BATSON GROUNDCARE

Environment Experts

Arboricultural Impact Assessment Tree Report

8 South Avenue, South shields, NE34 6QZ



Client: Mr Anthony McGurk

Date: 6th September 2021

Ref: 0010633

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1. General

1.1. The owner of property, 8, South Avenue, South Shields, NE34 6QZ, has applied to the Local Planning Authority seeking approval for building extension works and vehicular access drive. **(Ref - ST/0454/21/FUL)**

1.2. The propose new Access Drive will lead through the southern boundary, across a Public Highway Footpath and 'grass verge'.

1.3. There is a 'Street Trees growing within the 'grass verge, and the Local Planning Authority have requested that an '**Impact Assessment Tree Report' (IATR**) be prepared, in accordance with **BS5837(2012)**

2. Location

2.1. The property is located approximately 70 metres to the north-east of the A1150/ Barmpton Lane, Roundabout, Darlington.

2.2. Grid Reference NZ 377643. (E-437735 – N-564358)



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3. Use and Purpose of Report

3.1. This Report will assess the current Health & Condition of those trees growing on the site and outline the current and future impact of these findings.

3.2. This Report has been prepared specifically for our Client. Its intellectual content remains the property of Batson Groundcare Ltd and its other content, that of the Client. Disclosure of this Report to third parties is at the discretion of the Client.

3.3. This Report will outline any immediate, or potential risk, of branch or tree failure, which may subsequently cause injury to people or damage to property.

4. Legislative Context

4.1. Trees may be legally covered by a Tree Preservation Order (**TPO**) or by virtue of their presence within a Conservation Area. In the latter case, trees with a stem diameter measuring greater than 75mm, at 1.5m above ground level, are protected.

4.2. It has been established that tree **T1** is in the ownership of the Local Highway Authority, is not located within a Conservation Area, nor is covered by a Tree Preservation Order.

5. Site Survey

5.1. The site was visited on 23rd August 2021.

5.2. The Report has been prepared on the basis of observations made from ground level.

5.3. Appropriate tools and equipment were used to gather information.

5.4. No diagnostic tools were used during inspection.

5.5. It should be noted that trees are dynamic organisms and as such, are subject to change.

5.6. Individual tree details recorded during inspection, form the basis of the Tree Schedule (Para.9).

6. Wildlife Activity Within and Around Trees

6.1. At the time of inspection, there was evidence of bird activity within and around the site.

6.2. There was no evidence of bat activity at the time of inspection. However, there may be small break-out cavities, ivy, bark cracks, etc. which may act as Bat Roosts, especially on the larger trees.

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7. Site Observations

7.1. The property which is located towards the southern central part of South Shields, is a relatively 'Medium density', residential area.

7.2. The property consists of a detached dwelling, with attached garage and access drive gardens to the front and rear.

7.3. The garden to the front of the dwelling consists of a maintained lawn, shrub borders and scrub.

7.4. The front garden is contained by an existing vehicular access to the west, the dwelling to the north, a fence to the east, and a low 'solid-brick' boundary wall, with 'pillars', forming the southern boundary.

7.5. A Public Highway footpath, grass-verge and access road, lie immediately to the south of the southern boundary wall.

8. Tree Survey

8.1. It is the tree **T1** growing within the Highway grass verge, and as indicated on **Plan Drawing No. 0010633/P1** and outlined within **Tree Schedule,** Paragraph **10.0** which forms the subject of this Report**.**

8.2. For the purposes of this Report, individual specimen trees growing within or immediately outside of the site boundaries, have been referenced with a '**T**' prefix and number (e.g. **T1**).

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9. Tree Schedule

T No.	Species	Age	Height (m)	DBH (mm)	RPA Radius (m)	Crown spread N, E, S, W (m)	1st Branch / Direction e.g. 2.4 N	Ground to canopy height (m)	BS Cat.	SULE (Years)		1. Tree Detail 2. Site Comment	Recommended Action
T1	Sycamore *(Acer pseudoplatanus)*	M	17 e	330	3.96	4.5 4.0 4.5 3.5	2.5 m - S	mts	**B**	20+	**1.** **2.**	**Tree health –** Fair **Buttress Roots –** Fair **Main Stem –** Good **Stem Taper** - Good **Branching System –** Fair **Canopy –** Fair 2metre wide grass verge	N/A

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10. Tree Root Protection Areas (RPA's)

10.1. Tree RPA's are indicated by red circle on **Plan Dwg No.0010633/P1**

10.2. All trees within the working area must be protected by barriers, in accordance with Appendix 1, prior to construction works starting.

