Cawood Playing Fields
Cawood

Tree Condition Report

December 2019

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1 Scope of Report

Instruction

A Level 1 tree assessment survey of Cawood Playing Fields was commissioned by Cawood Parish Council. I was asked to provide an updated arboricultural report on the general condition of the trees and to recommend works to manage tree risk. The report is only concerned with significant trees within the boundaries of Cawood Playing Fields.

Collection of Data

A site visit was undertaken by a Jo Ryan on 10 December 2019. All observations were carried out from ground level using the Visual Tree Assessment (VTA) method[1]. All tree 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.

The last comprehensive survey was last undertaken in May 2009[2] and this report updates the content of the last survey. This report remains valid for one year from the date of inspection, December 2019.

Site

The playing fields at Cawood serve as the village's recreational area. It is accessed by an access road from Maypole Gardens and there are footpaths into the site at the northern and eastern corners. The area comprises open fields, a cricket pitch, tennis courts and a bowling green. There is a children's play area in the north western corner of the area and a skateboard park in the south western area. There are houses along the northern and western boundaries and a community allotment to the east of the fields.

[1] Mattheck, C and Breloer, H (1994) The Body Language of Trees. *Research for Amenity Trees No.4* Department of the Environment
[2] Report on Trees around Cawood Playing Fields May 2009 by Jo Ryan

2 Discussion

Wood Decay Two trees in Area 1 (Cherry T34 and Goat willow T37) have fruiting bodies of wood decay fungus Pholiota squarrosa around their root zone and lower stem. This fungus causes decay and hollowing around stem base and principal roots. As both trees are growing adjacent to a high use area, tree work is recommended. The root crown and principal roots of Cherry T34 should be investigated in more detail to ascertain extent of decay. However, given that this early-mature tree will continue to grow and can be expected to increase in size, it may be more economical to remove the tree and replace it. Wood decay in Goat willow T37 is more advanced and I recommend the tree is cut to approximately 1m above ground level, so the lower stem can regenerate, and decaying wood habitat in the lower stem can be retained.

Young Trees Trees along the north eastern boundary have recently been removed and young replacement trees have been planted. All young trees within the playing fields have been poorly staked and tied, so the trees are unable to flex and develop a tapered stem. I recommend all stakes, ties and other nursery tags and bamboo are carefully removed as soon as practicable. Any trees which are unable to support themselves can be re-supported using low wooden stakes and flexible spacers and tree ties, for a maximum of 1-2 years (Appendix D).

Pruning Some pruning work is recommended to trees overhanging paths and frequently used areas. Most pruning is recommended to reduce end loading and to increase height clearance. Pruning to reduce end loading is recommended to Oak T20 in Area 4. However, the work would not resolve the underlying poor branch structure and may lead to further tree problems. As such, I recommend Oak T20 is considered for removal and replacement in the longer term.

Where pruning work is recommended in the Tree Schedule, I have indicated in brackets the approximate number and diameter of branches to be removed. I recommend that where possible, branches are shortened by cutting from the outer tips back to a suitable side branch. This is preferable to pruning internal side branches (which creates end loading on branches), and to removing branches completely at the main stem (which causes large wounds and can lead to stem decay).

Dead Wood Dead wood greater than 25mm diameter has the potential to cause damage if it falls and should be considered for removal over areas that are regularly used (high target areas). 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 pruned 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 failing distance of footpaths or built structures are regularly surveyed (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 [3]

Trees subject to statutory controls

I was informed by Selby District Council that there is a group Tree Preservation Order along the north-eastern boundary[4] and one covering 3 oak trees[5] in the south eastern corner on the site. The fields are not located within a Conservation Area.

