

**Tree Safety Survey**

**Gaskell Fields Much Wenlock**

**For: Much Wenlock Town Council**



**Prepared by:**

David Woodhouse Arboricultural Officer,  
Natural Environment Team, Shropshire Council

**Date:** 22/09/15

## Contents

	Page
<b>1. Brief</b>	<b>1</b>
<b>2. Methodology</b>	<b>1</b>
<b>3. Survey limitations</b>	<b>1</b>
<b>4. Disclaimers</b>	<b>1</b>
<b>5. Background information</b>	<b>2</b>
<b>6. Tree inspection / findings</b>	<b>2</b>
– Ground compaction	
– Mulching trees	
<b>7. Conclusions</b>	<b>4</b>
– Tree Risk Management Process	
<b>8. Remedial work</b>	<b>5</b>
– Timeframe for work	
 <b><u>Appendices</u></b>	
<b>Appendix 1 Tree risk assessment and Location Plans - Gaskell Fields</b>	<b>6</b>
<b>Appendix 2 Tree work recommendations &amp; plans</b>	<b>17</b>
<b>Appendix 3 Key &amp; explanation for assessment and work recommendation criteria</b>	<b>31</b>

## 1. **Brief**

A formal request from Sharon Clayton on behalf of Much Wenlock Town Council has been received for a tree survey of all the trees at Gaskell Fields in Much Wenlock.

- The inspection is to identify all of the trees on the site, undertake a safety inspection of the trees and recommend remedial work where necessary.

## 2. **Methodology**

The trees were surveyed using the industry accepted 'Visual Tree Assessment' methodology and were assessed from ground level using a sounding mallet and a probe.

A risk based approach has been taken in assessing the trees whereby the usage and value of the areas within falling distance of the trees has been assessed (a process known as zoning), along with the likelihood of harm occurring. Such an approach is a quantitative method that recommends remedial safety work according to the likelihood of harm within falling distance of the branch or tree/s.

A tree risk assessment report giving details of the dimensions but also the structural and biological condition of each tree is attached to this document and a defect report identifying those trees that require remedial work is also attached to this report.

## 3. **Survey limitations**

Trees are living organisms subject to the vagaries of natural and man-made influences which may affect their health and condition over time. Thus any recommendations for tree work are valid for a period of 2 years, after which time it is advisable that the trees are resurveyed.

The assessment of the usage and value of areas is undertaken on the day by the assessor. The assessments are made by estimating the usage and as such there will be some scope for error in these assumptions.

## 4. **Disclaimers**

Trees are natural living entities that are subject to changes in their natural environment caused by human activities and weather conditions. The safety and condition of a tree cannot be guaranteed as with all trees a certain degree of risk is inherent and cannot be accounted for during any inspection. Only the factors identified in this report will be commented on and this assessment does not preclude all risk of failure.

This report is for the sole use of the above named client and relates only to the particular trees referred to on site. Use of the information by any other person for purposes not mentioned in this report will render the information useless. The text and content of the report remains the property of Shropshire Council. Copies of the report for purposes other than those directly related to tree management on the related sites should not be made or circulated without the permission of the owner.

## 5. Background information

The site was surveyed over 3 days between 15<sup>th</sup> and 17<sup>th</sup> of September 2015 by David Woodhouse (Arboricultural Officer) on behalf of Shropshire Council. The weather was mostly bright and sunny although there were some rain showers and the wind levels were quite strong on at least one day.

### a. Gaskell Fields

This is a large generally open site with a secondary school located to the northwest boundary. It is a multi-use site with a play area in the south of the site, a bowling green & associated pavilion in the northern part of the site and a cricket square and associated pavilion and machinery store towards the centre of the site. Combined with this the site has an Olympian Trail that encourages members of the public to walk along a Lime Avenue (known as Linden Avenue) which is also a public right of way.



Left: An interpretation board near one of the site entrances, highlighting the history

In general the site has a mature tree stock much of which dates back to the nineteenth century when a Dr William Penny Brookes was involved in creating Wenlock Olympian Society and using Gaskell Recreation Ground as a site for the Wenlock Olympian Games.

The formal planting of a Lime Avenue on the southeastern part of the site is very striking with some similar aged mature trees (mainly Lime & Oak) on the northeast boundary.

Additionally there is publicly accessed land around most of the site boundaries and there are trees around most of the site edges.

Whilst on site, it was evident that William Brookes School uses the site during some sporting activities such as running. It is unclear whether this is a formalised arrangement.



The majority of the trees on the site are protected by a Tree Preservation Order, some trees identified individually and some as groups. Notably each individual tree within Linden Avenue is protected, including the trees on land owned by Shropshire Council on the far side of Linden Avenue.

## **6. Tree inspection / findings**

The trees have been inspected and a report created detailing all of the trees on the site. These reports are followed by a key providing an explanation of the assessment categories and details of the risk matrix used for the survey. The details of the tree survey and accompanying maps are in **Appendix 1 page 6** and the key and risk matrix information in **Appendix 3 page 31**.

For inspection purposes a small number of trees have been classified as groups, this is where tree crowns form a closed canopy with adjacent trees and it has been considered pragmatic to do so. Whilst it may seem logical to identify Linden Avenue as a group, historically these trees have been recorded as individuals, and so this methodology has continued.

The majority of trees are in good structural condition (approximately 80%). There are a small number of trees that have weakened structure either due to natural form or past pruning or branch failure. There is one tree considered to be in poor structural condition which is Oak (109) which has a natural lean from past competition but has also been topped in the past.

There are numerous other trees in fair structural condition some of which is due to natural growth patterns, but a small number have suffered some harsh past pruning from which they have pretty much recovered.

It was noted that nearly all of the Lime trees has extensive basal growth that prevented a close basal inspection. Whilst the trees have been recorded as have good structural condition, all trees where this has been a problem, have associated work recommendations that will require this growth removing and a new basal assessment upon completion of that work.

The biological condition of the trees is also overall good with approximately 85% of the trees in good health. There are 10 trees with fair biological condition and these are mainly located in or close to Linden Avenue. A small number of Lime trees are struggling within the avenue and this may be due to past vehicle access on the field, but currently trees that were showing signs of stress have recovered. The Monkey Puzzle (99) does also appear to be recovering from decline with new growth returning to expected dimensions.

There are two trees in poor health (Oak – 111 & Hawthorn 244), the first is a relatively young tree that has been dying back for a number of years, whereas the Hawthorn is a young/mature example that has decline quite rapidly. There is one tree that has very poor biological condition and this is Sweet Chestnut (122) located near to the bowling green. This tree has been previously reduced because of crown decline and has even had a woodchip mulch applied around the base, but this has not prevented the terminal decline of this tree.

As for pathogens, there are only two trees infected with any pathogens of note. Wellingtonia (66) has a small amount of bleeding exudate at the base, but it is unclear if this is a disease of concern as the crown is not showing any signs of decline. Also Sweet Chestnut (122) has a likely Phytophthora infection that has led to its decline.

### **Ground compaction**

There have been previous concerns regarding the compaction of ground close to Linden Avenue, with evidence of regular passage of vehicles by persons using Gaskell Fields. Following such concerns over the health of a Monkey Puzzle (99) there were a number of bollards installed to prevent passage of vehicles close to this tree. It is clear that after a few years the vigour of the tree appears to have improved with new foliage being larger as would be expected of a tree of this age. It is therefore clearly demonstrated that the bollarding off of this tree has succeeded in improving the health of this tree.

