



Tree Survey Report

Site Address: Balmoral Gardens, Redoaks Way, Halewood, Liverpool L26 6BN

Date Surveyed:	21/1/2023
Surveyed By:	Robert Rainford
Produced For:	Premier Estates Ltd
Report Date:	05/02/2023

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1. Introduction

1.1 Instruction

Rainfords Tree Care have been instructed by Premier Estates Ltd, to carry out a tree survey to the trees within the site at Balmoral Gardens, Redoaks Way, Halewood, Liverpool L26 6BN

This report will discuss the findings on site and provide realistic management recommendations and further action.

The site was visited, and trees inspected on 21/1/2023, the weather was dry.

1.2 Purpose of the Report

This report provides an analysis of the Tree(s) mentioned regarding their current condition and to provide realistic management measures appropriate for the site. This report can be used to support a planning application for tree works. During the planning process this document will be publicly available, therefore the aim is to provide the information in a clear, concise, and understandable manner for the layman.

1.3 Limitations of the Report

Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to the inspection timescales laid out in the Tree Data Appendix. Any alteration to the site could change the current circumstances and may invalidate this report and any recommendations made.

Trees are dynamic structures that can never be guaranteed 100% safe; even in a good state they can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.

Any implications concerning buildings and their foundations within the area are beyond the scope of this report. A structural engineer would need to be consulted and the analysis dealt with separately. General comments may be noted for obvious structure damage, which may be attributed to trees discussed within this report.

1.4 Provided Documents

No documents or plans had been provided prior to visit.

1.5 Mapping

Maps were produced for this report using Google Maps and QGIS to give a site layout and boundary.

1.6 Justification of Works

Any works identified as part of the tree survey and contained within this report, it is based on maximising the trees Safe Useful Life Expectancy (SULE), this considers its current situation and the proximity of people or property.

2 Tree and Site Assessment

2.1 Site Overview

This site is a residential property comprising of a single multi storey apartment building, with car parking spaces and grassed areas around the site. To the rear is a group of Poplar trees which were likely retained as part of the site construction. The surrounding area is a mix of farmland, new large-scale development and existing residential areas.



FIGURE 1: SITE IN CONTEXT OF AREA, AT DROPPED PIN, TAKEN FROM GOOGLE MAPS

2.2 Inspection Method

This site was inspected from ground level accessing trees where possible, where 360-degree visibilities could not be obtained, binoculars were used to aid inspection, trees with significant or notifiable defects are logged within this report for further works or investigation, as necessary.

The trees were inspected visually from ground level, no aerial inspections were made.

2.3 Tree Assessment & Recommendations

The general health of the trees on site is good, with some maintenance required around car parking spaces. These poplars have all been topped/reduced in the past and are showing significant regrowth from the reduction points. Some are now beginning to show signs of decay at the pruning points. Recommendations include reducing back to these original points and providing clearance over the car park.

3 Statutory Controls

The presence of a Tree Preservation Order or Conservation Area constraint against trees on this site can indicate the wishes of the Local Authority to retain significantly visible and valuable trees within the landscape they serve. If these constraints are present, it does increase the chance for a tree to be retained and strong argument made for such a case. Trees with a TPO or within a conservation area can be removed, given adequate justification and mitigation within a development scheme, as the scheme can provide greater benefits than the presence of the trees alone.

In the presence of any TPO or CA constraints, written permission must be granted before any tree work is carried out.

3.1 Tree Preservation Orders

A check was made with Knowsley Council's online mapping on 05/02/2023 and found that the site does contain a group TPO covering all the surveyed trees.

3.2 Conservation Areas

A check was made with Knowsley Council's online mapping on 05/02/2023 and found that this site does not fall within a Conservation Area.