[3] www.gov.uk/government/organisations/natural-england
[4] Selby District Council TPO ref: 4/1997
[5] Selby District Council TPO ref: 1/1973

Figure 1
Map Showing Tree Locations

Appendix A
Tree Schedule

SITE:	CAWOOD PLAYING FIELDS, CAWOOD	**SURVEYOR:**	JO RYAN
CLIENT:	CAWOOD PARISH COUNCIL	**ASSESSMENT DATE:**	DECEMBER 2019
BRIEF:	LEVEL 1 WALK OVER TREE SURVEY	**JOB REFERENCE:**	CAWOOD PLAYING FIELDS/1219

AREA NO	SPECIES MIX (AGE RANGE) Young/Semi-Mature/ Early Mature/Mature (STEM DIA CM)	COMMENTS	MANAGEMENT RECOMMENDATIONS (RECOMMENDED WORK PERIOD)
Area 1 Northern boundary From north to NE Group TPOs (G1 and G2) on trees along this boundary	Wild cherry (EM) (50cm) Hawthorn (M) Norway maple (EM) Goat willow (EM) Oak (EM) Field maple (EM) Rowan (Y)	**Height range:** **Wild cherry T34:** Fruiting bodies of wood decay fungus Pholiota squarrosa all around root zone of tree. Fungus causes decay and hollowing around stem base and principal roots. Tree vitality moderate. **Hawthorn T35:** Bark decay fungi (Stereum spp.) at base of all stems. **Goat willow T37:** (Ht.9m). Main stem (100cm dia) branches into 3 at 1.5m. 2 of the 3 branches lean west/SW over playing field. Fruiting bodies of wood decay fungus Pholiota squarrosa around root zone of tree and at 1.5m. Wood decay on lower stem extends to 1m. **Oak T38:** Ivy on stem. Dead wood to 50mm dia through crown. **Norway maple T40:** Low branches over bench and north towards adjacent property.	**Wild cherry T34:** The tree is close to a high use area and so the root crown and principal roots should be investigated in more detail to ascertain extent of decay (12 months). However, the cherry still has more growing to do, so it may be more economical to remove the tree and replace it. (1-2 years) **Goat willow T37:** Cut all 3 branches at 1m and allow to re-sprout. (1-2 years). Periodically re-cut new shoot growth (3-5 years). **Oak T38:** Cut ivy. Remove dead wood over bench. (12 months) **Norway maple T40:** To reduce future conflict, consider removing 2 lowest branches – 1 to west over bench/bin and 1 above it to north to corner of house (50mm dia) (1-2 years)

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AREA NO	SPECIES MIX (AGE RANGE) Young/Semi-Mature/ Early Mature/Mature (STEM DIA CM)	COMMENTS	MANAGEMENT RECOMMENDATIONS (RECOMMENDED WORK PERIOD)
Area 1 Continued		**NE Boundary: Young replacement trees:** All poorly staked with metal bars and tied with inflexible tape. Nursery plastic ties still attached and cutting into trees. Young trees need to be able to flex in the wind in order to develop a self-supporting tapered stem.	**NE Boundary: Young replacement trees:** Carefully remove stakes, ties and any nursery tags and bamboo. Create a weed-free circle around each tree (Minimum 0.5m radius). Re-stake any trees which cannot support themselves with low wooden stakes and flexible tree ties (support for a maximum of 1-2 years then remove). (2-3 months) Water weekly during rain-free spring and summer months.

