

**Arboricultural Report
Trees at Proposed SHD Development
Priorsland
Cherrywood
Dublin 18**

March 2022

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Associated Drawings

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

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

1 Report Summary

- 1.1 This report comprises an updated Arboricultural review, accounting for a revised and updated development proposal. Notwithstanding this, the similarities of form and layout, are such that the assessed Arboricultural impacts remain much the same as the previous application iteration.
- 1.2 The scale of the proposed development and its associated infrastructure, will unavoidably results in extensive environmental change and the consumption of ground space. Such change will unavoidably impact the potential to retain trees.
- 1.3 As much of the proposed works are to the south of the Carrickmines Stream, then trees to the north of the stream alignment will gain substantive protection because of the streams acting as a physiological barrier to root development. As large areas to the north of the stream will remain undeveloped at present, then trees associated with these areas can be retained.
- 1.4 There are small areas of loss, for example, to allow for the construction of roads and bridges across the Carrickmines Stream. There are other issues regarding sustainability and safety, for example in respect of Woodland Area 1” that is in a state of profound dilapidation, regardless of any development impacts.
- 1.5 Notwithstanding the above, trees will be retained on what will be undisturbed open space, thereby providing a reasonable expectation of sustainability. This will be achieved with the adoption of simple tree protection methodologies and procedures. Tree protection will be based on the exclusion of construction activity during the construction phase of the project as well as the adoption of manual and low impact procedures, for example in respect of the provision of new footpaths near trees.
- 1.6 The proposed developments connectivity with existing and proposed infrastructure relating to the broader Cherrywood Strategic Development Zone, means that some works already have and will in the future, result in unavoidable tree impacts. Some such affected trees would appear likely to be lost in line with existing master-plan intentions.

2 Introduction

- 2.1 This report was commissioned by-
1 Carrickmines Land Ltd

This report has been prepared by-
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Report Brief

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

Report Context

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

Report Limitations

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

3 Site Description

- 3.1 The Priorsland site comprises part of the broader Cherrywood SDZ. The site is located south-east of Carrickmines and to the north of the M50 motorway.
- 3.2 The site is of irregular shape, effectively comprising two adjoining fields, separated by the Carrickmines Stream. The southern and larger site is effectively devoid of vegetation on its south-western boundary, that nearest to the M50 motorway. This boundary is irregular shape but appears to be defined currently by a post and rail fence. This boundary supports little vegetation of interest other than Bramble thicket. The eastern boundary of this area again comprises a post and rail fence that is effectively devoid of any vegetation of interest. The northern boundary appears to be best defined by a stream that runs along its full length. This area of the site supports a small number of trees that arise from the southern bank of the stream. The western boundary of this area appears to be defined by a distinct agricultural boundary hedge that is substantially overgrown at this stage. The hedge appears to exist in conjunction with a raised embankment and associated drainage ditch to the east, that shows evidence of recent excavation and clearance.
- 3.3 The northern site is defined on its southern boundary by the Carrickmines Stream as noted above. This boundary of the site supports a substantial number of trees including several particularly large Turkey Oak with a significantly larger population of younger trees including Sycamore, Ash and Elm the majority of which arise from the stone reinforced embankment of the stream.
- 3.4 This area's northern boundary is defined by a boundary with the LUAS line. Much of this boundary appears asymmetric with what appears to be a retaining wall dividing the lower level site from the raised level of the LUAS tracks. There are a small number of trees arising from this wall feature. The eastern boundary of this field divides the site from the adjoining LUAS park and ride car park. The boundary appears to be defined by a substantial ditch whose eastern side supports an outgrown hedge now dominated by Bramble and emergent Elm. The western boundary of this portion of the site is ill-defined other than a sporadic post and rail fence. This area divides the site from and adjoining dilapidated woodland.
- 3.5 Both areas of the site appear visually to be broadly flat. The northern portion of the site exhibited no evidence of drainage issues during the review. However, standing water and poor drainage was noted at various positions but particularly towards the eastern half of the southern field.

4 Pre-Development Arboricultural Scenario

- 4.1 To the south the open field supports little vegetation of interest, other than on its northern and easternmost boundaries.

- 4.2 To the east, there is a large hedge that is broadly overgrown with the original Hawthorn element mostly overwhelmed. Nonetheless, and as a vegetative corridor, the alignment is still substantial though retention and management in the future will be difficult.
- 4.3 The hedge alignment supports a small number of emergent trees including Beech and Ash. Many of these trees appear to be in reasonable health. However, most specimens are inaccessible and obscured by dense Ivy cover. Accordingly, it is advised that such trees are reviewed after Ivy cutting and thicket clearance.
- 4.4 The northern and southern site areas are divided by the Carrickmines Stream. There is only a small proportion of material to the south of this river, the majority of this was found to be in particularly poor condition and some in a dangerous state having suffered partial collapse.
- 4.5 The site's most significant material is within or adjoining the smaller northern field. In positions directly north of the Carrickmines Stream, there is a substantial and significant alignment of fully mature Turkey Oak. These are of variable health status with some specimens including Nos.6 and 39 being subject to decay and likely instability. Nonetheless, such trees might offer some degree of retention, for example with structural pruning of this would be context dependent and subject to the likely occupation and use the area within which they stand will attain in the future.
- 4.6 Along the northern edge of the stream, there is substantial regenerative thicket development. This thicket exhibit evidence of once having included Hawthorn's but at this time, very few remain and those that do tend to be of poor quality. The alignment is now dominated by an emergent population of young ash Elm together with a small number of Sycamore. These trees tend to be of poor quality, some being of poor mechanical form others distorted through suppression by the larger adjoining Turkey Oaks. Nonetheless, a combination of small stature and typically good vigour may offer some degree of sustainability, depending upon the future context. However, any such retention will be dependent upon the conservation of the existing stream embankment.
- 4.7 The western boundary of the northern field appears likely to have supported a thorn based hedge in the past. Very little of this remains present with the lower-level thicket like corridor being provided more by Bramble thicket. Arising from this thicket there is a substantial emergent population dominated by Wych Elm but also including Ash. Unfortunately, with the prevalence of Dutch Elm disease within the broader Dublin area it is unlikely that the Elms will survive and therefore their sustainability and suitability for retention remain questionable. Similar should also be considered pertinent to the Ash in light of the developing pathological issues associated with Ash Decline (Chalara Canker). The remainder of trees, the majority of which arise from the eastern side of a substantial ditch will require further review regarding retention context. The northern boundary of this field with the LUAS line supports very little material of interest other than a Bramble thicket of a small number of emergent trees. The trees in this area raise some concern for several reasons, the smaller Elms regarding their likelihood of

contracting Dutch Elm disease and the trees regarding their position relative to the retaining wall and the LUAS line as well as crown encroachment on the LUAS line. In this respect, Ash Nos.72 and 76, together with Sycamore No.73 should be reviewed once the obscuring thicket is removed. These typically poor quality and poor structural reform trees are already of dubious sustainability relative to the LUAS line and may become less suited for retention regarding any future context.

- 4.8 The eastern boundary of this field effectively involves a woodland edge. The tree survey has included a small number of trees located closest to the boundary of the site as most overhang it. In general terms, the quality of trees in this area tends to be rather poor with the smaller, younger ash being multi-stemmed heavily divided and of generally poor form. It is noted that at least for substantially older and larger Ash all of which exhibit age-related issues including prior mechanical failure and decay brought on by in a notice thus raising concerns in respect of the presentation of a threat to the site. In at least three cases, the subject trees should be removed and thus and should they prove to be outside the jurisdiction of the site area, then the tree's condition should be brought to the attention of their owners.
- 4.9 When continuing to the east, there appears to be a dilapidated area of softwood plantation, dominated by Sitka Spruce (Woodland Area 1). This area shows much evidence of dilapidation and non-management over time with multiple stems and stumps illustrating prior and ongoing tree failure. A small area near the north-east of the woodland is now being colonised by Birch, Common Alder and Ash. These are relatively small and young present no particular concern at present. The larger conifers do however raise concern in respect of woodland fragmentation, shelter loss and exposure being likely to result in wind blow. In this respect, and notwithstanding the visual significance of the woodland to date, it is unlikely to be sustainable and indeed is considered likely over time, to suffer catastrophic wind blow.
- 4.10 In respect of the western portion of the main site field, the tree survey has continued along the stream boundary in positions south of the LUAS car park and its access road. Though trees are described in this area, their location, north of the dividing stream has created a physiologically detachment from the site in respect of root development, where the existence of a persistent watercourse and anaerobic conditions beneath the stream bed that will have effectively prevented root development in a southerly direction. Nonetheless, the size of some of the trees and their overhang of the site was such as to consider them pertinent to the site and thus they were included within the broader survey context.
- 4.11 As can be seen from the graphs above, there are trends of similarity across the tree population. While the age proportions would appear reasonably good, useful life expectancy is dominated by none, short and medium term, categorisations are dominated by categories "C" and "U" and conditions are dominated by fair, fair/poor and poor, illustrating that overall, the greater proportion of trees across the site appear to offer mediocre to poor rates of sustainability.

