regarding sustainability.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9835	Ash (<i>Fraxinus excelsior</i>)	M	F	20.00	6.00	4.00	2.50	4.50	4.50	1	748	8.98	Of particularly drawn-up form with one-sided canopy typically unbalanced to west. Vigour and vitality are highly variable with notably reduced vigour about apex. Lower stem sees development of Ivy cover.	Review on regular basis regarding ongoing suitability for retention and potential for continued decline.	M	C2
9837	Oak (<i>Quercus robur</i>)	M	F/P	18.00	4.50	4.50	6.00	5.00	5.00	1	840	10.08	Once larger specimen has undergone substantial pruning including crown reduction type works. Remaining crown is of highly variable vigour with evidence of ongoing stag heading and decline. Principal stem sports extensive Ivy cover the prevents detailed review at present.	Cut Ivy and clean-out. Rereview regarding ascertaining likely sustainability.	S	C2
9842	Ash (<i>Fraxinus excelsior</i>)	E/M	P	13.00	4.00	0.00	2.00	4.00	4.00	1	283	3.40	Two suckering stems of adjoining and combined create single crown. Both are distorted with ash being of reduced vigour and vitality. Would be unsuitable for retention if isolated or exposed.	Consider removal and replacement.	S	C2
9843	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	17.00	0.00	3.00	4.00	6.00	4.50	1	401	4.81	Somewhat one-sided because of position beneath canopy of 9845. Is maintaining reasonable vigour and vitality.		L	B2
9844	Beech (<i>Fagus sylvatica</i>)	E/M	G/F	16.00	3.00	5.00	1.00	3.00	4.50	1	376	4.51	Heavily distorted because of position beneath canopy of larger tree. Higher crown distortion suggest possible prior mechanical failure. Principal stem is obscure by dense Ivy cover.	Cut Ivy and review.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9845	Beech (<i>Fagus sylvatica</i>)	M	P	20.00	5.00	7.00	7.00	6.00	7.00	1	1038	12.45	A particularly large specimen adjoining and overhanging roadway that is in a particularly poor state supporting extensive dead-wood and indications of chronic decline and deterioration. Is unsuitable for retention.	Remove immediately.	N/A	U
9847	Ash (<i>Fraxinus excelsior</i>)	S/M	P	9.00	6.00	0.00	1.50	3.00	1.00	1	204	2.44	A chronically distorted whip. Is unsuitable for retention.	Remove.	N/A	U
9848	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	D	7.00	2.00	0.00	1.00	3.00	2.00	1	267	3.21	Dead and in need of removal.	Remove.	N/A	U
9849	Wych Elm (<i>Ulmus glabra</i>)	S/M	P	10.00	2.00	2.00	2.50	1.50	1.00	1	226	2.71	Of reduced vigour with apical dieback suggestive of Dutch Elm disease.	Remove.	N/A	U
9850	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F	11.00	5.00	1.00	1.00	1.50	2.50	1	216	2.60	Drawn up and suppressed whip.		M	C2
9850a	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	11.00	3.00	3.00	3.00	3.50	3.50	3	452	5.42	Multi-stem from ground level comprising element of natural regeneration. South-western crown is heavily suppressed because of proximity to adjoining Cypress line.	Review regarding retention context.	M	C2
9851	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F	12.00	5.00	0.00	2.00	3.00	3.00	1	226	2.71	Drawn up and one-sided because of suppression. Is of notably reduced vigour.	Review regularly regarding ongoing suitability for retention.	M	C2
9852	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	13.00	2.00	3.00	4.00	5.00	5.00	1	493	5.92	Multi-stemmed and distorted, comprising element of natural regeneration. Remains vigorous. Old wounds support evidence of localised and early decay. Vigour remains good though tree is of limited sustainability.	Review regard to retention context.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9853	Beech (<i>Fagus sylvatica</i>)	E/M	D	13.00	4.00	3.00	1.00	0.00	0.00	1	337	4.05	Has previously failed and collapsed into canopy of 9854.	Remove immediately.	N/A	U
