

367 VALID TREE RISK-BENEFIT ASSESSMENT

SPRINGWOOD ESTATE HOLIDAY PARK

For

COVE COMMUNITIES UK



Prepared by

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SPRINGWOOD ESTATE HOLIDAY PARK

Tree Risk Benefit Assessment

Assessment Limitations: Unless otherwise stated all trees are assessed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the above project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy covered or in areas of overgrown vegetation, cannot therefore be expected. All obvious and identifiable defects are detailed in this report. Climbed tree safety appraisals are only carried out under specific written instructions.

Comments on evident tree safety relate to the condition of the identified trees at the time of the assessment only. Unless otherwise stated all trees should be re-inspected annually in order to re-appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regards tree structural integrity and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potentially unacceptable risk to persons and/or property has been identified during our assessment or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects on third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant authority.

Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Assessment Schedule. Where tree stem locations are not included on the plan(s) provided then they are plotted at the time of the assessment using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination.

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The author: The author is a Chartered Landscape Architect, Chartered Environmentalist, Chartered Horticulturist, Fellow of the Institute of Horticulture and Fellow member of the Arboricultural Association. He has extensive experience of working with and alongside local authority Planning Development Departments, preparing a range of large-scale landscape projects, often constructed adjacent woodlands and/or part of former country estates. Work of this nature requires a working knowledge of relevant planning legislation, experience of preserving trees on development sites through BS5837:2012 Trees in Relation to Design, demolition and construction – Recommendations. He holds qualifications in Arboriculture, Professional Tree Inspection and VALID validation. Beyond Landscape architecture, the author is qualified in the preparation and management of ISO45001:2018 Occupational Health and Safety Management systems, where he is involved in assessment of hazard and risk, legislative requirements and internal audit to assess the ongoing efficacy of a Management System, including the integration of ISO9001:2015 Quality Management & ISO14001:2014 Environmental Management Systems.

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1. Introduction

The brief of this VALID Tree assessment is to meet the requirements of Cove Communities UK¹ to assist in identifying potential risk to property road users and pedestrians, from tree failure in whole or in part. This assessment and report will satisfy their legal responsibility². The assessment is carried out within and adjacent the environs of Springwood Estate Holiday Park TD5 8LS. Grid Ref NT 71542 33352. This assessment and report investigates the health and condition of the trees within and adjacent the ownership boundaries. The trees identified in the report are considered a risk and will require either removal or structural arboricultural works to reduce or remove the risk perceived. These trees are identified within the tree schedule (Appendix A). The trees are categorised in accordance with BS5837:2012³ (Appendix B) to give context to their arboricultural value and life expectancy.

This report has been compiled in conjunction with the methods and procedures contained within the Arboricultural Association document, Guide to Tree Assessment and Inspection⁴, commensurate with the VTA (Visual Tree Assessment)⁵, and with The Principles of Tree Hazard Assessment and Management⁶.

Where trees are considered to have a specific risk following the above VTA inspection, a VALID Tree risk benefit assessment⁷ has been carried out, to quantify the risk based on occupancy of an area, consequence of a tree failing and the likelihood of a failure of a tree in whole or part.

With reference to the identification and naming of the species herein, the Illustrated Trees of Britain and Europe has been used to confirm assessment species recorded⁸.

With reference to the identification of Fungi species herein, the Manual of Wood Decays in Trees has been used to confirm species recorded.⁹

With reference to the identification of bacterial disease species herein, Trees Diseases and Disorders has been used to confirm species recorded.¹⁰

The assessment consists of an assessment of 38 individual trees and 1 group of 12 Ash (outwith the assessment area), age range 40 - 188 (estimated) years. Each tree of concern has been individually identified with an Arbotag or identified as NT (No Tag) and shown on the Google Map link (page 9). These trees consist of the following species:

¹<https://cove.co.uk/>

² https://www.hse.gov.uk/foi/internalops/sims/ag_food/010705.htm - Management of the risk from falling trees and branches.

³ BS5837:2012 Trees in Relations to design, demolition and construction. Recommendations

⁴Fay, N, Dowson, D, Helliwell, R. Tree Survey & Inspection. Arboricultural Association. Romsey. 2005.

⁵ Matheck, C. Guide to Visual Tree Inspection, Arboricultural Association. Romsey 1994

⁶Lonsdale, D. Principles of Hazard Assessment & Management. The Stationary Office. London 2001

⁷ <https://www.validtreerisk.com/tree-risk-management-strategy-policy-&-plan>

⁸ More, D; White, J. (2013) Illustrated Trees of Britain and Europe. London. Bloomsbury

⁹ Matheck.C & Weber.K. Manual of Wood Decay in Trees. Arboricultural Association Stroud.2003

¹⁰ Butin.H. Tree Diseases & Disorders. Oxford University Press. Braunschweig. 1995

The Tree Genus and Species are shown in ***bold italics***, where the numbers requiring immediate attention are in brackets after the trees common name.

No	Genus/ species	Common name	Retain			Remove					Total No remove/ ST	
			A	B	C	A	B	C	U	D	No	%
2	<i>Abies procera</i>	Nobel Fir	0	0	0	0	0	0	2	0	2	
7	<i>Acer pseudoplatanus</i>	Sycamore	0	1	5	0	0	0	1	0	1	
1	<i>Catanea sativa</i>	Sweet Chesnut	0	0	1	0	0	0	0	0	0	
1	<i>Dead (unknown)</i>	Dead	0	0	0	0	0	0	0	1	1	
3	<i>Fagus sylvatica</i>	Beech	1	1	1	0	0	0	0	0	0	
1	<i>Fagus sylvatica Purpurea</i>	Purple Beech	0	0	1	0	0	0	0	0	0	
9	<i>Fraxinus excelsior</i>	Ash	0	0	2	0	0	0	7	0	7	
12	<i>Fraxinus excelsior (Group)(outwith area)</i>	Ash	0	0	0	0	0	0	12	0	12	
1	<i>Larix decidua</i>	Larch	0	0	0	0	0	0	1	0	1	
1	<i>Picea abies</i>	Norway Spruce	0	0	0	0	0	0	1	0	1	
4	<i>Prunus avium</i>	Cherry	0	0	1	0	0	0	3	0	3	
1	<i>Quercus petraea</i>	Black Pine	1	0	0	0	0	0	0	0	0	
4	<i>Quercus robur</i>	English Oak	1	2	1	0	0	0	0	0	0	
1	<i>Sorbus intermedia</i>	Swedish Whitebeam	0	0	0	0	0	0	1	0	1	
1	<i>Sorbus aria</i>	Whitebeam	0	0	0	0	0	0	1	0	1	
1	<i>Ulmus glabra</i>	Wych Elm	0	0	0	0	0	0	0	1	1	

2. Executive summary

The assessment consisted of an assessment of the trees within the environs of Springwood Estate Holiday park. The trees in the main are mature and Veteran trees. These trees are in the main performing well, though some are posing a risk, due to Ash Die Back, structural defects and Summer Branch Drop¹¹.

