

# Tree Survey Report

SHELL UK  
WOODBANK  
CULTS  
ABERDEEN

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# CONTENTS

	<b>Page No</b>
<b>1.0 Introduction</b>	<b>3</b>
1.1 Limitations	4
<b>2.0 Tree Survey Methodology</b>	<b>5</b>
<b>3.0 Survey Results</b>	<b>6</b>
3.1 Site Description	6
3.2 Photographs	7
<b>4.0 Tree Condition and Recommendations</b>	<b>15</b>
4.1 Decay	15
4.2 Structural Defects	15
4.3 Dutch Elm Disease	17
4.4 Low Vigour and Decline	17
4.5 Deadwood	18
4.6 Basal Shoots	18
4.7 Ivy	19
4.8 Clearance of Buildings and Roads	19
4.9 Natural Regeneration	20
4.10 Cypress Hedges	20
4.11 Protected Species	20
4.12 Arboricultural Consents and Standards	21
4.13 Re-Inspection Frequency	21

**Appendix 1 - Tree Survey Drawing**  
Scale Approx. 1:500 at A1

**Appendix 2 - Tree Survey Schedule**  
Explanation of Terms

## 1.0 INTRODUCTION

This survey and report relate to trees growing within the grounds of the Shell UK business and leisure facility at Woodbank, Cults, Aberdeen.

The survey was commissioned by Brian Angus, of Sodexo, on behalf of Shell UK.

It updates and supersedes the previous Tree Survey and Report undertaken by this author in October 2014.

It sets out to achieve the following objectives:

- To undertake a detailed assessment of the condition of the trees within the site boundaries.
- To identify tree works required for reasons of safety and good arboricultural management.

Detailed visual inspection of the trees was undertaken from ground level by Arboricultural Consultant Struan Dalgleish on the 21<sup>st</sup> and 22<sup>nd</sup> January 2020.

The trees recorded by the survey are shown on the Tree Survey Drawing in Appendix 1. The drawing has been colour-coded to reflect the status of tree work recommendations.

Details of the trees recorded, recommendations for tree works and a timescale for completion are provided, along with an explanation of terms in the tree survey schedule in Appendix 2.

The inspections were carried out from within the confines of the site and adjacent public highway. Neighbouring private property was not entered.

The site occurs within the Pitfodels Conservation Area and trees works should only be carried out following close liaison with and the consent of Aberdeen City Council Planning Department.

**Author's qualifications:** Struan Dalgleish is a Chartered Forester (MICFor) and Chartered Environmentalist (CEnv). He holds an Honours Degree in Forestry and is a Professional Member of the Arboricultural Association. He has over 21 years' experience of arboricultural at a professional level.

## 1.1 Limitations

- ❑ The findings and recommendations contained within this report are valid for a period of twelve months from the date of survey unless otherwise stated (i.e. until 20<sup>th</sup> January 2021).
  
- ❑ Whilst every effort has been made to detect defects within the trees inspected, no guarantee can be given as to the absolute safety or otherwise of any individual tree. Extreme climatic conditions can cause damage to even apparently healthy trees. Re-assessment may therefore be required after extreme weather events.
  
- ❑ The recommendations relate to the site as it exists at present, and to the current level and pattern of land use. The degree of risk and hazard may alter if the site or its surroundings are developed or changed, and as such may require re-inspection and re-appraisal.
  
- ❑ Dense basal shoot, ivy or shrub growth around some trees has prevented full and proper inspection of the base and lower trunk. These trees should be re-inspected following the cutting back of this growth as specified in the Tree Survey Schedule.
  
- ❑ The extent of any decay where noted was tested using a hammer and hand-held auger. A detailed assessment of the internal condition of the trees was not undertaken.
  
- ❑ The report relates only to those trees surveyed as shown on Tree Survey Drawing in Appendix 1. Trees outwith the survey area were not inspected.
  
- ❑ This report has been prepared for the sole use of Shell UK and their appointed agents. Any third party referring to this report or relying on the information contained herein does so entirely at their own risk.

## 2.0 TREE SURVEY METHODOLOGY

The tree survey process sets out to assess the risk associated with trees by firstly identifying any person or object that would be injured or damaged should a tree or part of a tree fail.

A systematic and thorough visual examination of the tree is then carried out and if this reveals any defective part(s) the probability of failure and the potential for damage that this would cause are assessed.