9854-9857	Beech Line (<i>Fagus sylvatica</i>)	E/M	P	14.00	2.00	5.00	5.00	5.00	5.00	1	334	4.01	Assumed to have been installed as a hedge, this close-knit alignment is now wholly outgrown having developed spindly individuals. 9855 has already died and requires immediate removal on safety grounds. The remaining trees are of poor quality and in light of failure of 9853 should be regarded as being trustworthy and sustainable to mechanical failure. The age and degree of maturity attained by these trees leaves them beyond any tangible hope of managed retention.	Consider early removal.	S	C2
9860	Sycamore (<i>Acer pseudoplatanus</i>)	M	D	16.00	4.00	4.00	3.00	2.00	2.50	1	516	6.19	Completely dead and in need of immediate removal.	Remove.	N/A	U
9862	Horse Chestnut (<i>Aesculus hippocastanum</i>)	E/M	F	10.00	2.00	4.00	3.50	3.00	3.50	1	334	4.01	Small squat and suppressed because position directly adjoining larger cypresses. Is affected by substantial leaf-miner attack. Middle-crown is obscured by developing Ivy cover. Crown is one-sided and denuded because of shade to south-west.	Review regarding retention context.	M	C2
9864	Sitka Spruce (<i>Picea sitchensis</i>)	E/M	D	3.00	0.00	0.50	0.50	0.50	0.50	1	274	3.29	A large decapitated stump remaining after prior failure.	Remove immediately.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9875	Beech (<i>Fagus sylvatica</i>)	M	F	24.00	5.50	4.00	5.50	6.50	7.00	1	939	11.27	A large, visually imposing specimen of variable crown vigour. Much of canopy is maintaining reasonable vigour however, periphery support evidence of dieback and dead-wood development. Tree offers no visible cause for deterioration though principal stem and basal region is heavily obscured by dense Ivy cover that prevents detailed review at present.	Cut Ivy, Clean-out and review regularly.	M	B1-2
9876	Sycamore (<i>Acer pseudoplatanus</i>)	M	F	16.00	1.00	4.00	3.00	4.00	5.00	1	548	6.57	Suppressed by proximity to larger neighbours. General vigour and vitality are good. Much of principal stem is obscured by dense Ivy cover at present.	Cut Ivy and rereview.	L	B2
9877	Wych Elm (<i>Ulmus glabra</i>)	E/M	F	14.00	1.50	4.50	2.00	3.00	4.50	1	376	4.51	Heavily suppressed as result of proximity to near neighbours. Vigour and vitality appear reasonable at present however, prevalence of Dutch Elm disease in Co Dublin area suggest limited likelihood of survival beyond short to medium term.	Review regularly.	M	C2
9878	Beech (<i>Fagus sylvatica</i>)	M	F	20.00	2.00	9.00	7.00	5.00	7.00	1	993	11.92	Is one-sided and typically unbalanced to north. Vigour and vitality are fair but variable with some evidence of decline dieback and dead-wood development particularly about higher crown periphery. Lower stem is obscured by developing Ivy cover.	Cut Ivy and rereview once Ivy is shed.	L	B1-2
9878a	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	G/F	14.00	4.00	5.00	4.50	2.00	4.50	1	420	5.10	Suppressed by proximity of larger adjoining Beech and is typically unbalanced to north. Appears to be of good vigour but is compromised by major fork at 5.50 m.	Review regarding retention context.	L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9879	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	14.00	2.50	4.50	5.50	5.00	5.00	1	462	5.54	Suppressed at lower levels but apparently maintaining good vigour and vitality.	Review regard retention context.	L	B2
9880	Cherry Laurel (<i>Prunus laurocerasus</i>)	M	P	5.00	0.00	Contiguous				1	239	2.86	A block planting of Cherry Laurel running parallel with existing drive context. Hedge status is highly variable with some stems in decline and suffering dieback. Lower contiguous canopy appears be maintaining good vigour and vitality and offers substantial potential for managed retention.		M	B2
9881	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F	5.50	1.75	2.00	2.00	2.00	2.00	1	197	2.37	Young and vigorous, possibly comprising sucker regeneration. Has taken on a bushy and shrub like form.		L	C2
9884	Ash (<i>Fraxinus excelsior</i>)	E/M	F/P	10.00	2.50	4.50	2.50	2.00	3.50	1	328	3.93	Of notably reduced vigour with evidence of decay at canker wound at 4.50-5.00 metres. Unsuitable for retention.	Remove.	N/A	U