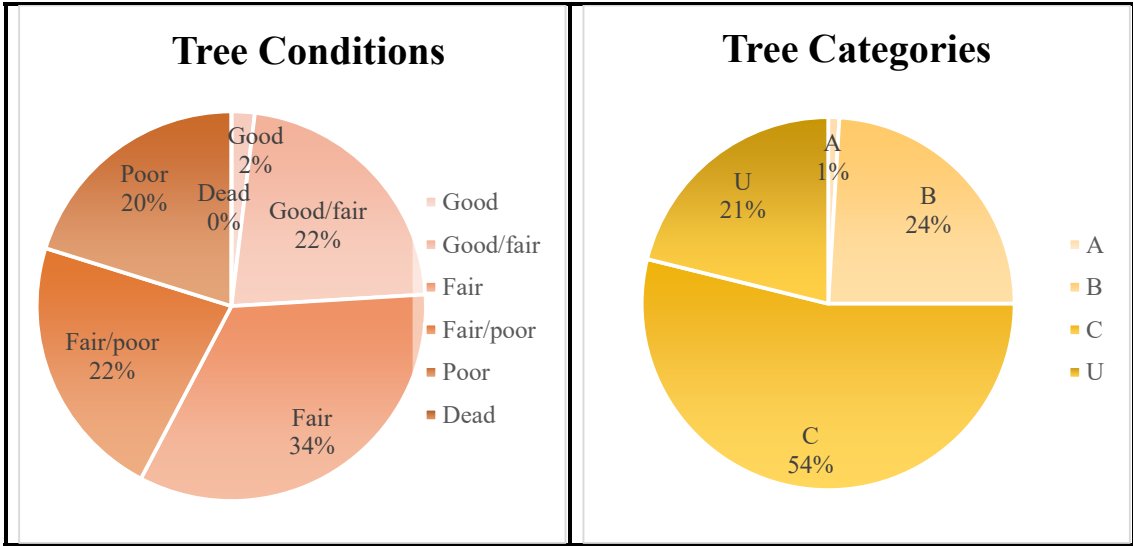


Fig 1

Fig 2

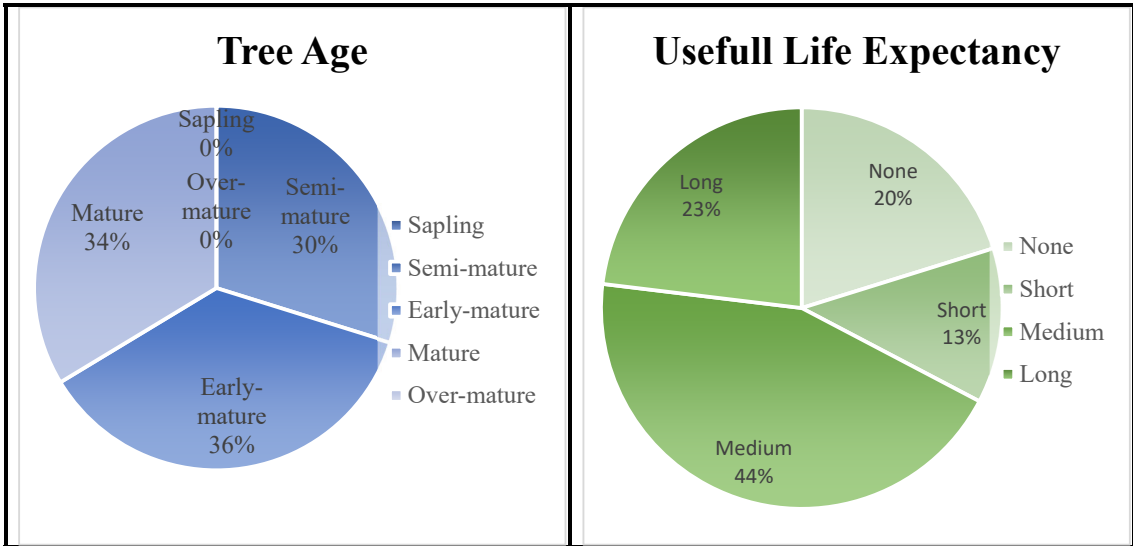


Fig 3

Fig 4

4.13 The species breakdown (Fig 5) suggests a partially planted and deliberate tree population, best illustrated by species such as Beech, English Oak and Turkey Oak. By comparison, the high proportion of Ash and Sycamore, English and Wych Elm is likely to be naturally arising. Of these, sustainability issues apply to the Elm and potentially to the Ash. Dutch Elm disease is widespread within the broader area and it is unlikely that the sites current Elm population will survive more than a few years. Similarly, Chalara Canker of Ash is becoming widespread across Ireland and therefore the sustainability of Ash should not be relied upon.

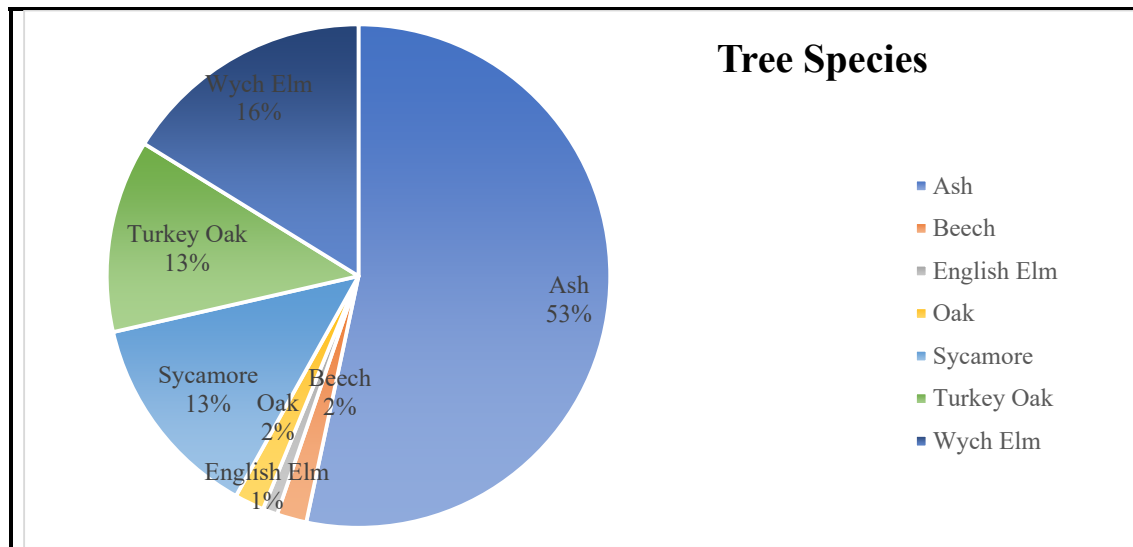


Fig 5

5 Planning Scenario in Respect of Tree

- 5.1 In respect of planning, it is noted that “Dun Laoghaire Rathdown County Council” includes numerous references to trees and woodlands, as well as their retention, within their planning documentation. Such references include-
- 5.2 In respect of trees, there are two principal areas of guidance including, the “County Development Plan 2016 – 2022”, and the “DunLaoghaire Rathdown tree strategy document”: “A Tree Strategy for Dún Laoghaire-Rathdown 2011 – 2015”
- 5.2.1 **Chapter 2, Sustainable Communities Strategy**
2.1.3.5 Policy RES5: Institutional Lands notes the retention of trees in development proposals
- 5.2.2 **Chapter 4, Green County Strategy**
4.1.3.1 Policy LHB19: Protection of Natural Heritage and the Environment*
4.1.3.5 Policy LHB23: Non-Designated Areas of Biodiversity Importance*
4.1.3.6 Policy LHB24: County-Wide Ecological Network*
4.1.3.8 Policy LHB26: Hedgerows*
4.2.2.6 Policy OSR7: Trees and Woodland* (Tree Strategy for the County – ‘DLR TREES 2011-201)
- 5.2.3 **Chapter 8, Principles of Development**
8.1.2.4 Policy UD7: Urban Tree Planting* (DLR TREES: A Tree Strategy for Dún Laoghaire-Rathdown 2011 – 2015)
- 8.2.3.2 Quantitative Standards, (ii) Residential Density (where lower densities may be considered or in sites where mature tree coverage prevents minimum densities being achieved across the entire site)

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

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

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

(v) Financial Contributions

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

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

8.2.7.2 Sensitive Landscapes and Site Features

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

8.2.8.3 Public/Communal Open Space – Quality

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

8.2.8.6 Trees and Hedgerows

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

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

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

Chapter 8 Development Management

8.2.11.2 Architectural Heritage – Protected Structures

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

- 5.3 In addition to the general county-wide planning requirement in respect of trees, note is made of further intentions outlines under the “Cherrywood Strategic Development Zone”. Particularly, note is made of the “Green Infrastructure” chapter and “Map 5.2: Vegetation. This map indicates a number of vegetation groups described in this report including, Hedges 1 and 2, tree lines 1 to 56 and 72 to 77 and 100 to 103.