The passage of vehicles on this site is likely to always be a problem and should be kept to the absolute minimum as tree roots are highly sensitive to ground compaction produced by the passage of vehicles.

### **Mulching trees**

There have been past recommendations to apply a woodchip mulch around the base of two trees to the north of the bowling green. One (Sweet Chestnut 122) has not responded to this and has died back further. The other (Oak 43) had mulch applied around the base in 2012/13 and the tree does appear to be stabilising with some evidence of strong growth in the crown. This tree has not yet recovered, but hopefully there will be an upward trend in the vigour. At present the woodchip mulch does not need topping up, but it might be recommended following future inspections as it does appear to be responding positively to the original application.

## **7. Conclusions**

The site has a large amount of tree cover generally in good condition. The species mix is a little limited although there are some very unusual trees present. The site is shrouded in history with much of the planting being historic in nature.

There is significant usage of the site and this is reflected by the high level of grounds maintenance and also the relatively high level of usage in the vicinity of many of the trees.

### **Tree risk management process**

It is important to recognise that as a tree owner Much Wenlock Town Council has a duty of care towards all persons that use the site. Whilst this site is well-used by the public, Much Wenlock Cricket Club, Much Wenlock Bowling Club and also by the adjacent secondary school. Whilst this usage is significant from numerous site inspections it is clear that usage of the site varies significantly with long periods of time throughout the day when there are very few people using much of the site.

With this in mind it is recommended that the site is reinspected biennially to ensure that the duty of care is met and that the management of the risk from trees is managed appropriately.

Records of all inspections (formal and informal) and any tree work should be kept so that if any future issues occur, it can be demonstrated that Much Wenlock Town Council took reasonable steps to manage the risk.

## **8. Remedial work**

The tree survey identified a significant amount of relatively minor work. Most of the work involves the removal of basal epicormic growth from nearly all of the Lime trees, and also where appropriate the light pruning of low branches obstructing passage of pedestrians around the trees.

There are also a small number of these Lime trees with small numbers of dead branches present.

One tree is to be felled because it is virtually dead (Hawthorn - 10) and is located in one of the heavier used part of the site.

Sweet Chestnut (122) has declined so much that it has been recommended that it is now left as a 5m monolith. The type of wood will remain resilient for a great number of years and will offer ecological habitat for birds, notably Green Woodpeckers which are in the vicinity.

As nearly all of the trees are protected by a Tree Preservation Order, a formal application will be made for the recommended work on behalf of Much Wenlock Town Council. Given the nature of the work it is envisaged that this should be approved.

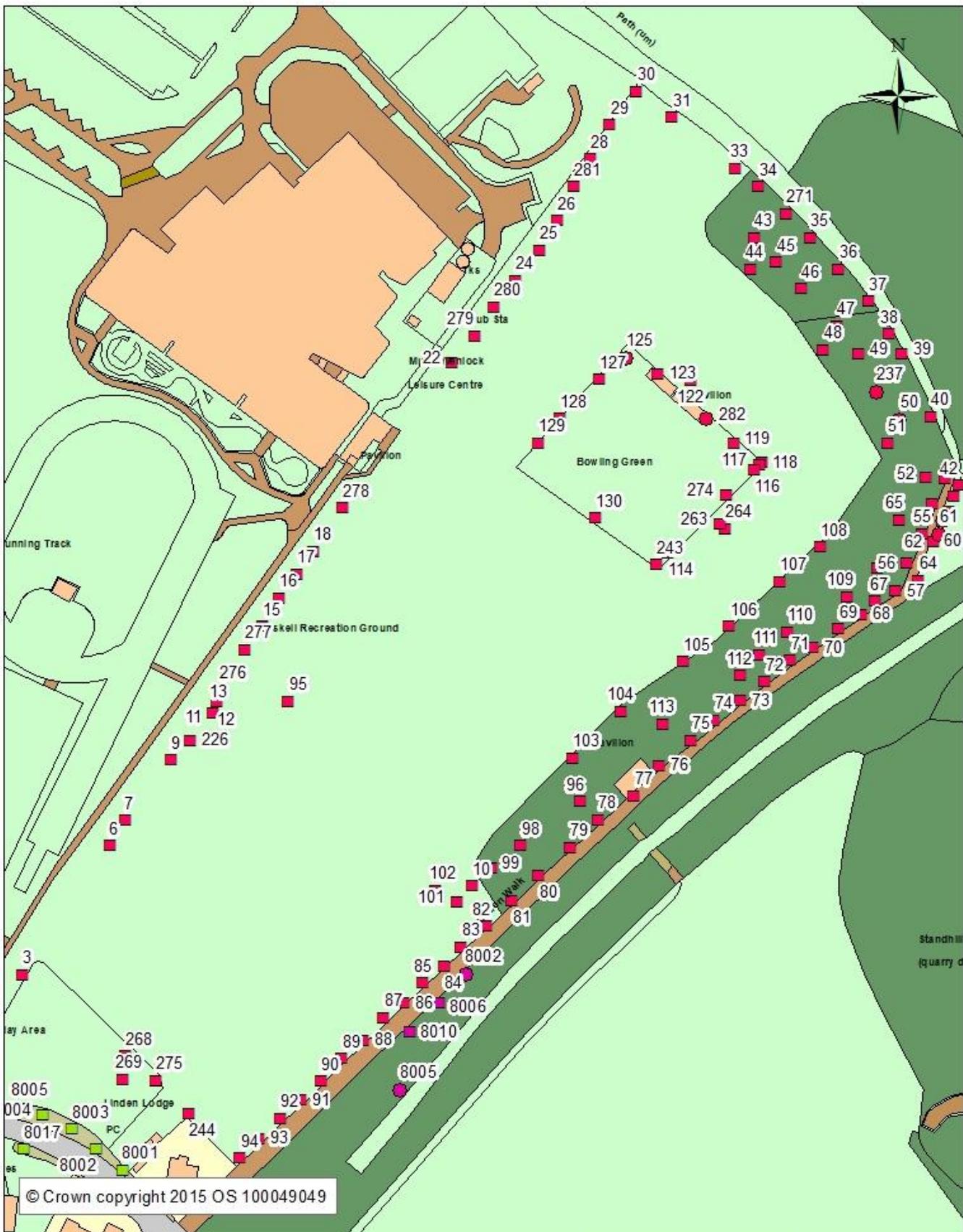
### **Timeframe for work**

The timeframe for undertaking the work varies depending on the risk apportioned during the survey. The shortest timeframe is 3 months and the longest is Routine Maintenance, which has not been given a definite timeframe. This is because the work is generally not safety based and should simply be carried out when funds permit, although it is likely to be pragmatic to undertake such work at the same time.

It is important to undertake the work within the timeframes recommended, and to keep records of this when completed.

It should also be noted that the site is well-used and as such the trees should be re-inspected on a 2-year frequency to ensure that any tree hazards are identified and dealt with appropriately.