9885	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	13.00	2.00	5.00	4.00	5.00	3.00	1	385	4.62	Slightly distorted with stem imbalance to south. Has suffered prior mechanical damage to lower crown. General vigour and vitality appear good. Proximity to existing boundary and retaining wall raises concerns regarding sustainability over time in respect of growth.		L	B2
9886	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	13.00	2.00	5.00	3.50	5.00	2.00	1	462	5.54	Distorted and twin stemmed from ground level. Proximity to existing boundary and retaining wall raises concerns regarding sustainability over time in respect of growth.		M	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9907	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	P	13.00	1.50	1.50	4.00	3.00	2.50	1	548	6.57	A once larger specimen has suffered substantial mechanical damage and early life decapitation. Arises from disturbed ground near new road structure suggesting prior damage. Is of poor quality and dubious sustainability.	Consider early removal.	N/A	U
9908	Cherry Laurel (<i>Prunus laurocerasus</i>)	M	F/P	3.50	0.00	1.00	2.00	2.00	0.50	2	274	3.29	A once large plant has been substantially cut back. Exhibits some degree of re-suckering but overall decline is still extensive.	Remove.	N/A	U
9909	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	P	12.00	2.50	1.00	1.00	2.00	2.00	1	242	2.90	Of particularly poor quality and in a state of chronic deterioration. Arises from edge of excavation and grading. Is unsuitable for retention.	Remove.	N/A	U
9910	Monterey Cypress (<i>Cupressus macrocarpa</i>)	E/M	F	16.00	2.00	4.50	4.00	2.50	4.50	1	493	5.92	Suppressed and distorted by proximity to near neighbours. Vigour and vitality are fair but variable suggesting possible local impacts. Concern exists regarding species sustainability issues and problems as will relate to shelter loss.	Review regarding any potential retention context.	S	C2
9911	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	P	10.00	2.00	1.50	3.50	2.00	1.50	2	567	6.80	Twin stemmed and distorted with substantial dieback and decline in evidence. Is unsuitable for retention.	Remove.	N/A	U
9912	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	P	11.00	0.00	4.00	4.00	4.00	3.50	1	567	6.80	Decapitated in early life and has developed spreading habit. Structure is now mechanically poor with evidence of stem failure. Is unsuitable for retention.	Remove.	N/A	U
9913	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	P	11.00	0.50	2.00	3.00	2.50	1.50	1	516	6.19	Distorted and has suffered prior mechanical damage. Is of particularly poor form and is in a state of deterioration. Is unsuitable for retention.	Remove.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9914	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	D	11.00	5.00	0.50	0.00	2.00	3.00	1	261	3.13	Completely dead and in need of removal.	Remove.	N/A	U
9915	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	P	12.00	1.25	3.00	3.50	3.00	2.50	3	688	8.25	In a state of decline and deterioration with extensive mechanical damage to north-east of crown. Is unsuitable for retention.	Remove.	N/A	U
9916	Laburnum (<i>Laburnum anagyroides</i>)	M	P	7.00	1.50	3.00	4.00	4.00	2.00	2	401	4.81	Heavily divided with easternmost stem now split. Is unsuitable for retention.	Remove	N/A	U
9917	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	S/M	D	7.50	1.50	1.00	1.00	0.00	0.50	1	197	2.37	Wholly suppressed and completely dead.	Remove.	N/A	U
9918	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	P	10.00	0.00	2.00	2.00	2.50	2.00	1	388	4.66	Chronically suppressed with only small proportion of crown apex remaining alive. Is unsuitable for retention.	Remove.	N/A	U
9919	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	S/M	P	7.00	1.25	1.00	0.75	0.50	0.50	1	175	2.10	Completely dead.	Remove.	N/A	U
9920	Wych Elm (<i>Ulmus glabra</i>)	E/M	F	11.00	2.00	2.50	3.50	5.00	5.00	1	376	4.51	Affected by compression fork at 2.50 m. Is suppressed and one-sided, typically unbalanced to south-east. Remains in good health however prevalence of Dutch Elm disease in Co Dublin area suggest limited likely sustainability.	Review regularly.	M	C
