bawden tree care

Arboricultural Survey
Freshford Parish Council

Arboricultural Survey Report

Client: Mr John Adler

Company Name: Freshford Parish Council

Survey Address: The Tyning and The Cemetery
Freshford
Bath
Somerset

Prepared by: Michael Clements

Date: 31/03/2021

Reference: 2021-974

The statements in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Bawden Contracting Services Ltd cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it or, if none stated, after two years from the date of the survey or when any site conditions change or pruning or other works unspecified in the report are carried out to, or affecting, the subject tree(s), whichever is the sooner.

1. SCOPE OF SURVEY

1.1. The survey is concerned with the arboricultural aspects of the site only.

1.2. No discussions took place between the surveyor and any other party concerning the trees.

1.3. The trees were inspected based on the Visual Tree Assessment method expounded by Claus Mattheck in The Body Language of Trees – Encyclopedia of Visual Tree Assessment, 2015.

1.4. Any recommended tree works will be required to be carried out in accordance with British Standard 3998:2010 Recommendations for Tree Work [BS3998].

1.5. The planning status of the trees on site was not investigated.

1.6. Any observations made with regards to the condition of built structures are from the viewpoint of a lay person.

2. REPORT LIMITATIONS

2.1 The tree survey was undertaken from ground level observation of the trees using only binoculars, rubber mallet and probing tool to aid tree assessment. No invasive or non-invasive decay detection devices have been used to assess tree health.

2.2 The recommendations and conclusions in this report relate only to the conditions found on the site visit and inspection. The recommendations laid out in this report are valid for a period of one year from the date of the report.

2.3 Any alterations made to the site that may affect the trees in question, i.e. changes to ground level, tree works, extreme weather, hydrological changes etc., may invalidate the findings of this tree survey and lead to the need for re-inspection of the trees.

2.4 This report is carried out for the assessment of risk and the health and condition of the trees only.

2.5 Trees are living organisms and their structural condition is subject to rapid change in response to a wide range of biotic and abiotic factors. Trees have the potential to fail structurally without any prior indication from reasonable visual symptoms. It is not possible, therefore, to state that any tree is ‘safe’.

2.6 It is beyond the scope of this report to comment in relation to indirect or direct structural damage existing or potential that might be linked to vegetation growth causing soil subsidence or heave.

2.7 Any recommendations set out in this report are purely advisory and preliminary in nature and relate to the trees within the current site use.

2.8 Any physical alterations to the site conditions following the date of the tree survey for the site will likely have the potential to alter the report findings.

3. SITE DETAIL

3.1. The survey was carried out on land owned by Freshford Parish Council. The village of Freshford is also a civil parish in the Avon Valley six miles south-east of Bath, in the county of Somerset. The sites surveyed consists of 3 areas, The Cemetery, The Tyning and part of The Tyning Woods (Freshford Parish Council are not responsible for the whole of Tyning woods) the proportion of the woods owned by Freshford Parish Council as directed by Mr John Adler.

4. SUBJECT TREES

4.1. The Tyning Woods is made up of a mix of broadleaf species, proportional amount of these trees are Ash. Ash Dieback is seen to be affecting the Ash trees on this site and no less then seventeen have been recommended for removal. I recommend monitoring the condition of the remaining Ash trees, because there is a footpath that runs along the top edge of the woods and having deteriorating trees in close proximity to this presents potential risks that will need managing. Ash trees listed for removal are G01, T37, T38, T39, T41, T48, T50, T51, T52 and T53.

4.2. Four trees are suspected of internal decay and are recommended for further inspection into internal decay with the use of a Picus test. The results from this will be able to confirm the structural integrity of these trees and can be used to create better informed recommendations for any necessary remedial works. Trees listed for further inspection for internal decay are T04 Leyland Cypress, T42 Lombardy Popular, T43 Lombardy Popular, T74 Horse Chestnut.

4.3. Four Lombardy Poplars are found along the top edge of the woods. These are large specimen of over twenty-eight metres high. T39, Tree is growing over old rotten stump resulting in large cavity to base of stem, recommended to remove. T40, Signs of shear crack to base of stem. Metal ring round base of stem is restricting growth and starting to become occluded in places, recommended to remove. T42, Percussion testing finds change in resonance to base of stem east side. Indication of possible internal cavity. Recommend further inspection with Picus test. T43, Percussion testing finds distinct change in resonance to base of stem South side. Recommended further inspection with Picus test.