10.3. Where construction of proposed development requires access 'over' RPA's, measures, in accordance with an Approved Method Statement, must be implemented.

10.4. **Table 1,** showing trees, Ref no, Species and current 'Root Protection Areas', in accordance with, **BS5837:2012**.

Table 1

Tree No.	Species	DHB (mm)	RPA (Rad. M)	RPA Sq M
T1	Sycamore	330	3.96	49.3

11. Analysis Introduction

11.1. *The 'Tree Analysis' examines the environment In which the trees are growing, together with other factors which will impact, or influence the trees' current and future health and condition.*

12. Analysis General

12.1. Trees which are growing within and immediately surrounding a property are considered as having 'visual amenity and landscape value. The 'amenity value' is dependent upon the current Health and Condition of the trees, whether they are viewed from within, or outside of the property, or from the surrounding environment.

12.2. Good specimen trees which are growing adjacent to a Public Highway, become part of the 'Street Scene' mand are therefore, enjoyed by the Public at large. These trees may be classified as being of 'high' visual amenity and landscape value of trees will, therefore, be an important consideration.

12.3. Where trees are growing in a more 'sensitive' environment e.g. 'Conservation Area', retention of tree cover will be considered by the Local Planning Authority, as being of 'high' importance. The visual amenity and landscape value of trees will, therefore, be an important consideration.

12.4. Where specimens are growing within 'groups', their overall 'combined canopy effect', particularly when viewed from a greater distance, e.g. within open countryside, may show the group as being of 'high' visual amenity and landscape value.

12.4.1. The highly competitive environment in which 'groups' of trees grow, frequently results in their rooting and branching systems being contained and suppressed. This may not be detracting from the overall 'amenity' appearance of the group, but individual specimens may be unhealthy and of poor shape, form and character for the species. The visual amenity and landscape value of individual, inferior quality trees will therefore, be reduced.

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12.4.2. In order to maintain continuity of the 'visual amenity and landscape value' of a group, it may be desirable or necessary, to remove and replace the poorer quality specimens.

12.5. Trees, shrubs and hedges growing adjacent to property boundaries may be of great benefit, in that they will provide a visual 'softening' effect between properties. These trees, although may not be readily viewed by the public at large, may be classified as being of 'local' visual amenity and landscape value.

12.6. A Tree Schedule outlines the attributes of individual trees. Where trees are found to have relative short remaining life expectancy, consideration may be given to their 'phased' or 'selective' removal and replacement planting. This will enable 'continuity' of the visual amenity and landscape value, by retaining the remaining trees, while replacement trees establish and grow to maturity.

13. Analysis Specific

13.1 It is noted, from **Plan Dwg No 10633/P1,** that the tree is growing within a narrow, 'grass-verge. The tree's rooting system therefore, will be substantially restricted by the consolidated, underlying soil beneath the highway, and, the southern boundary solid- brick boundary wall of the dwelling.

13.2 It is highly probable therefore, that the tree's rooting system will have developed and grown laterally, in the areas of less compacted soil within the grass verge and beneath the Public Highway footpath.

13.3 Sycamore tree's rooting systems are normally found to have developed and grown deeply within the soil.

13.4 As it is intended that a 'new' vehicular access be constructed over the grass-verge.

13.4.1 This may be achieved, without causing major direct damage to the underlying tree's rooting system, by incorporating a "Honeycomb", permeable surfacing system, in accordance with the Manufacturer's approved installation instructions. (This Method of Construction is used by many Local Authority's throughout the United Kingdom

14. Conclusion

14.1. On the basis that Sycamore tree's generally develop 'deep' rooting systems, and, an Approved Method of vehicular access surfacing system is to be used above the rooting system of Tree T1, it may be concluded that;-

14.1.1. Construction of the proposed access, over the Public Highway grass-verge, will have "minimal" detrimental effect, upon the future Health & Condition of Tree T1.

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15. Arboricultural Method Statement

Method Statement (Site Specific)
Site Specific Method Statements, may be required for approval by the L.P.A. The Method Statements outline how operations may be undertaken to prevent damage to trees' or the compaction of underlying soil during development works.

- Protective fencing
- Temporary ground protection (vehicular access, plant & machinery)
- Permanent ground protection with RPA's
- Excavations adjacent to RPA's
- 'No Dig' methods of construction
- Storage of excavated materials
- Storage of harmful materials away from trees (diesel, petrol, cement. Etc.)