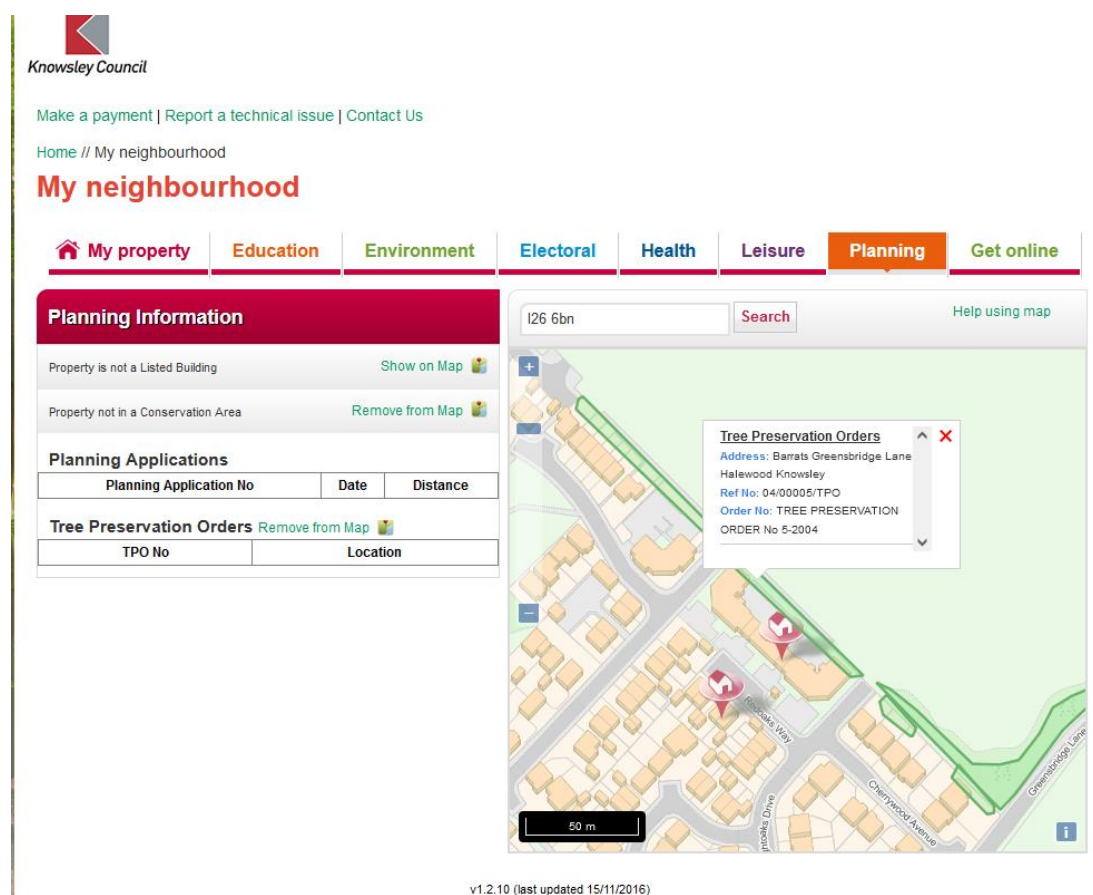


FIGURE 2: SCREENSHOT FROM KBC ONLINE MAPS

4 Bibliography and References

BS 3998:2010 Tree Work - Recommendations - BSI Standards Publication

Principles of Tree Hazard Assessment and Management - David Lonsdale

The Body Language of Trees - Claus Mattheck & Hedge Breuloer

Diagnosis of Ill Health in Trees - RG Strouts & TG Winter

Trees of Britain & Northern Europe - Allan Mitchell

Manual of Wood Decays in Trees - K Weber & C Mattheck

Fungi An Arborists' Field Guide - G Watson & T Green

NHBC Standards – January 2022 – nhbc-standards.co.uk

www.legislation.gov.uk - Official UK legislation, revised and as enacted 1267-present

www.trees.org.uk - The Arboricultural Association

www.barrelltreecare.co.uk - 'Pre-planning tree surveys: SULE is the Natural Progression'
Arboricultural Journal 17, 33–46. BTC/2/1993. Jeremy Barrell 2009

5 APPENDICES

APPENDIX A – Tree Data

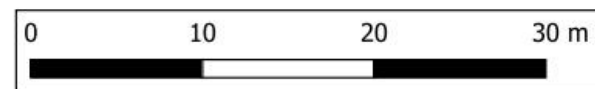
Feature Type	Tree ID	Tag Number	Tree Species	DBH (mm)	Height (m)	Crown Spread Radius (m)	Age Class	Structural Condition	Physiological Condition	Overall Condition	Comments	Recommendations	Work Priority	Assessed Tree Part	Target Description	Distance from Target	Likelihood of Failure	Likelihood of Impact	Failure & Impact	Consequences of Failure	Occupancy Rate	Risk Rating	Inspection Frequency	Date
Tree	1	1297	Lombardy Poplar	500	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old points decaying. Hung up Deadwood in crown	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	2	1298	Lombardy Poplar	600	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	3	1299	Lombardy Poplar	600	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	4	1300	Grey Poplar	700	22	5	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	5	1301	Grey Poplar	650	22	5	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	6	1302	Lombardy Poplar	500	22	2	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	7	1303	Lombardy Poplar	550	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	8	1304	Grey Poplar	600	22	5	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	9	1305	Lombardy Poplar	650	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying. Sounding reveals some minor dysfunction in stem.	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023