The report explains the phenomenon of Summer Branch Drop and the long term effects of Ash Die Back on the structural integrity of an Ash tree.

There are 3 high risk trees requiring removal (1621,1619, NT01) and 9 priority risk trees requiring crown reduction and crown thinning to reduce overhanging weight and sail (canopy density). This will reduce the risk to an acceptable level.

Trees are Arbo tagged¹² 1614 – 1643 & NT01 – 09 (No Tag as trees were inaccessible).

A Google link is added on page 9 to show the location and risk value of each tree in the tree schedule. The red x and red skull and cross bones icons refer to the priority trees.

There are 25 trees requiring trees works and removal that are covered under Tree Preservation Order (TPO). A Planning application is required to carry out this works with a notice of six weeks.

¹¹ <https://www.validtreerisk.com/tree-risk-management-&-tree-risk-assessment-news/10738465>

3. Scope of the VALID Assessment

The scope of the VALID Assessment was to gather information on, tree genus and species, health condition in relation to visible defects and the perceived potential for failure at the time of assessment within the environs of Springwood Estate Holiday Park. The Trees considered to pose a risk have been identified with a recommendation for necessary arboricultural works. These recommendations are identified in the tree assessment schedule (Appendix A). The extent of the recommended works will be to reduce the likelihood and consequence of the trees considered to be a risk now and in the near future. These works include, removal, structural repairs, crown reduction, crown thinning and removal of dead wood. This will ensure these trees are free from obvious defects identified.

All trees have been categorised to BS5837:2012 (Appendix B) to give context to each tree in the landscape to identify the arboricultural value and life expectancy at time of assessment.

The VALID Tree Risk Benefit Assessment provides a level of due diligence in respect of the legal implications of **The Roads (Scotland) Act 1984**, **The Occupiers Liability (Scotland) Act 1960** and **The Health & Safety at Work Act 1974 - Section 3**, and offers safe guards to Owners of Springwood Estate Holiday Park.

With the legal backdrop above, The National Tree safety Group¹³, have stated:

“trees present a very low risk to people, owners and managers should be able to make decisions within this context and avoid unnecessary intervention, assessment and cost. In so doing they can reduce unacceptable risks whilst optimising the many values conferred by trees. Good tree safety management does not seek to eliminate risk, but to reduce it to a reasonable level. In some situations people exposed to risks from trees are expected to make reasonable decisions about their own interaction with trees, particularly during extreme weather”.

whilst the Health & Safety Executive have stated:

“It is reasonable that decisions regarding tree safety are considered against a background of the general low risk from falling trees. Being reasonable involves taking actions proportionate to the risk”¹⁴.

This Tree Risk Benefit Assessments seeks to identify any risk associated with the trees assessed. Figure 1 shows the assessment area inside the red dashed line.

All works identified as a result of the assessment should be carried out in conjunction with BS3998:2010 Tree Work - Recommendations and carried out by an reputable and experienced contractor.

¹³ <http://ntsgroup.org.uk/>

¹⁴HSE (Health & Safety Executive) (2007). Management of risk from falling trees of branches – SIM 01/2007/05



Figure 1 Assessment area (Red dashed line)(TLC OS Licence 100057899).

3.1 VALID

The VALID Tree Risk Benefit Assessment determines the level of risk from tree failure or tree parts within the wider structure of a Tree Risk-Benefit Management Plan. This is illustrated in the flowchart (Figure 2). Everything follows from this methodology for risk assessment. This sets out the position on trees within the assessment areas, to put into context their benefits, and the risks.

In brief the report outlines the efficacy of VALID;

- Trees give us many benefits that we need;
- The overall risk from trees and branches falling is extremely low;
- We can't entirely remove the risk, and trees are living structures that sometimes shed branches or fall over; usually because of severe weather;
- We have a duty of care to be reasonable, proportionate, and reasonably practicable when managing the risk;
- The report assists in managing the risk to an Acceptable or Tolerable level

The report advocates VALID to manage the risk by Passive Assessment in all zones of use. And by Active Assessment in zones of high confluence (high-use and large trees).

The assessment involved as passive assessment of all trees, where an active assessment was carried out for trees within zones of high confluence.

