The Shire, St Ronan's Way, Innerleithen



### **TREE SAFETY SURVEY**

for

### Jane Nyberg

in regard of Trees within the grounds of The Shire St. Ronan's Way Innerleithen EH44 6RG

March 2024 Prepared by Liam Dawson BSC (Hons) Quote reference: 386

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## 1. Introduction

Jane Nyberg accepted Thomson Trees Ltd written quotation on 1<sup>st</sup> March 2024 to carry out a negative tree safety survey of trees present within the grounds of The Shire, Innerleithen, and to produce a report highlighting defects in respect of trees growing in the surveyed area.

This was a type 1 Visual Tree Assessment (VTA) (Mattheck and Breloer), conducted from ground level, and the trees requiring remedial work were identified with tags.

The survey was carried out by Liam Dawson on 18<sup>th</sup> March 2024.

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## 2. Limitations

No invasive decay measuring techniques or soil samples were undertaken and should further investigation be required it is highlighted in the report.

The findings and recommendations contained within this report are valid for a period of twelve months from the date of inspection. Trees are living organisms subject to change. It is strongly recommended that the trees are inspected regularly for reasons of safety.

The recommendations relate to the site as it exists at present, and to the current level and pattern of usage. The degree of risk and hazard may alter if the site is changed or the pattern of access changes and as such will require re-inspection.

The timing of the inspection was such that no assessment was possible of some species of fungal fruiting bodies which are only visible at certain times of year.

Every effort has been made to identify foreseeable defects in the trees inspected, however, the health and condition of individual trees cannot be guaranteed, and even apparently healthy trees can be damaged due to extreme or unseasonal weather conditions.

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## 3. Summary

A total of nine trees were surveyed on site. Six trees were found to be in poor condition, and three were found to be in fair condition. The trees surveyed were a mixture of beech, birch, sycamore oak, elm, and ash from semi-mature to mature age classes.

Five trees require some form of pruning.

One tree will require reinspection in leaf.

Four trees require removal.

One tree is recommended to be subjected to further decay detection to determine structural integrity.

Two trees require aerial inspection of features not fully observable from ground level.

Two trees require monitoring for the progression of various conditions. The re-inspection interval has been reduced for these trees accordingly.

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# 4. Investigation Findings

The site of the survey is a well-kept garden in the St Ronan's area of Innerleithen.

Several surveyed trees (3716, 3717, 3720) appear to have been affected by excavation for ongoing development of the neighbouring property, with root protection areas being apparently disregarded and significant roots having been severed. This will necessitate the removal of the small sycamore and beech closest (3717, 3720) to the property line and will likely affect the elm (3716) in the longer term.

Two trees, an oak and a birch (3721, 3722) grow in some degree of entanglement adjacent to your house, over a tree house. Both are in a poor condition, with the birch apparently quite hollow and potentially partially propped-up by the oak. The birch exhibits low vitality, with poor branch elongation. The oak also exhibits low vitality, with a high proportion of dead wood in the canopy, also with apparent hollowness in the trunk.

An ash (3715) on your property boundary requires removal due to the presence of ash dieback and very significant structural defects.

Other trees in the survey require more minor pruning of dead wood and aerial inspection of features not fully observable from ground level.

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# 5. Management Recommendations

All tree work must be carried out by professional and fully insured tree surgeons (arborists) to British Standard 3998:2010 "Recommendations for Tree Works".

There are two recognised schemes in the UK certifying the competence of arborists through examination and regular re-assessment:

1) The Arboricultural Association maintains an online directory of Arb Approved Contractors.

2) Individuals may also be certified by the International Society of Arboriculture.

Thomson Trees Ltd are qualified Arb Approved Contractors.

It is an offence under Section 1 of the Wildlife and Countryside Act of 1981 to intentionally take, damage or destroy the nest of any wild bird while it is in use or being built. If you suspect, there are any birds nesting in any tree's you will need to delay carrying out the tree work until the young have fledged.