6 Construction Activities and their Effect on Trees

- 6.1 Retaining trees takes up space. There is a big difference between physically preserving a tree and ensuring its future survival. Sustainable tree retention often depends on the extent and nature of construction protection.
- 6.2 Like all living things, trees are highly dependent on their environment in which they exist. A tree's continuity in supplies of water and nutrients from the soil. Any long-term change in ground conditions can easily affect a tree's metabolism, health, and sustainability.
- 6.3 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.
- 6.4 Where the above issues occur within the minimum "root protection area" as defined by "BS5837-2012", the tree's sustainability and safety may be compromised.
- 6.5 Sustainable tree retention must accept changing contexts and increased management in the future. Where rates of occupation and use increase, then any retained trees have a potential to cause harm or damage. This issue may be exacerbated where shelter-loss and exposure occur regarding the retention of individual trees.

- 6.6 Retained trees should be considered in respect of shadow-cast, light admission, and view-blocking. Wind patterns can affect leaf shedding, causing drifts and accumulations creating management issues around drains and gullies, or the creation of slippery surfaces.

7 Nature of Project Works

- 7.1 The proposed development is described as below:

- 7.1.1 The development will comprise a mixed-use village centre and residential development of 443 no. units comprising 6 no. blocks (A-F) of apartments (up to 5 storeys with basement/undercroft parking) providing 402 no. apartments units (146 no. 1-beds; 218 no. 2-beds and 38 no. 3-beds), and 41 no. houses (19 no. 3-beds and 22 no. 4-beds). All apartments provided with private balconies/terraces. Provision of indoor residential facilities to serve apartment residents.

The Village Centre and non-residential elements will comprise a supermarket, local retail/retail service units, non-retail commercial units, creche, gym, community space, and offices (High Intensity Employment) use.

Provision of car/bicycle/motorcycle parking; ESB sub-stations; bin storages areas, and all associated plant areas.

Provision of the first phase of Priorsland Park (on lands within the applicant's ownership) and other public and communal open spaces.

Construction of Castle Street through the subject lands and two road bridges across the Carrickmines Stream, one to serve the future school site/ park, the second to provide pedestrian and cyclist access to the Carrickmines Luas station and future Transport Interchange to the north. Provision of an additional pedestrian bridge to the park. Provision of an acoustic barrier along the southern/western edge of the site.

All associated site development works, landscaping, boundary treatments and services provision.

- 7.2 Considering the scope and scale of the proposed development, it is considered likely that most of the issues dealt with at "Construction Works and Trees" above, will apply at various points and particularly regarding-

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

8 Specific Issues and Arboricultural Concerns

- 8.1 The primary issues encountered for this development relate to the consumption of space to achieve necessary densities, the provision of site services and ancillary services associated with the broader area and the upgrading of existing infrastructure, as well as levels issues that have seen a necessity for filling and raising substantial portions of the site. All such works create local environmental change substantially beyond any real capacity to retain trees and accordingly, any trees affected by such works, will be lost.
- 8.2 It is fortunate that the Carrickmines Stream acts as a physiological barrier between the main site to the south and what will be open space to the north. Therefore, and notwithstanding what appears to be proximate works, any works carried out south of the stream will not affect the trees associated with the streams northern bank.
- 8.3 There are some punctuations to the stream, for example where services and the proposed water main as well as road access bridges are required. These punctuations and crossing points will disturb the northern side of the stream as depicted on the Arboricultural implication assessment drawing.
- 8.4 Much of the southern portion of the site will effectively require clearing. Fortunately, this area of the site supports limited material and few trees. The trees that do exist, tend to be located close to the southern edge of the Carrickmines Stream or along the western edge of the Ticknick Stream. Unfortunately, the previous installation of a main foul sewer close to and parallel with the Carrickmines Stream has resulted in obvious tree impacts with a large proportion of the trees along the southern edge of the stream being in particularly poor states of health or approaching death. Accordingly, any further impacts in this area are considered insignificant and irrelevant as with very few exceptions, the trees are typically unsuitable for retention within the new context.
- 8.5 Towards the east of the site and the Ticknick stream, the proximity of the proposed development, the provision of roads access and further complications raised by drainage requirements and the need for attenuation and SuDS related features, has seen a substantive encroachment on the outgrown hedge and associated thicket development. Some of this material will require removal, however, there appears to be some scope for at least partial retention of the smaller calibre, thicket and hedge material. Unfortunately, it appears that the full extent of this retention will not be apparent until construction stage. Nonetheless, the small number of trees located in this area will not prove suitable for retention.
- 8.6 The northern portion of the site is to remain broadly as open space at this time. Accordingly, and notwithstanding the notes above regarding bridge and services access, a large proportion of these trees would appear retainable with the provision of suitable tree protection. Nonetheless, issues remain in respect of future context and relating to the poor quality of some specimens. An example of this is to the east of the site where a new water main is proposed to project through the woodland area. The woodland

areas considered to be of particularly poor quality, being dominated by out-grown Sitka Spruce, that is unmanaged and in a state of progressive failure. Accordingly, an unavoidable loss is envisaged over time, however, any reduction of the cohesive woodland and a loss of shelter, will see a substantial increase in tree losses and wind-blow. Therefore, and showed woodland fragmentation be unavoidable then wholesale felling must be considered as the preferred option.

- 8.7 In respect of the western edge of the woodland note is made of the poor quality of sporadic alignment of ash. The worst of these trees have been recommended for removal. However, issues of exposure and shelter loss are likely to affect any trees preferred for retention. Therefore, and notwithstanding the works recommendations made in respect of the site's current context, it is likely that substantive and structural pruning works will be required to improve the suitability of these trees for retention within what will be a publicly accessible new context.
- 8.8 The extent of tree planting envisaged across the site will in part mitigate the above losses. Details have been provided within the proposed landscape plans as provided by Dermot Foley Landscape Architecture. These details indicate that numerous trees will be installed, including Turkey Oak, Lime, Scots Pine, Hairy Birch, Common Alder, Hazel, White Willow, Goat Willow, Crack Willow, Osier, Strawberry Tree, Magnolia and Mespil.
- 8.9 Elements of the proposed development connects to existing infrastructure or is designed to connect to future infrastructure. This illustrates that this development will not exist in isolation, but will relate and connect to neighbouring sites, either existing or in the future. The tree population reviewed includes trees predominantly within the site, but also includes those outside the site but directly adjoining it. In this respect, some trees located outside of the red line will be affected by the current proposals. Examples include Turkey Oak No.39 close to a proposed bridge. However, this tree is recommended for removal because of poor health and decay, and regardless of development works. Similarly, Elm No.58 will be affected by a combination of the bridge works and the extension of the existing 1650mm drainage line that exist to a point to the south of the tree. The proposed 1650mm drain appears to continue into lands to the east of the site. Here, the pipe-works will pass beside Ash No.86 as well as the adjoining woodland. These trees can only be removed by their owners. However, it appears that in line with broader master-plans for the area, that many of these trees are expected to be lost, regardless of the current proposal. Notwithstanding this, it is advised that contact be made with the relevant tree owners, in respect of the application of suitable management systems that may include tree removal. As such trees are beyond the jurisdiction of the site, they have not been shown for removal in this report.