5. DATE OF INSPECTION AND WEATHER CONDITIONS

5.1. The site was inspected on the 29th of March 2022, the weather was partly sunny and dry.

6. SURVEY SUMMARY AND RECOMMENDATIONS

Category	Total number of trees	Timescale of works			
		Critical / 1 month	3 months	6 months	1 year/part of cyclical maintenance programme
Tree	78	8	16	12	8
Tree group	1	0	1	0	0
Woodland area	0	0	0	0	0
Plantation area	0	0	0	0	0

6.1. Recommendations for maintenance are given within Appendix A of this survey, which should be read in conjunction with the location plan (See separate Tree Report PDF). The recommended works should be carried out, as a minimum, to the standards set out in BS 3998:2010 Recommendations for Tree Work and only undertaken by contractors capable of working to the British Standard. Contractor's staff should have appropriate craft Certificates of Competency.

6.2. In the exercise of your duty of care in terms of tree safety, it is recommended that trees in areas of frequent use should be re-inspected every 18 months or after a period of extreme weather or a change in site circumstances.

6.3. In recent years there have been a number of high-profile court cases involving death and injury from trees, reinforcing the need for those responsible for trees on their property to act to prevent injury or death, or damage to property. It is recommended that Appendix B to this report, describing relevant Acts of Parliament, be considered.

6.4. The Birmingham Case. Birmingham City Council (BCC) was operating a reactive tree management system. A tree fell and killed three people. The Health and Safety Executive brought and won a court case against BCC under the Health and Safety at Work Act 1974. Expert witnesses confirmed that the tree had obvious defects that would have been noted and acted upon had the tree been inspected by a suitably

experienced Arboriculturalist. BCC had not ensured that their property was safe for staff, contractors or the public because they did not have a proactive system of inspecting and maintaining their trees.

6.5. Chapman v Barking and Dagenham LBC. A Council owned tree failed and caused harm. The summary included the following:
"I am satisfied that, despite all encouragement and advice both from external sources and to some extent from their own officers, the defendant Council did not at any relevant time to appreciate the distinction between making lists of trees and routine maintenance, as opposed to systematic expert inspection as often as would reasonably be required. I find that no such inspections were ever made, that it was a clear duty on the defendants to make them and that they have failed in that duty."

6.6. This case indicates that landowners have a duty to employ a qualified Arboriculturist to systematically inspect their trees on a regular basis.

7. WILDLIFE

7.1. Consideration should be given to wildlife, birds and bats. Care needs to be taken to protect the valuable habitat and to balance these interests before carrying out work to trees. The Wildlife and Countryside Act 1981 (as amended) protects the roosts and nesting sites of birds and bats and requires consultation with the statutory bodies, i.e. Natural England, before carrying out harmful operations. For instance, heavy fines of up to £5000 for each bat killed are now in place. The Countryside and Rights of Way Act 2000 also makes it an offence to damage or destroy bats and other species. Stronger legislation is now in place with the Habitat Regulations amended in 2007 from the EC, listing many of the species under threat. It may be prudent to carry out a bat survey prior to any work carried out to mature trees with significant cavities and bark crevices and to check carefully for nesting birds. Trees heavily covered in ivy are potential roosting sites and should be checked by tree surgeons prior to carrying out work and perhaps delaying works until nesting is finished. If in doubt, always seek advice from the statutory body and, if one is in place, the site Conservation Officer.

8. NEXT INSPECTION

8.1. The next inspection should take place in **Summer 2023**

10. GLOSSARY OF TERMS

Trees are a major concern for estate owners and managers who must often juggle the preeminent demand of ensuring public safety with the emotional response that felling seemingly healthy trees invariably generates amongst the public they are seeking to protect.

Bawden Tree Care provides a comprehensive tree survey and reporting service for the management of health and safety risks, planning applications, tree and woodland management programmes and other general Arboricultural purposes. Our surveyors use the latest software from Pear Technology and hand-held GPS devices to produce a range of digital drawings and maps to suit your individual requirements.

Undertaking a regular survey of your tree stock helps identify the warning signs of tree stress and prevent unexpected and potentially dangerous incidences of limb drop. Proactive rather than reactive tree management is safer and makes financial sense.

Arboricultural Works

The following survey may identify work that is required to ensure your trees are maintained in a healthy and safe condition. Bawden Tree Care's highly qualified tree surgeons operate to the British Standard 3998:1989 Recommendations for Tree Work and carry full Public Liability insurance cover to £10m.