It is an offence under the Conservation (Natural Habitats, etc) Regulations 1994 (as amended) to damage or destroy a bat roosting place, even if there are no bats present at the time. We believe that some of the trees have medium to high bat roost potential and therefore prior to any tree work commencing, we recommend your arborist conducts a visual inspection for signs of bats. If evidence of bats is found, an individual holding a Bat Licence will need to be consulted on how operations should proceed.

We checked the Scottish Borders Council online interactive map and identified that your property is not in a conservation area. It is, however, subject to a Tree Preservation Order (TPO) (ref: SBC23) and it will be necessary to apply to the Council to carry out any tree work. Your appointed arborist should be able to apply on your behalf.

Those undertaking work on trees have a responsibility to implement routine biosecurity control measures, especially on higher risk sites highlighted by the biosecurity risk assessment process. This should include the cleaning and disinfection of clothing, Personal Protective Equipment (PPE), tools, equipment, and vehicles.

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### **Remedial Work Recommendations:**

Tag	Species	Recommendation	Timescale
3715	Common ash (Fraxinus excelsior)	Remove; also remove broken, hanging limbs from adjacent sycamore 3m to east	High (3 months)
3721	Pedunculate oak (Quercus robur)	Use of decay detection equipment to determine structural integrity; prune dead wood in canopy; reduce limb over garden pod with decaying cavity to remove damage; monitor for decline	High (3 months)
3722	Silver birch (Betula pendula)	Remove	High (3 months)
3712	Pedunculate oak (Quercus robur)	Use of decay detection equipment to determine extent of dysfunction at base of stem; aerial inspection of pruning wounds at 3, 7, 10, 11m; prune dead wood over targets	Moderate (6 Months)
3713	English elm (Ulmus procera)	Prune dead wood in canopy	Moderate (6 Months)
3714	Sycamore (Acer pseudoplatanus)	Prune dead wood from canopy; aerial inspection of squirrel damage	Moderate (6 Months)
3716	English elm (Ulmus procera)	Monitor; prune dead wood	Low (1 Year)
3717	Sycamore (Acer pseudoplatanus)	Remove	Low (1 Year)
3720	Common beech (Fagus sylvatica)	Remove	Low (1 Year)

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### **Re-Inspection Recommendations:**

Some of the surveyed trees are recommended to be monitored; the re-inspection frequency has been increased with this in mind.

Given that the survey has only touched on the trees currently presenting defects, it is recommended that the negative survey is repeated as a 3-year cycle.

### Trees to be re-inspected within 6 months.

(Should be re-inspected within 6 months of the report. i.e., by the end of September 2024)

Tag	Species	Inspect Period
3721	Pedunculate oak (Quercus robur)	6 Months

### Trees to be re-inspected within 2 years.

(Should be re-inspected within 2 years of the report. i.e., by the end of March 2026)

Tag	Species	Inspect Period
3712	Pedunculate oak (Quercus robur)	2 Years
3716	English elm (Ulmus procera)	2 Years

### Trees to be re-inspected within 3 years.

(Should be re-inspected within 3 years of the report. i.e., by the end of March 2027)

Tag	Species	Inspect Period
3713	English elm (Ulmus procera)	3 Years
3714	Sycamore (Acer pseudoplatanus)	3 Years

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# 6. Opinion

This report has discussed the presence of a development site in the adjacent property to your own, and the effects it has had beyond the bounds of that particular property. In the process of site preparation, the excavation for foundations has certainly irreparably damaged the root systems of two small, semi-mature trees growing on your boundary, and may have compromised the future rooting of a third, larger tree. This is particularly disappointing given the projected loss of several trees within your own property which this tree could have somewhat mitigated.

In addition to this, the severe mounding of building spoil on the root zones of two additional trees in the adjacent plot will also likely result in their loss. As one of these is within striking distance of your property it would be worth raising this with the council, given the protected status of these trees.