**Appendix 1 - Tree Risk Assessment Gaskell Fields, Much Wenlock – Site Plan**



© Crown copyright 2015 OS 100049049

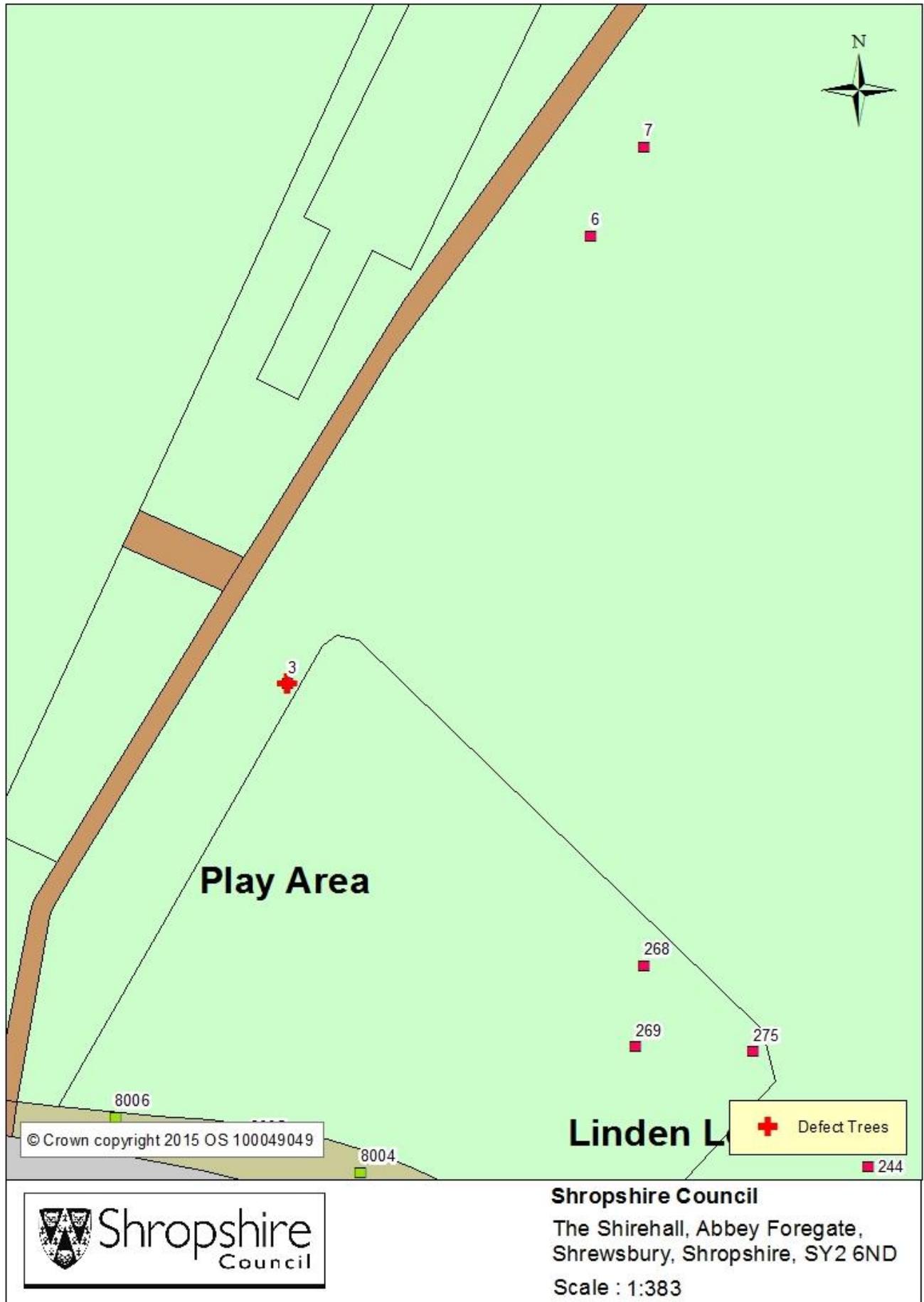


**Shropshire Council**

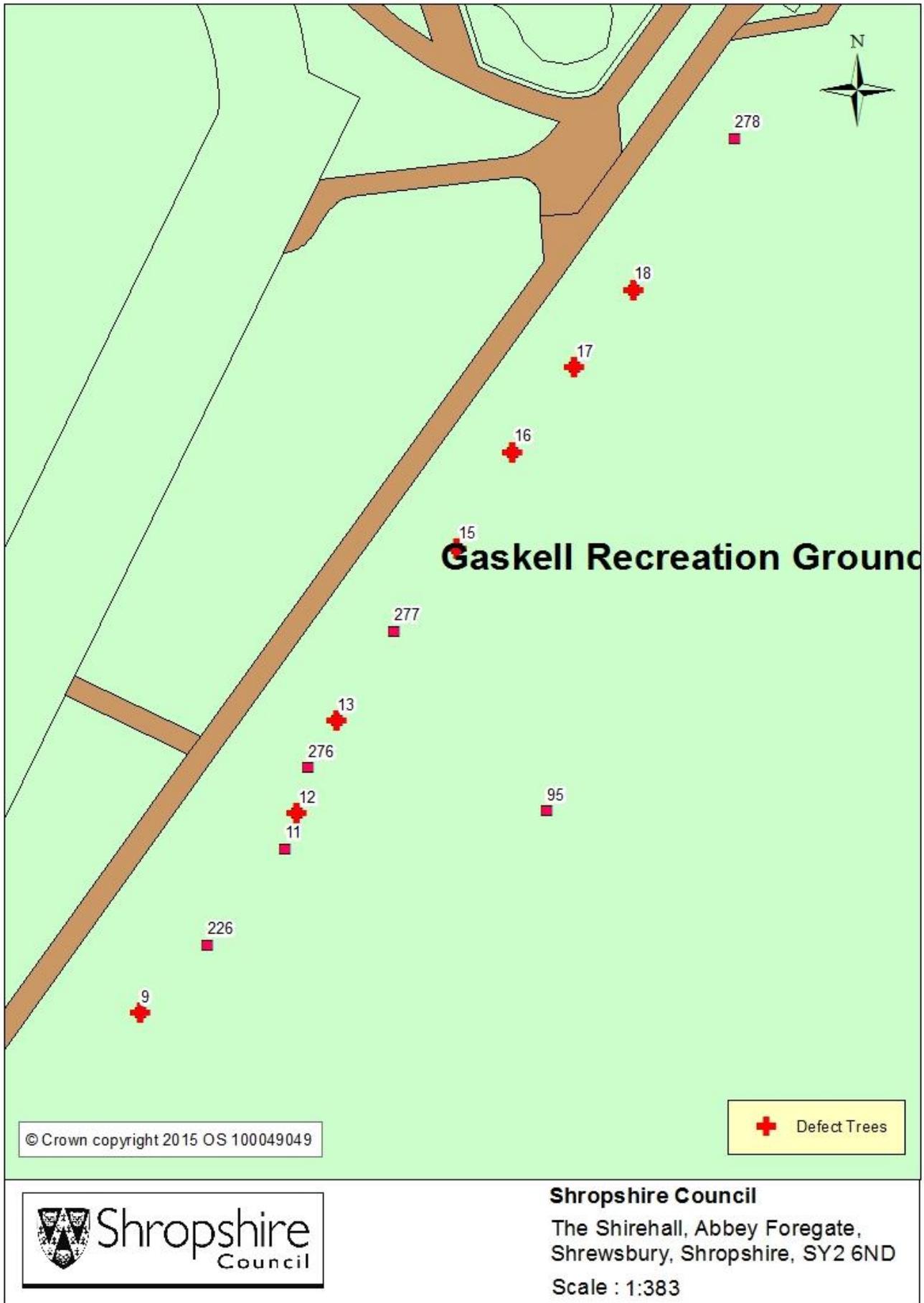
The Shirehall, Abbey Foregate,  
Shrewsbury, Shropshire, SY2 6ND