9 Design Iterations and Arboricultural Considerations

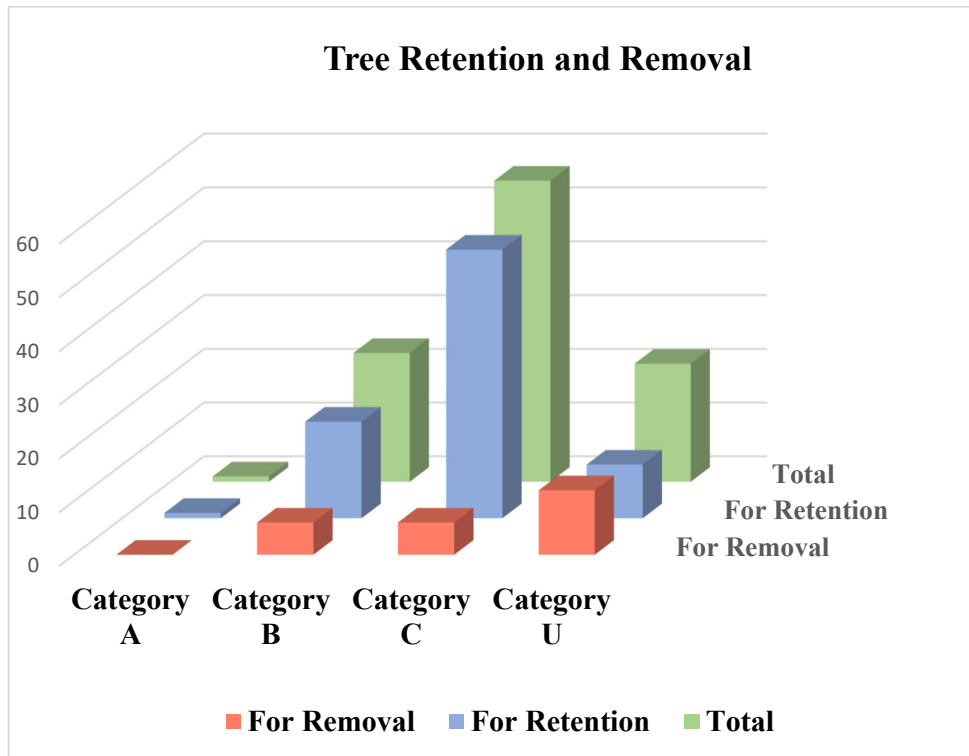
- 9.1 An earlier tree survey carried out in 2018 and the preliminary results were provided to the broader design team at that time. The survey was updated in March and April of 2020. Accordingly, there was an early appreciation of the site's tree cover, its quality, condition, and the constraints it presented.
- 9.2 This report relates to clause 4.4.2.1 of BS5837-2012 in that its findings relate to a predefined concept that was issued for review. 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.

10 Identification of Development Impacts to Trees

- 10.1 The expected tree impacts have been represented graphically on the tree impacts drawing "**Priorsland Tree Impacts Plan**", as well as 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 to be made between the existing site context and the development proposals in respect of new structures.
- 10.2 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.
- 10.3 Detail of the development proposals were gained from drawings provided by-
- Urban Agency Architects – Architectural Layouts
 - Punch Consulting Engineers – Drainage and Engineering information overlaid on Masterplan
 - Niall Montgomery + Partners – Landscape Design
- 10.4 The evaluation is primarily based on minimum protection ranges as defined paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS 5837:2012. 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.
- 10.5 The broader assessment attempts to consider both direct and indirect implications, based on perceived construction requirements, as well as how a tree will likely interact with the development in respect of growth, hazard development, light blockage and other social concerns in respect of the changing context, including its effect on tree amenity value.

11 Tree Retention and Loss

- 11.1 The drawing “Priorsland 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.
- 11.2 The nature and extent of the proposed development and its unavoidable need to convert or otherwise disturb the existing site conditions effectively requires the removal of all site trees as outlined below-
- The site as reviewed, currently supports 104no. trees or tree groups, as well as 3no. multi-plant groups such as woodlands or hedges. The individually described trees include-
- 1no. category A trees
 - 24 no. category B trees
 - 56 no. category C trees
 - 23 no. category U trees
- 11.3 The category “U” (unsustainable or unsuitable for retention) trees that are recommended for removal include Nos.1, 10, 14, 17, 23, 33, 34, 39, 45, 65, 67, 68, 69, 70, 71, 84, 85, 95, 96, 97, 98 and 99.
- 11.3.1 Note must be made that of the above trees, numbers 39, 65, 67, 68, 69, 70, 71, 84 and 85 are located at positions directly adjoining but outside of the site red line. Therefore, and whilst their removal is recommended, such removals are beyond the jurisdiction of the site and can only be undertaken by the lawful tree owners.
- 11.3.2 Additionally and though of poor condition, Oak No.6 offer limited sustainability with structural pruning as an alternative to immediate removal (see survey).
- 11.4 The site supports only one category “A” tree, No.74 that appears retainable within the proposed development context.
- 11.5 Of the site’s category “B” trees, the development will require the loss of Nos.32, 36, 37, 50, 52 and 53.
- 11.6 Of the site’s category “C” trees the development will require the removal of Nos.31, 35, 51, 58, 78, 79, 80, 86, 93, 94 and 95.
- 11.7 Located outside of the site further trees may be affected including tree nos.39 (category U), 58 (category C) and 86 (category C). Some of these appear likely to be removed in line with future works and developments of adjoining sites.



12 Tree Protection within the Scope of a Development

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

in situ (unless under the guidance of the site Arborist) until the completion of all site works.

13 Preliminary Management Recommendations

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

14 Bibliography

- 14.1 British Standards Institution (2010) BS 3998:2010: Tree Work - Recommendations. London: British Standards Institution.
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- 14.3 Jackson, R.B et al (1996) A Global Analysis for Root Distribution in Terrestrial Biomes *Oecologica*, 108 (1996) pp389-411, Springer Verlag
- 14.4 Lonsdale, D. (2005) *Principals of Tree Hazard Assessment and Management*, London, TSO
- 14.5 Mattheck, C. and Breloer, H. (1994) *The Body Language of Trees*, London, TSO
- 14.6 Roberts, J. and Jackson, N. and Smith, M. (2006) *Tree Roots in the Built Environment*, London, TSO
- 14.7 Strouts, R.G. and Winter, T.G. (1994) *Diagnosis of Ill-Health in Trees*, London, HMSO

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

Method Statement Outline

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

Drawings

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

Method Statement Use

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

Amendments and Modifications to Tree Protection Plan

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

Works Related Impacts

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

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

Tree Works Specification Updates

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

General Method Statement

1.0) Overview and Implementation

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

2.0) Works Sequence

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

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

3.0) Tree Protection

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

4.0) Provision of Ground Protection (If Required)

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

5.0) Works within “RPA” Zone

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

6.0) Service Installation

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

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

7.0) Tree Management and Works

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

8.0) Demolition

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

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

9.0) Ancillary Precautions

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

A2 Appendix 2 - Tree Survey

Nature of Survey

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

Drawing References

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

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

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

Survey Intent and Context

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

Survey Data Collection and Methodology

The Survey

- A2.9 The original survey was carried out in November of 2018 and extended in March of 2019, in March 2020 and in February 2021. This survey portion of the overall report is not an Implication Assessment though but provided some of the basic information regarding its compilation. The compilation of this survey was guided by the recommendations of BS 5837: 2012. This survey typically includes trees of stem diameters exceeding 150mm at approximately 1.50 metres from ground level. The survey relates to current site conditions, setting and context.
- A2.10 Each tree in the survey has a consecutive number that relates directly to the survey text. Measurements are metric and defined in metres and millimetres. All trees referred to in the survey text have been measured to provide information regarding canopy height and canopy spread (north, east, south, and west radii), level of canopy base and stem diameter at 1.50 meters from ground level. The dimensions provided are intended to provide a reasonable representation of a tree’s size and form. While efforts are made to maintain accuracy, visual obstruction, especially regarding trees in groups, requires that some tree dimensions be estimated only.

