

**Gill Green
Cawood**

Tree Assessment Report

May 2019

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Prepared for	Cawood Parish Council



1 Scope of Report

Instruction

A walk-over tree assessment was commissioned by Cawood Parish Council. I was asked to provide an arboricultural report on the general condition of trees on Gill Green in Cawood and to recommend any works necessary. The report is only concerned with trees within Gill Green boundary.

Collection of Data

A site visit was undertaken by a Jo Ryan on 1 May 2019. All observations were carried out from ground level using the Visual Tree Assessment (VTA) method¹. Stem diameters were measured with a tape and all other dimensions were estimated.

Statement

Trees are living organisms whose health and condition can change rapidly and all trees, even healthy ones, are at risk from unpredictable climatic and man-made events. The health, condition and safety of trees should be checked on a basis commensurate with the level of risk.

This report remains valid for one year from the date of inspection, May 2019.

Site

Gill Green is a triangular parcel of open space, located to the south of Castle Garth in Cawood. The land borders residential property to the east and Cawood Primary School to the west. Broad Lane runs along the southern boundary.

Within the grass area there is a line of six horse chestnut trees growing along the roadside. There is a line of vegetation along the northern boundary with Castle Garth, which comprises young oak trees and a remnant hawthorn hedge.

¹ Mattheck, C and Breloer, H (1994) The Body Language of Trees. *Research for Amenity Trees No.4* Department of the Environment

2 Discussion

Tree Condition

The line of red and white horse chestnut trees form an effective frame to Gill Green and roadside screen. They are actively growing and showing fairly good vitality and structure. The main problem affecting most trees is bleeding canker, although some trees are showing recovery from infection.

Bark cracks and exudations are symptomatic of infection by the bleeding canker bacterium (*Pseudomonas syringae*). A bleeding canker causes areas of dying bark on a tree's trunk or branches to ooze liquid. There is no approved chemical treatment available to cure or arrest the development of bleeding canker. Some trees with trunk infections can retain healthy-looking crowns and might not deteriorate further. Indeed, lesions may dry up and develop wound wood. However, extensive bark death and cracks can lead to infection by secondary wood decay pathogens which could result in wood failure. Bark lesions on infected trees should be inspected regularly to monitor changes.

Burrs, caused by bud proliferation, are beginning to form on the red horse chestnut trees. The cause of this widespread phenomenon is not known but it appears to be specific only to red horse chestnut species. The burrs are largely innocuous, although the underlying wood can become decayed if the galls die.

Pruning Works

Minor pruning work is recommended to crown lift and reduce end loading on branches over the footpath and road. This would involve small diameter pruning wounds (<25mm dia.) made by shortening branch ends only, cutting back to a side branches rather than removing branches completely back to the main stem. Work in the Tree Schedule to be 'considered' is suggested for operations that may be undertaken as part of longer-term management of the boundary trees along Castle Garth.

Dead Wood

Some trees have dead or decaying branches. Dead wood greater than 25mm diameter has the potential to cause damage if it falls and dead wood greater than 50mm diameter should be considered for removal over areas that are regularly used (high target areas, such as footpath and road). However, the risk of injury or damage becomes much reduced where dead wood overhangs lower target areas. In these locations no work is recommended. Dying and dead wood habitats are important from a conservation viewpoint and should be maintained wherever possible, i.e. where the risk of injury or damage is acceptably low. Where branches or trees cannot be retained it may be possible to leave the wood in large pieces on the ground, away from footpaths.

3 Other Considerations

Survey Periods

Trees are dynamic, living organisms and no tree can be guaranteed to be safe. As long as we retain trees, we cannot achieve zero risk. While it is important for owners and managers of trees to have them regularly inspected and to act on recommendations, there should be a reasonable and balanced approach to tree risk management where tree risk is considered alongside the benefits that trees provide.

Frequency of survey should be commensurate with frequency of site use. Unless stated otherwise in the Tree Schedule, I recommend that trees within falling distance of footpaths or built structures are surveyed every 2-3 years to assess their mechanical integrity. Following strong winds or adverse weather conditions, all trees should also be checked with a basic walk-over survey (either by a person with a good working knowledge of the trees or an arboriculturist) and arboricultural advice sought where there are any concerns or problems.