Comprehensive site-specific risk assessments are carried out prior to commencement of any works and where trees are adjacent to the public highway or, through storm damage for example, obstruct pedestrian or vehicular access, Bawden teams have members qualified under Part 1 of the Traffic Signs Manual Chapter 8: Roadworks and temporary situations (2009). All team members are trained and qualified in aerial rescue techniques in the unlikely event of an emergency.

Our tree teams are fully qualified to undertake the following works:

- Section felling and pruning
- Crown cleaning, lifting, shaping, reduction
- Storm damage repair
- bracing
- Hedge cutting
- Site clearance
- Stump removal

Terminology for the specification on report.

Tree pruning may be necessary to maintain a tree in a safe condition, to remove dead branches, to promote growth, to regulate size and shape or to improve the quality of flowers, fruit or timber. Improper pruning can lead to trees becoming unsightly, diseased and/or potentially dangerous.

It is important that clients understand the basic terms commonly used to describe tree work operations so that they can ask for what they want or understand what the Arboriculturist is recommending. Did you know, for example, that a 'crown thin' will not reduce the height of the tree? Nor will a 'crown lift to 4m'.

The three main pruning options are shown below, and after that a glossary of other terms that you may find helpful. These are very general summaries and the Arboricultural Association can provide more detailed guidance by leaflets and other publications.

The British Standards most relevant to Arboricultural work are:
BS3998: 2010 Tree Work Recommendations.
BS5837: 2012 Trees in Relation to Design, Demolition and Construction - Recommendations.

A word of caution: many trees are legally protected. Felling or even just pruning a protected tree without permission from your Local Planning Authority may be a criminal offence.
Always check for Tree Preservation Orders or Conservation Area restrictions with your local council's Tree Officer and/or Planning Department before carrying out any works.

Main Pruning Definitions

Crown Thinning

Crown thinning is the removal of a portion of smaller/tertiary branches, usually at the outer crown, to produce a uniform density of foliage around an evenly spaced branch structure. It is usually confined to broad-leaved species. Crown thinning does not alter the overall size or shape of the tree. Material should be removed systematically throughout the tree, should not exceed the stated percentage and not more than 30% overall. Common reasons for crown thinning are to allow more light to pass through the tree, reduce wind resistance, reduce weight (but this does not necessarily reduce leverage on the structure) and is rarely a once only operation particularly on species that are known to produce large amounts of epicormic growth.

Crown Lifting or Crown Raising

Crown lifting is the removal of the lowest branches and/or preparing of lower branches for future removal. Good practice dictates crown lifting should not normally include the removal of large branches growing directly from the trunk as this can cause large wounds which can become extensively decayed leading to further long-term problems or more short term

biomechanical instability. Crown lifting on older, mature trees should be avoided or restricted to secondary branches or shortening of primary branches rather than the whole removal wherever possible. Crown lifting is an effective method of increasing light transmission to areas closer to the tree or to enable access under the crown but should be restricted to less than 15% of the live crown height and leave the crown at least two thirds of the total height of the tree. Crown lifting should be specified with reference to a fixed point, e.g. 'crown lift to give 5.5m clearance above ground level'.

Crown Reduction

The reduction in height and/or spread of the crown (the foliage bearing portions) of a tree. Crown reduction may be used to reduce mechanical stress on individual branches or the whole tree, make the tree more suited to its immediate environment or to reduce the effects of shading and light loss, etc. The final result should retain the main framework of the crown, and so a significant proportion of the leaf bearing structure, and leave a similar, although smaller outline, and not necessarily achieve symmetry for its own sake. Crown reduction cuts should be as small as possible and in general not exceed 100mm diameter unless there is an overriding need to do so. Reductions should be specified by actual measurements, where possible, and reflect the finished result, but may also refer to lengths of parts to be removed to aid clarity, e.g. 'crown reduce in height by 2.0m and lateral spread by 1.0m, all round, to finished crown dimensions of 18m in height by 11m in spread (all measurements approximate.)'. Not all species are suitable for this treatment and crown reduction should not be confused with 'topping', an indiscriminate and harmful treatment.

The importance of correct pruning cuts

Every pruning cut inflicts a wound on the tree. The ability of a tree to withstand a wound and maintain healthy growth is greatly affected by the pruning cut – its size, angle and position relative to the retained parts of the tree. As a general rule branches should be removed at their point of attachment or shortened to a lateral which is at least 1/3 of the diameter of the removed portion of the branch, and all cuts should be kept as small as possible.

Other useful terms associated with tree work

Adaptive growth

An increase in wood production in localised areas in response to a decrease in wood strength or external loading to maintain an even distribution of forces across the structure.

