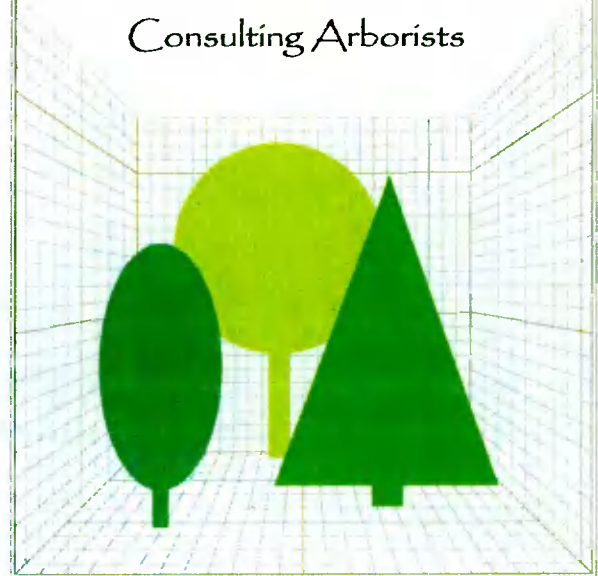


The Tree File

Consulting Arborists



Arboricultural Report

Trees at
Lucan Community College Development
Esker Drive
Lucan
Co. Dublin
May 2017

The Tree File Ltd

Consulting Arborists
Brookfield House
Carysfort Avenue
Blackrock
Co Dublin
01-2833500

Contents

Page	Subject
1	Introduction
2	Report Summary
6	Appendix 1 Impact Assessment
	a) Scope
	1) Construction Requirements
	2) Above and below ground construction constraints
7	3) Service and Infrastructure to new structures
	4) Modification of design – Necessity, Value and Benefit
	5) End Use of Space
8	6) Effect of Development on Trees – Retention/Removal
	7) Effect on Amenity Value
	8) Tree Preservation Orders or other retention orders
9	9) Potential for replacement planting
	10) Interaction between Retained Trees and Development: -
	a) Future Growth and Maintenance
10	b) Light ingress
	c) Potential for Hazard and Damage
	d) Social Concerns
11	Appendix 2 Arboricultural Method Statement and Tree Protection Plan Overview
12	Tree Protection
13	Ground Protection Works within “RPA” Zone
14	Service Installation Tree Management
15	Demolition Works Sequence
16	Ancillary Precautions
17	General Fig 1 Fig 2
18	Appendix 3 The Survey Nature of Survey and Report Drawing Reference Site Description
19	Survey Data Collection and Methodology
20	Survey Key and Explanations
21	Table 1 - Tree Survey Table

Introduction

The survey has been prepared by-
Andy Worsnop Tech Arbor A, NCH Arb (PTI LANTRA)

The Tree File Ltd

Brookfield House
Carysfort Avenue
Blackrock
Co Dublin

Report Brief and Context

This report was requested by the “**Dermot Foley Landscape Architects**” and comprises an Arboricultural review of the proposed development and provides a basis by which the site’s trees can be assessed in respect of sustainable retention, in the post development scenario. It also provides information in respect of tree protection and the avoidance of damage to trees during the construction process.

This report should be read in conjunction with the various tree related drawings.

The drawing the drawing “LCC-TCP-05-17” provides a graphic representation of tree survey data, depicting the constraints asserted by the site trees, as well as a categorisation their condition and potential value. The drawing “LCC-AIA-05-17” depicts the expected impacts by overlaying the tree information with the architectural and engineering drawings. The drawing “LCC-TPP-05-17” depicts the location of the various tree protection measures required for the provision of protection from the issues raised in the impact assessment.

Report Limitations

This report is based on the Arborists interpretation of information provided to him prior to report compilation and gained from the site 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 1” to the original tree report. The findings and recommendations made within this report are based upon the knowledge and expertise of the inspecting Arborist.

The envisaged outcomes outlined in this report are contingent on the full and correct application of all the measures and procedures it recommends, the omission of which may greatly change any expectation of success.

Regarding the Implication Assessment elements of the report, the report necessarily comprises assumptions and estimates, particularly in respect to how the project might proceed on a day to day basis. In this respect, many elements of the “Method Statement” remain broadly generic and will require additional review at the construction stage, for example in respect of the size and nature of the equipment or plant that might be utilised by any potential building contractor.

Assessment Context

This assessment comprises the results of and recommendations arrived at after the screening process and considerations defined within the “Implication Assessment” at “Appendix 2” and after an evaluation of trees as defined in the tree survey at “Appendix 3”. With the identification of the development related impacts, a “Method Statement” and “Tree Protection Plan” has been provided to illustrate the requisite conservation and protection methodologies necessary to maintain tree sustainability.

The “Implication Assessment” screening combines information gained from the tree survey, as well as the information provided by Architects and Engineers in respect of the nature of the proposed development. The effects of the proposed development have been assessed on the above details in respect of the ability to protect retained trees from the effects of the proposed development works. Accordingly, the accuracy of this assessment is based on all its elements and the omission or alteration of any part can radically alter the ability to or the suitability of ostensibly retainable trees. Therefore, any change in engineering detail or none compliance with the protection plan and tree protection methodologies will have the potential to alter the sustainable tree retention outcome.

Report Summary, Findings and Recommendations

The Lucan Community College site supports its own and borrows from adjoining young tree populations. There is little material on the site more than 3 decades old and much is substantially younger than this. Accordingly, much of the material encountered is of small stature.

Nonetheless, the cumulative effect of this material is notable, particularly in respect of the Alignments such as the Cyprus groups within the site and the woodland belt that defines the site from the adjoining sports fields to the south.

Issues have been noted in respect of sustainability with some trees having sustained prior disturbance or having been planted at positions where their sustainability and longevity will be impaired as result of expected encroachment and growth beyond the space available to them. Additionally, and regarding the Cyprus alignment, concern again arises in respect of sustainability considering well-documented issues regarding management over time. Accordingly, and notwithstanding any development it is advised that neither alignment on the site offers any degree of long-term sustainability and accordingly, their importance within the landscape might best be dealt with by way of replacement planting.

The scale and nature of the proposed development will require the substantive clearance of the site. It is intended to retain six trees close to the sites north-western and northern boundary, but to remove all other material from across the site in favour of replacement planting within the context of the newly designed scheme. Note is made that the trees adjoining but outside of the site, arising from the grass roadside verges will be retained and will serve to mitigate tree losses to some degree. As part of the development it is intended to remove both previously discussed Cypress alignments.

Site Description

The site is broadly rectangular, longest about its east-west access. It is adjoined to the west by the Newcastle Road and to the north by Esker Drive. The lands to the east and south comprise existing open space with the lands to the south comprising substantial sports fields.

The site is effectively divided with the western half being heavily developed and supporting various buildings associated with the existing school as well as vehicular access, car parking and hard surface sports areas. The eastern half of the site remains broadly open and appears to have been used as playing pitches.

The tree population associated with the site tends to be located positions to marking edges and boundaries. In respect of this, the western half of the site that supports the main school buildings support a substantial number of trees particularly around its edges. The entire southern boundary of the site and the sites eastern boundary are also defined by substantial woodland belts. In respect of the southern boundary note is made that much of this woodland belt comprises material arising from positions outside of the site boundary and associated with the adjoining sports grounds.

The site review suggested that the site is broadly level and at the time of review the site exhibited no evidence to suggest drainage issues.

Pre-Development Tree Population

The site's tree population must be regarded as being broadly young. There is however evidence to suggest disparaged planting. Is with material to the north and west of the main school buildings as well as tree lines 1 and 2, suggesting ages in the order of 20 years plus.

In addition to the above and planted at later dates, there are substantial evidence of more recent plantings presumed to be within the last 10 years.

In line with the typically young age of trees, the clear majority of specimens reviewed would tend to be in good health. In several instances, issues have arisen regarding growth form and structural deformation that might undermine longevity though for the most part, most trees would offer some degree of sustainability.

In some instances, sustainability may be undermined by species predispositions, an example of which might include

Cider Gum No.69 on the site's northern boundary that is already relatively large but asserts immense potential for continued growth over time. Additionally, concerns arise regarding tree lines 1 and 2 in that the constituent species, Leyland Cypress raises specific management and sustainability issues that will dramatically undermine both suitability for retention and sustainability over time.

Note is also made that in some instances, and particularly including those trees directly adjoining the northern edge of the existing school buildings have required substantial decapitation in the past. Notwithstanding their young age and no suggestion of structural/safety issues at present, their location and the fact that it has been deemed necessary to decapitate these trees raises substantial questions regarding sustainability. The species in question, Whitebeam and Norway Maple can all assert substantial potential for growth and tend to develop notably spherical crowns over time suggesting that the narrow grass verge from which they arise is ill suited to their retention and thus brings into question any degree of sustainability. Therefore, and notwithstanding the fact the trees remain young and vigorous, their retention should be considered with care.

Some concern arises in respect of the group of young trees to the south of the site, including Nos.9 to 34. Whilst these trees remain relatively young and would, under more normal circumstances, offer tremendous sustainability, note is made of the extent to which many trees have been disturbed by recent works. The full extent of damage is unknown at present however a sizeable number of trees exhibit evidence of substantial stem damage and damage/destruction of major surface running roots. Such damage has the potential to affect both tree health and tree stability thus raising concerns in respect of site safety. It is imperative that these trees be reviewed on a regular basis if retained.