Inspection and Evaluation Limitations and Disclaimers

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

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

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

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

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

Seasonality

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

Survey Key

Species	Refers to the specific tree species
Age	Referred to in 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 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
1	Ash (<i>Fraxinus excelsior</i>)	M	P	13.00	0.00	0.00	4.00	9.00	3.00	1	618	7.41	Has suffered prior catastrophic failure with remaining crown extending to south but affected by chronic decay and splitting. Total failure is inevitable.	Remove	N/A	U
2	Turkey Oak (<i>Quercus cerris</i>)	M	P	5.00	2.25	4.50	7.00	3.50	0.00	1	379	4.55	Chronically unbalanced to east. Is of dubious retention merit.		S	C2
3	Ash (<i>Fraxinus excelsior</i>)	S/M	F/P	6.00	1.00	0.00	1.50	5.50	2.00	1	293	3.51	Naturally arising on stream bank. Is chronically distorted and unbalanced to south across stream. Is of dubious retention merit.	Review regarding retention context.	M	C2
4	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	19.00	2.00	10.00	8.50	7.00	5.00	1	1019	12.22	A large, slightly one-sided specimen. Vigour and vitality appear reasonable with limited dead-wood. Middle crown is obscured by ivy cover with evidence of prior localised limb loss and storm damage.	Cut ivy and rereview.	L	B1-2
5	Turkey Oak (<i>Quercus cerris</i>)	M	G	22.00	2.50	12.00	10.00	10.00	6.00	1	1248	14.97	A large and dominating specimen of reasonable vigour and vitality. Crown supports some dead-wood and evidence of prior storm damage. Ivy is developing on principal stem.	Clean-out and review in respect of retention context and possible exposure if neighbouring trees remove.	L	B1-2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
6	Turkey Oak (<i>Quercus cerris</i>)	M	P	21.00	2.25	9.00	5.00	9.00	6.00	1	1098	13.18	A relatively large specimen compromised by extensive basal decay brought on by both Ganoderma and Inonotus that is visibly evident to east, south and west. Tree is structurally compromised and will deteriorate to point where collapse is inevitable. Vigour and vitality remain good.	Structural pruning may allow for interim retention dependent upon retention context. Remove. Alternatively, consider application of structural pruning works including crown reduction type works to facilitate safer interim retention.	S	U
7	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F/P	6.00	1.25	2.50	2.00	4.00	4.00	1	331	3.97	Suppressed and distorted, further compromised by dominant ivy cover about higher crown. Vigour is variable.	Review regarding retention context.	M	C2
8	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	22.00	2.50	12.00	14.00	9.00	9.00	1	1350	16.20	A large, broad and spreading specimen of reasonable vigour and vitality. Crown supports some dead-wood and evidence of storm damage. Ivy is developing about lower middle crown.	Cut ivy and clean-out.	L	B1-2
9	Ash (<i>Fraxinus excelsior</i>) Wych Elm (<i>Ulmus glabra</i>)	S/M	F/P	9.00	0.00	3.00	3.00	3.00	5.00	1	302	3.63	Distorted and previously damaged. Of questionable suitability for retention.	Elm suffers notable stem decay and should be removed regardless of retention of Ash stem.	S	C2
10	Ash (<i>Fraxinus excelsior</i>)	S/M	P	5.50	2.00	2.00	1.00	5.00	4.00	1	261	3.13	Distorted and previously damaged with decay at 1.50 m.	Remove.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
11	Ash (<i>Fraxinus excelsior</i>)	S/M	F	10.00	2.25	4.50	2.50	1.00	3.00	1	293	3.51	Distorted and unbalanced to north. Is of is wholly obscured by dense ivy cover though vigour remains reasonable.	Cut ivy and review regarding retention context.	M	C2
12	Ash (<i>Fraxinus excelsior</i>)	S/M	P	7.00	2.50	1.50	1.00	3.00	2.50	1	188	2.25	Suppressed and distorted. Is of questionable retention merit.		M	C2
13	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	12.00	2.25	3.50	3.00	3.50	2.50	1	376	4.51	Apparently vigorous but affected by collapse of adjoining ash whose crown is resting within and across canopy of this tree.	Review in respect of ash removal.	M	B2
14	Wych Elm (<i>Ulmus glabra</i>)	S/M	P	4.50	0.00	3.50	2.50	5.00	2.00	2	286	3.44	Comprises a community of sucker regeneration with larger stem subject to decay.	Remove.	N/A	U
15	Ash (<i>Fraxinus excelsior</i>)	E/M	F/P	10.00	3.00	0.00	2.50	6.00	3.00	1	366	4.39	Wholly one-sided and heavily unbalanced to south, across stream. Is of questionable retention merit.	Cut ivy and review regarding retention context.	M	C2
16	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	21.00	2.00	9.00	8.00	9.00	8.00	1	1146	13.75	Large specimen of apparently good vigour and vitality notwithstanding support of minor dead-wood and localised storm damage. Tree has been affected by collapse of adjoining ash that remains caught within oak crown.	Clean-out and review regarding retention context.	L	B1-2
17	Ash (<i>Fraxinus excelsior</i>)	M	P	4.50	0.00	1.00	1.00	6.00	4.00	1	344	4.13	Subject to chronic decay and partial stem failure.	Remove.	N/A	U
18	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	G/F	13.00	1.00	3.00	2.50	5.00	4.50	1	439	5.27	Young and vigorous specimen arising from stream embankment. Is of good vigour and vitality.		L	B2
19	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	20.00	2.00	10.00	5.00	7.00	5.50	1	949	11.38	Slightly suppressed but maintaining good vigour and vitality with crown supporting limited dead-wood or evidence of storm damage.	Clean-out.	L	B1-2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
20	Ash (<i>Fraxinus excelsior</i>)	S/M	F/P	4.50	2.00	1.00	2.00	5.00	4.00	1	216	2.60	Suppressed, distorted and heavily unbalanced to south, across stream. Is of dubious retention merit.	Review regarding retention context.	M	C2
21	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F/P	5.00	2.25	3.00	2.00	4.50	3.00	1	197	2.37	Chronically distorted and naturally arising from stream side embankment. Is of dubious retention merit other than on ecological grounds.	Review regarding retention context.	M	C2
22	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	21.00	1.50	11.00	8.00	9.00	10.00	1	1512	18.14	A broad and spreading specimen of good vigour and vitality, supporting limited dead-wood and only small amounts of storm damage. Middle crown sees development of ivy cover.	Cut ivy clean-out.	L	B1-2
23	Ash (<i>Fraxinus excelsior</i>)	S/M	P	5.00	0.00	1.50	3.00	4.00	0.00	3	229	2.75	Multi-stemmed and chronically damage.	Remove.	N/A	U
24	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F	9.00	0.00	2.00	2.00	4.00	3.00	1	261	3.13	Suppressed multi-stemmed from ground level. Remains vigorous.	Review regarding retention context.	M	C2
25	Ash (<i>Fraxinus excelsior</i>)	E/M	F	14.00	3.50	2.50	0.00	5.50	4.50	1	411	4.93	General vigour and vitality remain good though ivy is developing rapidly about middle-crown.	Cut ivy and review regarding retention context.	M	C2
26	Ash (<i>Fraxinus excelsior</i>)	E/M	F/P	12.00	1.50	2.50	1.00	5.00	5.00	1	248	2.98	Chronically distorted and naturally arising from stream bank position. Is of questionable retention merit.	Review regarding retention context.	M	C2
27	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	13.00	2.00	5.00	2.50	4.00	3.00	1	347	4.16	Suppressed and slightly distorted but maintaining reasonable vigour and vitality. Arises from bank top position adjoining stream.	Review regarding retention context.	L	B2
28	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	14.00	2.50	3.50	2.00	1.50	3.00	1	261	3.13	Drawn up and columnar supporting notable ivy cover. Arises from bank top position.	Review regarding retention context. Cut ivy.	L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
29	Ash (<i>Fraxinus excelsior</i>)	S/M	F/P	4.50	1.50	2.00	4.00	5.00	2.00	1	229	2.75	Distorted and arising from bank top position. Low quality specimen of questionable retention merit.		M	C2
30	Ash (<i>Fraxinus excelsior</i>)	S/M	F	8.00	2.50	0.00	3.00	2.00	0.00	1	197	2.37	Tall, spindly and unbalanced to east. Arises from made bank position.	Review regarding retention context.	M	C2
31	Ash Group (<i>Fraxinus excelsior</i>)	E/M	F/P	13.00	2.00	4.50	4.00	4.50	2.50	4	592	7.10	Multi-stemmed group likely to be arising as sucker regeneration from the stump of a previous tree. Arises from mid-bank position.	Review regarding retention context.	M	C2
32	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	12.00	1.00	3.00	2.00	4.50	3.00	1	462	5.54	Distorted and arising from made bank position.	Review regarding retention context.	M	B2
33	Ash (<i>Fraxinus excelsior</i>)	E/M	F/P	12.00	1.75	3.00	2.00	4.00	3.00	2	398	4.77	Principal stem is affected by localised decay.	Remove.	N/A	U
34	Ash Group (<i>Fraxinus excelsior</i>)	S/M	P	12.00	1.75	0.50	0.50	3.00	1.50	3	271	3.25	Has suffered chronic prior damage.	Remove.	N/A	U
35	Ash (<i>Fraxinus excelsior</i>)	E/M	F	11.00	1.25	3.00	4.50	6.00	1.00	1	398	4.77	Heavily distorted and notably unbalanced to south. Much of lower crown is obscured by dense ivy cover.	Cut ivy and rereview.	S	C2
36	Sycamore (<i>Acer pseudoplatanus</i>)	M	G/F	15.00	2.00	4.50	5.00	6.50	5.00	1	910	10.92	Apparently vigorous though obscured by dense ivy cover. Arises from bank top position.	Cut ivy and rereview.	L	B2
37	Beech (<i>Fagus sylvatica</i>)	S/M	F	9.00	0.75	2.50	3.00	4.00	2.50	1	334	4.01	Young and vigorous but suppressed by larger neighbours.		L	B2
38	Ash (<i>Fraxinus excelsior</i>)	S/M	F/P	7.00	2.50	1.50	1.00	4.50	4.50	1	280	3.36	Heavily distorted and unbalanced to south-west. Is of questionable suitability for retention.	Review regarding retention context.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
39	Turkey Oak (<i>Quercus cerris</i>)	M	P	15.00	1.75	12.00	11.00	6.50	6.00	1	993	11.92	Entire tree supports chronic imbalance to north-east. Entire basal region supports fruiting bodies of Ganoderma depicting ongoing and extensive internal decay vigour and vitality remains reasonable notwithstanding poaching/flooding of root zone.	Remove. Alternatively, consider application of structural pruning works including crown reduction type works for interim retention only.	N/A	U