Implementation of Works

I advise that all works are carried to BS 3998 *Tree Work - Recommendations* (2010).

Birds and Bats

It is the responsibility of the tree owner and tree contractor carrying out the work to ensure that no wild birds or bats and their roosts will be affected by any works. The Wildlife and Countryside Act 1981 as amended, the Countryside and Rights of Way Act 2000 and the Conservation (Natural Habitats) Regulations 1994 protect all wild birds, their nests (whether in use or being built) and eggs and other wild animals including bats and their roosts. Further information can be obtained from Natural England ²

Trees Subject to Statutory Controls

For trees protected by a tree preservation order or located in a conservation area it will be necessary to consult the local planning authority before any tree works other than certain exemptions (e.g. removal of deadwood) can be carried out.

² www.gov.uk/government/organisations/natural-england

Appendix A Tree Schedule

SITE:	GILL GREEN, CAWOOD	SURVEYOR:	JO RYAN
CLIENT:	CAWOOD PARISH COUNCIL	ASSESSMENT DATE:	1 MAY 2019
BRIEF:	WALK-OVER TREE SURVEY	JOB REFERENCE:	GILL GREEN/0519

TREE NO	SPECIES MIX AGE RANGE STEM DIA.	HT. (M)	COMMENTS	MANAGEMENT RECOMMENDATIONS (WORK PRIORITY)
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T1 Eastern boundary	Red Horse Chestnut (<i>Aesculus x carnea</i>) Early-mature 65cm	10	Vitality: Good Structure: Moderate Canopy clearance 2m over southern edge of Green. Snags and deadwood to 25mm dia. over green. One dead branch (50mm dia.). Bleeding canker bark cracks and exudates on stem and primary branches. Evidence of dried canker wounds on lower stem and primary branch to north. Sapwood decay on primary branch at 3m.	-
T2	Red Horse Chestnut Early-mature 55cm	10	Vitality: Good Structure: Moderate Canopy clearance 2m over footpath. Deadwood to 25mm dia. east over green. Bleeding canker bark cracks and exudates on stem, primary branches and branches to 150mm dia. in upper crown. Evidence of dried canker wounds on lower stem.	-

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TREE NO	SPECIES MIX AGE RANGE STEM DIA.	HT. (M)	COMMENTS	MANAGEMENT RECOMMENDATIONS (WORK PRIORITY)
T3	Horse Chestnut (<i>Aesculus hippocastanum</i>) Early-mature 85cm	14	Vitality: Good Structure: Moderate Multiple branches at 2.5m Included bark at some junctions. Canopy clearance 2m over footpath and 3m over road. Bleeding canker bark cracks and exudates on lowest branch to west, 3m from main stem, and on primary branch to east, which has a 50mm dia. dead branch within it. Dried bleeding canker on lower stem NE. Two callused bark wounds on branches south and east over green. Twiggy deadwood over road from vehicle damage.	Reduce canopy spread south over road by 0.5-1m and crown lift over road to 4m. Prune branch ends only, cutting back to side branches – pruning wounds <25mm dia. (1-2 years)
T4	Red Horse Chestnut Early-mature 55cm	10	Vitality: Moderate Structure: Moderate Co-dominant stems at 2m. Bleeding canker exudates on lower stem to 2m – on tension side of slightly leaning stem. Decayed wound on stem at 0.5m developed callus at edges but shows bark exudates. Galls - typical of Red horse chestnut – formed on stem and root crown. Largest gall is on main stem and branch junction. Minor twiggy deadwood through crown.	Check condition in 2 years.