Nature of Proposed Works and Likely Impacts

The proposed site development calls for the extension of the existing school complex.

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

Site trees can readily be affected by one of three primary impacts including

- A. Direct conflict with proposed structures, thus requiring tree removal.
- B. Partial conflict where the "Root Protection Area" is encroached upon by works or ground amendments and cannot be preserved/protected in full.
- C. Environmental damage e.g. compaction, capping, sealing – changing the existing ground environment to one that can no longer support tree root function.

Identification of Impacts

This report, its findings and recommendations have arisen from the scrutiny of development proposal drawings as provided by the Donnachadh O'Brien & Associates Consulting Engineers and by Dermot Foley Landscape Architects, in conjunction with the most recent tree survey data (as appended to this report). The evaluation is primarily based on minimum protection ranges as extrapolated from the tree survey data in accordance with paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837: 2012 and any element of the proposed development of works associated with is that affects the defined protection areas.

In respect of tree impacts, any structure, action or apparent need to enter or otherwise disturb/convert the "root protection area" of a site tree has been considered likely to have a negative impact, with the potential to render a tree wholly unsuitable for retention, unsafe or unsustainable.

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

The perceived development impacts have been illustrated graphically on drawing "LCC-AIA-05-17", within which trees denoted with "Dashed Black" crown outlines will be removed and those denoted with "Continuous Green" crown outlines will be retained.

Expected Development Impacts

The drawing "LCC-AIA-05-17" comprises the tree survey drawings overlaid by the development drawings, thus providing a graphic representation of the tree related impacts, with those trees that will be lost being denoted by black dashed outlines.

The proposed development will see a substantial change in site context, particularly relating to occupation and use. Accordingly, the primary tree survey noted several trees that through poor condition, or being affected by decay or disease and are considered unsuitable for retention regardless of the proposed site development. Such specimens have been categorised as category "U" (unsustainable or unsuitable for retention) trees within the tree survey and have been recommended for removal regardless of site development. Such trees include Nos. 7, 19, 23, 29 and 72.

The development requires the loss of no high-quality category "A" trees.

Of the site's category "B" and "C" trees, all will be removed except for Nos. 42, 43, 54, 55, 73, 74 and "Tree Line 2". All trees adjoining but outside the site will be retained including Nos. 79 to 107 inclusive.

This provides for a tree loss breakdown by category of-

- 5 No. Category U trees
- 33 No. Category B trees
- 43 No. Category C trees

However, note must be made that the extent of tree planting envisaged across the site will in part mitigate the above losses.

As defined within the Arboriculture Method Statement included in "Appendix 2" to this report, it will be necessary to review all ostensibly retainable trees after the primary site clearance and with consideration to the proposed development context. Such a review will address not only a tree's own management requirements, but must also address the change of context, increased occupation and use and potential threat as might be presented by any given tree, particularly in respect of its new and somewhat more exposed aspect.

Tree Protection within the Scope of a Development

The design and management recommendations as set out in BS5837: 2012 are considered "best practice" regarding the selection, retention, protection and management of tree within the scope of a new development.

All protection, whether vertical or horizontal, must conform or equate to the recommendations of Section 9, BS5837: 2012, must be fit for purpose and commensurate with the nature of development and the expected day-to-day activities of the site works.

Tree Protection intentions have been illustrated on the associated drawing "LCC-TPP-05-17". The bold "Pink" lines denote the proposed location of the primary protective "Construction Exclusion Fencing" and the "Pink" hatched area represents the primary "Construction Exclusion Zone". Such fences are to be erected prior to the commencement of any site works and must remain in situ (unless under the guidance of the site Arborist) until all site works are completed.

In respect of necessary and unavoidable structures required within the "RPA" zone, all efforts must be made to minimise impacts. Aerial elements may require access facilitation pruning or clearance pruning. Subterranean works that require excavation, must by design, location and action, minimise impacts to trees. This may require the adoption of "manual only" procedures so that root damage can be minimised, for example by hand digging or the use of "air-spades" for excavation or trenching. All such works must be undertaken under the guidance of the project Arborist who will advise on likely repercussions and necessary tree management issues.

In respect of all the above, attention is drawn to the provision of an "Arboricultural Method Statement" as part of this report. As no information exists to date in respect of any construction methodology or the plant/equipment that might be employed, then the method statement is intentionally general and prescriptive, attempting to address most regularly encountered scenarios applicable in general to all construction sites. The bold "Pink" lines denote the proposed location of the primary protective "Construction Exclusion Fencing" and the "Pink" hatched area represents the primary "Construction Exclusion Zone". Such fences are to be erected prior to the commencement of

any site works and must remain in situ (unless under the guidance of the site Arborist) until all site works are completed.

Nominal Tree Management Recommendations

Preliminary management recommendations have been put forward within the context of the survey table. Such recommendations are based on the current site scenario and pay no respect to any possible site developments or the effects that these may have on the trees.

As defined in the method statement, it will be necessary for the project Arborist to re-assess all retained trees after primary site clearance and felling works, so that changes in site usage, aspect and shelter loss can be better assessed and accounted for. This review will result in the compilation and issue of a new tree management plan that will supersede the preliminary recommendations made within the original tree survey.

Additionally, and regarding this development, note is made of the possible effects of various works, such as those requiring the creation of new surfaces near trees. Such works must be undertaken under the guidance of the project Arborist, who may, subject to the nature of tree roots encountered, amend any previously provided tree management recommendations.

In respect of this and regardless of any possible site development, it is advised that all trees be reviewed on regular basis and after any actions that may affect the trees, be those site development works or tree management works that involve tree removal or pruning.

Appendix 1

Arboricultural Implication Assessment

a) Assessment Scope

This assessment is based upon the recommendations and criteria as defined within BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations. The assessment will review both direct and indirect implications.

The assessment screens the proposed development in respect of many expected criteria as defined below.

The assessment criteria will include-

- 1) Construction Requirements
- 2) Above and below ground construction constraints
- 3) Services and Infrastructure to new structures
- 4) Modification of design
- 5) End Use of Space
- 6) Effect of Development on Trees – Retention/Removal
- 7) Effect on Amenity Value
- 8) Tree Preservation Orders or other retention orders
- 9) Potential and Value of replacement planting
- 10) Interaction of Retained Trees and Proposed Development
 - a) Future Growth and Maintenance
 - b) Light ingress
 - c) Potential for Hazard and Damage
 - d) Social Concerns

1) Construction Requirements

The construction process will culminate in the extension of an existing school complex, together with all necessary infrastructure, access roads, and landscape.

The extent and nature of the proposed development as well as the partial demolition of existing structures will require the use of substantial site plant and equipment, particularly in respect of excavation and lifting. It will also require a notable degree of vehicular access to various points about the site.

All such activity has the potential to affect tree health and retention potential. Such affects typically include the excision of ground space that currently supports tree root material, mechanical damage to limbs branches and stems from the passage of vehicles, or the disturbance/damage of existing ground environments by way of compaction, contamination or sealing (e.g. new surfaces), thereby rendering such ground incapable of sustaining suitable levels of tree root function.

Such affects can readily result in tree death or can undermine tree stability and safety. The effects of such damage may not become apparent at the time of occurrence, but can take many months or years to develop. Such damage can result in direct death or can weaken and predispose a tree to attack by various pathogens that undermine tree health and viability.

In respect of the above, it is imperative that the constraints imposed by site trees are reviewed carefully and considered when reviewing a trees suitability for retention, both in respect of the developed scenario as well as during the construction process.

2) Above and Below Ground Construction Constraints

The “Tree Constraints” as defined by BS5837, have been depicted in drawing “LCC-TCP-05-17”, which shows the shape of the tree crown as well as a nominal calculated extent of ground requiring protection from the effects of development activities, damage or disturbance. The primary protection radii are those nominated for each retainable

tree within the original tree survey data set and represented on the constraints drawing by an orange dashed circle surrounding all category A, B or C trees. This initial representation can be substantially effected in both shape and extent by existing ground features that can influence root growth and development.

To illustrate both tree constraints and development conflicts, the drawing "LCC-TCP-05-17" has been overlaid with the development drawings as supplied by Donnachadh O'Brien & Associates Consulting Engineers (project engineers) and Dermot Foley Landscape Architects. The intention is to provide a graphic representation of the spatial relationship between trees and the various elements of proposed development works.

The overlaid and combined drawing showing both tree constraints and development proposals "LCC-AIA-05-17" serves to illustrate the minimum areas requiring protection from the effects of construction related activity, relative to the broader site. Accordingly, the drawing provides a reasonable understanding of conflicts between tree and necessary works, as well as providing a better understanding of the issues relating to access and work space. This in turn has advised the tree protection requirements.

3) Service and Infrastructure to New Structures

Services and infrastructure typically includes but is not restricted to both underground and over-ground services to the proposed development. Underground services often require trenched or other excavated access and routing that can sever and destroy tree roots. The routes and depths of such services are often governed by inflexible engineering requirements and accordingly can attract substantial complications if relocation is necessary. Sustainable drainage systems can raise issues, particularly where below ground attenuation tanks are required.