Recommendations for tree works necessary for reasons of safety and good arboricultural practice have been provided with the surrounding land use intensity in mind.

All the substantial trees within areas of pedestrian or vehicular access have been recorded by the survey.

This generally includes those with a trunk diameter  $\geq 200$ mm at 1.5m above ground level which occur within falling distance of road, driveways, paths, car parks and buildings. Very small trees and shrubs have not been recorded.

For the purpose of the previous Tree Survey undertaken in October 2014 the trees were tagged with a uniquely numbered aluminium identity disc nailed to the trunk at around 2m above ground level.

The tags were often found to be in good condition and are referred to for the purpose of this re-assessment. Where occasionally tags were missing trees are easily identifiable by neighbouring tagged trees or their description provided in the Tree Survey Schedule.

On occasion one tag may refer to two or more adjacent, similar trees.

A total of **567** trees / small groups of trees were recorded by the survey. Tag numbers range from **2211 to 2777**.

The locations of trees were previously digitally plotted onto the supplied site drawing. This drawing has been updated to show any changes to the tree cover since that time.

These positions of tree were estimated and should be treated as indicative only.

Tag numbers and crown spreads have been added to the drawing using CAD.

## 3.0 SURVEY RESULTS

### 3.1 Site Description

The site boundaries are well defined and easily identifiable around the perimeter of the site.

The southern boundary is with the North Deeside Road; to the east The Marcliffe Hotel, the northern boundary is with Airyhall Road, and to the west Baird's Brae.

The topography of the site gradually slopes down towards the south with short, steep embankments and stone ha ha walls often present where changes in level occur.

Soils, where undisturbed, appear to be fertile, well drained and capable of supporting a wide range of tree species to full maturity.

The tree cover occurs as a diverse range of species, the majority of which are mature or in the early stages of maturity.

Trees grow as dense wooded strips around the site perimeter, overhanging neighbouring property, public road and lining driveways within the grounds.

The oldest are estimated to be around 150 years and would have formed part of the designed landscape associated with the original house.

This notably includes three prominent, open grown Scots pine (*Pinus sylvestris*) growing on the lawn area and a large Wellingtonia (*Sequoiadendron giganteum*) in front of the house.

Within the dense wooded strips surrounding the site and lining the driveways numerous large beech (*Fagus sylvatica*), sycamore (*Acer pseudoplatanus*), oak (*Quercus robur*), wych elm (*Ulmus glabra*), ash (*Fraxinus excelsior*), lime (*Tilia x europaea*), horse chestnut (*Aesculus hippocastanum*), Scots pine (*Pinus sylvestris*) and yew (*Taxus baccata*) are also likely to date back to around this time.

More recent ornamental planting of maples (*Acer platanoides*), hollies (*Ilex aquifolium*), cherries (*Prunus spp.*), silver birch (*Betula pendula*), rowan and whitebeam (*Sorbus spp.*), Douglas fir (*Pseudotsuga menziesii*), cedar (*Cedrus spp.*) and cypress's (*Chamaecyparis spp.*) along with natural regeneration of sycamore, ash and elm trees has resulted in the formation of the fairly age diverse tree population present today.

Clumps of laurel (*Prunus laurocerasus*) and rhododendron are present beneath trees throughout the site.

Two red squirrels were noted on the site during the survey. The grey squirrels noted during the October 2014 survey were not seen and no signs of grey squirrel damage to trees was evident.

No recent evidence of rabbit or roe deer grazing damage was obvious. The old wounds caused by previous grazing at the base of young trees were noted to be closing.

Roe deer were however seen on site and any new planting would require to be suitably protected.

The photographs below further illustrate the tree cover and highlights some management issues.

Section 4 provides description of tree condition and recommendations for management.

### 3.2 Photographs



Photo 1 – 3 open grown Scots pines form prominent landscape features within parkland south of hotel.



Photo 2 – A dense strip of mature trees line and overhang the busy North Deeside Road.



Photo 3 – Mature trees overhanging the presently less frequently accessed Baird's Brae.





Photo 4 – Mature trees lean towards the frequently used tennis courts.



Photo 5 – A strip of mature trees is present next to the children's play area.



Photo 6 – Dense trees including several large, mature individuals surround the frequently used car park.



Photo 7 – Young pine trees grow against wall at Sports Centre. These presently provide some screening but will soon out-grow their location and alternate planting should be considered.