Adventitious/epicormic growth

New growth arising from dormant or new buds directly from main branches/stems or trunks.

Bracing

Bracing is a term used to describe the installation of cables, ropes and/or belts to reduce the probability of failure of one or more parts of the tree structure due to weakened elements under excessive movement.

Branch bark ridge and collar

See diagram 3 section 3. Natural features of a fork or union that may or may not be visually obvious. Neither the branch bark ridge nor collar should be cut.

Callus

Undifferentiated tissue initiated as a result of wounding and which become specialised tissues of the repair over time.

Cavity

A void within the solid structure of the tree, normally associated with decay or deterioration of the woody tissues. May be dry or hold water, if the latter it should not be drained. Only soft decomposing tissue should be removed if necessary, to assess the extent. No attempt should be made to cut or expose living tissue.

Co-dominant stems

Two or more, generally upright, stems of roughly equal size and vigour competing with each other for dominance. Where these arise from a common union the structural integrity of that union should be assessed.

Coppicing

The cutting down of a tree within 300mm (12in) of the ground at regular intervals, traditionally applied to certain species such as Hazel and Sweet Chestnut to provide stakes etc.

Crown

The foliage bearing section of the tree formed by its branches and not including any clear stem/trunk.

Deadwood

Non-living branches or stems due to natural ageing or external influences. Deadwood provides essential habitats and its management should aim to leave as much as possible, shortening or removing only those that pose a risk. Durability and retention of deadwood will vary by tree species.

Decline

When a tree exhibits signs of a lack of vitality such as reduced leaf size, colour or density.

Dieback

Tips of branches exhibit no signs of life due to age or external influences. Decline may progress, stabilise or reverse as the tree adapts to its new situation.

Dormant

The inactive condition of a tree, usually during the coldest months of the year when there is little, or no growth and leaves of deciduous trees have been shed.

Drop Crotching

Shortening branches by pruning off the end back to a lateral branch which is at least 1/3 of the diameter of the removed branch.

Fertilising

The application of a substance, usually to the tree's rooting area (and occasionally to the tree), to promote tree growth or reverse or reduce decline. This will only be effective if nutrient deficiency is confirmed. If decline is the result of other factors such as compaction, physical damage, toxins etc., the application of fertiliser will not make any difference.

Formative pruning

Minor pruning during the early years of a tree's growth to establish the desired form and/or to correct defects or weaknesses that may affect structure in later life.

Fungi/Fruiting bodies

A member of the plant kingdom that may colonise living or dead tissues of a tree or form beneficial relationships with the roots. The fruiting body is the spore bearing, reproductive structure of that fungus. Removal of the fruiting body will not prevent further colonisation and will make diagnosis and prognosis harder to determine. Each colonisation must be considered in detail by a competent person to determine the long-term implications of tree health and structure when considered alongside the tree species, site usage etc.

Lopping and Topping

Generally regarded as outdated terminology but still included as part of Planning legislation. Lopping refers to the removal of large side branches (the making of vertical cuts) and topping refers to the removal of large portions of the crown of the tree (the making of horizontal cuts, generally through the main stems). Often used to describe crude, heavy-handed or inappropriate pruning.

Painting or Sealing

Covering pruning cuts or other wounds with a paint, often bitumen based. Research has demonstrated that this is not beneficial and may in fact be harmful. On no account should timber treatments be used as these are harmful to living cells.

Pollard

The initial removal of the top of a young tree at a prescribed height to encourage multistem branching from that point, traditionally for fodder, firewood or poles. Once started, it should be repeated on a cyclical basis always retaining the initial pollard point, or bolling as it becomes known.

Retrenchment pruning

A form of reduction intended to encourage development of lower shoots and emulate the natural process of tree aging.

Root pruning

The pruning back of roots (similar to the pruning back of branches). This has the ability to affect tree stability, so it is advisable to seek professional advice prior to attempting root pruning.

Topping

See Lopping and Topping.

Vitality

The degree of physiological and biochemical processes (life functions) within an individual, group or population of trees.

Ivy Banding

The severing and removing of a band of Ivy round the entire circumference of a stem. The Ivy is to be cut in two places, at ground level and at a hight of one meter (minimum). The severed section is to be removed from the stem thus revealing a cleared band of the stem. When cutting and removing the Ivy, grate care should be taken not to damage the Tree bark.

Desire lines

An informal route or path (such as one worn into a grassed area by repeated foot traffic) that is used by pedestrians in preference to or in the absence of a designated alternative (such as a paved pathway).