Scale : 1:1,397

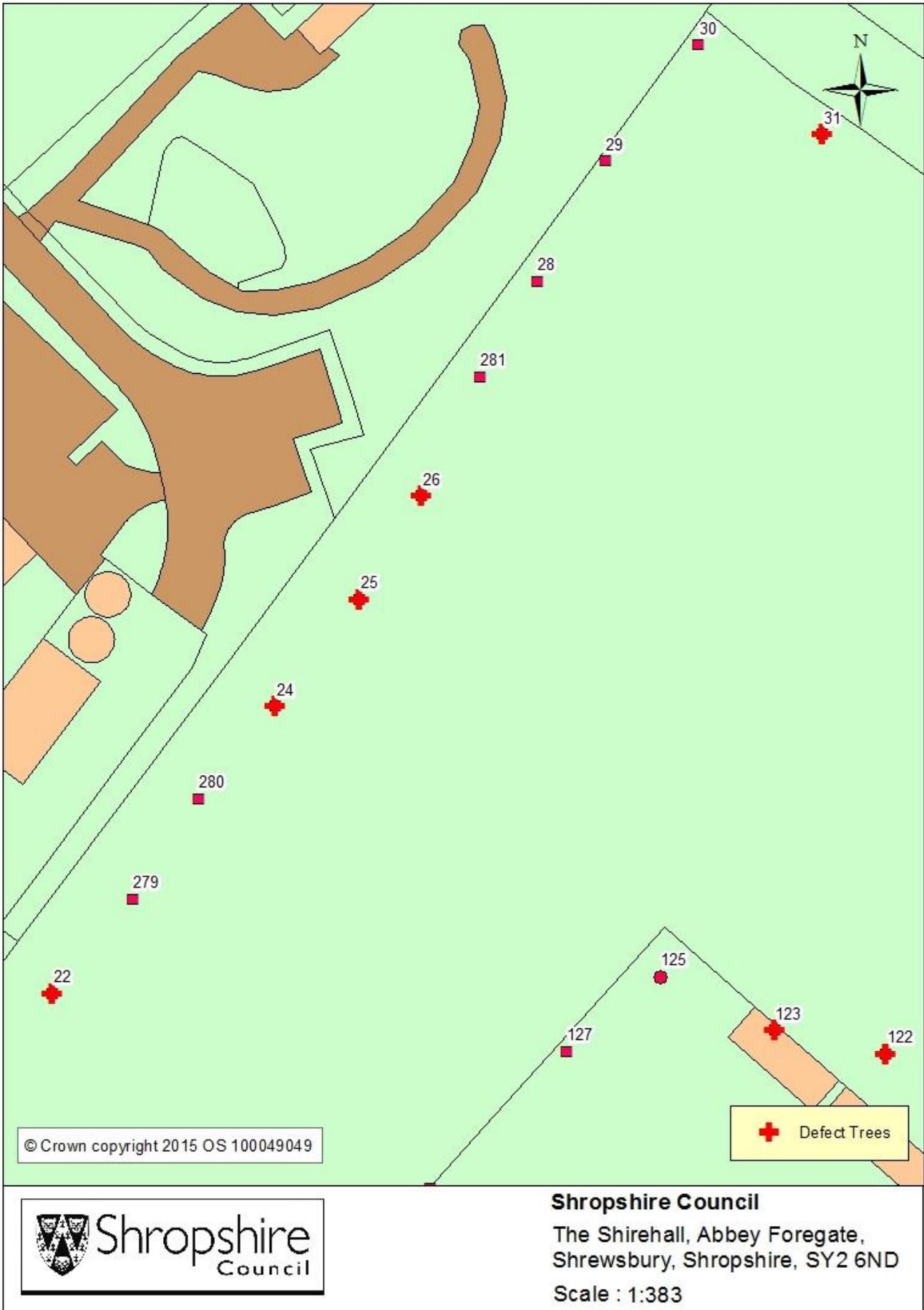
**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no1**



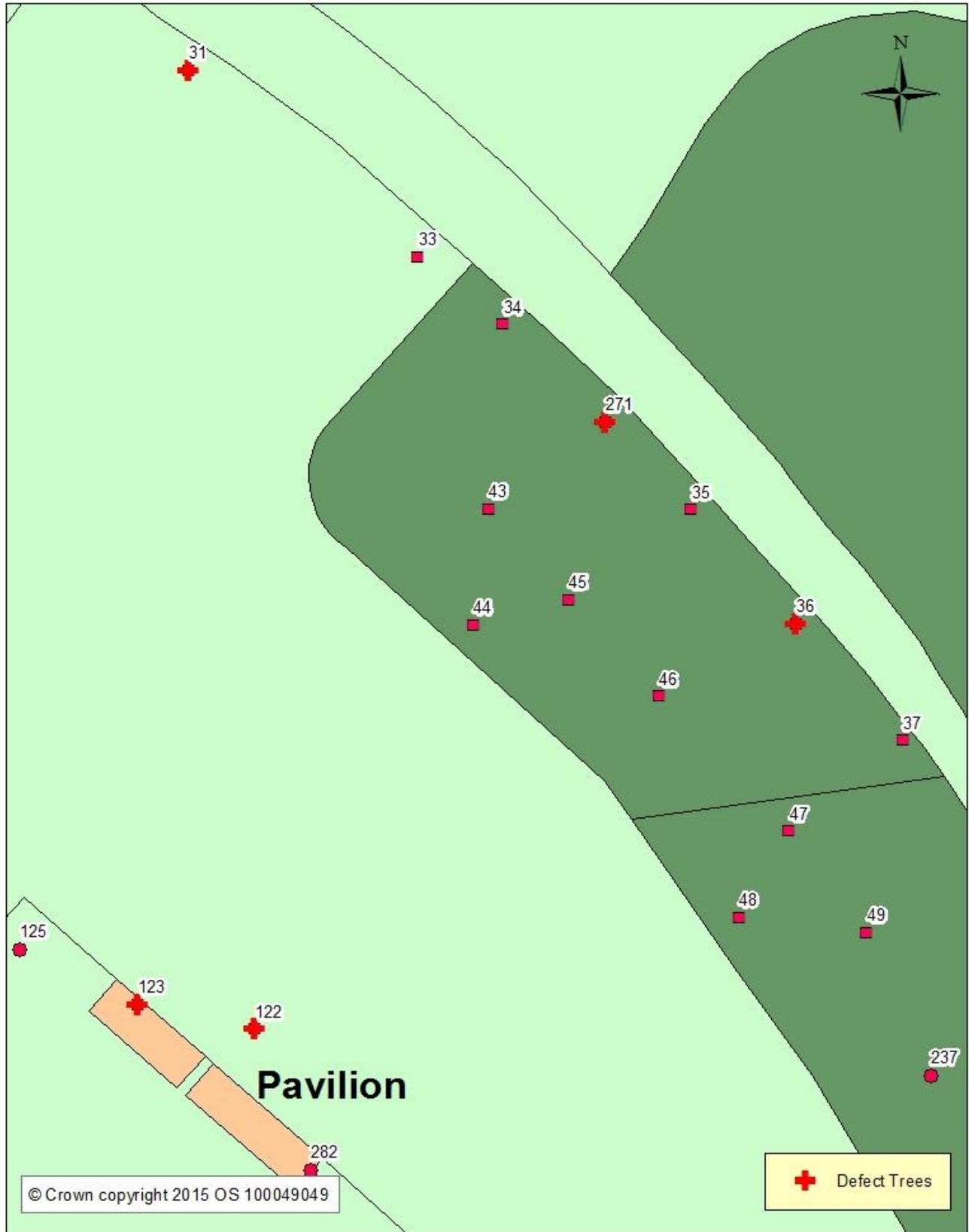
**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no2**