Document Production and Revisions

Document Title	- Impact Assessment Tree Report – 36, Barningham Close, Sunderland SR31PX - For Mr A McQurk
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Appendix I

Information Regarding Types of Protective Fencing and Barrier Types (BS: 5837: 2012 Part 6.2).

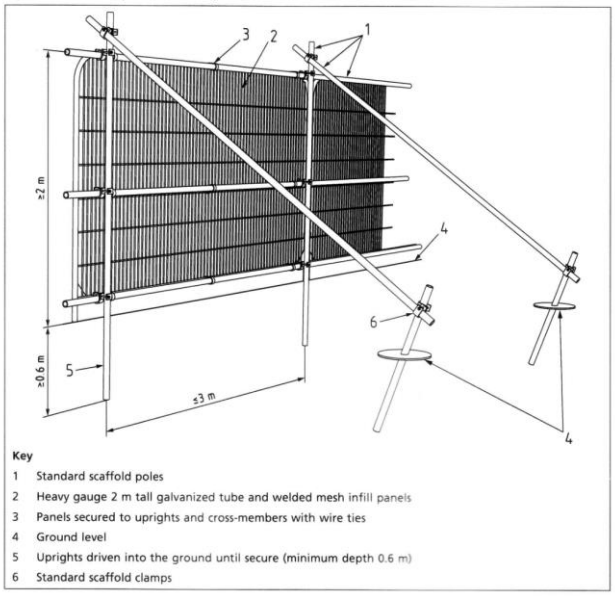
All trees to be retained on site should be protected by barriers or ground protection. The barriers should be erected before any materials or machinery are brought on site and should not be removed or altered without prior consent by a qualified Arborist.

Barriers should be fit for the purpose of excluding construction activity and appropriate to the level and proximity of work taken place around the trees. Barriers should remain rigid and complete.

In most cases, barriers should consist of scaffolding framework in accordance with Figure 2, below, which comprises of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at maximum intervals of 3 metres.

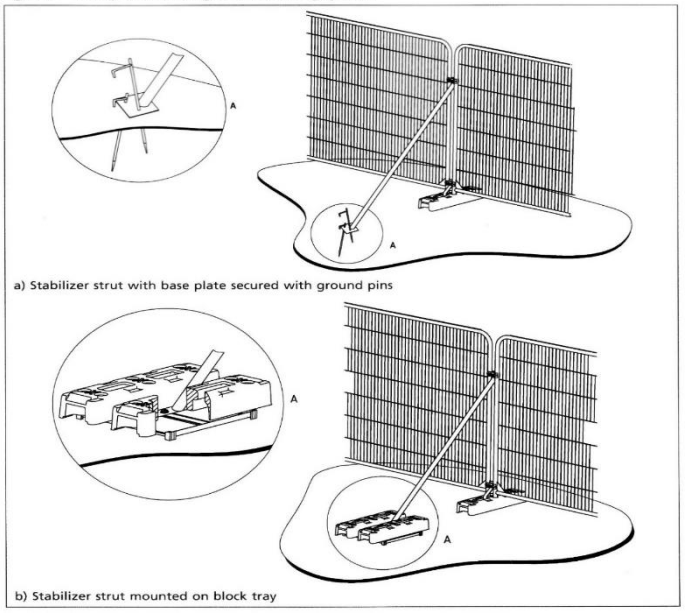
Should the site circumstances and the associated risk of damaging incursion into the RPA do not necessitate the default level of protection, it may be possible, for the project Arboriculturist to design an alternative specification, and where relevant agreed with the Local Planning Authority. For example 2m tall welded mesh panels on rubber or concrete feet, secured with two couplers and supported with stabiliser struts. See Figure 3.

Figure 2 **Default specification for protective barrier**



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3 **Examples of above-ground stabilizing systems**



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Appendix II

NJUG (National Joint Utilities Group)

'Guidelines for the Planning, Installation, and Maintenance of Utility Services in Proximity to Trees'.

NJUG guidelines are applicable to all underground and overhead services and to trees in various locations. The guidelines should be considered when; a) services are to be maintained or managed and trees are to be managed, b) when new services are to be constructed adjacent to existing trees, and c) where new trees are to be planted adjacent to existing services.

Generally, the majority of the trees rooting system is in the first 600mm of the soil, and tends to extend in a radial direction with distances in excess of the trees height. Excavations within root protection area's of trees are likely to damage roots. Therefore, whenever trees are present, it is important to minimise damage to the trees' rooting system. Excavation of open trenches by machine is totally unacceptable within root protection areas.

As the extent of the trees rooting system is often unpredictable, careful control and supervision of any excavation, particular if it involves digging through the surface 600mm where the majority of roots develop.