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AREA NO	SPECIES MIX (AGE RANGE) Young/Semi-Mature/ Early Mature/Mature (STEM DIA CM)	COMMENTS	MANAGEMENT RECOMMENDATIONS (RECOMMENDED WORK PERIOD)
Area 2 Eastern boundary	Hawthorn (M) Norway maple (SM) (20cm) Field maple (Y) Ash (M) Lawson cypress cultivar. (EM)	**Hawthorn T9:** Eastern corner by footpath. Ivy-covered. Lower stem decayed to 1.5m. Dead wood to 25mm dia over path. **Norway maple T11:** Break-out wound on branch to east. Included bark at branch junctions. **Ash T12:** Good vitality. Manure piled around base on north and west. Ivy and vegetation occluding lower stem. Dead wood and snags to 50mm dia through crown and to 150mm dia on SW. Dead branch (200mm dia) on south. 4 end-loaded lateral branches: **Branch 1**. North over manure area/tool shed. Canopy clearance 2m. **Branch 2.** NE over allotment entrance. **Branch 3**. East over allotment. Shading allotment plot beneath. **Branch 4.** West along hedge line. Canopy clearance 2m. **Lawson cypress:** Blue ctv. Branch collapsed out on east.	**Hawthorn T9:** Keep ivy cut. Consider planting up gaps around Hawthorn with hedging plants. (1-2 years) **Field maple:** Remove stake and ties. (3-6 months) **Ash T12:** Remove manure. Cut ivy and check lower stem and major branch junctions (12 months) Remove dead branch (200mm dia) on south (12 months) Prune to reduce end loading (12 months) **Branch 1** (100mm dia) – Laterally reduce branch by 4m, pruning back to junction with branch to east over compost, about 2m from main stem. **Branch 2** (150mm dia) – Laterally reduce to a side branch 3m from main stem. **Branch 3** (100mm dia) – Consider lateral reduction of branch by 3m to a side branch. **Branch 4**– <u>If</u> crown lifting is required, laterally reduce branch ends by 2-3m to increased height clearance (50-75mm dia)

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Area 3 Southern boundary	Oak (EM-M) Douglas fir (SM) (25cm) Lawson cypress (M) Oak (M)	**Height range:** 12-15m **Oaks:** 3 trees in southern corner. Dead wood to 75mm dia. **Oak T15** closest to pavilion shows reduced vitality with a lot of dead wood through crown. Long lateral branches extend NE/east over paved area and bowling green. Crack and adaptive growth on lowest lateral branch to north (at junction on 3rd branch up on this lateral branch) **Douglas fir:** Line of 4 trees recently crown lofted to 2m. **Lawson cypress:** 3 trees in front of tennis pavilion. Stems topped in past. Sapwood decay fungus (Stereum spp.) visible on lower stems. Remaining car park cypress hedge to west of 3 trees cut at 3-5m. Exposed wood along sides of pruned hedge. **Oak T17:** Car park. Ivy up stem to 4m Dead wood to 75mm through crown.	**Oaks southern corner:** **All** – Keep ivy cut from lower stem. Remove dead wood over bowling green and paths. (1-2 years) **Oak T15** – Branch with crack on north (150mm dia) – laterally reduce this branch, pruning to a side branch 0.5m below crack/branch junction. Laterally reduce other branches to north and NE by about 2m, pruning to side branches (5 x 50mm dia). (12 months) **Oak T17:** Cut and remove 1m-long section of ivy around tree base. Remove dead wood over car park. (12 months)

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AREA NO	SPECIES MIX (AGE RANGE) Young/Semi-Mature/ Early Mature/Mature (STEM DIA CM)	COMMENTS	MANAGEMENT RECOMMENDATIONS (RECOMMENDED WORK PERIOD)
Area 4 South-western boundary	Oak (EM) Norway maple (SM-EM) Silver birch (EM)	**Oak T20:** Soil mound around tree base. Poor structure– long spreading lateral branches. Break-out wound from snapped out branch at base of primary branch to NW which comprises 1/3 of whole canopy. **Norway maples T21-T23:** Line of trees alongside pitch. Dead wood to 50mm dia. **T21** - Suppressed by Oak T20. Bark wound on SW. **T22** - Moderate vitality. Dieback on lopped branch ends. Decay and callus at junction of lowest 2 branches to south. Decayed wound on stem at 1m. **T23** - Dead wood to 50mm dia. **Oak T24**: Dead wood through crown to 50mm dia, particularly on lopped branch ends to south. **Oak T27:** Area of discoloured bark at stem base where tarmac meet (indication of possible wood decay beneath). Stem over-growing kerb stone on south. Abruptly bent branch to east along fence line between Skateboard area and cricket pitch, shows a pruning wound on both upper and lower sides. **Norway maple T29:** Lower branches growing to score board/hedge/house.	**Oak T20:** Option A - Prune to reduce loading on branch to NW and remaining crown - Reduced length of branch to NW by 1/2. Other 3 primary branches in crown - reduce length by 1/4-1/3. This option will reduce loading in crown but would create large pruning wounds and reduce tree vitality, lead to wood decay and would not resolve poor branch structure. Option B – Remove tree and replace. (1-2 years) **Norway maple T23:** Remove dead wood and crown lift on south by removing lowest 3 side branches (25-50mm dia). (12 months) **Oak T24:** Crown lift on south by removing dead wood on lopped branch (5 x 25-50mm) (1-2 years) **Oak T27:** Remove kerb at base of tree if possible, without damaging bark/tree. Abruptly bent branch (200mm dia) – consider reducing branch to 2m from bend/3m from main stem. (1-2 years) **Norway maple T29:** Crown lift to 3m to clear canopy from score board/hedge/house (2 x 75mm dia, 4 x 50mm dia). (1-2 years)