**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no3**

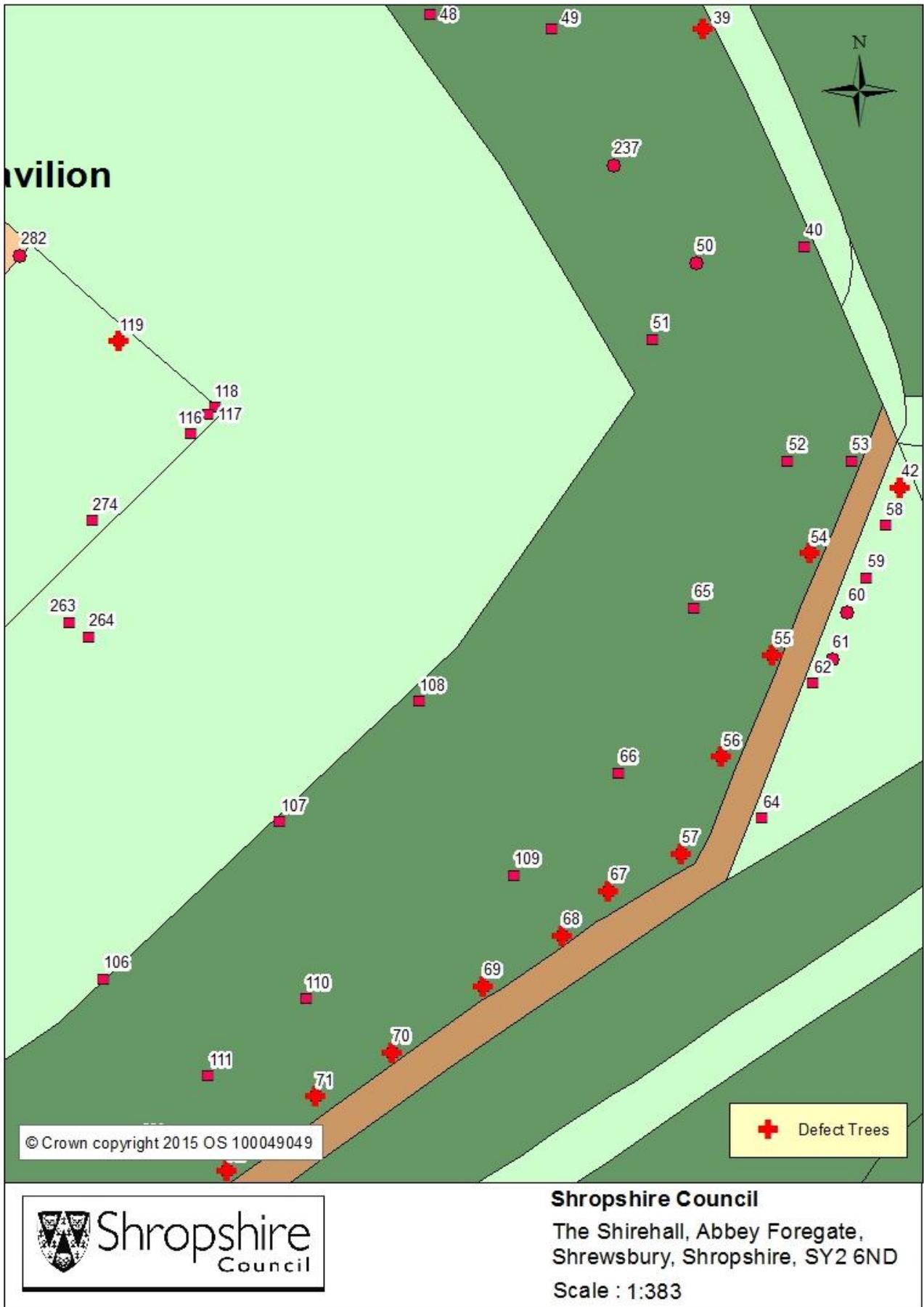


**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no4**

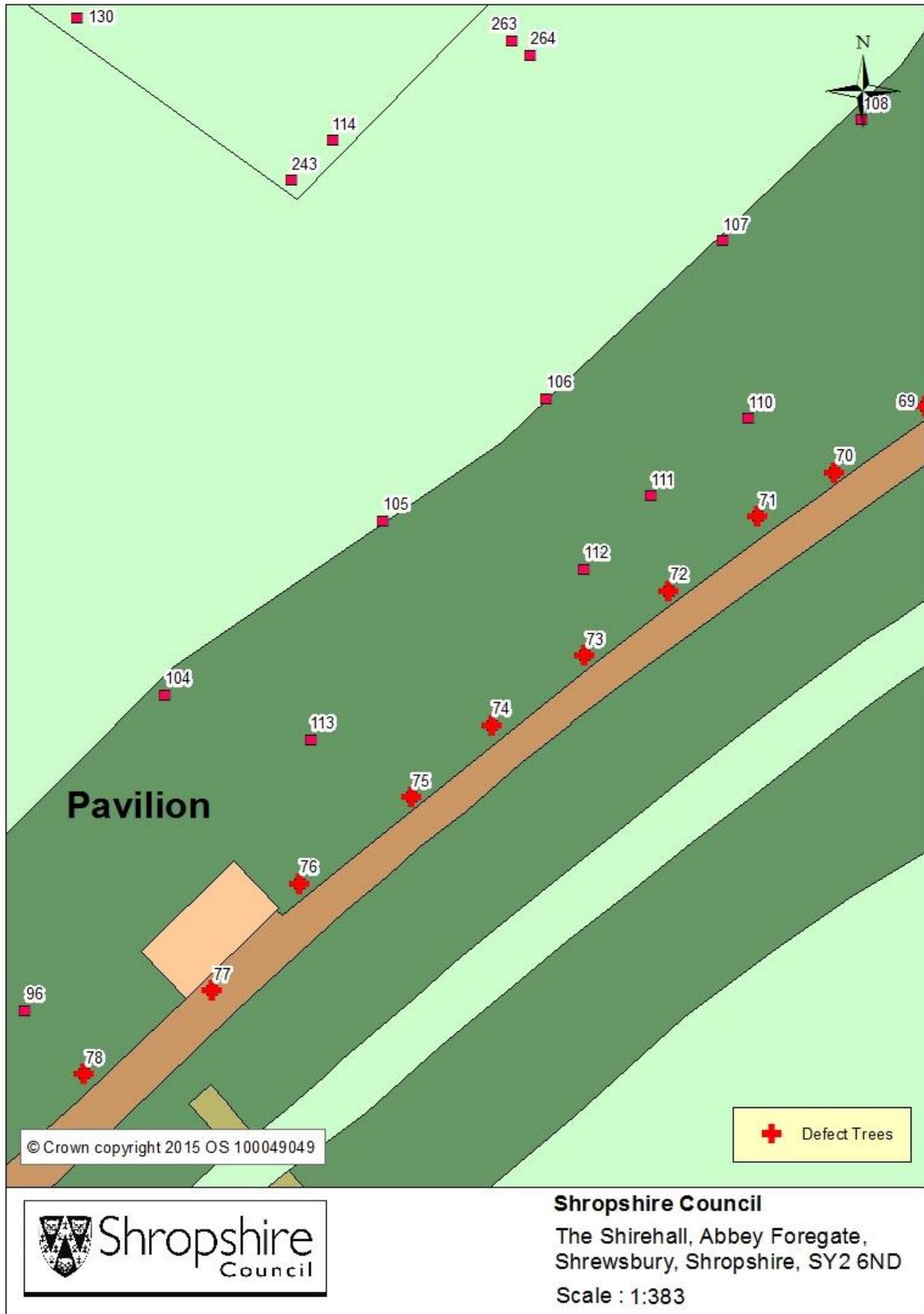