In the case of oak (3721) the use of decay detection equipment to determine structural integrity of the main stem is recommended. There will of course be a cost involved in carrying out this procedure, however without determining the safety of the tree in this way we will struggle to recommend the retention of it.

Given the TPO that the property is situated in, we would encourage you to replant with high-quality, specimen trees, as this will likely be a condition of permission to remove trees discussed in this report. Advice on replanting can be given by an arboricultural consultant, or your elected arboricultural contractor.

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# APPENDICES

## References

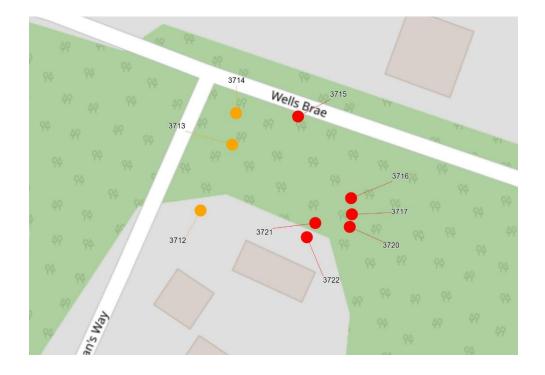
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### **Tree Location Plan**



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## **Tree Schedule**

Tag	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3712	Pedunculate oak (Quercus robur)	23	82	3	6	10	4	Mature	Normal	Building Dwelling Road	Fair	Single stem tree growing in garden, adjacent to house, overhanging; fungal fruiting bodies from the Lycoperdaceae family found at base of stem; wire embedded in stem at 1.5m; major union at 3m where 2 co-dominant stems originate forming u-shaped union; pruning wound at base of stem to the south, 200mm in diameter with good reaction wood and limited decay of heartwood; limbs over house to east have been pruned back at 3, 7 & 10m, not to pruning points, leaving approximately 250- 300mm diameter wounds, wounds not fully observable from ground level; limbs exhibit erratic epicormic growth on them; further pruning wounds at 11m on limb to south; relatively minor dead wood in upper canopy over decking and driveway	Aerial inspection of pruning wounds at 3, 7, 10, 11m; prune dead wood over targets	Moderate (6 Months)	5+	2 Years

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Тад	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3713	English elm (Ulmus procera)	24	76	4	7	6	7	Mature	Normal	Dwelling Footpath Road Garden pod	Fair	Single stem tree growing in garden; trimmed epicormic growth at base of stem; major union at 6m where 2 co-dominant stems originate forming u-shaped union; stem historically crown lifted on house side to 14m with associated pruning wounds with fair occlusion, epicormic growth on some wounds; some relatively minor dead wood in the upper canopy	Prune dead wood in canopy	Moderate (6 Months)	5+	3 Years

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Тад	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3714	Sycamore (Acer pseudoplatanus)	24	72	5	4	6	4	Mature	Normal	Dwelling Footpath Road Street lights Garden pod	Fair	Single stem tree growing adjacent to property boundary, overhanging pavement and road; historically crown lifted to 11m with associated wounding, poor pruning technique employed resulting in short stubs with poor occlusion, some small diameter epicormic growth from pruning points; significant dead limb at 14m to south, smaller dead wood at 17m in centre of canopy that appears to be related to squirrel damage of cambium, further squirrel damage elsewhere not fully observable from ground level	Prune dead wood from canopy; aerial inspection of squirrel damage	Moderate (6 Months)	5+	3 Years

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Tag	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3715	Common ash (Fraxinus excelsior)	25	66	5	7	4	6	Mature	Low	Dwelling Footpath Road Street lights Garden pod	Poor	Single stem tree growing on property boundary, adjacent to road, overhanging; wire embedded in stem at 1m; major union at 8m where 2 co-dominant stems originate forming u-shaped union; decaying pruning wound at 8m to north over road with regrowth exerting leverage; stem to south exhibits open cavity of approximately 400x120mm with associated hollowing of stem and dark exudate staining bark suggesting severe hollowing; moderately severe dieback symptoms in canopy with lesions on primary limbs and increased proportion of dead wood, erratic epicormic growth on scaffold limbs, many decaying broken stubs in canopy	Remove; remove broken, hanging limbs from adjacent sycamore 3m to east	High (3 months)	<2	Not Recorded