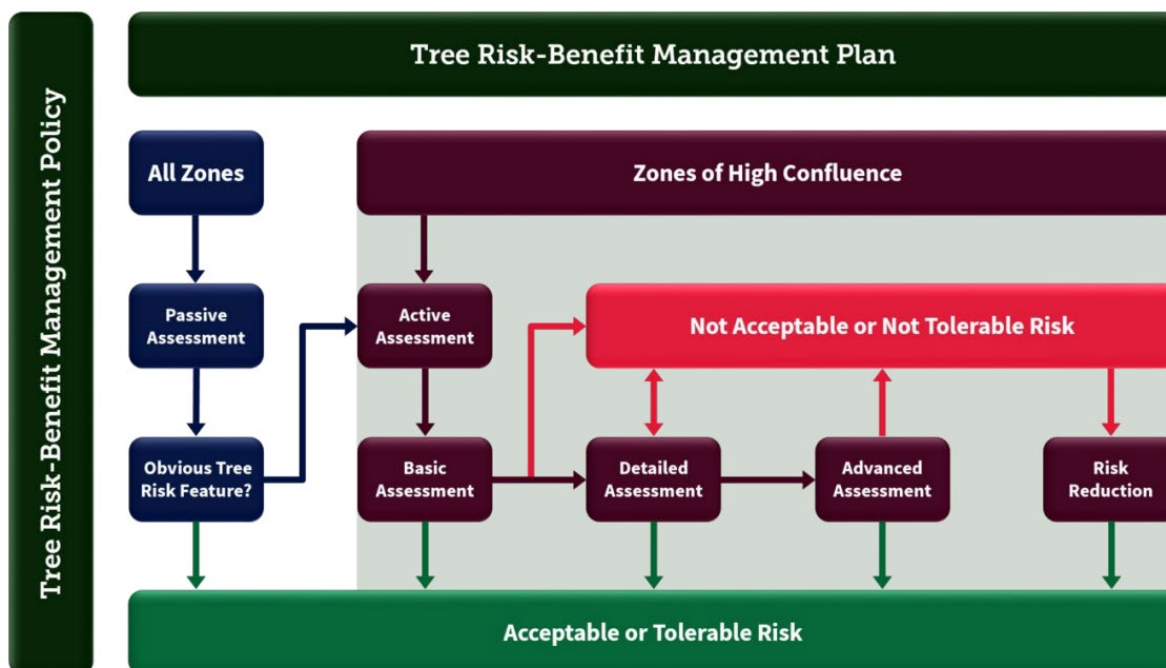


Figure 2 VALID Structure

4. Limitations

The data collected using the Trimble TDC 600, using Korec K-MobileX software¹⁵. The Trimble TDC 600 accuracy can vary from 0.6m to 1m depending on satellite availability. In many cases the tree positions were aligned with the OS background mapping on the device.

¹⁵ <https://www.korecgroup.com/>

5. Methodology

The tree assessment was carried out on 8 & 9 August 2022. Each tree was assessed visually for outward signs of stress, poor development, structural defects, hung up limbs and presence of fungal fruiting bodies that may indicate a potential for a tree to fail or present an internal structural hazard¹⁶. Each tree was sounded using a rubber mallet (where possible) to ascertain the presence of cavities and potential structural weaknesses. All tree assessment information was gathered using a GIS Trimble TDC 600 with KorecX data capture software. Where considered appropriate, tree height was measured using an TruPulse 200 Laser Inclinometer. Girth measuring is estimated to give context to age and tree size.

The defects identified at the time of the assessment are listed in the tree assessment schedule (Appendix A), along with the existing level of perceived risk based the likelihood and consequence of a tree or part of a tree failing, along with a priority work scale.

The findings of the assessment will strike a balance between the risks and the benefits associated with the trees. This balance is based on a risk assessment involving a risk-benefit trade-off between safety and preservation of the many magnificent historic trees on Springwood Estate Holiday park. The schedule shows the scoring of likelihood and consequence for each tree, to ensure a pragmatic decision has be recorded.

The NTSG¹⁷ argues for the presumption that, the contribution made by trees generally to a social and environmental value and the importance to human health and well-being wherever possible, trees should not be unnecessarily felled. It is furthermore considered a reasonable policy to articulate the benefits of trees, as much as it is in protecting the policy-maker against litigation following an incident as any reasonable risk management policy would achieve in a workplace setting.

¹⁶ Fungal bodies are mainly found in the Autumn, though older bracket fungi may persist.

¹⁷ [https://www.forestry.gov.uk/pdf/POSITIONSTATEMENT.pdf/\\$FILE/POSITIONSTATEMENT.pdf](https://www.forestry.gov.uk/pdf/POSITIONSTATEMENT.pdf/$FILE/POSITIONSTATEMENT.pdf)

6. Tree Risk-Benefit Assessment

The assessment was carried out within environs of Springwood Estate Holiday Park (Figure 1). The assessment areas were walked, and every tree examined for structural defects, pests, diseases and fungal fruiting bodies and potential for risk. Trees considered a risk were scored to assess the potential to cause harm using the VALID assessment system.

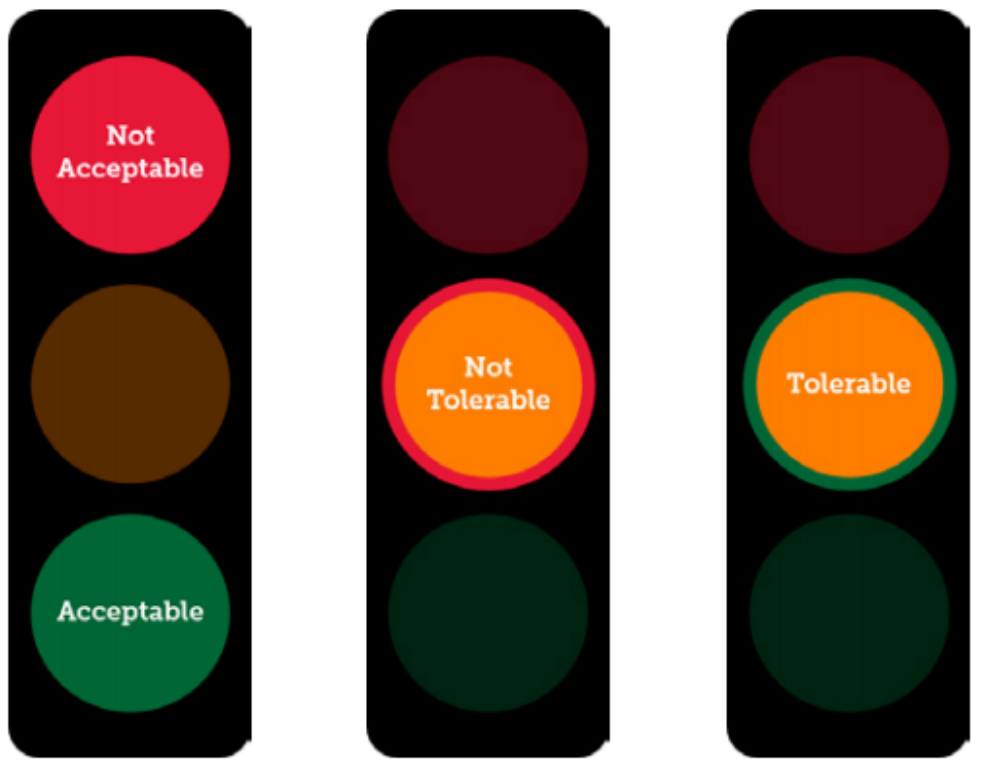


Figure 3 VALID System

The trees identified in the schedule all require some level of works to reduce the the risk of injury and/ or damage from falling dead branches and hung up limbs or tree collapse. Many trees visually assessed are not included within this report, as there were no obvious defects to report on.