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TREE NO	SPECIES MIX AGE RANGE STEM DIA.	HT. (M)	COMMENTS	MANAGEMENT RECOMMENDATIONS (WORK PRIORITY)
T5	Horse Chestnut Early-mature 80cm	13	Vitality: Good Structure: Moderate Canopy clearance 2-3m over footpath and road. Dieback and deadwood to 50mm dia. on branch ends which have been cut in past. Lowest lateral branch to SE extends to edge of Green. Bark separation at junction of primary branch to road sign.	-
T6	Red Horse Chestnut Early-mature 45cm	8	Vitality: Good Structure: Good Small ring of callus tissue formed around most recent pruning wounds on lower stem. Callus developing at junction of primary branch.	-

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G1 Northern boundary	Oak (<i>Quercus robur</i>) Young 20cm Hawthorn (<i>Crateagus monogyna</i>) Mature -	4-5	Vitality: Good Structure: Moderate-Good Mature ivy covering some hawthorn trees and may soon collapse under weight of ivy. Line of hawthorn trees leaning strongly east to Green. Trees extend approximately 6m at a 45° angle.	Consider regenerating northern boundary: Ivy-covered hawthorn: To minimise tree collapse, consider reducing hawthorn height and cutting ivy. Line of leaning hawthorn trees: Prune trees back 2-3m and plant up gaps with mixed low-edge, native species to enhance biodiversity and habitat value.
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Appendix B

Glossary of Terms

Adaptive growth. New wood produced in response to damage or loads and compensates higher strain in marginal fibres.

Basic Tree Assessment Survey

The surveyor locates and identifies the trees to be assessed and carries out a ground-level visual tree assessment. The intention will not be the inspection of each tree in detail but to take a general view of each tree or tree group and look for signs of substantial defects or debility that might present a significant risk of harm to identified 'Targets'.

Bark. A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem

Bacterial canker. A bark-killing bacterial disease which can be disfiguring and sometimes fatal.

Break-out cavity. A void/wound caused by the snapping or failure of a branch

Circling root. The growth of roots that is not radial away from the stem and curves to encircle the stem.

Condition. An indication of the physiological vigour of the tree. Where the term 'condition' is used in a report, it should not be taken as an indication of the stability of the tree

Crown/Canopy. The main foliage bearing section of the tree

Crown density. An assessment of tree condition based on the amount of light passing through the crown

Crown lifting. The removal of limbs and small branches to a specified height above ground level

Dead wood. Branch or stem wood bearing no live tissues. Retention of dead wood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of dead wood is generally recommended only where it represents an unacceptable level of hazard

Dieback. The death of parts of a woody plant, starting at shoot-tips or root-tips

DBH (Diameter at Breast Height). Stem diameter measured at a height of 1.5m or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified

Girdling root. A root which circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue

Included bark (ingrown bark). Bark of adjacent parts of a tree (usually forks, acutely joined branches or co-dominant stems) which is in face-to-face contact; i.e. without a woody connection. Such a structure lacks inherent strength but is in many instances strongly reinforced by a surrounding 'shell' of wood.

Minor dead wood. Dead wood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree

Mulch. Material laid down over the rooting area of a tree or other plant to help conserve moisture; a mulch may consist of organic matter or a sheet of plastic or other artificial material

Occluding callus. A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. wound wood)

Pruning. The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs

Radial. In the plane or direction of the radius of a circular object such as a tree stem

Removal of dead wood. Unless otherwise specified, this refers to the removal of all accessible dead, dying and diseased branch wood and broken snags

Removal of major dead wood. The removal of, dead, dying and diseased branch wood above a specified size

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Retrenchment pruning. A phased form of crown reduction, which is intended to emulate the natural process whereby the crown of a declining tree retains its overall biomechanical integrity by becoming small. The pruning should be implemented by shortening heavy, long or weakened branches throughout the crown, while retaining as much leaf area as possible and encouraging the development of secondary branches.

Root-collar examination. Excavation of surfacing and soils around the root-collar to assess the structural integrity of roots and/or stem

Root zone. Area of soils containing absorptive roots of the tree/s described

Snag. In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point

Stem/s. The main supporting structure/s, from ground level up to the first major division into branches. A stem can divide into two or more substantial elements that might be described as co-dominant stems

Stress. In mechanics, the application of a force to an object

Structural roots. Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree

Understorey. A layer of vegetation beneath the main canopy of woodland or forest or plants forming this

Stress. In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature

Vitality. Ability of a tree to sustain its life processes.