Photo 8 – Spindly larch 2388 to be removed.



Photo 9 – Beech 2415 (centre) with Kretzschmaria wood decay fungus at base. Overhangs Bairds Brae.



Photo 10 – Mature tree close to rear of sports complex. Includes severely decayed horse chestnut 2482 where removal has been recommended.



Photo 11 – Previous tree safety work on decayed beech 2521 have been completed.



Photo 12 – Leyland cypress hedge 2593a screen the phone mast. The hedge is overgrown and requires to be clipped to encourage a dense and compact form.



Photo13 – Semi mature trees 2595 to 2598 growing from wall and displacing stones.



Photo 14 – Twin stemmed sycamore 2633. Co-dominant stem should be removed to protect wall.



Photo 15 – Wild cherry 2604 is in very poor condition overhanging hut and should be removed



Photo 16 – Large and mature limes 2666, 2668 and 2671 grow from edge of ha ha wall next to driveway. The stone at the base of each tree have fallen from the wall, exposing the roots. The trees are tall with some poorly formed limbs. A 20% crown reduction has been recommended to reduce the risk and encourage the development of a more compact crown.



Photo 17 – Wych elm 2694 displays signs of infection with Dutch elm disease. Surrounding elm trees have all been removed since the time of the previous survey, presumably due to infection by the disease.

## 4.0 TREE CONDITION AND RECOMMENDATIONS

The survey identified several issues affecting the health and condition of the trees. These have been recorded in the Tree Survey Schedule and described below.

Where defects pose a threat to safety or have the potential to cause damage to property recommendations for remedial action and a timescale for completion have been provided.

### 4.1 Decay

**Horse chestnut 2482** is severely decayed and has shed a co-dominant leader. The remaining tree is at high risk of failure and **removal within 3 months** has been recommended.

The wood decay fungus *Kretzschmaria deusta* is commonly associated with the severe degradation of wood and loss of structural strength often resulting in the failure at the base or roots of the tree.

Small patches of the fungus were noted at the base of **beech tree 2415 and sycamore 2430**. This type of decay tends to be progressive and badly affected trees are often at high risk of failure.

Both trees occur in a relatively sheltered locations away from frequently accessed areas. While their retention in the short term may be possible the trees should be closely monitored for signs of deterioration and **removal within the next 5 years is considered likely to be required**.

Elsewhere when decay was noted it tended to be more localized and associated with old wounds. Where sufficiently vigorous, trees respond to wounding and decay through the formation of callus and re-enforcing wound wood.

In-time wounds can close-over, concealing decay within. An assessment of the internal condition of trees was not undertaken.

### 4.2 Structural Defects

Many of the trees are of reasonable form and structural condition. There were however a number considered to be of poor form with significant structural weaknesses and defects.

The following structural defects are typical of those noted. Where they pose a threat to safety remedial action maybe recommended.

- 1) Trees with very acute forks between co-dominant limbs, often with included bark. Badly affected trees can be at high and increasing risk of failure and splitting at the point of weakness.

A structurally weak tight fork was noted on **beech tree 2247**. The tree occurs within an area of high land use intensity next to the North Deeside Road. Bracing of co-dominant stems using a non-invasive and dynamic bracing system has been recommended to provide additional support to the weak fork. Additional information regarding suitable bracing systems is available at [www.arboa.com](http://www.arboa.com). This work should be undertaken within 12 months.

- 2) Trees with long lateral branches, slender stems with no lower branches or trees with pronounced leans may develop excessive end weight which can lead to failure, particularly during periods of high winds.

**Larch 2388** is exposed and leaning next to the car park. The tree appears to be at high risk of blowing over or snapping during strong winds and **removal with 3 months has been recommended**.

**Wild cherry 2604** is very poorly formed and has shed large branches. It overhangs a wooden hut next to the car park and **removal within 3 months is recommended**.

- 3) Abrupt bends and angles in branches and limbs can be a point of weakness. Where branches and limbs have been previously removed by pruning or breakage, vigorous re-growth can develop. This maybe poorly attached or there maybe decay in the old wound.

- 4) Below ground defects associated with poorly formed rooting systems including girdled and spirally formed roots.

**Lime trees 2666, 2668 and 2671** grow from the edge of low, stone retaining wall next to the driveway. The walls are in poor condition and tree roots severely exposed where stones have been displayed. Signs of root decay are present, and the trees are tall with some poorly formed branches. It is recommended pruning to reduce the height and spread of the crown be undertaken to reduce the potential of storm damage.