The link below is to the assessment map (Appendix C).

<https://www.google.com/maps/d/edit?mid=1hvuARw6y068Tjz0Sryz1LwmS4Vm3ir4&usp=sharing>

The trees contained herein in the main are considered either to be a risk or to give comfort to the owner on the condition of trees that could become a risk in the future. The perceived levels of risk identified, does not mean such trees require removal unless specified, but a specified range of works will reduce the risk value to a lower perceived acceptable risk level.

6.1 Decay Fungi and Diseases

Priority 1 works have been identified in 12 trees. Fungal infection will have contributed to each trees condition. However, no fungal fruiting bodies were found.

The fungal fruiting bodies affect the structural integrity of a tree. Depending on the attacking fungal infection, the feeding fungi will either create a Brown rot (breaking down of cellulose) or a White rot (breaking down of lignin). The following disease were found. Each fungal/ Disease species is described to advise on the decay/ infection type and likely failing mechanism. Common name in brackets:

Name:	<i>Hymenoscyphus fraxinae</i> (Ash Die Back)
Mode of Life	On living and dead trees (parasitic & saprobic)
Type of Rot	Rot caused by seceonary pathogen infection. Ash Die Back affects the vascular system to eventually kill the tree predisposing the tree to fungal attack.
Rot site	Associated with secondary root fungi
Hosts	<i>Fraxinus</i> spp (Ash)
Symptoms	Dark patches develop on leaves in the summer. The leaves then wilt to black and may shed early. Small lesions on the bark, underneath the bark lesions the wood will have turned a brownish-grey colour. In late summer and early autumn tiny fungi will be found on the leaf stalks in damp areas. New growth from previously dormant buds further down the trunk. This is known as epicormic growth and is a common response to stress in trees.
Wood alteration	Roots decay, wood embrittlement
Consequence	Brittle fracture and root failure
Found on	All Ash trees
Significance to assessment	Roadside trees throughout the Estate boundary

6.2 Ash Die Back

Ash trees across Scotland are showing clear signs of ash dieback (*Hymenoscyphus fraxineus*), and it is expected that at least 50%-75% of the country's 11 million mature ash trees will die over the next two decades. However, trees with slight to moderate symptoms can survive for many years, underlining the need to monitor the health of ash trees and to focus action on those trees showing significant health issues in higher risk areas. Currently there is no known efficient prevention or curative treatment.

Land owners and managers need to identify their ash tree populations, assess their condition, monitor for any change over time, and take action, including recovery measures such as compensatory tree planting.

Land owners and managers have an overarching duty to comply with the law and should be acting now in their preparation to deal with the likely risks from ash dieback, particularly those associated with public safety. The initial focus should be on ash trees growing within 'high risk' locations, such as those adjacent to roads, service network infrastructure, buildings, and areas or routes frequently used by the public. The Ash Die Back Tool Kit is available at the link below.

[Tree-Council-Scotland-ADB-Toolkit-DIGITAL-280x210-March-21-2022.pdf](https://www.treecouncil.org.uk/Tree-Council-Scotland-ADB-Toolkit-DIGITAL-280x210-March-21-2022.pdf)
([treecouncil.org.uk](https://www.treecouncil.org.uk))

6.3 Summer Branch Drop

Summer branch drop is the unexpected falling of horizontal branches from an otherwise healthy tree. Also known as sudden limb drop, this occurrence normally strikes tree owners off guard, as the trees that suffer this fate usually don't show any signs beforehand. This issue can happen to any kind of tree but is more common in older trees as well as Oak, Beech, and Elm, often associated with prolonged periods of drought¹⁸. A fact sheet has been included on SBD (Appendix D).

¹⁸ <https://www.validtreerisk.com/tree-risk-management-&-tree-risk-assessment-news/10738465>

6.4 Tree Benefits

The large mature trees make the landscape character of Springwood Estate Holiday Park the attractive destination that it is. They provide a magnificent backdrop and provide a rich heritage and valuable habitat. All trees provide various benefits across and throughout every site. These benefits are:

- Combat climate change;
- Clean and filtrate particulate pollution for the air;
- Provide Oxygen – trees are the lungs of the World;
- Cooling the air and providing comfortable environments;
- Conserve energy through reducing energy needs ie less need for air conditioning or heating.
- Reduce transpiration thus saving water;
- Prevent water pollution through root uptake and slowing flow during inundation;
- Prevent soil erosion;
- Shield people from harmful Ultra-violet rays;
- Claming and healing effects of the trees, improving health and reducing violence;
- Habitat for wildlife supporting local and regional ecosystems;
- Provide a beautiful backdrop to Springwood Estate Holiday Park.

There are much more which can be found with more information at the Tree people¹⁹

¹⁹ <https://www.treepeople.org/22-benefits-of-trees/>

7. Designations

There are areas within Springwood Estate Holiday Park that are protected under a Tree Preservation Order (TPO). A TPO is made by the Local Authority, under Section 160 of the Town and Country Planning (Scotland) Act 1997, and within the procedures set out in the Town and Country Planning (Tree Preservation Order and Trees in Conservation Areas) (Scotland) Regulations 2010. Six week notice is required to the local planning authority to advise of any intent to carry out trees works and or remove a tree. Scottish Borders Council guidance can be found online in the reference below²⁰. Figure 4 shows the TPO areas in brown shading, and orange dot make trees under TPO protection.



Figure 4 TPO areas

Trees within TPO designations are exempt for submitting 6 weeks notice, where Planning Circular 1 2011²¹ – Section 74, where the cutting down, topping, lopping or uprooting of a tree if: it is urgently necessary in the interests of safety.”