40	Ash (<i>Fraxinus excelsior</i>)	S/M	F/P	8.50	2.50	0.00	2.50	5.00	1.00	1	207	2.48	Heavily unbalanced to south.	Review regarding retention context.	S	C2
41	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	19.00	2.00	12.00	6.00	7.00	5.50	1	996	11.96	A relatively large specimen of apparently good vigour and vitality. Supports minor deadwood and evidence of localised storm damage.		L	B1-2
42	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F/P	7.50	0.00	0.50	2.00	2.00	1.50	1	207	2.48	Suppressed because of position beneath canopy of adjoining Oak.	Review regarding retention context.	M	C2
43	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	20.00	2.00	15.00	9.00	12.00	9.00	1	1292	15.51	A particularly large and spreading specimen of reasonably good vigour and vitality notwithstanding support of notable deadwood and evidence of localised storm damage.	Clean-out and review regard retention context.	L	B1-2
44	Ash (<i>Fraxinus excelsior</i>)	M	F/P	14.00	2.50	0.00	0.00	8.00	6.00	1	579	6.95	Chronically unbalanced to south-west because of position beneath canopy of larger, dominating Oak. Much of principal stem is obscured by dense ivy cover. Tree arises from ditch embankment.	Cut ivy and rereview in respect of retention context.	M	C2
45	Ash (<i>Fraxinus excelsior</i>)	S/M	P	2.50	0.00	5.00	1.00	0.00	0.00	1	210	2.52	Affected by limb of adjoining Oak. Is wholly unbalanced to north-east. 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
46	Ash Group (<i>Fraxinus excelsior</i>)	S/M	F	8.00	1.00	5.00	2.50	3.50	5.00	2	398	4.77	Young and still vigorous though distorted and naturally arising.	Review regarding retention context.	M	C2
47	Ash (<i>Fraxinus excelsior</i>)	S/M	F	10.00	3.00	3.00	2.50	3.00	1.00	1	229	2.75	Suppressed and distorted as result of proximity to near neighbours. Supports extensive ivy cover preventing detailed review at present.	Cut ivy and rereview.	M	C2
48	Ash Group (<i>Fraxinus excelsior</i>)	S/M	F	10.00	2.50	5.00	2.00	4.50	3.00	1	366	4.39	Naturally arising from within scrub thicket adjoining stream bank. Vigour and vitality are impaired with some evidence of higher crown dieback.	Cut ivy, rereview, particularly during growing season of 2019.	S	C2
49	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	11.00	2.50	5.00	3.00	4.50	4.50	1	407	4.89	Dominant specimen within area of scrub. This be maintaining reasonable vigour and vitality however much of crown is obscured by dense ivy cover.	Cut ivy and rereview.	M	C2
50	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	13.00	1.50	3.50	5.00	3.00	5.00	2	525	6.30	Previously truncated on eastern side to maintain clearance from overhead power cables. General vigour and vitality appear good however much of crown is obscured by dense ivy cover preventing detailed review.	Cut ivy and rereview.	L	B2
51	Ash (<i>Fraxinus excelsior</i>)	E/M	F	14.00	1.50	5.00	5.50	6.00	4.50	1	548	6.57	A distorted and misshapen specimen that appears be maintaining reasonable vigour and vitality. Entire crown structure is obscured by dense ivy cover.	Cut ivy and rereview.	M	C2
52	Ash (<i>Fraxinus excelsior</i>)	M	G/F	16.00	1.50	5.00	3.50	5.00	4.00	1	567	6.80	Slightly large and dominating specimen within alignment. Suppression is lead to development of fanlike crown profile. Much of crown structure is obscured by dense ivy cover.	Cut ivy and rereview.	L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
53	Ash (<i>Fraxinus excelsior</i>)	M	G/F	16.00	2.00	5.50	5.00	6.00	5.50	1	684	8.21	A large, dominant and spreading specimen almost wholly obscured by dense ivy cover. Visual review suggests vigour and vitality remains good.	Cut ivy and rereview.	L	B2
54	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F	11.00	1.50	4.50	4.00	5.50	3.50	1	449	5.39	Suppressed distorted and unbalanced. Vigour remains reasonable though substantial proportion of crown is obscured by ivy.	Cut ivy and rereview.	M	C2
55	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	23.00	0.00	13.00	14.00	10.00	10.00	1	1210	14.52	A particularly large and spreading specimen of apparently good vigour and vitality. Crown supports species typical deadwood and localised evidence of storm damage.	Clean-out.	L	B1-2
56	Turkey Oak (<i>Quercus cerris</i>)	M	G/F	20.00	3.00	9.00	6.00	10.00	15.00	1	993	11.92	A large specimen typically unbalanced to west. Vigour and vitality are reduced with deadwood development and twiggy decline evidence throughout crown. No evidence of pathogen attack was found during the review however, much of lower stem is wholly obscured by dense ivy cover. Concerns exist regarding likelihood of continued deterioration.	Clean-out remove existing deadwood. Cut ivy and clear buttress region to facilitate better review. Re-review during growing season of 2019.	M	C1-2
57	Wych Elm (<i>Ulmus glabra</i>)	S/M	F	6.00	0.00	1.00	5.00	5.00	5.00	1	398	4.77	Multi-stemmed with swept base suggesting instability and collapse in southerly direction at early life. Remains vigorous but is at risk of contracting Dutch elm disease.	Review regularly.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
58	Wych Elm (<i>Ulmus glabra</i>)	E/M	F	9.00	1.00	5.00	3.50	3.00	5.00	2	430	5.16	Arises from eastern side of substantial ditch. Is distorted, unbalanced to west and support extensive ivy cover. Would be predisposed to attack by Dutch elm disease.	Review regularly.	M	C2
59	Ash (<i>Fraxinus excelsior</i>)	E/M	F	10.00	2.50	4.50	5.00	5.00	4.50	3	493	5.92	Multi-stemmed and arising from eastern side of ditch. Tree has spurious elm's stem arising through western crown. Supports extensive ivy cover.	Cut ivy and review.	M	C2
60	Wych Elm (<i>Ulmus glabra</i>)	M	F	6.00	0.00	2.50	3.0	5.00	3.00	1	366	4.39	Distorted and arising from ditch base. Has sustained notable damage to western crown. Is of dubious retention merit.		M	C2
61	Wych Elm (<i>Ulmus glabra</i>)	E/M	G/F	13.00	4.00	4.00	5.00	4.00	4.00	1	344	4.13	Naturally arising from hedge thicket and from eastern side of ditch. Appears be maintaining reasonable vigour and vitality but will be subject to attack by Dutch elm disease.		M	C2
62	Wych Elm (<i>Ulmus glabra</i>)	E/M	F	11.00	3.50	5.00	2.50	3.00	4.50	1	258	3.09	Distorted and one-sided, typically unbalanced to north-west. Is of good vigour and vitality but at risk of attack by Dutch elm disease.		M	C2
63	Wych Elm (<i>Ulmus glabra</i>)	S/M	P	7.00	1.00	2.50	5.00	4.00	0.00	1	261	3.13	Chronically unbalanced to east. Is of dubious retention merit.		S	C2
64	Wych Elm (<i>Ulmus glabra</i>)	E/M	F	9.00	1.50	2.00	6.00	4.50	0.00	1	344	4.13	Wholly one-sided and heavily unbalanced to east. Remains vigorous but is at risk of attack by Dutch elm disease. Is of dubious retention merit.		S	C2
65	Wych Elm (<i>Ulmus glabra</i>)	E/M	F/P	9.00	1.75	1.00	3.00	6.00	4.50	1	334	4.01	Heavily unbalanced to south and over car parking spaces. Is considered ill-suited to retention.	Consider early removal.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
66	Wych Elm (<i>Ulmus glabra</i>)	E/M	F	9.00	2.00	4.00	5.50	2.00	4.00	1	388	4.66	Distorted and slightly unbalanced. Would be susceptible to attack by Dutch elm disease.		M	C2
67	Wych Elm (<i>Ulmus glabra</i>)	E/M	P	8.00	1.00	0.00	6.00	6.00	4.50	2	398	4.77	Chronically distorted and unsuitable for retention.	Remove.	N/A	U
68	Wych Elm (<i>Ulmus glabra</i>)	E/M	P	13.00	0.00	4.50	7.00	4.50	5.00	2	493	5.92	A multi-stemmed group whose eastern crown has already suffered chronic failure.	Remove.	N/A	U
69	Wych Elm (<i>Ulmus glabra</i>)	E/M	F/P	9.00	1.00	4.50	6.50	2.00	0.00	1	385	4.62	Chronically unbalanced to east and of dubious stability.	Consider early removal.	N/A	U
70	Wych Elm (<i>Ulmus glabra</i>)	E/M	F/P	8.00	2.00	0.00	2.00	4.00	2.50	1	325	3.90	A distorted whip apparently arising from a decaying stump. Is unsuitable for retention.	Remove.	N/A	U
71	Wych Elm (<i>Ulmus glabra</i>)	E/M	F/P	9.00	0.00	5.00	4.00	5.00	5.00	2	548	6.57	Heavily divided and split from ground level. Is unsuitable for retention.		N/A	U
72	Ash Group (<i>Fraxinus excelsior</i>)	E/M	F/P	13.00	2.00	5.00	3.00	5.00	5.00	2	462	5.54	A distorted group arising from raised wall retained embankment adjoining LUAS line. Basal region is inaccessible and wholly obscured by dense bramble thicket which in combination with ivy prevents detailed review at present. General vigour and vitality appear reasonable though some concern exists in respect of routine position on top of apparent retaining wall structure. Parts of crown overhangs LUAS powerlines for ash.	Review regarding LUAS line impacts.	S	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
73	Sycamore Group (<i>Acer pseudoplatanus</i>)	E/M	F/P	14.00	2.00	5.00	6.00	6.00	4.00	6	780	9.36	Large multi-stemmed group arising as sucker redevelopment from the stump of previous tree. Root base is located above and adjoining retaining wall where continued growth will readily result in wall damage. Tree is of poor quality and is unsustainable.	Consider early removal.	S	C2
74	Ash (<i>Fraxinus excelsior</i>)	S/M	G	9.00	2.00	2.50	2.50	2.50	2.50	1	226	2.71	Young, vigorous and of good form.		L	A2
75	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	10.00	2.00	4.00	4.00	4.00	4.00	1	325	3.90	Wholly inaccessible being surrounded by bramble thicket. Visual review of canopy suggests good vigour and vitality with some degree of sustainability rereview after scrub clearance in respect of trees relationship to LUAS retaining wall.		L	B2
76	Ash (<i>Fraxinus excelsior</i>)	M	F	16.00	2.00	4.50	5.00	5.00	4.50	3	668	8.02	Triple stemmed with 2 stems to south intertwined and apparently affected by compression fork union. Central and south-eastern stem is already suffered traumatic failure of higher crown. Trees mechanical form and proximity to LUAS line are considered highly questionable.	Review with regard retention context and subsequent to clearance of obscuring scrub. Consider application of structural pruning works including crown reduction type works if trees being retained.	M	C2
77	English Elm (<i>Ulmus minor</i>)	E/M	F	12.00	2.00	2.50	1.50	2.50	2.00	1	344	4.13	Tall and drawn up, supported on distorted bass. Lower stem supports notable ivy cover. General vigour and vitality appear good at present however tree will be susceptible to attack by Dutch elm disease.	Review regularly.	M	C