In this instance, the proposed engineering and infrastructure details have been provided by Donnachadh O'Brien & Associates Consulting Engineers, in the form of drawings "DOBA1446-C-003 Surface Water.dwg", "DOBA1446-C-004 Foul Drainage.dwg" and "DOBA1446-C-005 Watermain.dwg".

In respect of the above, attention is drawn to the recommendations as set out BS 5837-2012 Trees in Relation to Design, Demolition and Construction – Recommendations, Section 7.7 Underground and above-ground utility apparatus and its advice in respect of trenchless solutions for differing utility apparatus installation requirements.

Where possible, preference should always be given to routing underground services or any other infrastructure requiring excavation or trenching through areas outside of any trees "RPA" zone.

Where such services are required within the "RPA" zones of any tree then additional advice and recommendations can be gained from the National Joint Utility Group's – "Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees" (NJUG 10).

4) Modification of design – Necessity, Value and Benefit

In some instances, the quality or importance of a tree or trees might warrant design/layout amendments to enable sustainable retention. In many instances, this might not be feasible, whilst in others it may require the amendment of minor details, materials or procedures.

In the case of this development, the advanced state of the design in conjunction with the scale of the development relative to the site size has allowed for few beneficial amendments.

5) End Use of Space

The proposed development will culminate in the extension of an existing school complex. Whilst the fundamental function will be the provision of educational facilities, the overall development and its provision of landscaped areas also serve to provide space for pedestrian and vehicular access as well as recreation, sports and social use.

The nature of the potential tree failure targets in this scenario are considered static and permanent regarding the principal structures, but irregular and intermittent regarding the vehicular access/parking and pedestrian access thereto and social usage thereof.

The cumulative effect of the development would appear to be to increase the rates of occupation and use in areas near trees intended for retention.

6) Effect of Development on Trees – Retention/Removal

For the purposes of this report, the location, orientation and extent of development have been based on information gained from the architectural, engineering and landscape drawings that have been overlaid with the tree survey data to produce the drawing “LCC-AIA-05-17”.

Regardless of development, attention is drawn to the category “U” trees as denoted by the “Red” category button surrounding the tree stem. Category “U” trees recommended for removal regardless of site development because of poor condition include Nos.7, 19, 23, 29 and 72.

Of the site’s category “B” and “C” trees, all will be removed except for Nos.42, 43, 54, 55, 73, 74 and “Tree Line 2”. All trees adjoining but outside the site will be retained including Nos.79 to 107 inclusive.

This includes-

- 5 No. Category U trees
- 33 No. Category B trees
- 43 No. Category C trees

7) Effect on Amenity Value

Amenity value might be reviewed considering the methodologies highlighted by “Helliwell”, or by other similar systems. Such systems attempt to quantify and value the importance of a tree within the landscape and tend to revolve about the trees appearance and importance to the adjoining areas. Invariably, the trees value will be linked to its “public” appearance and its visibility from a publicly accessible position (existing or proposed).

As the proposed development intends to encompass the removal of numerous trees then its effect on amenity value is unavoidable.

Nonetheless, the loss of trees on this site will impact visual amenity, a factor that has been addressed by the extent of replacement planting called up by Dermot Foley Landscape Architects.

8) Tree Preservation Orders or other Retention Orders

At the time of writing, the author of this report had no knowledge of the existence of Tree Preservation Orders as may have been applied under the “Planning and Development Act 2000”.

It is advised that contact be made with South Dublin County Council with regards to possible site conservation constraints that may require that you notify the authority of likely tree works and particularly tree felling.

Consideration should also be given to other legislation that can relate to trees including the “Birds Directive 79/409/EEC” and the “Natural Habitats” Regulations 1997. Such legislation revolves about the avoidance of disturbing wildlife, for example in the avoidance of hedge cutting during the bird nesting season (i.e. between the 1st day of March and the 31st day of August in any year)

Being located within a County Area, it should be appreciated that the removal of any of the trees noted in the survey and notwithstanding those that might prove to be exempted, may be subject to the requirements of the 1946 Forestry Act and those in relation to the procurement of a Tree Felling Licence.

However, and of overriding importance, is the fact that under Paragraph “2b” of the “SUMMARY OF THE MAIN PROVISION OF THE ACT IN REGARD TO THE FELLING OR UPROOTING OF TREES”, “a tree standing within 100 feet of a building other than a temporary structure or wall”, is not subject to the licence requirements of the 1946 Forestry Act.

It should be noted that the undertaking of any form of tree works on the site would incur numerous “Health and Safety” issues. Such issues will relate to the physical undertaking of the works and to the area/space influenced by

that undertaking. Such space will include both the site as well as the adjoining public roadway over which some trees hang.

9) Potential for replacement planting

Notwithstanding the consumption of space about the development portion of the "red line" site, it is noted that the broader site provides extensive space potential for the planting of trees, groups of trees and shrubberies.

In respect of this, attention is drawn to the landscape proposals associated with this development application as provided by Dermot Foley Landscape Architect.

10) Interaction between Retained Trees and Development

a) Future Growth and Maintenance

Many of the trees encountered on this site have the potential to increase substantially in size over time. As such, management issues may well arise. Species such as Beech, Eucalyptus, Sycamore, Sweet Chestnut, Poplar, Lime and Ash can all attain heights exceeding 20.00 metres in time. Accordingly, issues of sustainability and contextual compatibility may arise if such trees are retained within a close knit developed context.

The retention of large growing trees can lead to issues of encroachment on existing or new structures. They can impose a requirement for ongoing management and pruning/cutting back over time. Such trees can raise social issues including shadow-cast and light blockage.

The retention of any large growing tree within an area of known occupation and use may incur risks. Any tree can be subject to failure, even when healthy, though such risks are increased dramatically during severe weather events. This is of particular concern in respect of the ostensibly retainable large trees close to the northern boundary of the site that will both overhang the adjoining public roadway and footpath as well as the proposed access driving parking areas to the development.

Such risks are considered exacerbated in this instance, particularly in relation to the proximity of works to trees whose retention is desired. Such trees have the potential to present a tangible threat to the proposed development. The application of various pruning works, may serve to reduce tree related risks in some circumstances, though issues of unsightliness are likely to be unavoidable.

It is advised that any tree retention encompass a regular review and inspection system. Only in this way can the possible signs or symptoms of ill-health or deterioration be noted at an early stage, thereby enabling early intervention. Such a review should be on an annual basis.

Seasonal issues can arise in respect of leaf loss, particularly where deciduous species predominate, creating a drifting potential of leaves during windy weather. Note should also be made that in severe instances, where leaf fall is extensive, that drifting and surface water washing can see the development of drainage issues with gullies and grids being blocked. Such issues can result in a need for seasonal management and leaf clearance.

b) Light ingress

The trees currently intended for retention on the site are limited to localised areas to the north and west of the site, thus providing minimal constraint to light admission and thus is unlikely to cause substantial shadow-cast.

Where they occur, such issue can result in the development of pressures towards tree removal because of reliance on artificial light and shaded garden areas.

c) Potential for Hazard and Damage

In many instances concerns relating to "Potential for Hazard and Damage" have been discussed at "a" above.

Wherever retainable trees exist near structures, thoroughfares or roadways, there is always a potential for hazard, damage or injury. This factor would relate both to the principal structures as well as to pedestrian and vehicular occupancy of the spaces adjoining the principal structures.

In this scenario and because of the proximity of trees to the proposed development, safety concerns exist in respect of the possible effects of works, particularly where they occur within the nominal "root protection area" of a tree.

Notwithstanding the notes above, it must be appreciated that any tree can be subject to failure, particularly during severe weather events. Therefore, and considering the proximity of trees to the proposed development and the adjoining road, then the potential for tree failure related harm/damage cannot be ruled out.

The nature of the potential targets in this scenario is considered static and permanent regarding the principal structures, but irregular and intermittent regarding the vehicular access/parking and pedestrian access thereto. The proximity of trees to the adjoining public road to the north must also be considered.

It is therefore advised that consideration be given to constant and regular monitoring throughout the future regarding hazard mitigation as well as the application of short-term remedial works including structural pruning, to reduce the potential level of threat as may be presented at present.

Such pruning works should be applied in accordance with "BS 3998: 2010 Recommendations for Tree Work"

d) Social Concerns

It should be appreciated that the proximity of large trees is known to, on occasion, cause apprehension regarding the possible threat of mechanical failure and related damage. Such apprehension is typically maximised during high winds and storm conditions.

Trees can attract secondary problems including perched and roosting for birds that can result in noise problems as well as an accumulation of droppings and guano. Some trees can attract huge aphid populations that can create notable "Honey-dew" problems creating unsightly film build-up on windows, vehicles and other structures including pathways where the residue can become very slippery after rain.

Shadow cast and shelter can reduce drying rates in areas beneath and adjoining tree crowns, a factor that can lead to escalated rates of moss and algae build-up. This can cause management problems including lawn management issues and slip hazards like those associated with "Honey-dew".

Seasonal issues can arise in respect of leaf loss, particularly where deciduous species predominate. In this respect, note should be made both location of trees relative to homes as well as facilities such as roads and paths and consideration should be given to the drifting potential of leaves during windy weather. Note should also be made that in severe instances, where leaf fall is extensive, that drifting and surface water washing can see the development of drainage issues with gullies and grids being blocked.