**Shropshire Council**  
The Shirehall, Abbey Foregate,  
Shrewsbury, Shropshire, SY2 6ND  
Scale : 1:383

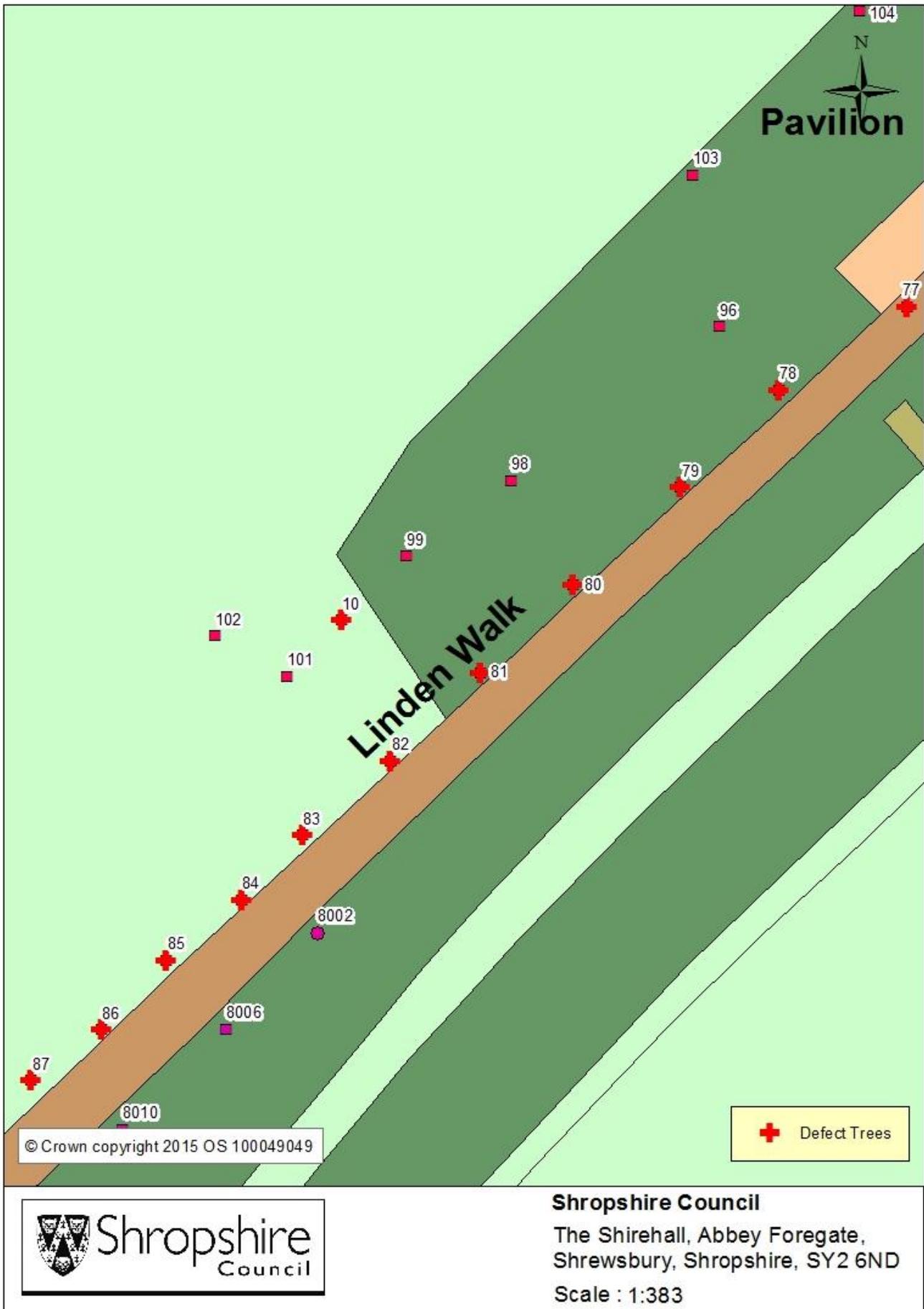
**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no5**