As a species lime tend to respond favourably to pruning and the trees are likely to regenerate vigorously from the pruning wounds. This new growth can be poorly attached



and should not be allowed to become excessively large. Periodic pruning to maintain the trees at the new, lower height is likely to be required on approximately a 10-yearly cycle.

### 4.3 Dutch elm disease

The disease is a significant issue on the site and has spread to infect four trees since the time of the previous survey in October 2014. This includes **wych elms 2329, 2491, 2493 and 2694.**

The trees all occur adjacent to frequently accessed areas and felling has been recommended. To restrict the spread of disease to other parts of the city branch wood should be chipped and spread on site. Trunk wood should be safely stacked and retained on site.

Eleven other elms were noted by the survey. These displayed no obvious signs of disease at the time of survey.

Further spread of the disease is however inevitable and the surviving elm population requires to be **re-assessed in the summer when signs of infection is most evident.**

Where disease is noted prompt action to restrict the further spread may be required.

### 4.4 Low vigour and decline

Sparse crowns, small buds with limited annual shoot growth extension and dieback within the upper parts of the crown are symptoms of low vigour and declining health. Tree's in advanced stages may display a dead top and 'stag headed' appearance.

Where noted on site general decline and dieback is most likely associated with sub-optimal soil growth condition and disturbed rooting environments.

Trees weakened in this way are susceptible to secondary pathogenic infection such as decay fungi and are often of limited long-term potential.

Remedial works maybe required where declining tree pose a threat to safety or property.

## 4.5 Deadwood

The presence of deadwood within the tree canopy is a natural feature of mature trees and woodland.

Where it occurs within the lower parts of the crown it may be associated with shading within a healthy, dense canopy. Deadwood within the upper parts of the crown can be a sign of poor health as described above.

Deadwood, particularly large standing pieces can be of great wildlife habitat value and should be retained where it is considered safe to do so.

Deadwood can however become poorly attached as it decays and where it has high potential to fall onto frequently accessed areas it may require to be pruned-out for reasons of safety as recommended in the Tree Survey Schedule.

The removal of deadwood can also improve the appearance of specimen trees.

Deadwooding has been recommended for the crowns of seven mature trees:

**Oak 2212, Turkey oak 2361, lime 2362, Wellingtonia 2366, sycamore 2374 and beeches 2669, 2733 and 2734.**

## 4.6 Basal Shoots

Some species of tree, for example lime, develop dense shoot or epicormic growth at the base and from the lower trunk.

If left unchecked basal growth can become obtrusive and obstruct a clear view of the tree making a full and thorough inspection impractical.

The cutting back of basal shoots has been recommended for **22 trees** throughout the site.

This work should be carefully carried out by skilled landscape operatives using hand saws and secateurs to avoid unnecessary damage to the base of the tree.

It is recommended that basal shoots are kept in-check by cutting back once a year in early winter.

## 4.7 Ivy

Ivy uses the tree for support as it climbs towards the light and competes with the roots for nutrients and moisture.

It can overwhelm trees with sparse crowns and significantly increase the forces acting on the trunk by increasing the weight within the crown and the 'sail area'.

It obscures the base and trunk limiting the potential for thorough tree safety inspection.

It is recommended that where trees are present within areas of high land use intensity ivy should be controlled by severing ivy shoots at the base and removing a section of stems removed to discourage re-growth. The ivy above this point will die and should be allowed to fall off naturally.

This is required for 6 trees identified in the Tree Survey schedule.

The work should be undertaken by skilled landscape operatives using hand saws and secateurs and taking care to avoid unnecessary damage to the trunk.

## 4.8 Clearance of buildings and roads

In several places trees and branches were noted to be contacting or in very close proximity to buildings and other structures.

Where this occurred pruning or removal of trees which are likely to out-grow their location may have been recommended to provide enough clearance.

The tips of **beech tree 2313** is contacting the floodlights next to the tennis court. Pruning is required to provide clearance and ensure the floodlights are not damaged by swaying branches.

**Sycamore 2633** has a twin stem growing against the wall around the car park. The removal of the stem has been recommended to protect the wall.

The holly at the base of **beech 2515** is resting on the roof of a sub-station. Pruning is required to provide clearance.

#### 4.9 Natural regeneration

In the absence of significant grazing pressures, a quantity of naturally regenerating trees has, and are continuing to establish throughout the site.