Appendix 2

Arboricultural Method Statement and Tree Protection Plan

Method Statement Brief

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

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

This method statement should be read in conjunction with the associated drawing "LCC-TPP-05-17", which defined the areas at risk and the general approaches in respect of tree protection.

Note should be made that the above drawing is not necessarily to scale. Accordingly, and in respect of tree protection rages from any tree, reference must be made to the root protection area radius as defined for that tree within the tree survey table.

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

Note should be made that the inability to conform to the recommendations of this method statement or the associated tree protection plan could readily change the sustainability of trees and/or their suitability for retention.

1.0) Overview

- 1.1 This method statement will be addressed and discussed by all member of the construction team management, prior to any site works or construction/demolition related works.
- 1.2 The method statements application must be discussed in detail in respect of expected site plant and equipment, access, activity and procedures and how they will be affected by the proposed tree protection measures and particularly where issues of none compliance are envisaged.
- 1.3 The project Arborist or other qualified person will oversee the application of all tree protection measures and any necessary modifications to this Method Statement to provide a basis upon which tree protection will be managed on the construction site.
- 1.4 This Method Statement is based upon the findings of the tree survey and Arboricultural Implication Assessment, carried out after the review of the proposed development plans.
- 1.5 This statement intends to address those items noted within the "Impact Assessment" as being potentially damaging to ongoing tree health and safety of retainable trees by the stipulation of methodologies and materials intended to mitigate such effects.
- 1.6 It deals with the execution of the works required for the proposed development regarding works access to areas within the "RPA" zones of retained trees.
- 1.7 This statement relates recommendations for both specific procedures as well as for unforeseen events or situations that have the potential to affect trees.
- 1.8 The tree constrains (radial range) associated with any tree to be retained on site is to be regarded as sacrosanct and is not to be entered for any reason without confirmation from the project Arborist.

- 1.9 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
- 1.10 As unforeseen tree losses may compromise project planning permissions, it is imperative that issues relating to tree protection or tree damage be brought to the immediate attention of the project Arborist for review and possible discussion with the relevant planning authority.

2.0) Tree Protection

- 2.1 These notes must be read in conjunction with drawings “LCC-TPP-05-17” that relates all tree constraints, trees for retention and removal, as well as the location of all tree protection measures.
- 2.2 Works access includes area outside only of the “Construction Exclusion Zone” and must provide for all required vehicular and pedestrian access as well as providing space for works, secure storage, deliveries, site management offices, parking, toilet facilities and all other facilities commensurate with the required works and to personnel and construction practice.
- 2.3 If entry into the “RPA” (Root Protection Area) zones becomes unavoidable, ground protection systems must be utilised. This practice will allow for the relocation of the “Construction Exclusion Fencing”, thereby allowing for an extension of accessible ground space.
- 2.4 All construction, works or access areas must be enclosed and defined by protective fencing, this comprising the “Construction Exclusion Zone”
- 2.5 Such a fence must be fit for purpose and commensurate with the nature of activity expected upon the site.
- 2.6 The fence should be in accordance with the overall “Tree Protection Plan”, at ranges/positions defined as “RPA” ranges in the original tree survey unless specifically agreed with the Project Arborist.
- 2.7 The fence should be 2.00 metres in height, constructed of robust materials and be suitably braced to withstand impact.
- 2.8 The fence may include sheet panels attached to timber posts or weld-mesh panels supported upon a scaffold bar system. All footings must be firm (no mobile rubber or cement footing), being installed with the aid of a post-hole driver, under the guidance of the Project Arborist.
- 2.9 An illustration (Fig 1-facsimile of BS5837: 2012) is appended to this document to illustrate a possible option for the construction of the protective fencing.
- 2.10 The fence should be affixed with notification signs such as “TREE PROTECTION AREA - KEEP OUT”
- 2.11 The position of all “Protective Fencing” must coincide with the edge of ground protection measures incorporated and exclude all site activities from the “Construction Exclusion Zone” or areas not provided with ground protection.
- 2.12 All protection measures must be installed in a manner that will cause least disturbance and under the guidance of the Project Arborist
- 2.13 Ground protection must be installed progressively, thereby allowing progressive access to the next area to be protected. No vehicles/plant will be allowed on unprotected ground.
- 2.14 Where applicable, structures such as “lock-ups”, offices or other temporary site building, not requiring excavation or underground ducting, may be positioned such as to comprise part of the “Construction Exclusion Zone” fencing. All remaining fencing must be continuous with such features and effectively prevent access.

- 2.15 All tree protection measures must be verified by the Project Arborist prior to works commencement and regarding maintenance for the duration of site works
- 2.16 No amendment, alteration, relocation or removal of the tree protection fencing shall occur without prior liaison and approval from the Project Arborist.

3.0) Specific Methodology for Provision of Ground Protection (If Required)

- 3.1 Ground protection can comprise the use of proprietary materials/structures or procedures that avoid ground damage/disturbance/compaction, or the use of procedures that avoid such effects e.g. manual/pedestrian installation procedures.
- 3.2 Such systems may include but would not be limited to the use of “roll-out” temporary vehicular access matting or the use of three-dimensional cellular confinement systems whose function results from the constrained use of hard-core.
- 3.3 Any system utilised must effectively spread load-weight, avoid compaction, maintain drainage/percolation/aeration and be installed in a manner that avoids these issues.
- 3.4 Where none proprietary ground protection systems are to be used, specific installation methodologies must be agreed with the Project Arborist and project Engineer prior to commencement.
- 3.5 Any area of ground protection must be regarded as part of the “Construction Exclusion Zone” until completed and as such must remain fenced-off from the general site.
- 3.6 Dependent upon the nature and durability of the ground protection, it may on completion of installation allow for construction related access if the perimeter of the new ground protected area is fenced-off, thereby preventing inadvertent access onto none protected ground of the remaining “Construction Exclusion Zone”.
- 3.7 Where proprietary ground protection systems are utilised, it is imperative that manufacturer’s specifications and recommendations are adhered to in full regarding the provision and installation of this type of ground protection.
- 3.8 It is appreciated that the nature of the materials involved may require mechanical assistance of a nature that has the potential to cause ground damage and disturbance.
- 3.9 The progressive laying down of ground protection, with previously laid material providing vehicular access to the next zone will be acceptable as an approved methodology.
- 3.10 No vehicular access whatsoever will be allowed onto unprotected ground.
- 3.11 The provision of construction exclusion fencing may require the assistance of machinery and vehicles. No such vehicles will be allowed on unprotected ground.
- 3.12 On completion of any area by way of the provision of ground protection systems then vehicular access will be allowed to deliver materials and machinery the erection of construction exclusion fencing.
- 3.13 Construction exclusion fencing must be undertaken using either pedestrian means where ground protection does not exist but may use vehicular and mechanical assistance where ground protection systems have been put in place.
- 3.14 No mechanical or vehicular access must be made to areas of unprotected ground within the root protection area of any tree intended for retention.

4.0) Works within “RPA” Zone

- 4.1 Only works and construction practices, agreed with the Project Arborist prior to commencement, will be allowed in the “RPA” area.

- 4.2 The "RPA" zone associated with all retained trees must be protected from the effects of construction works.
- 4.3 Amended tree protection measures as agreed with the Project Arborist and including the relocation of fencing and the provision of ground protection will be installed in accordance with the tree protection measures prior to commencement.
- 4.4 All works will be undertaken under the supervision and guidance of the Project Arborist who will have the authority to stop works if activities are considered such as to have the potential to damage trees.
- 4.5 Preference must be given to manual labour and techniques within the fenced "RPA" zone.
- 4.6 On completion of the required works, the area will be inspected by the Project Arborist regarding the reinstatement of the original protection and the relocation of the protective fencing to a position relating to the original "RPA" area.

5.0) Service Installation

- 5.1 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.
- 5.2 Any such works as may be identified in the future, 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)
- 5.3 No open trenching will be allowed. All works must be commensurate with the preservation of the effected tree root system.
- 5.4 Preference will be given to trench-less techniques including Mole-piping, Directional-drilling manual hydro-trenching (high pressure water), "Air-Spade" or broken-trench techniques.
- 5.5 All works carried out within the "RPA" zone or "Construction Exclusion Zone" must be agreed with and supervised by the Project Arborist.

6.0) Tree Management

- 6.1 All tree works should be undertaken under the guidance of the project Arborist.
- 6.2 It is advised that all tree removal works as identified within the Arboricultural Implication Assessment be undertaken at the earliest stage of the overall development works.
- 6.3 On completion of primary site clearance and felling, the Project Arborist must re-assess all ostensibly retainable trees in respect of possible amendments to the "Preliminary Management Recommendations"
- 6.4 Tree pruning works are likely to be modified from those originally defined within the "Preliminary management Recommendations" of the initial tree survey to account for changed land use, changed rates of occupation and use and to account for potential impacts upon the newly built environment including encroachment on buildings, possible light ingress issues and any other tree safety/management issues as may come to light during the development process.
- 6.5 A safe works procedure must be adopted by trained and competent staff.
- 6.6 Whilst any safe felling methodology may be adopted for much of tree felling works, it will be necessary to dismantle in sections, all trees within falling range of trees intended for retention into the post-construction period.
- 6.7 It is recommended that all preliminary works defined within the original tree survey be undertaken regarding all retainable trees.