9921	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	S/M	D	7.00	1.50	1.00	1.00	0.50	0.50	1	191	2.29	Completely dead. Remove.		N/A	U
9922	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	S/M	D	6.00	2.00	1.00	0.50	0.00	0.50	1	181	2.18	Completely dead. Remove.		N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9923	Beech (<i>Fagus sylvatica</i>)	E/M	G/F	16.00	2.00	7.00	5.50	5.50	6.50	1	774	9.28	Though still vigorous, tree is affected by Ganoderma and is subject to decay.	Remove.	N/A	U
9933	Cappadocian Maple (<i>Acer cappadocicum</i>)	E/M	F	12.00	2.00	4.50	5.00	5.00	4.00	1	493	5.92	Distorted and heavily obscured by dense Ivy cover that prevents detailed review at present. Tree has been affected by failure of adjoining specimens.	Clean-out and cut Ivy. Review after Ivy shedding.	M	C2
9934	Cordyline (<i>Cordyline australis</i>)	M	F	10.00	4.00	1.50	2.00	2.50	2.50	1	433	5.19	Large specimen having sustained prior damage and distortion. Much of Crown is obscured by dense Ivy development. Is of poor quality and dubious sustainability.		S	C2
9949	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	M	F	6.00	1.75	2.00	3.00	1.50	2.00	1	325	3.90	Particularly distorted but maintaining reasonable vigour and vitality. Offers limited degree of sustainability.		M	C2
9950	Walnut (<i>Juglans regia</i>)	M	F/P	15.00	2.50	5.00	5.00	7.00	7.50	1	716	8.59	A once larger specimen has undergone substantial prior pruning. A notable open cavity is visible at 1.00 m to south-east. Vigour and vitality appear variable with some dead-wood noted within crown. Tree arises from substantially manipulated ground environment. Tree supports notable imbalance to south-east.	Apply crown-reduction works concentrating on reduction in both height and spread to south and south-east. Consideration should be given to more holistic crown reduction works deliberately intending to reduce dimensions and to promote suckering at lower levels.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9951	Walnut (<i>Juglans regia</i>)	M	P	20.00	3.00	10.00	6.50	9.00	12.00	1	1038	12.45	A large specimen typically unbalanced to south. Crown vigour and vitality is highly variable with much of higher and northern crown being of notably reduced vigour. Crown supports evidence of dead-wood development and deterioration of previously cut limbs. Trees prognosis and degree of sustainability is considered minimal.	Imbalance should be addressed by applying crown reduction works to southern portion of crown to address overhang and extent remaining crown should be cleaned out to remove dead-wood or decay affected limbs. Consideration should be given to more holistic crown reduction works deliberately intending to reduce dimensions and to promote suckering at lower levels.	S	C1-2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9955	Walnut (<i>Juglans regia</i>)	M	P	19.00	2.50	6.00	5.50	4.50	4.50	1	910	10.92	A large specimen typically unbalanced to east and of notably reduced and highly variable crown vigour. Much of higher and south-western canopy is of particularly low vigour and apparently in a state of decline. Primary stem is affected by area of localised decay at circa 5.50 m though old wounds to west at 2 m also exhibit evidence of extensive decay and cavity development. Inonotus is noted on major structural limb to east. Tree is considered mechanically poor and potentially hazardous. Retention would require substantive and structural pruning works.	Consider crown-reduction works of circa 2.00 – 3.00 m in height with corresponding reshaping. If retained, review on annual basis in respect of ongoing suitability for retention. Alternatively, remove and replace plant.	S	C1-2