Tree	10	1305	Lombardy Poplar	700	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying. Sounding reveals some minor dysfunction in stem.	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	11	1307	Grey Poplar	700	22	5	Mature	Good	Good	Good	Large wound on low stem with apparent cavity. Tree has been topped previously with significant regrowth. Old pruning points decaying	Extent of cavity/decay should be quantified. Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	12	1308	Lombardy Poplar	680	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old pruning points decaying. Sounding reveals some minor dysfunction in stem.	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	13	1302	Turkey Oak	450	20	4	Semi-Mature	Good	Good	Good	Grown at angle adjacent to boundary leaning over neighbouring gardens. Ivy on stem limits visibility.	Sever and clear lower 2m of ivy.	Low - 12 Months	Major Branches	Low Value Structures	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023
Tree	14		Turkey Oak	330	16	4	Semi-Mature	Good	Good	Good	Grown at angle adjacent to boundary leaning over neighbouring gardens. Ivy on stem limits visibility. Asymmetrical canopy weighted towards neighbours' gardens. Damaging fence.	Fell to ground level.	Low - 12 Months	Major Branches	Low Value Structures	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	N/A	21/01/2023
Tree	15	1309	Lombardy Poplar	80	22	3	Mature	Good	Good	Good	Tree has been topped previously with significant regrowth. Old points decaying.	Re pollard to previous points. Remove deadwood. Remove Epicormic growth up to 6m height. Prune clear of building by up to 3m	Low - 12 Months	Major Branches	High Value Buildings	Within 1x Height	Improbable	Medium	Low	Minor	Constant	Low	Moderate - 18 Months	21/01/2023

APPENDIX B – Site Map



Balmoral Gardens, Halewood, Tree Survey January 2023



Date Surveyed: 21/1/2023
 Surveyed by: R Rainford
 Map 1 of 1

APPENDIX C - Glossary of Arboricultural Terms

Absorptive roots	Non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients
Adaptive growth	In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. This helps to maintain a uniform distribution of mechanical stress.
Adaptive roots	The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading
Adventitious shoots	Shoots that develop other than from apical, axillary, or dormant buds; see also 'epicormic'
Anchorage	The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree
Architecture	In a tree, a term describing the pattern of branching of the crown or root system
Axil	The place where a bud is borne between a leaf and its parent shoot
Bacteria	Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms
Bark	A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex, and periderm; occasionally applied only to the periderm or the phellem
Basidiomycotina (Basidiomycetes)	One of the major taxonomic groups of fungi; their spores are borne on microscopic peg-like structures (basidia), which in many types are in turn borne on or within conspicuous fruit bodies, such as brackets or toadstools. Most of the principal decay fungi in standing trees are basidiomycetes
Bolling	A term sometimes used to describe pollard heads
Bottle-butt	A broadening of the stem base and buttresses of a tree, more than normal and sometimes denoting a growth response to weakening in that region, especially due to decay involving selective delignification
Bracing	The use of rods or cables to restrain the movement between parts of a tree
Branch:	- A first order branch arising from a stem. - A second order branch, subordinate to a primary branch or stem and bearing sub-lateral branches. - A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs
Branch bark ridge	The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem
Branch collar	A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base
Brown-rot	A type of wood decay in which cellulose is degraded, while lignin is only modified
Buckling	An irreversible deformation of a structure subjected to a bending load
Buttress zone	The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions
Cambium	Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally
Canker	A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria
Canopy species	Tree species that mature to form a closed woodland canopy
Cleaning out	The removal of dead, crossing, weak, and damaged branches, where this will not damage or spoil the overall appearance of the tree
Compartmentalization	The confinement of disease, decay or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defences operating at the boundaries of the affected region
Compression strength	The ability of a material or structure to resist failure when subjected to compressive loading; measurable in trees with special drilling devices
Compressive loading	Mechanical loading which exerts a positive pressure; the opposite to tensile loading
Condition	An indication of the physiological vitality of the tree. Where the term 'condition' is used in a report, it should not be taken as an indication of the stability of the tree
Construction exclusion zone	Area based on the Root Protection Area (in square metres) to be protected during development, by the use of barriers and/or ground protection
Crown/Canopy	The main foliage bearing section of the tree
Crown lifting	The removal of limbs and small branches to a specified height above ground level
Crown thinning	The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure
Crown reduction/shaping	A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape
Crown reduction/thinning	Reduction of the canopy volume by thinning to remove dominant branches whilst preserving, as far as possible the natural tree shape