- 6.8 Where no specific works are defined, general Cleaning-Out works should be applied (section 12 - BS 3998: 1991 Recommendations for Tree Work)
- 6.9 On completion of felling works, all retained trees must be re-evaluated by the Project Arborist regarding the potential effects of exposure and isolation.
- 6.10 Additional works including formative pruning, crown reduction etc., may be nominated for various trees in the interests of mitigating the potential effects of exposure and isolation.
- 6.11 All additional works will be agreed with the local authority and/or other stakeholders and applied at the earliest possible opportunity.
- 6.12 All such works must be carried out by a competent Tree Surgeon, suitably trained for the purpose at hand and compliant with all legislative, safety and insurance requirements.
- 6.13 All Tree Surgery/Pruning works will be undertaken under the guidance of the Project Arborist, the precise nature and extent of work being agreed before commencement.
- 6.14 On completion of site works, the retained tree population will be reviewed and re-evaluated regarding ongoing condition and the likely requirements of any ongoing or future monitoring or management needs

7.0) Demolition

- 7.1 All demolition procedures must be agreed and overseen by the Project Arborist and other suitably skilled staff to monitor for damage and to protect exposed roots/cut-trim exposed roots/oversee backfilling of exposed roots.
- 7.2 No vehicle, plant or other machinery will be allowed on unprotected ground within the "RPA" of a tree to be retained.
- 7.3 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.
- 7.4 Care will be taken to avoid damage to soil volumes beneath and adjoining demolished structures that may contain tree root material.
- 7.5 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.
- 7.6 Where tree 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).
- 7.7 Underground structures (services etc.) within the "RPA" zone should be reviewed with regards to retention in situ in the interest of avoiding tree damage.
- 7.8 Where underground structures (services etc.) within the "RPA" must be removed then the situation must be reviewed by the Project Arborist (and all other stakeholders) regarding the ongoing suitability of the affected tree for retention.
- 7.9 Preference should be given to the retention existing sub-bases where hard surfaces are removed, particularly if the hard surface is to be replaced.

8.0) Works Sequence

- 8.1 No construction related works will commence until the agreed level of tree protection, in accordance with the "Tree Protection Plan", is completed.
- 8.2 All site tree protection will be "signed-off" as complete by the Project Arborist.

- 8.3 The tree management plan will be reviewed by the Project Arborist concerning amendments necessary to address changed land use, changed rates of occupation and use. This may account for potential impacts upon the newly built environment including encroachment on buildings, possible light ingress issues and any other tree safety/management issues, thereby amending (if necessary) the "preliminary Management Recommendations" stipulated in the original Tree Survey.
- 8.3 All tree surgery and felling works will be undertaken under the guidance of the Project Arborist.
- 8.4 The Project Arborist will liaise with the tree works contractor regarding the nature and extent of woodland access to facilitate felling works.
- 8.5 This will include the nomination of "No Vehicular Access" zones in areas where tree retention is envisaged.
- 8.6 Whilst the timing of general tree pruning works is less critical, it is appreciated that the Tree Felling works must be completed prior to construction in the interest of providing works access and reducing the risk of impromptu damage.
- 8.7 On completion of the felling works, trees to be retained will be reviewed regarding the amending of tree pruning works orientated towards the mitigation of exposure and shelter loss.
- 8.8 Revised pruning works will be agreed with the local authority and applied at the earliest possibly opportunity.
- 8.9 After the completion of primary tree clearance but prior to the commencement of construction works, all "Construction Exclusion" and "Protective" fencing must be erected to the satisfaction of the Project Arborist.
- 8.10 On completion of construction works, all protective measure may be removed, but in a manner, that does not compromise the "Protection Zones". This must be completed in a "Progressive" manner, with each section being removed whilst utilizing protection systems still in situ. Such works must be agreed and overseen by the Project Arborist.
- 8.11 On completion of construction works, all retained trees will be reviewed regarding condition and longer term management recommendations and regarding site hand-over.

9.0) Ancillary Precautions

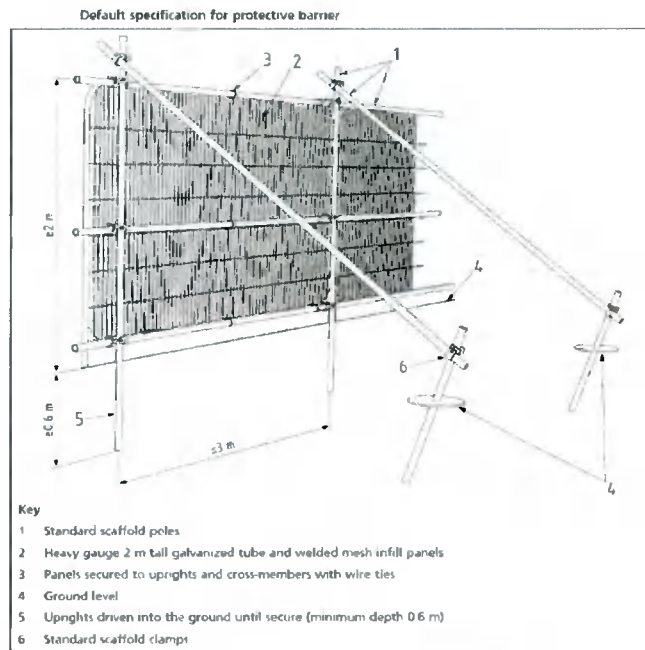
- 9.1 The methodologies as set out in this document apply to all undertakers of work upon or adjoining the site as may require access to the "Construction Exclusion Zone" or the "RPA" area of any tree.
- 9.2 This document will be disseminated to all persons requiring access to the work site.
- 9.3 All persons undertaking works either before or after the principal development (site investigation works, Landscape Contractors) are subject to the above requirements
- 9.4 Works outside the "Construction Exclusion Zone" must be controlled to create no potential secondary hazard to tree health.
- 9.5 Large loads accessing the site must be reviewed regarding clearance and potential tree damage.
- 9.6 Care must be taken regarding materials that may contaminate the ground. No concrete mixings, diesel or fuel, washings or any other liquid material may be discharged within 10 metres of a tree.
- 9.7 No fires can be lit within 5 metres of any tree canopy extent.
- 9.8 No tree will be used for support regarding cables, signs etc.

- 9.9 The trees should be reviewed on a regular basis throughout the development process and on completion. At that time, additional recommendations regarding tree management may be required.
- 9.10 Any issue that has the potential to affect site trees must be brought to the attention of the Project Arborist for review and comment.

10.0) General

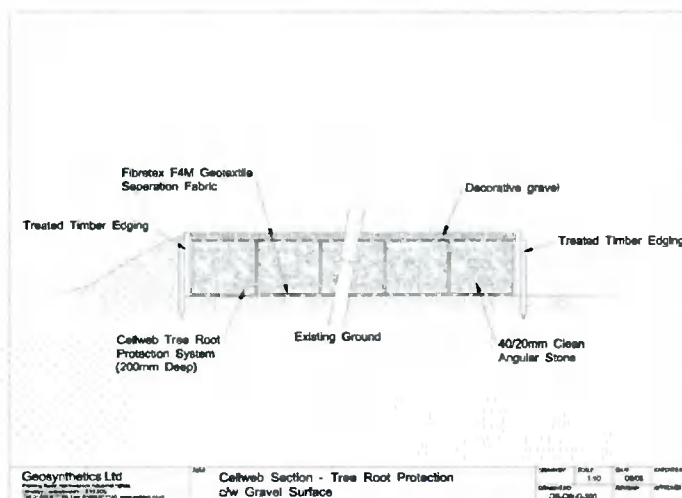
- 10.1 Any circumstances that become known whilst the development project is ongoing that either involves trees or access to/works within the construction exclusion zone must be brought to the attention of the Project Arborist for evaluation and advice regarding approach and methodology.
- 10.2 It is likely that liaison/agreement will be required with the Local Planning Authority regarding compliance with, as well as the verification of the required tree protection measures.

Fig 1



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

Fig 2



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

Appendix 3 - Tree Survey

Nature of Survey

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

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

The survey relates to the site and the conditions thereon at the time of the survey. It is likely that changes in site usage, development or other environmental changes will require an amendment of recommendations and in some instances, may require the re-classification of a tree’s suitability for retention.

Drawing References

The survey should be read in conjunction with the “Tree Constraints Plan” drawing “LCC-TCP-05-17” regarding the representation of tree positions, crown forms, “RPA” extents and colour reference to category systems. Where tree positions were not indicated on the supplied drawing, their positions may have been given “sketched” locations within “LCC-TCP-05-17”. It is advised that any such trees are accurately located by professional means so that the constraints such trees have upon the site can be accurately gauged.