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Tag	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3716	English elm (Ulmus procera)	14	37	6	7	4	3	Early Mature	Normal	Garden pod Tree house Adjacent property	Poor	Single stem tree growing adjacent to property boundary, overhanging; adjacent property is currently being developed, with foundations dug and laid resulting in damage to rooting by excavation within 3m of stem, tree may not be viable long- term due to severe root zone interruption (root protection area should be 4.4m min.); relatively minor dead wood in canopy	Monitor; prune dead wood	Low (1 Year)	3+	2 Years
3717	Sycamore (Acer pseudoplatanus)	12	15	1	5	4	0	Semi Mature	Normal	Tree house Adjacent property	Poor	Double stem tree growing adjacent to property boundary, overhanging; adjacent property is currently being developed, with foundations dug and laid resulting in damage to rooting by excavation within 2m of stem, tree no longer viable beyond medium term due to severe root zone interruption (root protection area should be 1.7m min.)	Remove	Low (1 Year)	<3	Not Recorded

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Тад	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3720	Common beech (Fagus sylvatica)	10	12	3	4	З	а	Young	Normal	Tree house Adjacent property	Poor	Single stem tree growing adjacent to property boundary, overhanging; adjacent property is currently being developed, with foundations dug and laid resulting in damage to rooting by excavation within 1m of stem, tree no longer viable due to severe root zone interruption (root protection area should be 1.4m min.)	Remove	Low (1 Year)	<3	Not Recorded

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Tag	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3721	Pedunculate oak (Quercus robur)	12	49	5	6	5	5	Mature	Low	Building Dwelling Neighbo uring property	Poor	Single stem tree growing in garden, adjacent to house, tree house and garden pod, overhanging garden pod and pruned back from house; site of historic wounding at 2m to west with apparent degree of severe hollowing as detected by means of sounding mallet; major union at 5m where 3 co- dominant stems originate forming stable unions; limb to south growing through decaying union in adjacent birch, oak may be propping-up birch, this feature appears to be the site of bird nesting activity; limb extending over garden pod to northwest exhibits wounding with associated hollowing on side; high proportion of dead wood in canopy	Use of decay detection equipment to determine structural integrity; prune dead wood in canopy; reduce limb over garden pod with decaying cavity to remove damage; monitor for decline; reinspect in leaf	High (3 months)	2+	6 Months

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Тад	Species	Height	DBH (cm)	Crown Spread (N)	Crown Spread (E)	Crown Spread (S)	Crown Spread (W)	Life Stage	Vigour	Targets	Condition	Survey Notes	Recommendations	Timescale	Life expectancy (years)	Inspect Period
3722	Silver birch (Betula pendula)	17	40	6	5	3	3	Mature	Low	Building Dwelling Neighbo uring property	Poor	Single stem tree growing adjacent to dwelling, leaning away, tree house over root zone; through- and-through rib in stem running east-west, apparent degree of hollowing of stem from ground level to 2m major limb to west at 10m pruned, leaving 600mm stub which supports a limb growing from an adjacent oak tree, severe rubbing and creaking noises in breeze, apparent decay and hollowing of stub with dark staining of stem below; upper canopy appears relatively sparse with reduced branch elongation	Remove	High (3 months)	<2	Not Recorded



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## Key

### DBH Range measured @ 1.5m

S	0 – 25cm
M	25 – 50cm
L	50 – 75cm
VL	75 – 100cm
VVL	100cm+

### Life Stage:

Young	Young (up to 1/3 <sup>rd</sup> of expected height)
Semi Mature	Semi-Mature (1/3 <sup>rd</sup> to 2/3 <sup>rd</sup> of expected height)
Mature	Mature (close to expected height, but still increasing in girth fairly rapidly)
Over Mature	Over-Mature (close to full height and girth increasing slowly)