Appendix B
Species List

Acuba (*Acuba japonica*)	Laburnum (*Laburnum spp.)*
Alder, Italian (*Alnus cordata*)	Larch (*Larix decidua*)
Alder, common (*Alnus glutinosa*)	Laurel, cherry (*Prunus laurocerasus*)
Apple (*Malus spp.*	Lime, common (*Tilia* x *europaea*)
Ash (*Fraxinus excelsior*)	Lime, broad-leaved (*Tilia platyphyllos*)
Beech, common (*Fagus sylvatica*)	Lime, small-leaved (*Tilia cordata*)
Beech, copper (*Fagus sylvatica f. purpurea)*	Maple, field (*Acer campestre*)
Birch, Silver (*Betula pendula*)	Maple, Norway (*Acer platanoides*)
Birch, weeping silver *(Betula pendula* 'Youngii')	Oak, English (*Quercus robur*)
Blackthorn (*Prunus spinosa*)	Oak, sessile (*Quercus petraea*)
Cedar, blue Atlas (*Cedrus atlantica* 'Glauca')	Pear, ornamental (*Pyrus spp.)*
Chestnut, horse (*Aesculus hippocastanum*)	Plum *(Prunus domestica*)
Cherry, wild cherry (*Prunus avium*)	Lime, silver pendent (*Tilia* x *petiolaris)*
Birch, Silver (*Betula pendula*)	Poplar, hybrid (*Populus x canadensis*)
Cypress spp (*Chamaecyparis spp./Cuppressus spp)*	Plane, London (*Platanus* x *hispanica*)
Cypress, Lawson (*Chamaecyparis lawsoniana*)	Rowan (*Sorbus aucuparia*)
Cypress, Sawara (*Chamaecyparis pisifera*)	Sycamore (*Acer pseudoplatanus*)
Elder (*Sambucus nigra*)	Whitebeam (*Sorbus aria*)
Elm, wych (*Ulmus glabra*)	Whitebeam, Swedish (*Sorbus intermedia*)
Hawthorn (*Crateagus monogyna*)	Willow species (*Salix spp.*)
Hazel (*Corylus avellana*)	Willow, crack (*Salix fragilis*)
Hazel, Turkish (*Corylus colurna*)	Willow, weeping (*Salix* x *sepulcralis* 'Chrysocoma')
Holly, common (*Ilex aquifolium*)	Willow, goat (*Salix caprea*)
Hornbeam (*Carpinus betulus*)	Yew (*Taxus baccata*)

Appendix C
Glossary of Terms

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

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

Co-dominant branch/stem. Two or more branches of similar dimensions arising from about the same position on a trunk or 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. Dead branch wood

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

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

Failure. Breakage of stem, branches, roots or loss of mechanical support in the root system

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

Lopping. Indiscriminate cutting between branch unions or at internodes with the final cut leaving a stub

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

Appendix C
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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

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

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

Target. People, property or activities that could be injured, damaged or disrupted by a tree