9956	Walnut (<i>Juglans regia</i>)	M	F/P	18.00	2.00	7.50	6.00	5.50	7.00	1	907	10.89	Is of convoluted form and variable vigour. Higher levels are particularly poor with evidence of ongoing deterioration. Lower stem is obscured by developing Ivy cover. Crown is noted to support some dead-wood.	Apply crown-reduction works particularly to eastern and south-eastern canopy adjoining building. Consider more holistic works reducing overall canopy height and spread by circa 1.50 – 2.00 m deliberately intending to initiate lower level suckering within crown. Review on annual basis if retained.	S	C1-2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
9957	Walnut (<i>Juglans regia</i>)	M	F/P	18.00	2.00	8.00	9.50	6.50	7.00	1	939	11.27	Distorted and of variable bull vigour after prior pruning. Higher crown is of reduced vigour with evidence of ongoing deterioration. Lower crown retained reasonable vigour particularly where pruning has resulted in re-suckering. Crown is noted support some dead-wood.	Consider application of crown reduction works intending to initiate new suckering. Reduction in the order 2.00 m in height and corresponding reduction in spread accepting east where reductions may be in the order of 3.00 – 5.00 m to reduce extent of encroachment and overhang. Review on annual basis regarding ongoing suitability of retention if retained.	M	C1-2
9960	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	D	11.00	3.00	3.00	1.50	0.00	2.50	1	261	3.13	Completely dead and in need of removal.	Remove.	N/A	U
9961	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	P	10.00	1.50	4.00	2.00	2.50	2.00	1	385	4.62	Chronically distorted with large proportion of crown already dead. Is unsuitable for retention.	Remove.	N/A	U
9962	Ash (<i>Fraxinus excelsior</i>)	E/M	P	10.00	0.00	5.00	6.00	4.00	3.50	1	350	4.20	Multi-stemmed community of low quality with substantial elements of decline and dieback evident within crown. Unsuitable for retention.	Remove.	N/A	U
9963	Holly (<i>Ilex aquifolium</i>)	M	P	9.00	1.50	5.50	4.00	0.00	3.00	1	334	4.01	Distorted and arising from position close to retaining wall. Growth in this position is considered unsustainable. Unsuitable for retention.	Remove.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
A	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	7.50	1.00	2.00	2.00	3.00	3.00	1	366	4.39	Suppressed because of proximity to nearest neighbour and overhanging boundary wall. General vigour and vitality appear good.		L	B2
B	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	7.50	1.00	3.00	3.00	2.00	2.00	1	357	4.28	Suppressed because of proximity to nearest neighbour and overhanging boundary wall. General vigour and vitality appear good.		L	B2
C	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	6.00	1.00	2.00	2.00	2.00	2.00	1	350	4.20	Young and apparently vigorous though becoming suppressed by adjoining shrubbery.	Review regularly.	M	B2
D	Group D Silver Birch (<i>Betula pendula</i>)	S/M	G	9.00	1.00	2.50	2.50	2.50	2.50	1	175	2.10	Relatively young and recently planted in roadside margin and adjoining site boundary. All exhibit evidence of good vigour and vitality though some, closest to Cypresses A and B become slightly distorted as result of suppression.		L	B2
E	Whitebeam (<i>Sorbus aria</i>)	S/M	G/F	7.00	2.25	2.50	3.50	3.00	2.50	1	261	3.13	Slightly misshapen but of good vigour and vitality.		L	B2
F	Swedish Whitebeam (<i>Sorbus intermedia</i>)	M	F	6.00	0.50	3.50	3.50	2.50	3.00	1	290	3.48	A reverted specimen with Swedish Whitebeam suckers at base that much of crown reverted to species typical configuration.		L	B2
G	Swedish Whitebeam (<i>Sorbus intermedia</i>)	M	F	6.00	0.50	3.00	3.50	2.50	3.00	1	286	3.44	Younger broadly vigorous but has sustained some lower stem and buttress root damage.	Review regularly.	M	C2
H	Cordyline (<i>Cordyline australis</i>) Chinese Lantern Tree (<i>Crinodendron hookerianum</i>)	M	F	5.50	0.00	2.00	2.00	2.00	2.00	1	175	2.10	A coalesced mass including front boundary hedge and adjoining shrubbery. Is of poor quality with Cordyline and Crinodendron being in state of decline.		M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
I	Cordyline (<i>Cordyline australis</i>)	E/M	F	5.00	2.00	1.00	1.00	1.00	1.00	1	197	2.37	A relatively small and visually insignificant specimen.		M	C2