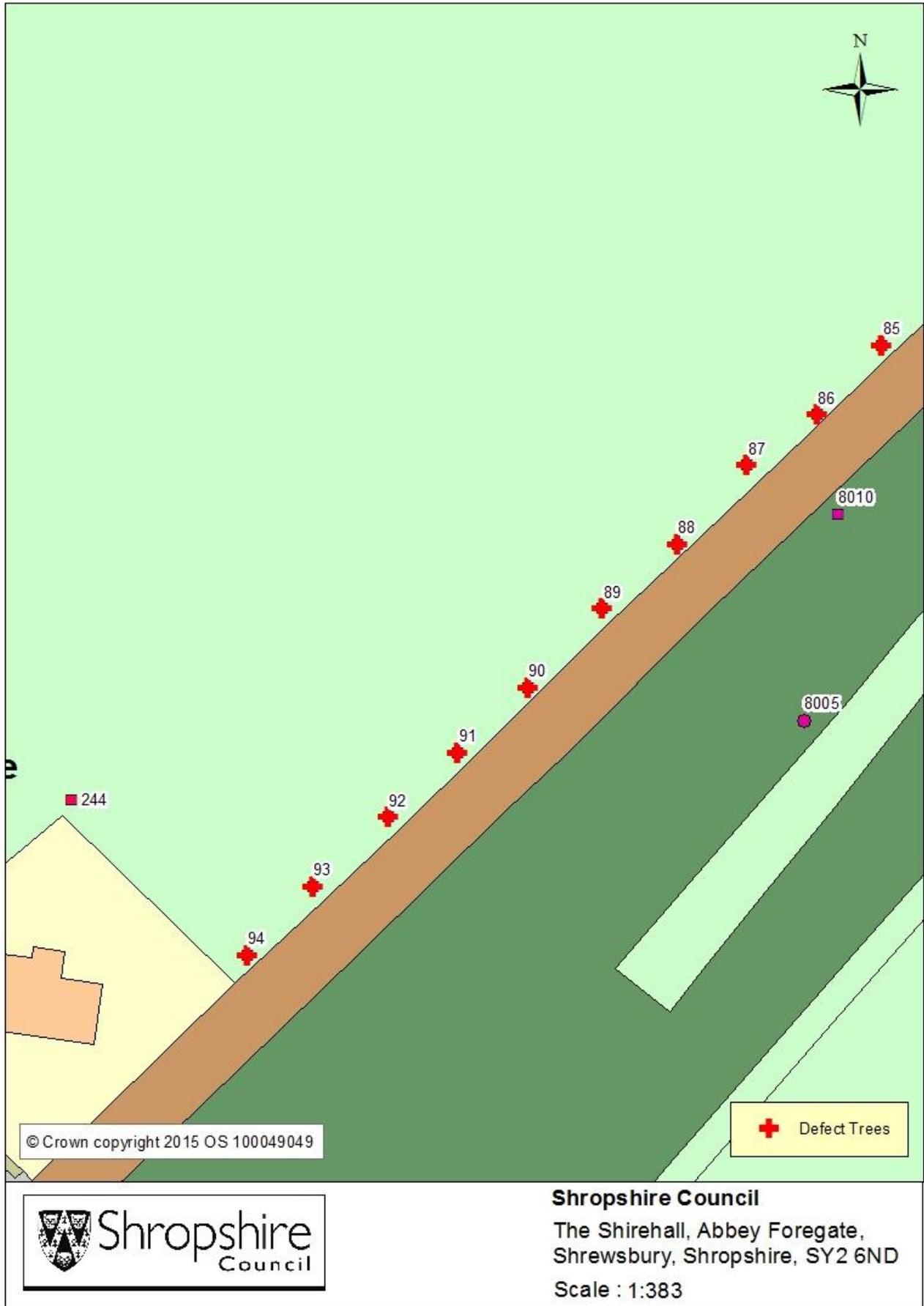
**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no6**



**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no7**



**Appendix 2 - Tree Work Recommendations Gaskell Fields, Much Wenlock – Plan no8**



### Appendix 3 - Key & explanation for assessment and work recommendation criteria

<b>No.</b>	The number of trees, particularly relevant when a group of tree requires work being undertaken.
<b>Tree Name</b>	Common tree name or scientific if not known
<b>Location of tree</b>	A general description of where the tree is situated.
<b>Protected status</b>	This is a category that details whether there are any restrictions regarding the pruning or felling of a tree. Categories are <b>TPO</b> (Tree Preservation Order), <b>CA</b> (Conservation Area) or <b>NP</b> (Not Protected). If the tree is protected a formal application must be submitted to Shropshire Council and approved before any work is undertaken.
<b>Maturity – Age Class</b>	<b>Young (Y)</b> - a tree less than one third of its normal life expectancy for the species and usually showing monopodial growth, <b>Young/Mature (Y/M)</b> – a tree between one and two thirds of its optimum life expectancy for the species normally showing sympodial growth form, <b>Mature (M)</b> – a tree between two thirds and its optimum life expectancy generally that has reached peak crown size and shape for the species , <b>Late Mature(L/M)</b> – in excess of its optimum life expectancy for the species usually with signs of crown decline
<b>Life Expectancy</b>	Dead - <b>D</b> , short (up to 10 years) - <b>S</b> , medium (11-20 years) - <b>M</b> , long (21-40 years) - <b>L</b> , extra long (40+ years) - <b>EL</b>
<b>Height</b>	estimated in metres, <b>Very Large</b> (20m+) – <b>VL</b> ; <b>Large</b> (15-20m) – <b>L</b> ; <b>Medium/Large</b> (10-15m) – <b>ML</b> ; <b>Medium</b> (5-10m) – <b>M</b> ; <b>Small</b> (Under 5m) – <b>S</b> ; <b>Newly Planted</b> (within a few years of being planted, yet to establish) – <b>NP</b> ; <b>Unknown</b>
<b>Spread</b>	total canopy diameter 3 categories <b>Small</b> (up to 5m) – <b>S</b> ; <b>Medium</b> (6-10m) – <b>M</b> ; <b>Large</b> (11m+) - <b>L</b>
<b>Form</b>	<b>Sin - Single Stemmed</b> (Comprising 1 main stem); <b>TWIN - Twin Stemmed</b> (Comprising 2 main stems at or near to ground level); <b>MUL - Multi-stemmed</b> (more than 2 stems), <b>Unknown</b>
<b>Form Rating</b>	An opinion of the form of the tree as a whole, <b>E - Excellent</b> (almost perfect for species, well balanced with no defects), <b>G - Good</b> (generally well formed / balanced for species), <b>M - Moderate</b> (has imbalanced canopy for species & possibly minor defects), <b>P - Poor</b> (has form that is heavily imbalanced and generally vulnerable), <b>VP - Very Poor</b> (is heavily imbalanced and considered highly vulnerable as a result), <b>Unknown</b>
<b>Veteran</b>	Is the tree a veteran tree <b>Yes</b> or <b>no</b>
<b>Pruning History</b>	describe most significant past action pick from <b>Red (Reduced)</b> , <b>Pol (Pollarded)</b> , <b>Top (Topped)</b> , <b>CL (Crown Lifted)</b> , <b>Copp (Coppiced)</b> , <b>UNKN (Unknown)</b>
<b>Vegetation / Growth</b>	Most significant vegetation preventing full inspection pick from <b>EP - Basal Epicormic growth</b> , <b>Ivy</b> , <b>OC - Other Climbers</b> , <b>OV - Other Vegetation</b> , <b>Other</b> , <b>None</b>
<b>Potential Wildlife Habitat</b>	Are there species close to or in tree – <b>Birds (Bir)</b> , <b>Bats (Bat)</b> , <b>Badgers (Bad)</b> , <b>Small Mammals (Mam)</b> , <b>Other (Oth)</b> or <b>None</b>
<b>Commemorative Tree</b>	Is the tree planted in memory of someone or something, usually a plaque is present
<b>Structural Condition</b>	An assessment of the structural integrity of the tree. – <b>Good</b> (no obvious significant structural faults/defects that could lead to remedial work being instigated to prevent partial or whole tree failure), – <b>Moderate</b> (at least 1 significant structural fault/defect that could lead to remedial work being instigated),