Tree Assessment Survey (Level 1). The surveyor will walk the site not with the intention of inspecting or surveying each tree in detail or of viewing all parts or all sides of every tree, but to take a general overview of trees and look for signs of substantial defects or debility that might be significant in relation to targets. The surveyor will record trees grouped by common characteristics such as species, age and vitality. Defects identified as being significant in relation to the target will be recorded and the affected tree will be identified on the Tree Survey Plan

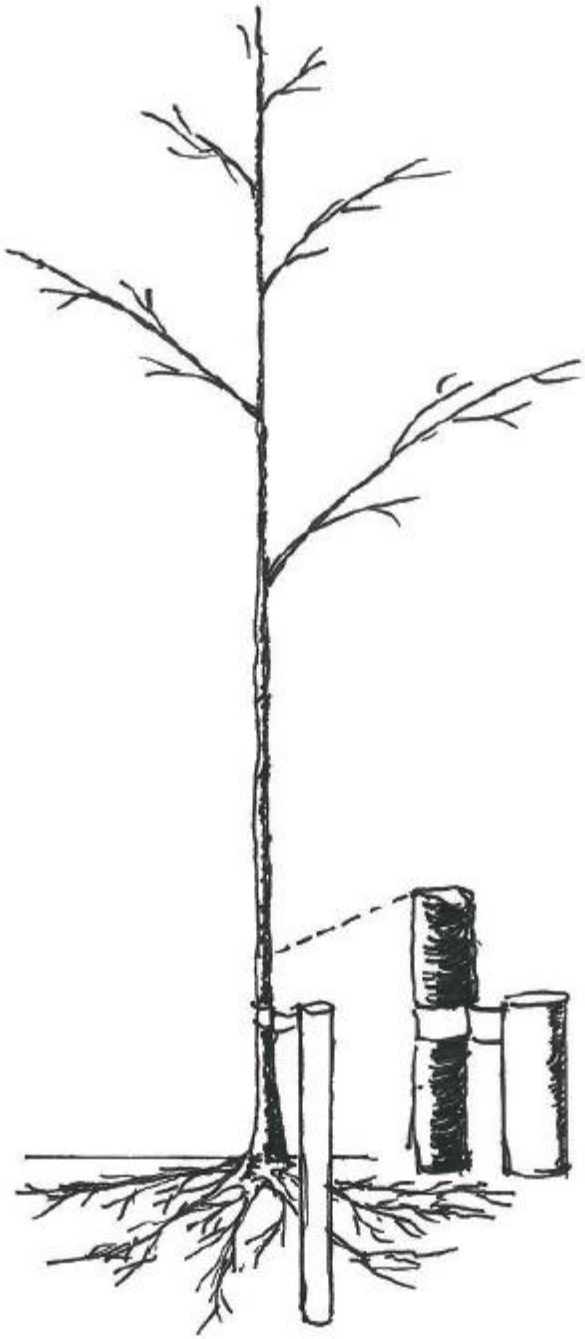
Tree Assessment Survey (Level 2). The surveyor will locate and identify the trees to be assessed and carry out a ground-level visual tree assessment. The intention will not be the inspection of each tree in detail but to take a general view of each tree or tree group and look for signs of substantial defects or debility that might present a significant risk of harm to identified 'Targets'. All parts will be viewed insofar as possible from the ground using binoculars where appropriate. Signs of defect or decay identified as being potentially significant in relation to the target will be recorded against the affected tree

Topping. Removal of the upper part of a tree, reducing its height with indiscriminate pruning cuts. This practice usually damages trees, reducing strength, condition and vigour, promoting premature decline and exposure to pests and disease

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

Vitality. Ability of a tree to sustain its life processes

Appendix D
Tree Staking Example



Stake height = maximum 1/3 the height of clear stem to first branch.

Where a staking system is used, the lower the position of tie in relationship to the main stem, the lower the lateral movement of that stem. This movement encourages stem thickening at the fulcrum point. It is advantageous for stem thickening to occur as low down the main stem as possible, reinforcing the development of the stem taper above the tree's natural root flare.

BS 8545: 2014
Trees: from nursery to independence in the landscape. Recommendations