Where possible, services should be diverted outside of root protection areas. However, where this is not possible, there are various techniques, which may be used to minimise damage to tree roots. The method for lying depends on the following:

- The scope of the works (i.e. are the works a one-off repair, or do they form part of an extensive operation?).
- Degree of urgency (for restoration of supplies)
- Knowledge of location of other services
- Soil conditions
- Amenity value of tree
- Cost

Acceptable techniques for the laying of services in order of preference are:

Trenchless - Wherever possible trenchless techniques should be used. Pit excavations for starting and receiving the machinery should be located outside the root protection area.

In order to avoid damage, the recommended depth of the run should be below 600mm. External lubrication of the mole with materials other than water should be avoided, unless precautions are taken to ensure no contamination of soil within 600mm of the surface within the root protection area.

Broken trench – Combines hand dug trench sections with trenchless techniques. If excavations are unavoidable it should be limited to practical access and installation around / below the roots. The trench must be excavated by hand. Open sections should only be long enough to allow access for linking to the next section. Lengths of sections will be determined by local conditions such as soil texture, cohesiveness as well as the practical need for access. In all cases open sections should be kept as short as possible.

Continuous trench – must be undertaken by hand as to retain as many roots as possible. Needs to be undertaken with great care, and therefore is likely to require close supervision, and undertaken by fully competent operatives.

After careful removal of the hard surface material, digging should be undertaken with hand tools. Clumps of smaller roots, including fibrous roots and roots greater than 25mm diameter, should be retained. Roots with a diameter greater than 25mm should not be cut without prior advice from a qualified arborist. If severance is unavoidable, roots must be cut back using a sharp tool, leaving the smallest wound.

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Appendix III

Terminology

It should be noted that trees are dynamic organisms and as such are subject to change. The details recorded in this report only apply to those visibly apparent on the day of inspection.

No diagnostic tools were used in the assessment; the trees were only assessed visually from ground level. A DBH tape was used to measure the diameter at breast height of the trees. The height and crown spread was estimated.

It should be noted that the trees may be the subject of a Tree Preservation Order or may lie within a Conservation Area. Therefore, the Local Planning Authority must be contacted before any works are carried out upon the trees.

1.0 Tree number:

Each of the trees surveyed was allocated a unique T number, these T numbers are specific to this report only.

1.1 Tree species:

Full botanical name (genus and species) and common name has been given.

1.2 Age class:

Tree age was estimated using the surveyor's professional experience and placed in one of the following categories:

a) Over mature - crown starting to break up and decrease in size.

b) Mature - more or less at full height but still increasing in girth rapidly. This category may be extended into the late maturity class, whereby the tree is more or less at full height and large girth but increasing only slowly.

c) Semi-mature - between 1/3 and 2/3 of the expected height.

d) Young - established tree up to 1/3 expected ultimate height.

1.3 Height:

Individual tree height was estimated.

1.4 Crown spread:

The crown spread of the tree was measured in metres from the centre of the tree in north, south, east and westerly directions.

1.5 D.B.H:

The diameter at breast height was measured at the standard 1.5 meters above soil level.

1.6 Condition:

A general arboricultural account of the tree's health and form were noted based on site observations. The trees were then placed in one of the following categories:

a) Good – full healthy canopy but possibly including some suppressed branches or minor physical damage.

b) Reasonable – slightly reduced leaf cover, minor deadwood or isolated areas of more extensive deadwood.

c) Poor – overall sparse leafing or extensive dead wood.

d) In decline – large areas of the crown dead.

Note – The assessment of overall condition also considers other factors including the appearance of the trunk and branches – splits and/ or breaks; potentially weak structural features such as forks, crossing branches, cavities, decay and physical damage to stem or branches.

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Appendix IV

British Standard Tree Categorisation 2012

Category A Light Green: (RGB code 000-255-000)

Trees of high quality with an estimated remaining life expectancy of at least 40 years

1. Trees that are good example of their species, especially if rare or unusual; or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and / or principle trees within an avenue).
2. Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape
3. Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).

Category B Mid Blue: (RGB code 000-000-255)

Those of moderate quality with an estimated remaining life expectancy of at least 20 years

1. Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial 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 special quality necessary to merit the category A designation
2. 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 contribution to the wider locality.
3. Trees with material conservation or other cultural value.

Category C Grey: (RGB code 091-091-091)

Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter of below 150mm

1. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2. Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offer low or only temporary /transient landscape benefits
3. Trees with no material conservation or other cultural value.