Deadwood	Dead branch wood, Branch or stem wood bearing no live tissues.
Decurrent	In trees, a system of branching in which the crown is borne on several major widely spreading limbs of similar size (cf. excurrent)
Defect	In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment
Delamination	The separation of wood layers along their length, visible as longitudinal splitting
Dieback	The death of parts of a woody plant, starting at shoot-tips or root-tips
Disease	A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms
Distal	In the direction away from the main body of a tree or subject organism (cf. proximal)
Dominance	In trees, the tendency for a leading shoot to grow faster or more vigorously than the lateral shoots; also, the tendency of a tree to maintain a taller crown than its neighbours
Dormant bud	An axial bud which does not develop into a shoot until after the formation of two or more annual wood increments; many such buds persist through the life of a tree and develop only if stimulated to do so
Dysfunction	In woody tissues, the loss of physiological function, especially water conduction, in sapwood
DBH (Diameter at Breast Height)	Stem diameter measured at a height of 1.5 metres (UK) or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified
Endophytes	Micro-organisms which live inside plant tissues without causing overt disease, but in some cases capable of causing disease if the tissues become physiologically stressed, for example by lack of moisture
Epicormic shoot	A shoot having developed from a dormant or adventitious bud and not having developed from a first-year shoot
Excrescence	Any abnormal outgrowth on the surface of tree or other organism
Excurrent	In trees, a system of branching in which there is a well-defined central main stem, bearing branches which are limited in their length, diameter, and secondary branching (cf. decurrent)
Felling licence	In the UK, a permit to fell trees more than a stipulated number of stems or volume of timber
Flush-cut	A pruning cut which removes part of the branch bark ridge and or branch-collar
Girdling root	A root which circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue
Guying	A form of artificial support with cables for trees with a temporarily inadequate anchorage
Habit	The overall growth characteristics, shape of the tree and branch structure
Hazard beam	An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting
Heartwood/false-heartwood/ripewood	Sapwood that has become dysfunctional as part of the natural aging processes
Heave	A term mainly applicable to a shrinkable clay soil which expands due to re-wetting after the felling of a tree which was previously extracting moisture from the deeper layers; also, the lifting of pavements and other structures by root diameter expansion; also, the lifting of one side of a wind-rocked root-plate
High canopy tree species	Tree species having potential to contribute to the closed canopy of a mature woodland or forest
Incipient failure	In wood tissues, a mechanical failure which results only in deformation or cracking, and not in the fall or detachment of the affected part
Included bark (ingrown bark)	Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact
Increment borer	A hollow auger, which can be used for the extraction of wood cores for counting or measuring wood increments or for inspecting the condition of the wood
Infection	The establishment of a parasitic micro-organism in the tissues of a tree or other organism
Internode	The part of a stem between two nodes; not to be confused with a length of stem which bear nodes but no branches
Lever arm	A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch
Lignin	The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed Lignification
Lions tailing	A term applied to a branch of a tree that has few if any side-branches except at its end, and is thus liable to snap due to end loading
Loading	A mechanical term describing the force acting on a structure from a particular source, e.g. the weight of the structure itself or wind pressure
Longitudinal	Along the length (of a stem, root, or branch)
Lopping	A term often used to describe the removal of large branches from a tree, but also used to describe other forms of cutting
Mature Heights (approximate):	