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
78	Wych Elm (<i>Ulmus glabra</i>)	S/M	F	9.00	1.50	5.00	3.00	2.00	3.50	1	261	3.13	Distorted and naturally arising from adjoining woodland thicket. Will be susceptible to attack by Dutch elm disease.	Review regularly.	M	C2
79	Ash (<i>Fraxinus excelsior</i>)	E/M	F	12.00	3.50	0.00	5.00	4.00	3.00	2	229	2.75	Divided from ground level and heavily distorted. Comprises element of natural regeneration within adjoining woodland block. Tree appears to arise from eastern side of substantial embankment.		M	C2
80	Ash (<i>Fraxinus excelsior</i>)	E/M	F	12.00	1.50	3.00	4.50	5.00	5.00	2	579	6.95	Heavily divided from low level. Arises from eastern edge of substantial embankment. Vigour and vitality appear good though much of crown is obscured by dense ivy cover.	Cut ivy and rereview.	L	C2
81	Ash (<i>Fraxinus excelsior</i>)	S/M	F	10.00	1.50	4.00	4.00	2.00	3.50	5	366	4.39	Multi-stem from low level possibly comprising sucker regeneration from stump of previous tree. Arises element of natural regeneration from adjoining woodland block. May be of impaired mechanical form.		M	C2
82	Ash (<i>Fraxinus excelsior</i>)	E/M	F/P	13.00	0.00	5.50	4.00	3.00	6.00	3	497	5.96	Multi-stemmed from ground level and of diverging and broadly poor form. Appears to be maintaining reasonable vigour and vitality though may be subject to mechanical damage.	Cut ivy and rereview.	M	C2
83	Ash Group (<i>Fraxinus excelsior</i>)	M	F	14.00	1.50	5.00	5.00	4.50	5.00	2	592	7.10	Multiple stems arise in close-proximity to one another to can pine and create a singular crown form. Central area is obscured by dense ivy growth though general vigour and vitality appears good.	Cut ivy and rereview after ivy shedding and scrub clearance.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
84	Ash (<i>Fraxinus excelsior</i>)	M	P	24.00	5.00	4.00	3.00	7.00	7.00	1	783	9.40	A once substantially larger tree has suffered catastrophic mechanical failure including portions of its crown shared into the site area. Visible evidence of Inonotus suggests ongoing threat of mechanical failure.	Remove.	N/A	U
85	Ash (<i>Fraxinus excelsior</i>)	M	P	19.00	4.00	2.00	2.00	5.00	6.50	1	907	10.89	Distorted and one sided with tree apparently having lost substantial portion of eastern crown leading remaining tree unbalanced to west. This considered unsuitable for retention.	Remove.	N/A	U
86	Ash (<i>Fraxinus excelsior</i>)	M	F/P	20.00	2.00	6.00	7.00	7.00	6.00	1	929	11.15	A large specimen supporting minor imbalance to east away from site. Debris on ground suggests tree has sustained notable prior mechanical failure notwithstanding trees outward appearance of good health. Concerns exist in respect of trees proximity to an overhang of the site.	Cut ivy and rereview after ivy shedding. If retained, consider application of substantial structural pruning including crown reduction type works.	S	C1-2
87	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	14.00	1.50	6.00	6.00	5.50	5.50	1	592	7.10	Generally young and still vigorous specimen. Much of crown is obscured by dense ivy cover. Crown appear to support minimal dead-wood.	Cut ivy and rereview.	L	B2
88	Ash (<i>Fraxinus excelsior</i>)	M	G/F	14.00	2.50	5.50	5.00	5.00	6.00	1	611	7.33	Apparently vigorous though entire principal stem and middle crown region is obscured by dense ivy cover, potentially obscuring evidence of defect or pathogen attack. Stream to East exhibit evidence of recent excavation and clearance with small proportion of damage root material evident within the stream bank.	Cut ivy and rereview.	M	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
89	Beech (<i>Fagus sylvatica</i>)	M	F	17.00	1.50	8.00	7.50	6.00	6.00	1	1038	12.45	Large spreading specimen of apparently good vigour and vitality. Basal region is wholly obscured by bramble thicket and is currently inaccessible. Tree arises from notably raised embankment with substantial stream/ditch to east. Tree supports notable imbalance to east. Tree is affected by substantial limb loss wound supporting notable decay at circa 2.50 m on eastern side of stem Ditch immediately to east of tree stem exhibit evidence of recent clearing and excavation.	Review regarding retention context.	M	C2
90	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	G/F	9.00	2.00	1.50	3.00	3.50	2.50	1	207	2.48	Young and vigorous though slightly unbalanced to south-west.		L	B2
91	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	11.00	2.00	4.50	4.50	4.50	4.00	1	462	5.54	Young and still vigorous though much of middle crown is obscured by dense ivy cover.	Cut ivy and rereview.	M	B2
92	Ash (<i>Fraxinus excelsior</i>)	M	F	11.00	2.00	4.00	3.50	3.00	4.00	1	398	4.77	Heavily divided and heavily smothered by ivy cover that prevents detailed review at this time.	Cut ivy and rereview.	M	C2
93	Ash (<i>Fraxinus excelsior</i>)	S/M	F	9.00	1.50	3.50	3.50	4.00	2.00	4	462	5.54	Distorted a multi-stemmed, arising as part of regenerative thicket. Is of dubious retention merit.		S	C2
94	Ash (<i>Fraxinus excelsior</i>)	S/M	F	8.50	2.50	2.50	2.00	3.00	3.00	2	398	4.77	An element of regenerative thicket arising from raised embankment over stream. Is heavily obscured by dense ivy cover.	Review regarding retention context.	M	C2
95	Ash (<i>Fraxinus excelsior</i>)	M	P	19.00	2.00	5.00	6.00	5.50	3.00	1	748	8.98	In an advanced state of decline with much of higher crown already dead. Is wholly 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
96	Ash (<i>Fraxinus excelsior</i>)	M	P	17.00	2.50	0.00	3.00	10.00	7.00	1	844	10.12	A once larger specimen has suffered chronic and catastrophic failure subsequent to decay.	Remove immediately.	N/A	U
97	Ash (<i>Fraxinus excelsior</i>)	M	P	7.00	2.00	5.00	0.00	0.00	7.00	1	783	9.40	Has collapsed in a north-westerly direction and crown is caught within oak arising from northern side of stream.	Remove immediately.	N/A	U
98	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	P	12.00	2.00	2.00	3.50	5.00	3.50	1	347	4.16	Two stems arise in close-proximity to one another. The sycamore to west is in a state of decline sustained notable middle and higher crown damage. Ash is notably unbalanced. It will be considered unsuitable for retention.	Consider early removal.	N/A	U
99	Ash (<i>Fraxinus excelsior</i>)	S/M	P	7.50	2.00	5.00	3.50	4.00	3.50	1	334	4.01	Has suffered catastrophic damage to stem and notable splitting.	Remove.	N/A	U
100	Oak (<i>Quercus robur</i>)	M	F	15.00	1.00	5.00	7.00	7.00	1.50	1	939	11.27	A large specimen, wholly one-sided and unbalanced to east. Has suffered substantive storm damage and failure of major limb to south-east that remains caught within crown. General vigour and vitality appear good. Lower stem is enveloped in dense Ivy cover.	Cut Ivy and review.	L	B1-2
101	Oak (<i>Quercus robur</i>)	M	G/F	156.00	2.00	4.50	2.50	8.00	7.00	1	844	10.12	Wholly one-sided and typically unbalanced to west. Is of good vigour and vitality but supports developing Ivy cover on lower stem.	Cut Ivy and Clean-out.	L	B1-2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
102	Ash (<i>Fraxinus excelsior</i>)	M	F	16.00	1.00	4.00	5.00	5.50	4.00	1	589	7.07	A distorted specimen arising from what appears to be disturbed ground associated with a LUAS trackside margin. Much of northern crown has been cut back previously, presumably to reduce encroachment. Vigour and vitality appear fair though much of crown is obscured by dense Ivy cover.	Remove basal suckers and cut Ivy. Review subsequent to Ivy cutting correction shedding.	M	C2
103	Ash (<i>Fraxinus excelsior</i>)	M	F	15.00	5.00	3.50	2.00	5.00	5.00	1	592	7.10	Heavily one-sided having been cut on northern side, presumably in respect of encroachment on trackside facilities. Primary stem and middle crown is obscured by dense Ivy cover. Tree appears to arise from previously disturbed ground associated with LUAS trackside margin.	Remove lower level suckers. Review regarding retention context.	M	C2
104	Sycamore (<i>Acer pseudoplatanus</i>)	E/M	F/P	11.00	3.00	4.50	3.00	4.50	5.00	1	420	5.04	Arising from stream side bank with notable undercutting about western buttress. Stag-heading and dieback is notable about crown apex. Tree is of questionable sustainability.	Review regarding retention context.	S	C2