This tended to be occurring in a very narrow range of species, predominantly sycamore and wych elm and often giving rise to poor quality, over-crowded individuals.

To ensure the long-term continuity of good quality trees and woodland natural regeneration requires to be managed.

Selective thinning is necessary to remove inappropriately located or poorly formed trees where they interfere with development of better trees and to the detriment of species diversity.

The process of on-going tree inspection will identify trees to be removed for these reasons.

#### 4.10 Cypress Hedges

Leyland cypress (*Cupressocyparis leylandii*) hedging was recorded surrounding the phone mast 2593a and lining the eastern boundary adjacent to The Marcliffe Hotel, 2560a.

These hedges are becoming overgrown and regular clipping has been recommended to encourage the development of a dense and manageable form.

If left unmanaged for a long period fast growing cypress hedges can become very tall, prone to splitting branches and increasing difficult to restore as a hedge

#### 4.11 Protected Species

It is an offence to disturb bat roosts at any time or birds during the nesting season.

Large and mature trees can provide suitable habitat for roosting bats and it is necessary that their presence is checked for prior to undertaking tree felling or major pruning.

This should be carried out by a competent and experienced bat surveyor.

To avoid bird nesting season tree work should not be carried out between March and August.

#### 4.12 Arboricultural Consents and Standards

The trees occur within The Pitfoldels Conservations Area of Aberdeen.

Tree works should only be undertaken following close liaison with and the consent of Aberdeen City Council Planning Department.

This Tree Survey Report, Schedule and Drawing should be submitted to the Council in support of an Application to Undertake Works on Protected Trees.

All felling and major pruning work must be carried out by a competent tree surgeon to British Standard 3998 (2010) '*Tree Work - Recommendations*'.

Cutting back of basal shoots, severance of ivy stems and minor pruning using secateurs and hand saws could be carried out by a competent landscape operative.

#### 4.13 Re-inspection Frequency

For reasons of safety all the substantial trees within the site should be inspected and recorded by a competent arboriculturalist on an **annual basis**.

Additional inspections maybe required in the aftermath of severe storms.

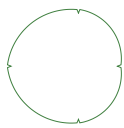
## APPENDIX 1 – TREE SURVEY DRAWING

Shell UK, Woodbank, Cults, Aberdeen

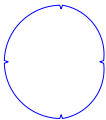
Scale 1:500m at A1

Tree positions are estimated and intended to be indicative only.

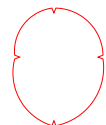
### Key:



No work.



Pruning required.



Remove tree / crown.

## APPENDIX 2 – TREE SURVEY SCHEDULE

### Explanation of Terms

<b>Tag</b>	Numbered identity disc attached to tree.
<b>Species</b>	Common name of species.
<b>Dia. (cm)</b>	Diameter at estimated in millimeters at 1.5m. MS = multi-stemmed.
<b>Ht. (m)</b>	Height of tree estimated in meters.
<b>Spread (m)</b>	Crown spread. Estimated in meters in N, E, S and W directions.
<b>Age class</b>	Young, middle aged, mature, over mature, veteran.
<b>Condition</b>	Good, fair, poor, dead – see explanation overleaf.
<b>Comments</b>	General comments on tree health, structural condition and form, highlighting any defects or areas of concern.
<b>Recommendations</b>	Recommended remedial action/work in the interest of safety and sound arboricultural management.
<b>Timescale</b>	Timescale for completing recommendations.

### Tree Condition Categories

<b>Good</b>	<ul style="list-style-type: none"> <li>(1) Healthy trees with no major defects</li> <li>(2) Trees with a considerable life expectancy</li> <li>(3) Trees of good shape and form</li> </ul>
<b>Fair</b>	<ul style="list-style-type: none"> <li>(1) Healthy trees with small or easily remedied defects</li> <li>(2) Trees with a shorter life expectancy</li> <li>(3) Trees of reasonable shape and form</li> </ul>
<b>Poor</b>	<ul style="list-style-type: none"> <li>(1) Trees with significant structural defects and/or decay</li> <li>(2) Trees of low vigour and under stress</li> <li>(3) Trees with a limited life expectancy</li> <li>(4) Trees of inferior shape and form</li> </ul>
<b>Dead</b>	<ul style="list-style-type: none"> <li>(1) Dead trees</li> </ul>