### Appendix 3 - Key & explanation for assessment and work recommendation criteria

	<ul style="list-style-type: none"> <li>– <b>Poor</b> (at least 1 significant structural fault and any minor structural faults that is likely to require remedial work being instigated),</li> <li>– <b>Very Poor</b> (at least 2 significant structural faults and any minor structural faults that would normally require remedial work being instigated),</li> </ul>
<b>Biological Condition</b>	<p>An assessment of the biological function of the tree.</p> <ul style="list-style-type: none"> <li>– <b>Good</b> (leaf colour, size, density, general shoot extension and live crown considered normal for species and variety),</li> <li>– <b>Moderate</b> (tree crown showing minor reductions in any of the categories leaf colour, size, density, general shoot extension and live crown considered normal for species and variety),</li> <li>– <b>Poor</b> (tree crown showing significant reductions in the at least two categories of leaf colour, size, density, general shoot extension and live crown from that which would be considered normal. Showing crown dieback in excess of 33% of crown volume),</li> <li>– <b>Very Poor</b> (tree crown showing extensive reductions in the any multiple categories of leaf colour, size, density, general shoot extension and live crown from that which would be considered normal. Showing extensive crown dieback in excess of 50% of crown volume),</li> </ul>
<b>Pathogen Significance</b>	<p>An assessment of any pest, disease or fungal pathogen affecting the tree.</p> <ul style="list-style-type: none"> <li>– <b>Signif (Major fungal/pathogen Infection)</b> – Tree infected with pest &amp;/or disease that is considered to have major impacts on either Structural or Biological condition currently.</li> <li>– <b>Minor Inf (Minor fungal/pathogen infection)</b> - Tree infected with pest &amp;/or disease that is considered to currently have limited impacts on either Structural or Biological condition but could become significant in the future.</li> <li>– <b>None (None Present)</b> – Tree with no notable pest &amp;/or disease present</li> </ul>
<b>Consequence of whole tree failure</b>	<p>This is an assessment of the maximum risk presented by the tree and is related to the frequency of usage by people (pedestrian or vehicular) or the value of the property affected and the size of the tree itself. A matrix has been produced that shows how this is deduced</p>
<b>Next Resurvey</b>	<p>This is the recommended timescale for future assessment of the tree and is dependent on the consequence of whole tree failure, any degradation of structural condition and combines government and professional guidance and includes <b>1, 2, 3, 4, 5</b> years or None. The last category relates to trees that pose little or no risk to any person or property by virtue of their location.</p>
<b>Size of part</b>	<p>This is the largest part of the tree likely to fail, due to an identified defect. If no defect of note is recorded / observed then this is be recorded as None. Categories are <b>&lt;150mm (1), 150 – 450mm (2), 450 – 900mm (3), &gt;900mm(4), Whole tree(when larger than a 900mm diameter stem)(5), None(0)</b></p>
<b>Tree Target Rating</b>	<p>Relates to usage of area where the defective part of the tree is most likely to fail. The categories are essentially reflections of the Consequence of Whole tree failure category in as much as they are related to usage etc but relate <b>only</b> to a defective part. <b>Catastrophic</b> (Very High Risk) <b>(5)</b>, <b>Severe</b> (High Risk) <b>(4)</b>, <b>Moderate</b> (Possible Risk) <b>(3)</b>, <b>Minor</b> (Low Risk) <b>(2)</b> , <b>Insignificant</b> (Very Low Risk) <b>(1)</b> or <b>Not Assessed</b> (No defective part present) <b>(0)</b></p>
<b>Tree Failure Potential</b>	<p>This is a judgement as to the probability of the failure of the defective part. Categories are <b>Imminent</b> (1-7 days) <b>(5)</b>, <b>Probable</b> (7days – 3 months) <b>(4)</b>, <b>Likely</b> (3+ months – 1 year) <b>(3)</b>, <b>Possible</b> (1 – 5 years) <b>(2)</b>, <b>Negligible</b> (5+ years) <b>(1)</b> or <b>Not Assessed</b> (No defective part present) <b>(0)</b></p>

### Appendix 3 - Key & explanation for assessment and work recommendation criteria

<b>Location of defect</b>	A description of where in the tree the defect is located.
<b>Description of defect</b>	A description of the most significant defect, which may require remedial work.
<b>Recommendation</b>	These are the tree works recommended either to address a safety concern or to be considered a suitable method of tree management.
<b>Size of part</b>	This is the largest part of the tree likely to fail, due to an identified defect. If no defect of note is recorded / observed then this is recorded as None. Categories are <150mm (1), 150 – 450mm (2), 450 – 900mm (3), >900mm(4), <b>Whole tree</b> (when larger than a 900mm diameter stem)(5), <b>None</b> (0)
<b>Tree Target Rating</b>	Relates to usage of area where the defective part of the tree is most likely to fail. The categories are essentially reflections of the Consequence of Whole tree failure category in as much as they are related to usage etc but relate only to a defect part. <b>Catastrophic</b> (Very High Risk) (5), <b>Severe</b> (High Risk) (4), <b>Moderate</b> (Possible Risk) (3), <b>Minor</b> (Low Risk) (2) , <b>Insignificant</b> (Very Low Risk) (1).
<b>Tree Failure Potential</b>	This is a judgement as to the probability of the failure of the defective part. Categories are <b>Imminent</b> (1-7 days) (5), <b>Probable</b> (7days – 3 months) (4), <b>Likely</b> (3+ months – 1 year) (3), <b>Possible</b> (1 – 5 years) (2) and <b>Negligible</b> (5+ years) (1).
<b>Risk rating</b>	Size of part x Tree failure potential x Tree target rating
<b>Priority</b>	This is the timescale for undertaking the recommended work. Priority is directly related to the risk rating score. Categories are:  <b>Immediate</b> (score 60 -125), <b>1 month</b> (40 – 50), <b>3 months</b> (27 – 39), <b>1 year</b> (12 – 25) & <b>routine maintenance</b> (1 – 11) (this last timescale is for non-safety based work or work affecting very low target areas). The 'Immediate' priority requires urgent attention and if work is delayed all areas within falling distances of the particular tree will need fencing off until the work is completed.

## Appendix 3 - Key & explanation for assessment and work recommendation criteria

### Consequence of whole tree failure matrix

Height	Target rating				
	V. High Risk (Catastrophic)	High Risk (Severe)	Possible Risk (Moderate)	Low Risk (Minor)	V. Low Risk (Insignificant)
Very large (20m+)	25	20	15	10	5
Large (15-20m)	20	16	12	8	4
Medium Large (10-15m)	15	12	9	6	3
Medium (5-10m)	10	8	6	4	2
Small (under 5m)	5	4	3	2	1

<b>Extreme</b>	<b>20-25</b>
<b>Major</b>	<b>15-16</b>
<b>Moderate</b>	<b>8-12</b>
<b>Minor</b>	<b>4-6</b>
<b>Negligible</b>	<b>1-3</b>

Target Rating name	Definition
<b>Very high risk - (Catastrophic)</b>	This is reserved for the targets that have the highest usage and value of property to be damaged. This is almost constant pedestrian usage, high speed roads with high volumes of usage approximately 1000/hour or high property value £1 000,000+. The definition of a high speed road is 60mph or more.
<b>High risk - (severe)</b>	This is for areas of high level of pedestrian usage (30 – 50 / hour), all roads with high volumes of traffic (100 + per hour), or property value of approximately £100,000 - £500,000 (covering most property values).
<b>Possible risk - (Moderate)</b>	This is for areas with significant level of pedestrian usage (10 / hour), roads with frequent traffic ( 30 / hour) or property value of approximately £20,000 (a reasonable cost for a new vehicle).
<b>Low risk - (Minor)</b>	This is for a low level of pedestrian usage (1 / hour), roads with low levels of traffic use (5 / hour) or property value of approximately £500 (generally the maximum value of insurance excess on basic property insurance).
<b>Very low risk - (Insignificant)</b>	This for areas with a very low level of pedestrian usage (5 / day), virtually no traffic use (5 / day) and very low value of property £10 (this effectively is a very low value of property damage).