### Vitality:

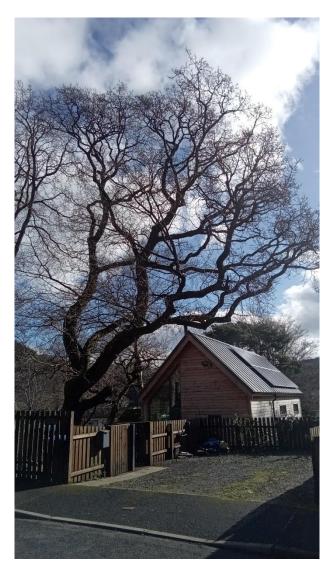
Rating:	Explanation:
Normal	Tree has normal ability to sustain life processes
Low	Tree has low ability to sustain life processes

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## Photographs



OAK (3712) IN SITU

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ASH (3715) IN SITU

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ASH (3715) DETAIL OF LARGE CAVITY IN CO-DOMINANT STEM

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ELM (3716) DETAIL EXCAVATION IN ROOT ZONE

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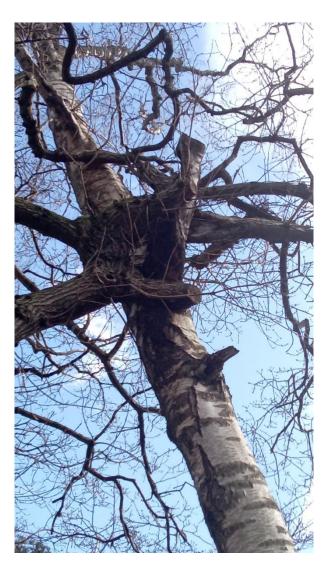


OAK (3721) AND BIRCH (3722) IN SITU, EXHIBITING DEGREE OF ENTANGLEMENT AND POSSIBLE PROPPING-UP OF BIRCH

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BIRCH (3722) DETAIL OF OAK LIMB GROWING THROUGH, AND RUBBING ON DECAYING UNION

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## Glossary

**Aerial Inspection** – The physical act of climbing the tree to examine features and defects that are not observable from ground level.

**Co-dominant stems** - Two or more main stems (or "leaders") that are about the same diameter and emerge from the same location on the main trunk. As the tree grows older, the stems remain similar in size without any single one becoming dominant.

**Compression Fork** - a kind of narrow forking branch union with included bark in which continued radial growth results in pressure which tends to push the limbs of the fork apart.

**Cup Union** – A union formed by adaptive growth of a tree to strengthen a sub-optimal branch union

Crown – The collective of branches, shoots and foliage of a tree.

DBH – Diameter at breast height (1.5m).

**Deadwood** - in the growth and development of a tree, branches compete, and weaker branches are eventually suppressed and die. The dead branches are then liable to fall.

**Defect** – A structural or physiological expression of imperfection in the tree, caused by a variety of factors including, but not limited to, natural presence of fungal fruiting bodies, environment, and physical damage.

**Epicormic Growth** – Small diameter limbs, numerous in nature, generated by the tree to quickly expand the photosynthetic canopy of the tree. A common feature of Lime trees, particularly at the base.

Hanging Limbs – Broken branches, or limbs hanging in the remaining canopy of a tree.

**Occlusion** – The continued radial growth of new wood, including wound wood, which gradually grows over wounds to the woody parts of trees.

**Reaction Wood** – Wood laid down by the tree in an effort to occlude wounding to the trunk and limbs, the form of which can be used to judge the effectiveness of the healing process of the tree.

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### **Reduction** – A type of targeted pruning used to reduce canopy size and spread.

**Rib** – A longitudinal formation that is produced by wound wood on the stem or limbs of a tree.

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## Disclaimer

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