	- Low maturing – less than 8 metres high - Moderately high maturing – 8 – 12 metres high - High maturing – greater than 12 metres high
Microdrill	An electronic rotating steel probe, which when inserted into woody tissue provides a measure of tissue density
Minor deadwood	Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree
Mulch	Material laid down over the rooting area of a tree or other plant to help conserve moisture; a mulch may consist of organic matter or a sheet of plastic or other artificial material
Mycelium	The body of a fungus, consisting of branched filaments (hyphae)
Occluding tissues	A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. wound wood)
Occlusion	The process whereby a wound is progressively closed by the formation of new wood and bark around it
Pathogen	A micro-organism which causes disease in another organism
Photosynthesis	The process whereby plants use light energy to split hydrogen from water molecules, and combine it with carbon dioxide to form the molecular building blocks for synthesizing carbohydrates and other biochemical products
Phytotoxic	Toxic to plants
Pollarding	The removal of the tree canopy, back to the stem or primary branches. Pollarding may involve the removal of the entire canopy in one operation or may be phased over several years. The period of safe retention of trees having been pollarded varies with species and individuals. It is usually necessary to re-pollard on a regular basis, annually in the case of some species.
Primary branch	A major branch, generally having a basal diameter greater than 0.25 x stem diameter
Primary root zone	The soil volume most likely to contain roots that are critical to the health and stability of the tree and normally defined by reference BS5837 (2005) Guide for Trees in Relation to Construction
Priority	Works may be prioritised, 1 = high, 5 = low
Probability	A statistical measure of the likelihood that a particular event might occur
Proximal	In the direction towards from the main body of a tree or other living organism (cf. distal)
Pruning	The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs
Radial	In the plane or direction of the radius of a circular object such as a tree stem
Rams-horn	In connection with wounds on trees, a roll of occluding tissues which has a spiral structure as seen in cross-section
Rays	Strips of radially elongated parenchyma cells within wood and bark. The functions of rays include food storage, radial translocation and contributing to the strength of wood
Reactive Growth/Reaction Wood	Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth)
Removal of dead wood	Unless otherwise specified, this refers to the removal of all accessible dead, dying and diseased branch wood and broken snags
Removal of major dead wood	The removal of, dead, dying and diseased branch wood above a specified size
Respacing	Selective removal of trees from a group or woodland to provide space and resources for the development of retained trees
Residual wall	The wall of non-decayed wood remaining following decay of internal stem, branch, or root tissues
Root-collar	The transitional area between the stem/s and roots
Root-collar examination	Excavation of surfacing and soils around the root-collar to assess the structural integrity of roots and/or stem
Root protection area	An area of ground surrounding a tree that contains sufficient rooting volume to ensure the tree's survival. Calculated with reference to Table 2 of BS5837 (2005) and shown in plan form in square metres
Root zone	Area of soils containing absorptive roots of the tree/s described. The Primary root zone is that which we consider of primary importance to the physiological well-being of the tree
Sapwood	Living xylem tissues
Secondary branch	A branch, generally having a basal diameter of less than 0.25 x stem diameter
Selective delignification	A kind of wood decay (white rot) in which lignin is degraded faster than cellulose
Shedding	In woody plants, the normal abscission, rotting off or sloughing of leaves, floral parts, twigs, fine roots, and bark scales
Silvicultural thinning	Removal of selected trees to favour the development of retained specimens to achieve a management objective

Simultaneous white rot	A kind of wood decay in which lignin and cellulose are degraded at about the same rate
Snag	In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point
Soft rot	A kind of wood decay in which a fungus degrades cellulose within the cell walls, without any general degradation of the wall as a whole
Spores	Propagules of fungi and many other life-forms; most spores are microscopic and dispersed in air or water
Shrub species	Woody perennial species forming the lowest level of woody plants in a woodland and not normally considered to be trees
Sporophore	The spore bearing structure of fungi
Sprouts	Adventitious shoot growth erupting from beneath the bark
Stem/s	The main supporting structure/s, from ground level up to the first major division into branches
Stress	In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition, or extremes of temperature
Stress	In mechanics, the application of a force to an object
Stringy white rot	The kind of wood decay produced by selective delignification
Storm	A layer of tissue which supports the fruit bodies of some types of fungi, mainly ascomycetes
Structural roots	Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree
Subsidence	In relation to soil or structures resting in or on soil, a sinking due to shrinkage when certain types of clay soil dry out, sometimes due to extraction of moisture by tree roots
Subsidence	In relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight
SULE	SULE 'Safe Useful Life Expectancy' is the length of time that the arboriculturist assesses an individual tree can be retained with an acceptable level of risk, based on the information available at the time of inspection. It is a snapshot in time of the potential an individual tree has for survival in the eyes of the assessor. It is closely related to tree health and the surrounding conditions. Consequently, the reliability [of] all SULE assessments will decrease as time passes from the initial assessment and the potential for changes in variables increases.
Taper	In stems and branches, the degree of change in girth along a given length
Target canker	A kind of perennial canker, containing concentric rings of dead occluding tissues
Targets	In tree risk assessment (with slight misuse of normal meaning) persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it
Topping	In arboriculture, the removal of the crown of a tree, or of a major proportion of it
Torsional stress	Mechanical stress applied by a twisting force
Translocation	In plant physiology, the movement of water and dissolved materials through the body of the plant
Transpiration	The evaporation of moisture from the surface of a plant, especially via the stomata of leaves; it exerts a suction which draws water up from the roots and through the intervening xylem cells
Understorey	A layer of vegetation beneath the main canopy of woodland or forest or plants forming this
Understorey tree species	Tree species not having potential to attain a size at which they can contribute to the closed high canopy of a woodland
Vascular wilt	A type of plant disease in which water-conducting cells become dysfunctional
Vessels	Water-conducting cells in plants, usually wide and long for hydraulic efficiency; generally, not present in coniferous trees
Veteran tree	A loosely defined term for an old specimen that is of interest biologically, culturally, or aesthetically because of its age, size, or condition and which has usually lived longer than the typical upper age range for the species concerned
White rot	A range of kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded
Wind exposure	The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity
Wind pressure	The force exerted by a wind on a particular object
Windthrow	The blowing over of a tree at its roots
Wound dressing	A general term for sealants and other materials used to cover wounds in the hope of protecting them against desiccation and infection; only of proven value against fresh wound parasites
Wound wood	Wood with atypical anatomical features, formed in the vicinity of a wound