Tree Lines, Groups and Hedges

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
H1	Hedge 1 Hawthorn (<i>Crataegus monogyna</i>) Blackthorn (<i>Prunus spinosa</i>) Goat Willow (<i>Salix caprea</i>) Bramble (<i>Rubus fruticosus</i>) Ivy (<i>Hedera helix</i>) Snowberry (<i>Symphoricarpos Sp.</i>) Spindle (<i>Euonymus europaeus</i>) Sycamore (<i>Acer pseudoplatanus</i>)	M	F/P	2.50-7.00	0.00	Spread Contiguous/v ariable	m/s	223	2.67	Review of ground space in Association with hedge reveals what appears to be a defunct ditch embankment scenario with the ditch being apparently unused and dry at present. The primary alignment appears once have been dominated by a Hawthorne hedge considered likely to be an original agricultural field boundary hedge. At this time, the number of Hawthorns is diminishing with no continuity being provided by the species. Broader continuity is provided by a more generalised thicket development, typically dominated by Elder and Goat Willow at higher levels and Bramble at lower levels. Effectively the hedgerow as was no longer exists however, a broad thicket like corridor of some visual significance does remain. Suitability for retention will be context dependent though management issues should be considered.		L	C2

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
H2	Hedge 2 Hawthorn <i>(Crataegus monogyna)</i> Blackthorn <i>(Prunus spinosa)</i> Goat Willow <i>(Salix caprea)</i> Bramble <i>(Rubus fruticosus)</i> Ivy <i>(Hedera helix)</i> Sycamore <i>(Acer pseudoplatanus)</i> Holly <i>(Ilex aquifolium)</i>	M	F/P	1.50-5.00	0.00	Spread Contiguous/v ariable	m/s	223	2.67	A broad and spreading thicket like alignment now dominating what appears to have been an original Hawthorn hedge. The alignment exists in conjunction with what appears to be a dry ditch and embankment scenario. It was providing some ecological merit, the hedge would be considered of dubious value with regard to Amenity retention.		L	C2

No.	Species	Age	Con	Ht	CH	Spread	Stm	Dia.	RPA	Structural Condition	PMR	Yrs.	Cat
WG 1	Woodland Area 1 Sitka Spruce <i>(Picea sitchensis)</i> Common Alder <i>(Alnus glutinosa)</i> Silver Birch <i>(Betula pendula)</i> Bramble <i>(Rubus fruticosus)</i> Ivy <i>(Hedera helix)</i> Elder <i>(Sambucus nigra)</i>	M	P	14.00-18.00	0.00-4.00	Continuous Cover	1	1.20		<p>A defunct and failing plantation comprising Sitka Spruce, a large proportion of which have already failed. The woodland exhibits no evidence of prior management or population thinning but the woodland floor area is littered with numerous broken and collapse specimens. Within the population, many specimens are partially collapsed and perched within the grounds of near neighbours and others are wholly suppressed by chronic Ivy cover. The woodland is considered unsustainable and beyond management in that loss of additional trees either naturally or through sanitation Felling or attempts of population thinning will expose that which remain to increased levels of exposure and shelter loss. As this species is most intolerant of such issues, then inevitable failures will be accelerated.</p> <p>North-eastern corner, note is made that within this express woodland, there is a small area of what appears to be natural regeneration, dominated by silver Birch and common Alder. Trees are yet relatively small and young but tend to be of good condition and health.</p>		N/A	U