Each tree is represented by a coloured circle, 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) denoted as a dashed orange circle. This circle represents the minimum area requiring protection from the effects of development activity. For the purposes of design, it should be considered as approximating the position of the tree protection fencing that must be erected prior to the commencement of any site works, thus excluding all site activities other than those dealt with by way of the “Arboricultural Implication Assessment” and “Arboricultural Method Statement”

The development of a Tree Constraints Plan (TCP) provides a design tool regarding tree retention. Such a plan combines the topographical land survey drawing with additional information as provided by the tree survey. The aspects of the tree’s existence recorded on the “TCP” are, firstly, the tree canopies, represented in accordance with the four cardinal compass point radii (Sp: R in survey Table 1). Secondly, each tree’s Root Protection Area (RPA) is represented in accordance with paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837: 2012.

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

Survey Intent and Context

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

Survey Data Collection and Methodology

The Survey

The tree survey was carried out in May of 2017. This survey portion of the overall report is not an Implication Assessment though but provided some of the basic information regarding its compilation. The survey has been undertaken under the recommendations of BS 5837: 2012. This survey includes only tree of a stem diameter exceeding 150mm at approximately 1.50 metres from ground level. The survey relates to current site conditions, setting and context.

Identification

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

Measurements

Measurements are metric and defined in metres and millimetres. All trees referred to in the survey text have been measured to provide information regarding canopy height and canopy spread (north, east, south and west radii), level of canopy base and stem diameter at 1.50 meters from ground level. The dimensions provided are intended to provide a reasonable representation of a trees size and form. Whilst efforts are made to maintain accuracy, visual obstruction, especially regarding trees in groups, requires that some tree dimensions are estimated only.

Inspection and Evaluation Limitations and Disclaimers

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

The survey is not a safety assessment and the parameters reviewed within this survey context would be substantially deficient in extent to provide for a reliable safety assessment. The survey is intended to provide a general and qualitative review to assist in gauging the suitability of an individual tree for retention within a development context. All trees are subject to impromptu failure and damage and the assessment of risk as may be presented by a tree requires the review of numerous factors more than those noted herein and as such, remains outside the scope of this document and any attempt to use the information herein for such proposes will render the information invalid.

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

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

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

Seasonality

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

Survey Key

Species	Refers to the specific tree species
Age	Referred to in generalized categories including: -
Y - Young.....	A young and typically small tree specimen.
S/M - Semi-Mature.....	A young tree, having attained dimensions that allow it 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
C-Ht	Lowest canopy height
FSB	Level of First Significant Branch
Sp: R	Tree Canopy Spread measured by radii at north, east, south and west
Dia	Stem diameter at approx. 1.50m from ground level.
RPA	Root Protection Area, as a radius measured from the tree's stem centre.
Con	Physical Condition
G Good.....	A specimen of generally good form and health
G/F Good/Fair.....	
F Fair.....	A specimen with defects or ill health that can be either rectified or managed typically allowing for retention
F/P Fair/Poor.....	
P Poor.....	A specimen whom through defect, disease attack or reduced vigour has a limited longevity or may be un-safe
D Dead.....	A dead tree
Structural Condition	Information on structural form, defects, damage, injury or disease supported by the tree
PMR – Preliminary Management Recommendations	Recommendation for Arboricultural actions or works considered necessary at the time of the inspection and relating to the existing site context and tree condition. Note is also made of works considered as urgent.
Retention Period	
S – Short.....	Typically 0 -10 years
M – Medium.....	Typically 10 -20 years
L – Long.....	Typically 20 – 40 years
L+.....	Typically in excess of 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. Note should be made of the fact that tree categorization relates to the current site and tree locations therein. As site changes occur, it may become necessary to re-evaluate trees regarding their relationship to new features.
Category U.....	Typically relates to trees that are dead, dying or dangerous. Such trees may present a threat of suffer from a defect or disease that is considered irremediable.
Category A.....	A typically a good quality specimen, which is considered to make a substantial Arboricultural contribution
Category B.....	Typically including trees regarded as being of moderate quality
Category C.....	Typically including generally poor quality trees that may be of only limited value.
	The above categories (A, B and C) will be further subdivided regarding the nature of their values or qualities. A tree may be awarded one or more value categories as below, but such attributes do not infer any additional value and it may be possible for a tree may qualify for one or more of the categories as below.
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.

Appendix 1 – Tree Data Table

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
1	Winter Flowering Cherry (<i>Prunus subhirtella</i> "Autumnalis")	E/M	F	4.00	1.25	3.50	2.50	3.00	3.00	1	181	2.18	Located on raised bed. Vigour and vitality is fair but below that expected retrieve this age with deadwood notable within crown.	Review regularly.	S	C2
2	Ornamental Apple variety (<i>Malus Sp.</i>)	E/M	F	4.50	0.00	3.00	3.50	3.00	2.50	1	226	2.71	Slightly distorted and arising from position directly adjoining paved surfaces, raising concern regarding sustainability.	Review regularly.	M	C2
3	Winter Flowering Cherry (<i>Prunus subhirtella</i> "Autumnalis")	E/M	F	4.50	1.50	4.50	3.50	4.00	4.00	1	280	3.36	Appears to be of reasonable vigour but supports crown deadwood. Recent folia dieback and suggests monitor linear attack.	Review regularly.	M	C2
4	Viburnum (<i>Viburnum Sp.</i>)	M	F	3.50	0.00	3.00	2.50	2.00	2.50	1	159	1.91	Comprises a shrubby mass combining number of individual plants.		M	C2
7	Beech (<i>Fagus sylvatica</i>)	S	G/F	5.00	3.00	1.25	1.25	1.25	1.25	1	111	1.34	Young and vigorous but arising from the highly-constrained area within 1.50 m of buildings and above known underground services. Is considered unsustainable.	Remove.	N/A	U
8	Rowan (<i>Sorbus aucuparia</i>)	S	F/P	4.50	2.00	1.50	1.50	1.50	1.50	1	86	1.03	Young and still vigorous but has suffered stem damage and strangulation at stake top position.	Remove and replace.	S	C2
9	Silver Birch (<i>Betula pendula</i>)	E/M	G/F	10.00	2.50	3.00	2.50	1.50	2.50	1	216	2.60	Young and vigorous but arises from recently disturbed ground.	Review regularly.	L	B2
10	Ash (<i>Fraxinus excelsior</i>)	S/M	G	9.00	2.00	3.50	3.00	1.00	1.50	1	201	2.41	Originally suppressed and now unbalanced to north. General vigour appears good though tree arises from notably disturbed ground.		L	B2

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	9.00	3.50	3.50	3.00	0.00	2.00	1	197	2.37	Originally suppressed and is now unbalanced to north. Lower stem has suffered bark damage and tree arises from disturbed ground with evidence of root disturbance.	Review regularly.	M	C2
12	Ash (<i>Fraxinus excelsior</i>)	E/M	G/F	13.00	3.00	5.00	4.00	1.50	3.00	1	299	3.59	Suppression is lead to development of northerly growth imbalance. General vigour and vitality appears good though tree arises from disturbed ground with evidence of root disturbance.	Review regularly.	L	B2
13	Rowan (<i>Sorbus aucuparia</i>)	E/M	F	5.50	2.50	3.50	2.00	1.00	2.50	1	143	1.72	Suppression is lead to northerly growth imbalance. Tree arises from disturbed ground with evidence of root disturbance.	Review regularly.	L	B2
14	Hybrid Black Poplar (<i>Populus x Canadensis</i>)	E/M	F	17.00	5.00	7.00	4.50	4.00	5.00	1	477	5.73	A young but vigorous specimen with immense potential for continued growth. Tree supports minor growth imbalance to north and arises from disturbed ground. Consideration should be given to development of far reaching and invasive root system.		L	B2
15	Silver Birch (<i>Betula pendula</i>)	S/M	F	6.50	2.25	3.00	1.00	1.50	2.00	1	156	1.87	Suppressed and unbalanced to north. Vigour and vitality is reduced.	Review regularly.	M	C2
16	Silver Birch (<i>Betula pendula</i>)	E/M	F/P	8.00	3.00	5.00	4.00	0.00	3.50	1	223	2.67	Heavily suppressed and unbalanced to north. Appears to have sustained extensive basal damage including breakage of at least one major. Lower crown is also suffered major limb loss at 2.50 m to north.	Review regularly regarding ongoing suitability for retention.	S	C2
17	Common Alder (<i>Alnus glutinosa</i>)	S/M	F	10.00	2.50	4.00	2.50	1.00	2.00	1	216	2.60	Drawn-up and of narrow form. Supports minor imbalance to north.	Review regularly.	L	B2
18	Silver Birch (<i>Betula pendula</i>)	E/M	F	9.00	2.25	2.00	2.50	3.00	2.50	1	216	2.60	Young and still vigorous but has sustained widespread buttress root damage.	Review regularly regarding ongoing suitability for retention.	S	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
19	Common Alder (<i>Alnus glutinosa</i>)	S/M	P	6.50	1.75	2.00	1.00	0.00	0.50	1	105	1.26	A heavily suppressed specimen estate and deteriorating health.	Remove and replace.	N/A	U
20	Rowan (<i>Sorbus aucuparia</i>)	S/M	F	5.50	2.00	4.50	0.50	0.50	2.50	1	99	1.18	Suppressed as result of position relative near neighbours. Has sustained substantial mechanical damage to lower stem.	Review regularly.	M	C2
21	Silver Birch (<i>Betula pendula</i>)	E/M	F/P	11.00	5.00	5.00	3.50	0.00	3.00	1	232	2.79	Unbalanced to north and has sustained notable root damage.	Review regularly regarding ongoing suitability for retention.	S	C2
22	Silver Birch (<i>Betula pendula</i>)	E/M	F	10.00	3.00	5.00	3.50	3.50	3.00	1	337	4.05	Heavily divided at 1.50 m. Vigour and vitality is good though tree arises from notably disturbed ground with evidence of root damage particularly to south and west.	Review regularly.	M	C2
23	Common Alder (<i>Alnus glutinosa</i>)	S/M	P	9.00	4.50	2.00	1.00	2.00	2.00	1	178	2.14	Has sustained extensive damage to lower stem.	Remove and replace.	N/A	U
24	Common Alder (<i>Alnus glutinosa</i>)	S/M	F/P	8.00	2.50	4.00	2.00	1.50	4.50	1	175	2.10	A poor-quality specimen with evidence of decline about higher crown.	Consider early removal and replacement.	S	C2
25	Rowan (<i>Sorbus aucuparia</i>)	S/M	F	6.00	2.00	2.00	2.00	2.00	1.50	1	146	1.76	Young and still vigorous but has suffered extensive bark damage to lower stem.	Review regularly.	M	C2
26	Silver Birch (<i>Betula pendula</i>)	E/M	F	12.00	2.00	4.00	3.00	3.50	3.50	1	264	3.17	Young and still vigorous, arising from disturbed ground.		L	B2
27	Common Alder (<i>Alnus glutinosa</i>)	S	P	4.00	2.00	3.50	2.50	0.00	0.00	1	73	0.88	Suppressed and unbalanced to east.	Remove and replace.	S	C2
28	Silver Birch (<i>Betula pendula</i>)	E/M	F	10.00	2.50	3.00	2.50	3.00	4.00	1	239	2.86	Appears to be of good vigour and vitality but arises from disturbed ground.		L	B2
29	Silver Birch (<i>Betula pendula</i>)	S/M	P	8.50	2.00	3.50	2.50	1.00	2.50	1	169	2.02	Stem is heavily unbalanced to north. Tree has suffered extensive damage to lower stem.	Remove and replace	N/A	U