²⁰ https://www.scotborders.gov.uk/info/20013/environment/601/protected_trees_and_tree_preservation_orders

²¹ <https://www.gov.scot/publications/scottish-planning-series-planning-circular-1-2011-tree-preservation-orders/pages/5/>

8. Recommendations

The tree schedule sets out the framework for remedial tree works which may generate a significant amount of timber. A Felling Licence may be required as the Forestry Commissions parameters of 5m³ of timber per quarter shall be exceeded. There will be seasonal restrictions on all tree work to comply with the Wildlife & Countryside Act 1981 to protect nesting birds between 1 March and 31 August. A Bat assessment may be required prior to tree works being carried out within the larger mature species where cavities have been identified. Bats are protected through Conservation (Natural Habitats, &c.) Regulations 1994.

All structural arboricultural works specified within the tree schedule (Appendix A) will reduce the existing perceived risk to reduce the likelihood and consequence as a result when carried out. Tree removal will remove the risk, where formative works are not an option. (The risks identified refers to the risk associated with each tree at the time of assessment). A list has been included to explain the Arboricultural terminology used (Appendix E).

The management of Ash trees throughout the Springwood Estate Holiday Park is recommended for the benefit of the long term management of the tree cover, where large amounts of Ash will die and will need replaced, notwithstanding associated risk issues of large dead dying and decaying trees falling.

Consideration should be given to where Ash trees have to be removed to replace with more suitable species.

Some trees assessed are outwith the boundary as they are considered a risk to the users and staff of Springwood Estate Holiday Park.

A Planning application is required to advise the local authority of the necessary tree works required to be carried out.

TLC Environmental Limited



Keith Vernon *MLA DHE DMS Cert Arb(RFS) FCIHort ISAMembProf F Arbor A CHort CEnv CMLI*

Appendix A

367 Tree Assessment Schedule

VALID KEY	O=Occupancy	1-2 low	3-4 Med	5 High	Value
	F=Failure	1-2 low	3-4 Med	5 High	Value
	R=Risk	Occupancy x Failure			Formula
	Tolerance	Acceptable	Tolerable	Not tolerable/ acceptable	Formula

PROJECT LOCATION	VALID TREE RISK BENEFIT ASSESSMENT
ADDRESS 1	SPRINGWOOD ESTATE HOLIDAY PARK
ADDRESS 2	KELSO
ADDRESS 3	TD5 8LS
CLIENT	COVE COMMUNITIES UK
JOB NO	367
DRAWING	367-TLC-EX-00-DR(L)92-1001 -S2
STATUS	S2 - INFORMATION
SURVEYED BY/	KEITH VERNON - 08-09/08 2022

TLCMS: FM_6.1.4_023F_V1-I1

Issue: 04/04/2020
Review: 04/04/2021
Ref: 367_8.1 Survey

Legend: Age Class: YT=Young Tree; SM=Semi Mature; M=Mature; FM- Fully Mature; OM=Over mature; BS5837 Category: A=High Value; B=Moderate value; C=Low Value; U=Unsuitable/ No Value; NOD=no obvious defects; **Works:** NW=No work; DW=Dead wood; CC=Crown Clean; CL=Crown Lift; CR=Crown Reduce; CT=Crown Thin; SR=Structural Repairs; SD=Storm damage; HB=Hazard Beam; R=Remove Tree; RFD=Remove Tree For Development; ST=Standing timber @ ?m; P=pollard; RE=Remove epicormic growth; RI remove ivy; RS=remove suckers; RH=Remover hangers; FIR=Further Inspection Required; Mo=Monitor as indicated; BIR=Bat inspection required; RP=Root protect; IC=Inspect cavity; Risk A=A Acceptable; NT=Not Tolerable (VALID); ADB=Ash Die Back; Life expectancy based following works carried out; FD=Faciliate development; Status IC-Increased Risk; RR=Reassessed Risk; NC=No Change; CW=Condition Worse; HI=Height increase; GI=Girth increase; VMAN=Veteran manage;