Category U Dark Red: Trees for removal (RGB code 127-000-000)

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.

1. 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)
2. Trees that are dead or are showing signs of significant immediate and irreversible overall decline.
3. 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 value.

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Appendix V

Tree detail:

Where applicable, the surveyor may record specific problems/defects associated with a particular tree. This may include consideration of the root plate and the trunk/soil interface, cracking, mounding, presence of fungi as well as an examination of previous management practices such as pollarding, crown reduction/thinning, etc. In the majority of instances, the intensity/severity of the problem/defect will also be recorded individually.

Estimated remaining contribution in years:

a) < 10
b) 10+
c) 20+
d) 40+

1.10 Recommendations:

All recommendations are based on the author's previous experience and knowledge.

All recommendations are valid for a period of one year, from the date of inspection.

The following terms may be used:

(a) Crown clean – the removal of dead, dying, diseased and crossing branches.

(b) Crown raise/lift – the removal of the lower branches to allow the unhindered passage of pedestrians/vehicles.

(c) Crown thin – the removal of branches within the crown to permit the free flow of air, allow greater light penetration or to reduce crown/ branch weight.

(d) Removal – the controlled dismantling or felling of a tree, usually to just above ground level.

The removal of stumps (usually by stump grinder) to below ground level removes trip hazards and can significantly reduce potential sources of infection.

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Appendix VI

Glossary of Terms Strouts *et al* (2000) & Lonsdale (1999)

Arboriculture	formally, the culture of trees.
Assessment	in relation to tree hazards, the process of estimating the risk which a tree or a group of trees pose to persons or property.
Aerial	above ground.
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.
Blight	a loose term describing the extensive and rapid death and collapse of soft tissue.
Bole (trunk)	the main stem of a tree below its first major branch.
Bracket fungus	a fungus whose fruiting bodies resemble brackets shelves or hoofs.
Branch	a limb extending from the main stem or parent branch of a tree.
Branch bark ridge	the raised arch of bark tissue that forms within the acute angle between a branch and its parent stem.
Branch collar	a swelling at the base of a branch whose diameter growth has been disproportionally slow compared to that of the parent stem; a term also applied to the pattern in which the cells of the parent stem grows around the branch base, even if no swelling is thereby formed.
Brown-rot	a type of wood decaying in which cellulose is degraded, while lignin is only modified.
Butt	the basal end of the trunk.
Callus	a term with more than one botanical meaning, especially an undifferentiated mass of cells, for example forming on the upper sides of the junctions
Canker	a clearly defined patch of dead and sunken or malformed bark.
Canker-rot	a disease in which the causal fungus gives rise to both bark canker and underlying wood
Chlorosis	abnormal yellow or yellow-green coloration of normally green foliage.
Co-dominant	"A fork comprising co-dominant leaders is somewhat weaker than a junction between a main stem and a subsidiary branch. In the region where the branch merges with the parent stem, its wood is partially enveloped by the latter due to its smaller annual growth in diameter". (Lonsdale. 1999).
Defect	in relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.
Dieback	often used to mean 'death'. Here used to mean progressive death of a tree or branch from its extremities towards the roots.
Flush-cut	a pruning cut close to the parent stem which removes part of the branch bark ridge.
Fruit body	a general term for any kind of fungal, spore-bearing structure.
Gall	abnormal plant growth.

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Hazard beam	in a tree, an upwardly curved part in which strong internal stresses may occur without the compensatory formation of extra wood.
Host (tree)	the tree on or which the parasite lives.
Included bark	(ingrown bark) bark of adjacent part of the tree (usually in forks acutely angled branches or basal flutes) which is in face-to-face contact so that there is weakness due to the lack of woody union.
Lignin	the hard, cement like constituent of wood cells.
Lion-tailing	a term applied to a branch of a tree that wholly or largely lacks side-branches, except near its tip, and may thus be liable to snap due to end loading.
Natural pruning	the shedding of a twig or branch that has died back naturally and has become decayed at or near its base (often due to the activation of wood-decaying endophytes).
Necrosis	death of plant tissue, usually characterised by a change in colour to brown or black.
Occlusion	the overgrowth of a wound with (callus) tissue produced subsequently (verb occlude).
Remedial action	in tree hazard management, action to remove or mitigate the risk of injury to persons or damage to property.
Stag-headed	describes the silhouette of a large tree whose crown has died back so that the ends of the dead branches protrude like spikes or antlers from the reduced live foliated crown.
Sucker	regenerated growth shoots / water shoots usually from the base and stem of trees. Many species cause galls.

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