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
30	Silver Birch (<i>Betula pendula</i>)	E/M	F	8.50	2.00	4.00	2.00	2.00	3.50	1	236	2.83	Appears be maintaining good general vigour and vitality but arises from notably disturbed ground and exhibit evidence of buttress damage to north-west.	Review regularly.	M	C2
31	Ash (<i>Fraxinus excelsior</i>)	S/M	G/F	8.00	2.00	3.00	2.50	3.00	3.50	1	197	2.37	Young and vigorous but has sustained extensive stem damage with evidence of substantial root disturbance also.	Review regularly.	S	C2
32	Silver Birch (<i>Betula pendula</i>)	E/M	F	10.00	2.25	2.50	2.00	1.00	2.50	1	226	2.71	Stem is unbalanced and north with crown imbalance to west. Arises from disturbed ground with evidence to suggest root damage particularly to south-west.	Review regularly.	M	C2
33	Beech (<i>Fagus sylvatica</i>)	S/M	F	4.50	1.00	2.50	2.00	2.00	2.00	1	175	2.10	Young and still vigorous.		L	B2
34	Rowan (<i>Sorbus aucuparia</i>)	E/M	G/F	5.50	1.75	4.50	4.00	4.50	4.00	11	267	3.21	Young and still vigorous was arising from disturbed ground with evidence of lower crown damage.	Review regularly.	L	B2
35	Lime (<i>Tilia europea</i>)	S/M	G/F	6.50	2.00	4.50	3.00	3.00	3.50	1	248	2.98	Young and vigorous with immense potential for continued growth over time.	Remove basal suckers.	L	B2
36	Italian Alder (<i>Alnus cordata</i>)	E/M	F	14.00	3.50	2.50	5.00	4.50	3.00	1	516	6.19	Part of a close-knit community and accordingly is slightly distorted of growth form.	Review regularly.	L	B2
37	Italian Alder (<i>Alnus cordata</i>)	E/M	F	13.00	2.50	2.00	5.00	3.00	1.50	1	417	5.00	Part of a close-knit community accordingly is of distorted crown form. Is of good vigour with immense potential for continued growth over time.		L	B2
38	Italian Alder (<i>Alnus cordata</i>)	E/M	G/F	12.00	3.00	2.00	3.00	4.50	3.50	1	366	4.39	Part of a close-knit community has been suppressed as result of 70 to near neighbours, developing growth imbalance to south. Remains vigorous asserts immense potential for continued growth over time.		L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
39	Italian Alder (<i>Alnus cordata</i>)	E/M	F	12.00	2.50	5.50	0.00	4.50	5.00	1	567	6.80	Has developed gross distortion because of proximity to near neighbours. Crown is typically unbalanced to north-east and is heavily divided from 1.00 m.	Review regularly.	L	B2
40	Norway Maple (<i>Acer platanoides</i>)	E/M	G/F	7.50	2.50	6.00	5.50	5.00	5.00	1	465	5.58	A broad and spreading specimen whose crown supported on sharply forked system including compression forks with bark inclusion is that may predispose tree to mechanical damage in later life.	Review regularly.	L	B2
41	Sweet Chestnut (<i>Castanea sativa</i>)	S/M	G/F	5.00	2.00	3.50	2.50	3.00	2.50	1	216	2.60	Young and still vigorous with immense potential for continued growth over time.		L	B2
42	Ornamental Cherry (<i>Prunus variety</i>)	E/M	G/F	6.50	2.00	5.50	5.00	4.50	5.00	1	353	4.24	Young and still vigorous.		L	B2
43	Norway Maple (<i>Acer platanoides</i>)	E/M	G/F	6.50	2.00	5.50	5.00	5.00	5.00	1	382	4.58	Broad and spreading. Is maintaining reasonable vigour but is potentially compromised by sharp crown fork at 1.25 m.	Review regularly.	L	B2
44	Rowan (<i>Sorbus aucuparia</i>)	E/M	G/F	5.00	1.00	4.00	4.00	3.00	3.50	1	299	3.59	Young and still vigorous. Of spreading form.	Review regularly.	L	B2
45	Wild Service Tree (<i>Sorbus torminalis</i>)	E/M	G/F	3.50	0.00	2.50	2.50	2.50	2.50	1	261	3.13	Young and still vigorous requiring no action at present.		L	B2
46	Purple Plum (<i>Prunus cerasifera</i>)	E/M	F	5.00	1.00	3.50	4.00	3.00	2.50	1	306	3.67	Slightly unbalanced but maintaining good vigour and vitality.	Review regularly.	L	B2
47	Whitebeam (<i>Sorbus aria</i>)	S/M	G/F	5.50	1.50	4.50	4.50	4.00	4.00	1	312	3.74	Young and vigorous though slightly suppressed on southern and south-western side as result of proximity to near neighbours.	Review regularly.	L	B2
48	Red Oak (<i>Quercus rubra</i>)	S/M	F	4.50	2.00	3.50	4.00	3.00	3.50	1	166	1.99	Young and vigorous with immense potential for continued growth over time.		L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
49	Purple Plum (<i>Prunus cerasifera</i>)	M	G	5.00	1.00	3.50	4.00	3.00	2.50	1	226	2.71	Slightly unbalanced but maintaining good vigour and vitality.		L	B2
50	Silver Birch (<i>Betula pendula</i>)	E/M	G/F	9.50	2.25	5.00	5.00	4.50	4.50	1	465	5.58	Heavily divided from 1.00 m. Vigour and vitality appears good at present.		L	B2
51	Silver Birch (<i>Betula pendula</i>)	M	F	8.00	2.00	2.00	2.50	2.00	1.00	1	216	2.60	Slightly suppressed but maintaining good vigour and vitality.		L	B2
52	Small Leaved Lime (<i>Tilia cordata</i>)	S/M	G	6.50	2.00	4.50	3.50	3.50	3.50	1	271	3.25	Vigorous with immense potential for continued growth over time.		L	B2
53	Domestic Pear (<i>Pyrus communis</i>)	S/M	F	4.50	1.00	1.00	1.50	2.00	1.50	1	175	2.10	Young and still vigorous but has sustained notable lower stem damage.	Review regularly.	M	C2
54	Horse Chestnut (<i>Aesculus hippocastanum</i>)	S/M	G/F	6.00	2.50	4.00	4.00	2.50	3.00	1	229	2.75	Young and still vigorous with immense potential for continued growth over time.		L	B2
55	Ash (<i>Fraxinus excelsior</i>)	S/M	G/F	8.00	2.50	4.50	4.50	4.50	3.50	1	325	3.90	Young and vigorous with immense potential for continued growth over time.		L	B2
56	Norway Maple (<i>Acer platanoides</i>)	E/M	F	9.00	2.25	5.0	5.50	5.50	5.00	1	487	5.84	Young and vigorous. Crown is supported on 3-way fork union with substantial bark inclusion is raising some concern with regard possible predisposition toward splitting in later life.	Review regularly.	L	B2
57-64+66	Whitebeam (<i>Sorbus aria</i>)	E/M	F/P	4.00	2.00	2.50	2.00	1.50	2.00	1	242	2.90	A young specimen comprising part of an alignment parallel to school building. Has been recently decapitated 4.00 m.	Review regularly.	M	C2
65	Norway Maple (<i>Acer platanoides</i>)	S/M	P	4.00	2.50	2.00	1.50	1.00	1.50	1	267	3.21	Harshly decapitated 4.00 m. Tree exists a position directly adjoining and above known underground services.	Consider removal.	S	C2
67	Norway Maple (<i>Acer platanoides</i>)	S/M	G/F	6.50	2.50	4.50	4.50	4.50	4.50	1	325	3.90	Young and still vigorous with notable potential for continued growth over time.		L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
68	Norway Maple (<i>Acer platanoides</i>)	S/M	G/F	6.00	2.50	4.25	4.25	4.25	4.25	1	274	3.29	Young and vigorous with notable potential for continued growth over time.		L	B2
69	Cider Gum (<i>Eucalyptus gunnii</i>)	E/M	F	12.00	2.25	7.00	6.50	5.50	5.50	1	700	8.40	Relatively large tree supporting nominal imbalance to north east. Tree sets immense potential for continued growth over time.	Review regarding retention context.	M	B2
70	Rowan (<i>Sorbus aucuparia</i>)	S/M	F	5.00	1.75	2.00	3.00	2.50	2.00	1	166	1.99	Badly distorted as result proximity to near neighbours and adjoining shrubbery but is maintaining reasonable vigour and vitality.	Review regularly.	M	C2
71	Sycamore (<i>Acer pseudoplatanus</i>)	S/M	F	8.00	2.50	4.00	4.00	4.00	4.00	2	398	4.77	Multi-stem from ground level suggesting possible sucker redevelopment from prior tree remnant. Is vigorous and asserts immense potential for continued growth over time. Sharply forked stature raises concerns regarding mechanical integrity in later life.	Review regarding retention context and on regular basis.	M	C2
72	Hybrid Black Poplar (<i>Populus x Canadensis</i>)	S/M	F/P	9.00	175	3.00	3.50	4.00	3.00	1	366	4.39	In a state of ongoing deterioration presumably with respect to canker damage with substantial proportion of north-eastern crown already dead. Unsuitable for retention.	Remove.	N/A	U
73	Dogwood (<i>Cornus Sp.</i>)	E/M	F	4.50	1.50	3.50	3.50	3.50	3.50	1	239	2.86	Young and still vigorous.		L	B2
74	Silver Birch (<i>Betula pendula</i>)	E/M	F	7.50	2.50	3.00	3.50	2.50	2.00	1	251	3.02	Early life pruning saw loss of northern stem with notable wound remaining. Tree supports minor imbalance to east.	Review regularly.	M	C2
75	Rowan (<i>Sorbus aucuparia</i>)	S/M	F	5.00	2.00	3.50	3.00	2.50	2.00	1	194	2.33	Slightly one-sided and unbalanced to east.	Review regularly.	M	B2
76	Norway Maple (<i>Acer platanoides</i>)	E/M	F	9.00	2.00	3.50	4.00	4.00	4.00	1	309	3.71	Heavily pruned in past with notable wound at 1.75 m. Proximity to kerb edge raises concerns regarding sustainability in line with growth potential.	Review regularly.	L	B2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
77	Norway Maple (<i>Acer platanoides</i>)	S/M	F/P	7.50	3.50	2.50	4.00	2.50	1.50	1	248	2.98	Heavily pruned on western side that is now substantially denuded. proximity to curb edge raises concerns regarding sustainability in line with growth potential.	Review regularly.	S	C2
78	Norway Maple (<i>Acer platanoides</i>)	E/M	F	8.00	2.50	5.00	5.00	5.00	5.00	1	325	3.90	Has undergone crown raising on lower western side of crown. Vigour and vitality is good though proximity to curb edge raises concerns regarding sustainability in line with growth potential.	Review regularly.	M	B2
79-87	Lime (<i>Tilia europea</i>)	S/M	G/F	5.00	1.75	2.50	2.50	2.50	2.50	1	127	1.53	Young and vigorous, part of roadside verge planting. Nos.80, 81 have sustained minor lower stem damage No.85 is slightly unbalanced and No.86 has suffered both stem damage and lower crown No.87 has suffered only minor lower stem damage.		L	B2
88-97	Elm Variety (<i>Ulmus var</i>)	S/M	G/F	5.50-6.50	2.00-2.50	2.50	2.50	2.50	2.50	1	223	2.67	Young and vigorous arising from constrained planting configuration. No.91 is slightly suppressed as result of position beneath eucalyptus. No.96 supports notable imbalance to north.		L	B2
98-105	Hornbeam (<i>Carpinus betulus</i>)	S/M	G/F	5.50	2.00	1.50	1.50	1.50	1.50	1	191	2.29	Young and vigorous, arising from grass reserve. Some specimens have sustained notable bark damage.		L	B2
106	Elm Variety (<i>Ulmus var</i>)	S/M	G/F	5.50-6.50	2.00-2.50	3.00	3.00	0.50	2.50	1	223	2.67	Suppressed because of position under canopy of adjoining Cyresses.		M	C2
107	Elm Variety (<i>Ulmus var</i>)	S/M	G/F	5.50-6.50	2.00-2.50	2.50	2.00	1.00	2.00	1	223	2.67	Heavily suppressed as result of position beneath canopy of adjoining Cyresses.		M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
TL1	Tree Line 1 Leyland Cypress (<i>Cupressocypariss leylandii</i>)	E/M	F	13.00-14.00	2.00	2.50	5.00	2.50	5.00	1	493	5.92	A close-knit, continuous and contiguous alignment of 11 primary specimens with one additional smaller suppressed stem. The alignment does not comprise equidistant centres and indeed there is evidence to suggest a larger number of trees in the past with remnant stumps still in existence within the broader alignment. Canopy is now coalesced in a north-south manner exacerbating crown spread in east west manner and leading to development of fanlike crown profile. General vigour and vitality is good at present suggesting immense potential for continued growth. Mechanical damage typically associated with this species remains limited at present though small scale limb shedding is noted. Concerns exist in respect of sustainability and the species natural predisposition towards suffering mechanical damage and failure in combination with broadly understood management issues relating to apical growth pattern and an ability to apply standard pruning practice without risking unsightly canopy denudation. Trees remain vigorous and afford a substantial screen/alignment effect at present however their sustainability is considered impaired.		M	C2
TL2	Tree Line 2 Leyland Cypress (<i>Cupressocypariss leylandii</i>)	E/M	F/P	12.00-14.00	0.00-2.00	2.50	5.00	2.50	5.00	1	366	4.39	Effectively defining the eastern boundary of the site is a continuous and contiguous alignment of Leyland Cypress located circa 0.50 m inside of the palisade rail boundary. These trees are in reasonable health but are already suffering the early stages of mechanical deterioration considered typical for species. Due consideration should be given to management issues relating to the species and particularly to their apical growth pattern, including the difficulties to in applying pruning type management to control size or shape without undermining visual appearance and denuding canopy cover. Whilst relatively small at present, should be considered that these trees are of particularly limited sustainability and thus their suitability for retention is equally minimal.		M	C2