Tree identity	Tree Tag, name and number			Location		Tree vitality & condition			Tree dimensions						Tree categories & age				VALID Before works				Priority works & Protection									
	Genus/ Species	Common name	No	X	Y	Root plate zone condition/ comments	Tree description/ comments	Vitality	Structural issues	NESW	Crown radi (m)	D1@ 1.3m(mm)	D2@ 1.3m(cm)	D3@ 1.3m(cm)	D4@ 1.3m(cm)	D5@ 1.3m(cm)	Height (m)	Clear stem (m)	Age Class	Age (est)	BS5837 Cat	Life expectancy (yrs)	O	F	R	T	Priority works	Bat Survey	TPO/ Con	Recommended works - BS3998:2010	RPA(D1-5) (mm) x 12	Inspect Frequency (month)
1614	Quercus robur	English Oak	1	371774.921	633415.184	lawn road	large mature broad spreading semi dense canopy epi throughout DW multi stem SBD	fair	nod	0	0	0	0	600			24	0	M	75	A	<40	2	2	4	8				DW; CR2m		18
1615	Quercus petraea	Sessile Oak	1	371774.891	633395.948	lawn	large mature broad spreading dense canopy epi throughout dense inner canopy DW SBD	good	nod	0	0	0	0	900			24	0	M	113	A	<40	2	2	4	8				DW; CR2m		18
1616	Quercus robur	English Oak	1	371835.14	633385.298	road	large broad spreading semi dense canopy DW throughout hangers SBD multiple wound cavities high target	fair	multiple	0	0	0	0	1000			24	0	OM	126	B	<20	3	4	12	19	v	v		DW; RH; CR2m; tidy		18
1617	Fagus sylvatica	Beech	1	371863.815	633426.222	banking	large twin stem mature broad spreading canopy dense large amounts if DW rabbit burrows at base SBD an issue	good	twin stem to left poor	0	0	0	0	1200			25	0	M	151	C	<10	2	2	4	8			v	DW; CR2m;		18
1618	Quercus robur	English Oak	1	371826.712	633438.797	lawn	straight stem dense narrow to spreading canopy epi throughout broad overhand over caravan high target dead tips decline fir	fair	SBD and cavity	0	0	0	0	800			24	0	M	100	C	<10	3	4	12	19	v	v	v	SR upper limb; CR50%; CR3m TREE; DW		18
1619	Acer pseudoplatanus	Sycamore	1	371628.4	633478.221	rg og	poor condition large section of lower basal stem missing large open wound result of a failed inclusion stem to west may fail large upper stem large sail lever arm	fair	multiple	0	0	0	0	1000			26	0	OM	126	U	0	4	3	12	19	v	v	v	R		
1620	Acer pseudoplatanus	Sycamore	1	371606.413	633439.113	road	leaning east twisting stem thinning canopy spindle limb over road twin stem included no cavity	poor fair	lean weak overhanging limb	0	0	0	0	700			30	0	M	88	C	<10	2	2	4	8			v	SR overhang limb		18
1621	Abies procera	Nobel Fir	1	371545.323	633391.06	lawn	poor decayed buttresses to west slim flux to cavity wound tree leaning east high sail falling away from caravans and road	poor	cavity	0	0	0	0	700			28	0	OM	88	U	0	4	3	12	19	v	v	v	R		
1622	Prunus avium	Cherry		371419.261	633400.547		1622 cherry poor in decline no r														U		2	2	4	8				R		
1623	Fagus sylvatica Pupurea	Purple Beech	1	371332.99	633188.034	woodland	large mature beech one-sided canopy cavity to east wound healing open decay mutuple DW and hangers dead tips in decline	goog	cavity	0	0	0	0	1000			25	0	M	126	C	<10	3	4	12	19	v	v	v	DW; CR2m; RH; MO		18
1624	Fagus sylvatica	Beech	1	371323.819	633152.831	woodland	leaning east dense broad canopy some DW and inner decline twin lower stem	fair	lean	8	9	7	5	760			24	0	M	95	B	<20	2	3	6	11	v		v	DW	9120	18
1625	Acer pseudoplatanus	Sycamore	1	371319.731	633133.455	woodland	three stems ave con broad canopy	fair	nod	5	5	4	5	350			18	0	EM	44	C	<10	1	2	2	5			v	NW	4200	18
1626	Acer pseudoplatanus	Sycamore	1	371309.113	633122.525	woodland	leaning east one-sided canopy dense multi branched	fair	lean	7	6	6	5	850			20	0	M	107	B	<20	2	2	4	8			v	NW	10200	18
1627	Larix decidua	Larch		371334.177	633173.631		1627 larch poor split upper stem R														U		2	2	4	8			v	R		
1628	Fraxinus excelsior	Ash	1	371341.092	633148.525	grass	poor ADB twin stem poor union	poor	adb	5	6	4	4	350			12	0	EM	44	U	0	2	2	4	8				R	4200	
1629	Fraxinus excelsior	Ash		371360.429	633143.297		1629 ash poor r														U		2	2	4	8				R		
1630	Fraxinus excelsior	Ash		371407.66	633127.535		1630 ash adb st5m														U		2	2	4	8				R		
1631	Fraxinus excelsior	Ash		371441.76	633121.45		1631 ash adb r														U		2	2	4	8				R		
1632	Fraxinus excelsior	Ash	1	371545.906	633161.782	woodland	large mature ash signs of adb DW throughout leaning east included stems growing through neighbouring tree	good	lean inclusion adb	0	0	0	0	800	900		25	0	M	151	C	<10	3	3	9	15	v	v	v	CR3m; CT30%; DW		18
1633	Prunus avium	Cherry	1	371481.776	633227.83	over grown	1633 cherry dead dying poor r	poor		0	0	0	0	350				0	EM	44	U	0	2	2	4	8				R		
1634	Prunus avium	Cherry	1	371762.995	633354.586	over grown	1634 cherry up rooted	poor		0	0	0	0	350				0	EM	44	U	0	2	2	4	8				R		
1635	Fagus sylvatica	Beech	1	371567.432	633355.282	lawn	large vet beech dense broad spreading canopy wound cavities and cavity points throughout DW and some SD hung up limb to east	fair	multiple	0	0	0	0	1500			31	0	OM	188	A	<40	2	3	6	11	v	v	v	RH; DW; repair		18
1636	Acer pseudoplatanus	Sycamore	1	371624.632	633435.081	over grown	twin stem included union possible cavity dense broad spreading canopy	good	inclusion cavity	0	0	0	0	1000			24	0	M	126	C	<10	2	3	6	11	v		v	MO cavity climb inspection		18
1637	Acer pseudoplatanus	Sycamore	1	371625.719	633418.101	over grown	overhanging caravan dense one-sided canopy suppressed	fair	lean	0	0	0	0	500			18	0	M	63	C	<10	2	2	4	8			v	CR2m; CT20%; mo		18
1638	Fraxinus excelsior	Ash	1	371540.097	633388.646	over grown	large ash adb starting one-sided suppressed canopy large limbs over road DW throughout	fair	adb	0	0	0	0	500			20	0	M	63	C	<10	2	3	6	11	v		v	CR2m; CR5m lower limb		18
1639	Prunus avium	Cherry	1	371537.571	633318.693	lawn	large cherry elevated root plate large cavity to south included stems dense broad canopy	fair	cavity inclusion	0	0	0	0	600			16	0	M	75	C	<10	3	3	9	15	v	v		CR30%; CT2m; MO		18
1640	Sorbus aria	Whitebeam	1	371498.848	633364.745	over grown	1640 soari poor large cavity r		cavity	0	0	0	0	350			9	0	EM	44	U	0	2	3	6	11				R		
1641	Sobus intermedia	Swedish Whitebeam	1	371471.536	633300.334	over grown	1641 soint cavity decay r		cavity	0	0	0	0	350			9	0	EM	44	U	0	2	2	4	8				R		
1642	Acer pseudoplatanus	Sycamore	1	371366.502	633373.131	woodland	large leaning sycamore away from caravan lower stem wounds to east possible damage from foundations	fair	cavity	0	0	0	0	850			19	0	M	107	C	<10	2	2	4	8			v	CR2m; CT20%; MO		18
1643	Quercus robur	English Oak	1	371539.278	633409.649	woodland	ave con large oak large section of dead wood limb to south	fair	dw	0	0	0	0	800			23	0	M	100	B	<20	2	2	4	8			v	DW		18
NT01	Fraxinus excelsior	Ash	1	371503.67	633206.195	woodland	poor DW throughout stem day at mid point adb	poor	cavity adb	0	0	0	0	400			24	0	EM	50	U	0	3	2	6	11	v	v	v	R		
NT02	dead	dead	1	371997.488	633486.389	woodland	dead tree not r		poor	0	0	0	0	300			8	0	EM	38	U	0	2	2	4	8				R		
NT03	Fraxinus excelsior	Ash	1	371942.456	633463.393	over grown	ash dying adb r		poor	0	0	0	0	300			7	0	EM	38	U	0	2	2	4	8				R		