APPENDIX D - Tree Conditions and Age Class Definitions Key

Overall Condition

Good – Minor Defects with good vitality, no structural defects

Fair – Significant rectifiable defects and/or limited crown signs. Limited vigour/vitality.

Poor – Serious structural defects and/or abnormal crown signs e.g., dieback/chlorosis

Structural Condition:

Good – Good Structure with minor rectifiable defects

Fair – Manageable defects but not structurally compromised.

Poor – Contains defects which undermine stability or the structural integrity of the tree.

Physiological Condition:

Good – Full tree with full well-formed crown

Fair – Suppression/minor restrictions

Poor – Heavily suppressed and/or defects clearly visible.

Age Class

NE – Newly Established – Small young tree, new generation of growth, easily replaced by nursery stock if necessary.

Y – Young – Young and established within 1/3rd of ultimate age/height potential. High Vigour.

SM – Semi Mature – A well established and maturing tree with high vigour, within 1/3rd and 2/3rd of its ultimate age/height.

M – Mature – Trees in the final 1/3rd of its ultimate age/height, fully grown tree, moderate vigour.

OM – Over Mature – Fully mature tree which may show decreased vigour and reduced annual extension growth, some decline may be present.

V – Veteran – A tree which has high ecological, arboricultural, biological, and aesthetic value due to its age. Low vigour.

Work Priority

1. **Urgent** – Immediately (that day) to make a tree safe or guard site

2. **Very High** – Within 7 days

3. **High** – Within 30 days

4. **Moderate** - within 90 days

5. **Low** – Works of the lowest priority, could be carried out if budget allows

6. **None** – No works required or target non-existent/excluded

Inspection Frequency

1. **Urgent** – Carried out ASAP, e.g., detailed/further inspection of aerial parts and/or use of decay detection equipment

2. **Very High** – 6 Months

3. **High** – 12 Months

4. **Moderate** – 18 Month

5. **Low** – 3 Years

APPENDIX E - Report Caveats

Full Legal Disclaimer

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Specific - Trees

All tree inspections, unless specified, have been undertaken from ground level and using non-invasive techniques. Comments contained within the report on the condition and risk associated with any tree relate to the condition of the tree at the date and time of survey. Please note that the condition of trees is subject to change. This change may occur but is not limited to biological and non-biological factors as well as mechanical/ physical changes to conditions in the proximity of the tree. Any freak weather events may cause physical changes to the structure of the trees beyond expectation or reasonable foreseeability, to which this report cannot be held to account. Trees should be inspected at intervals relative to identified site risks and in accordance with relevant HSE and Central Government guidance. Rainfords Tree Care can provide further information on this matter if required.

Please note no statutory control checks have been undertaken (unless specified). Where tree surgery works have been identified these works assume that planning is approved, no tree works should be undertaken prior to determination of this application without up-to-date confirmation of the Tree Preservation Order / Conservation Area Status of the vegetation.

All works should be undertaken in accordance with the appropriate Duty of Care. This should include, for example, site specific risk assessments and due diligence inspections for the presence of protected species.

Any comment relating to 3rd party trees has been made without full access to the tree(s). Should these trees have any impact on the proposed development we would advise you to instruct us to contact the 3rd party and undertake further inspection work.