No.	Species	Age	Con	Ht.	CH	N	E	S	W	Stm	Dia.	RPA	Structural Condition	PMR	Yrs	Cat
WB 1	Woodland Belt 1 Common Alder (<i>Alnus glutinosa</i>) Norway Maple (<i>Acer platanoides</i>) Sycamore (<i>Acer pseudoplatanus</i>) Ash (<i>Fraxinus excelsior</i>) Lime (<i>Tilia europea</i>) scots pine, Hawthorn (<i>Crataegus monogyna</i>) Hazel (<i>Corylus avellana</i>) Rowan (<i>Sorbus aucuparia</i>) Cappadocian Maple (<i>Acer cappadocicum</i>) Grey Alder (<i>Alnus incana</i>)	S/M- E/M	G/F	8.00-14.00	0.00-2.00		Contiguous			1	302	3.63	Located immediately outside of the site's palisade defined southern boundary there is a notable but young woodland belt. All trees should be regarded as being relatively young, typically combining semimature early mature specimens and attain heights between 8.00 and 14.00 m. For the most part, the trees are setback substantially from the school boundary, for example to the south of the existing buildings typically being set back from the boundary railing by circa 5.00 – 6.00 m. However, it is noted that towards the eastern end of the buildings and along the entire width of the netball courts that tree ranges decreased and in many instances, trees are located within 4.00 – 5.00 m. Many trees reviewed attain stem diameter is in the order of 0.75 – 0.90 m girth asserting nominal root protection areas of less than 4.00 metres radius In many instances, and because of natural woodland suppression and the existence of open space positions north of the woodland belt, many trees have developed gross imbalances towards the north and across the boundary palisade railing and thus, offer substantial overhangs of the site. Is considered likely that this will increase over time. Equally, and regarding a subtterranean constraint, it should be considered that these trees already offer some degree of encroachment onto the site area in respect of their nominal root protection zones. Consideration should be given to the fact that the trees are still young and assert immense potential for continued growth over time. Accordingly, the degree of overhang noted to date will increase with time.		L	B2