TLCMS: FM_6.1.4_023F_V1-I1

Issue: 04/04/2020
Review: 04/04/2021
Ref: 367_8.1 Survey

VALID KEY	O=Occupancy	1-2 low	3-4 Med	5 High	Value
	F=Failure	1-2 low	3-4 Med	5 High	Value
	R=Risk	Occupancy x Failure			Formula
	Tolerance	Acceptable	Tolerable	Not tolerable/ acceptable	Formula

PROJECT	VALID TREE RISK BENEFIT ASSESSMENT
LOCATION	SPRINGWOOD ESTATE HOLIDAY PARK
ADDRESS 1	
ADDRESS 2	KELSO
ADDRESS 3	TD5 8LS
CLIENT	COVE COMMUNITIES UK
JOB NO	367
DRAWING	367-TLC-EX-00-DR(L)92-1001 -S2
STATUS	S2 - INFORMATION
SURVEYED BY/	[KEITH VERNON - 08-09/08 2022

Legend: Age Class: YT=Young Tree; SM=Semi Mature; M=Mature; FM- Fully Mature; OM=Over mature; BS5837 Category: A=High Value; B=Moderate value; C=Low Value; U=Unsuitable/ No Value; NOD=no obvious defects; **Works:** NW=No work; DW=Dead wood; CC=Crown Clean; CL=Crown Lift; CR=Crown Reduce; CT=Crown Thin; SR=Structural Repairs; SD=Storm damage; HB=Hazard Beam; R=Remove Tree; RFD=Remove Tree For Development; ST=Standing timber @ ?m; P=pollard; RE=Remove epicormic growth; RI remove ivy; RS=remove suckers; RH=Remover hangers; FIR=Further Inspection Required; Mo=Monitor as indicated; BIR=Bat inspection required; RP=Root protect; IC=Inspect cavity; Risk A=A Acceptable; NT=Not Tolerable (VALID); ADB=Ash Die Back; Life expectancy based following works carried out; FD=Faciliate development; Status IC-Increased Risk; RR=Reassessed Risk; NC=No Change; CW=Condition Worse; HI=Height increase; GI=Girth increase; VMAN=Veteran manage;

Tree Tag, name and number				Location		Tree vitality & condition				Tree dimensions							Tree categories & age				VALID Before works				Priority works & Protection								
Tree identity	Genus/ Species	Common name	No	X	Y	Root plate zone condition/ comments	Tree description/ comments	Vitality	Structural issues	NESW	Crown radi (m)	D1@ 1.3m (mm)	D2@ 1.3m (cm)	D3@ 1.3m (cm)	D4@ 1.3m (cm)	D5@ 1.3m (cm)	Height (m)	Clear stem (m)	Age Class	Age (est)	BS5837 Cat	Life expectancy (yrs)	O	F	R	T	Priority works	Bat Survey	TPO/ Con	Recommended works - BS3998:2010	RPA(D1-5) (mm) x 12	Inspect Frequency (month)	
NT04	Ulmus glabra	Wych Elm	1	371930.153	633454.918	over grown	dead elm r		poor	0	0	0	0	350			7	0	EM	44	U	0	2	2	4	8							
NT05	Abies procera	Nobel Fir	1	371739.59	633486.421	over grown	Norway spruce leaning r		poor	0	0	0	0	400			6	0	M	50	U	0	2	2	4	8							
NT06	Fraxinus excelsior	Ash	12	371676.669	633284.596	over grown	12 ash adb poor		poor	0	0	0	0	300			8	0	EM	38	U	0	2	2	4	8							
NT07	Fraxinus excelsior	Ash	1	371352.347	633357.367	over grown	ash with hanger r		poor	0	0	0	0	400			9	0	M	50	U	0	2	2	4	8							
NT08	Picea abies	Norway Spruce	1	371355.693	633345.168	over grown	Norway spruce lost top r		poor	0	0	0	0	400			9	0	M	50	U	0	2	2	4	8							
NT09	Castanea sativa	Sweet Chestnut	1	371340.096	633133.41	grass	yt suppressed poor tree	poor	nod	3	4	3	3	300			10	0	EM	38	C	<10	1	2	2	5				NW	3600	18	