J	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	6.50	1.25	2.00	2.00	2.00	2.00	1	236	2.83	Young and vigorous, comprising an element of a relatively recent planting.	Review regarding retention context.	L	B2
K	Monterey Cypress (<i>Cupressus macrocarpa</i>)	E/M	F	10.00	1.25	3.50	3.00	3.00	3.50	1	290	3.48	Young and still vigorous with immense potential for continued growth over time.		M	C2
L	Monterey Cypress (<i>Cupressus macrocarpa</i>)	S/M	F	7.50	0.00	2.50	1.50	1.50	2.50	1	162	1.95	Young and vigorous but is of dubious sustainability considering position directly adjoining wall structure.		M	C2
M	Chilean Myrtle (<i>Luma apiculata</i>)	E/M	F	7.00	1.00	2.00	2.00	2.00	2.00	1	239	2.86	Young but of reduced vigour.	Review regularly.	M	C2
N	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	E/M	F	6.00	0.00	0.75	0.75	0.75	0.75	1	159	1.91	A group of 3 adjoining cypresses. Young and relatively vigorous though becoming suppressed by adjoining plants.	Review regularly.	M	C2
O	Field Maple (<i>Acer campestre</i>)	S/M	F	6.00	1.50	2.50	2.50	2.50	2.50	1	204	2.44	Young and vigorous.		L	B2
P	Himalayan Birch (<i>Betula utilis</i>)	S/M	G	5.00	1.50	2.50	2.50	2.50	2.50	1	156	1.87	Young and vigorous.		L	B2
Q	Ornamental Cherry (<i>Prunus variety</i>)	S/M	G	5.50	1.00	2.50	2.50	2.50	2.50	1	166	1.99	young and vigorous.		L	B2
R	Field Maple (<i>Acer campestre</i>)	S/M	G/F	5.00	1.25	2.50	2.50	2.50	2.50	1	185	2.22	Young and vigorous.		L	B2
S	Holm Oak (<i>Quercus ilex</i>)	S/M	G/F	5.00	1.75	1.50	1.50	1.50	1.50	1	153	1.83	Group of 3, relatively recently installed trees. Our maintaining reasonable vigour and vitality.		L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
T	Hornbeam (<i>Carpinus betulus</i>)	S/M	G/F	4.50	1.00	1.25	1.25	1.25	1.25	1	153	1.83	Young and vigorous, part of new planting.		L	B2
U	Lime (<i>Tilia europea</i>)	S/M	G/F	5.00	1.00	2.00	2.00	2.00	2.00	1	127	1.53	Young and vigorous, comprising part of recent planting.		L	B2
V	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F	12.00	2.00	4.50	3.00	1.00	3.00	1	347	4.16	Naturally arising from inside of walled garden area. Is heavily one-sided through location relative to original cypresses.	Review regarding retention context and potential for growth related damage to wall.	M	C2
W	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	10.00	1.50	4.50	4.00	5.00	5.00	1	433	5.19	Young and naturally arising as part of broader site thicket. Remains vigorous with substantial potential for ongoing growth. Position adjoining wall will result in damage over time.		M	C2
X	Wych Elm (<i>Ulmus glabra</i>)	E/M	F/P	11.00	1.00	3.00	5.50	6.00	4.50	5	430	5.16	A large, sprawling multi-stemmed group of poor mechanical form. Tree remains vigorous at present however, prevalent to Dutch Elm disease in Co Dublin area suggests limited potential for sustainability considering high likelihood of contracting this disease.		M	C2

Appendix 3 – Site Photographs

Photo 1



This photograph illustrates the storm damage decapitation of Beech 9773 and the partial collapse of Beech 9774, as well as the chronic decline of Western Red Cedars 9770 and 9771.

Photo 2



This photograph illustrates the poor quality of tree within the group to the south of the Brewery Road entrance road. This group contained many dead and partially collapsed trees that currently constitute a tangible threat through failure. This entire group is of minimal sustainability.

Photo 3



This photograph illustrates the trees retained after the excavation of the fire tender access opposite the completed “Block G”. Environmental change including exacerbated drainage and drying has resulted in widespread death and decline within the overall population. This group is of minimal sustainability.

Photo 4



This photograph illustrates the “built-up” nature of ground to the south and south-west of Beech 9876, where the previous installation of underground services, combined with raising of ground levels has created a substantially artificial scenario and a pre-existing imposition on what would be the nominal root protection area.