Topics:

Adaptive growth, bracing, callus, cavity, coppicing, crown, crown lifting, crown raising, crown reduction, crown thinning, deadwood, definitions, dieback, glossary, lopping, terminology, topping.

11. LIST OF BOTANICAL TREE NAMES

Alder	*Alnus cordata*	Liquidambar	*Liquidambar styraciflua*
Acacia	*Robinia pseudoacacia*	Lime	*Tilia platyphyllos*
Amelanchier	*Amelanchier lamarkii*	Lombardy poplar	*Populus nigra* 'Italica'
Apple	*Malus* sp	Maple	*Acer* sp
Ash	*Fraxinus excelsior*	Magnolia	*Magnolia grandiflora*
Aspen	*Populus tremula*	Maritime pine	*Pinus pinaster*
Atlas cedar	*Cedrus libani atlantica*	Mimosa	*Acacia dealbata*
Bay	*Laurus nobilis*	Monkey puzzle	*Araucaria araucana*
Beech	*Fagus sylvatica*	Monterey cypress	*Cupressus macrocarpa*
Birch	*Betula pendula*	Monterey pine	*Pinus radiata*
Blackthorn	*Prunus spinosa*	Mountain redwood	*Sequoiadendron giganteum*
Black poplar	*Populus nigra*	Mulberry	*Morus* sp
Blue atlas cedar	*Cedrus libani atlantica Glauca Group*	Norway Maple	*Acer platanoides*
Box Elder	*Acer negundo*	Norway spruce	*Picea abies*
Catalpa	*Catalpa bignonioides*	Oak	*Quercus robur*
Cherry	*Prunus sp*	Pear	*Pyrus* sp
Coast redwood	*Sequoia sempervirens*	Pittosporum	*Pittosporum* sp
Colorado blue spruce	*Picea pungens* 'glauca'	Plane	*Platanus* sp
Corsican pine	*Pinus nigra* var. *calabrica*	Plum	*Prunus* sp
Cotoneaster	*Cotoneaster* sp	Poplar	*Populus* sp
Crab	*Malus sp*	Portuguese laurel	*Prunus lusitanica*
Cryptomeria	*Cryptomeria japonica*	Purple plum	*Prunus cerasifera 'Nigra'/'Pissardii'*
Cypress	*Cupressus* sp	Red horse Chestnut	*Aesculus carnea*
Dawn redwood	*Metasequoia glyptostroboides*	Red oak	*Quercus rubra*
Deodar cedar	*Cedrus deodara*	Rowan	*Sorbus aucuparia*
Douglas fir	*Pseudotsuga menziesii*	Scots pine	*Pinus sylvestris*
Elaeagnus	*Elaeagnus* sp	Sitka spruce	*Picea sitchensis*
Elder	*Sambucus nigra*	Amelanchier	*Amelanchier lamarkii*
Elm	*Ulmus* sp	Strawberry tree	*Arbutus unedo*
English oak	*Quercus robur*	Swedish whitebeam	*Sorbus intermedia*
Eucalyptus	*Eucalyptus* sp	Sweet Chestnut	*Castanea sativa*
Field maple	*Acer campestre*	Sycamore	*Acer pseudoplatanus*
Fig	*Ficus* sp	Thorn	*Crataegus monogyna*
Goat willow	*Salix caprea*	Thuja	*Thuja plicata*
Hazel	*Corylus avellana*	Tulip	*Liriodendron tulipifera*
Hemlock	*Tsuga heterophylla*	Turkey oak	*Q. cerris*
Holm oak	*Quercus ilex*	Walnut	*Juglans regia*
Holly	*Ilex aquifolium*	Western red cedar	*Thuja plicata*
Hornbeam	*Carpinus betulus*	Whitebeam	*Sorbus aria*
Horse Chestnut	*Aesculus hippocastanum*	Wild cherry	*Prunus avium*
Irish yew	*Taxus baccata* 'Fastigiata'	Weeping willow	*Salix* x *chrysocoma*
Judas tree	*Cercis siliquastrum*	Wellingtonia	*Sequoiadendron giganteum*
Laburnum	*Laburnum* sp	White poplar	*Populus alba*
Larch	*Larix* sp	White willow	*Salix alba*
Laurel	*Prunus laurocerasus*	Willow	*Salix caprea*
Lawson cypress	*Chamaecyparis lawsonia*	Yew	*Taxus baccata*
Leyland cypress	*x Cupressocyparis leylandii*		