Appendix B

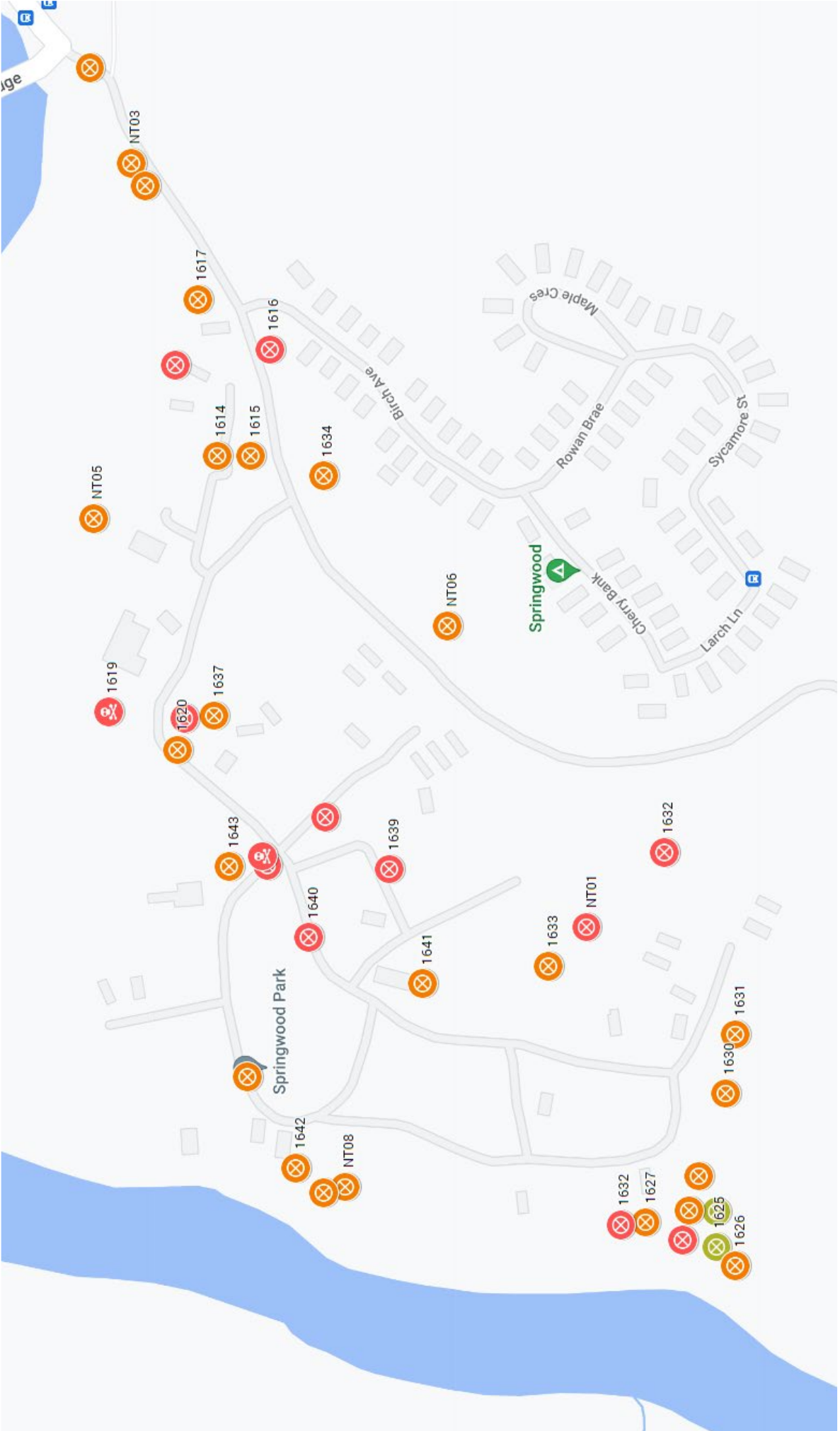
BS5837:2012 - Tree Categories

BS5837:2012 Table 1 – Cascade Chart for Tree Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
<p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> ▪ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) ▪ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline ▪ Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see BS5837:2012 paragraph 4.5.7.</i></p>			Red
	1	2	3	
	Mainly arboricultural qualities	Mainly landscape qualities	Mainly cultural values, including conservation	
Trees to be considered for retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Green
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Blue
<p>Category C</p> <p>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

Appendix C

367 Google Tree Assessment Map



Appendix D

Summer Branch Drop

1 All you need to know about the risk from SBD

Taking a reasonable proportionate and reasonably practicable approach

1 This guide gives you the facts about the risk from Summer Branch Drop (SBD). Looks at the overall risk and reviews what we currently know and don't know. Then provides you with some risk management advice.

1.1 What is SBD?

Branches that unexpectedly fail after hot dry weather

2 SBD is a very loose term for branches on mature trees that have no obvious tree risk features, which unexpectedly fail after a period of hot dry weather.

1.2 Fact-checking the risk

The overall risk is mind-bogglingly low

3 Compared to other everyday risks that we readily accept, the overall risk from SBD is mind-bogglingly low. From the data^{1 2} we have, the annual risk of death or serious injury is less than one in one hundred million. That's so low, we're at greater risk for the few minutes it takes to cover about 5km/3mi on a drive, than we are from SBD over a whole year.

1.3 What we know and what we don't know

There's no agreement about what SBD is or what it's called

4 Perhaps because the overall risk from SBD is so mind-bogglingly low, it's not been very well researched. There's no agreement about what SBD is, or even what it's called - it's also known as Sudden Branch Drop and Sudden Limb Drop. SBD is often used as a catch-all term to describe branch failure when wind or extensive decay doesn't appear to be an obvious explanation.

There's no agreement about the critical factors that trigger branch failure

5 In the published literature, the causes of SBD are not agreed or clear^{3 4}. Amongst these, there's no agreement about how hot and dry it needs to be, and for how long; or if humidity plays a role. Or whether the branch has to be horizontal or if its length is a critical factor. There's no agreement either about what time of day it's likely to happen, and if rain is required. Or even if the branch has to be free of obvious tree risk features to qualify.

1.4 Species profiling and a lack of obvious features

Many tree species can suffer from SBD

6 In the literature, SBD's been recorded on the following species; Ash, Beech, Cedar, Corymbia, Elm, Fig, Eucalyptus, Giant Sequoia, Horse Chestnut, Liquidambar, Oak, Pine, Plane, Poplar, Silver Maple, Sweet Chestnut, Tree of Heaven, Willow. There are probably more species not yet recorded.

We can't tell which branches will or will not fail

7 Branches that might fail because of SBD, on trees that don't have a history of it, lack any obvious tree risk features. This means an Arborist can't tell the difference between branches that have a high likelihood of failure from those that have a low likelihood of failure before they unexpectedly fail.

1.5 Managing the risk

Unless a tree has a history of SBD the risk is Acceptable

8 If your trees don't have a history of SBD, then even at the times of the year when it's most likely to occur, the risk is Acceptable. That means there's no need for you to reduce the risk any further. If any of your trees have a history of SBD then you should manage the risk to an Acceptable level.

Further Information

9 **1 National Tree Safety Group | Risk Research**
2 List of Deaths From Falling Tree Parts in Australia
3 Sudden Branch Drop: A Case for Closer Inspection
4 Summer Branch Drop | Arboricultural Research Note

Appendix E

367 Arboricultural terminology