



## **Arboricultural Hazard Survey Millom without Parish Council**

**The Hill**

**Millom**

**April 2017**

<b>Surveyor</b>	<b>Author</b>	<b>Checked</b>
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## **1.0 Introduction**

1.1 Lowther Forestry Group Ltd has been commissioned by Millom without Parish Council to carry out an arboricultural hazard survey of trees within their ownership at The Hill, Millom.

## **2.0 The Brief**

2.1 Carry out a visual inspection of all trees within the survey area identified by the Parish Council on site.

2.2 Assess the trees using Quantified Tree Risk Assessment (QTRA) to produce a risk of harm to persons or damage to property.

2.3 Make recommendations regarding future management of the trees and what works are required to reduce the risk of harm to an acceptable level.

## **3.0 Reasons for Survey**

3.1 The survey has been requested by Millom without Parish Council as part of their on-going tree management program.

3.2 The survey is to identify defective trees and to recommend future works that will benefit the woodland and its wildlife whilst providing a safe environment.

## **4.0 Scope and Report Limitations**

4.1 This is a tree safety survey and evaluates trees with regard to their likelihood to cause death or bodily injury to any person or damage to property. Any clear and identifiable hazards are highlighted with recommendations. There may however be hidden defects or defects which are not identified due to weather conditions or foliage for which Lowther Forestry Group Ltd cannot be held responsible. The survey produces a picture of those trees surveyed as on the date when the survey was undertaken. It is quite possible for hazards and defects to develop after that time.

4.2 This report confines itself to the arboricultural and silvicultural aspects of the site, any engineering or ecological implications are not covered and specialist advice may be sought.

## **5.0 Documents Provided**

5.1 The survey area was identified by Millom without Parish Council and marked on a paper plan.

5.2 A digital plan of the site was purchased in SHP format to enable to plotting of tree locations.

## 6.0 Survey Methodology

6.1 The procedure for the assessment of individual trees is to:

- Assess the site for Targets (person or object damaged by the falling part or whole tree). The detail of this assessment will be led by the general nature of both the site and trees.
- Assess the tree in relation to the Target.
- Identify, calculate and record any significant risk.

6.2 Table 1:- Target Ranges for Structures, Pedestrians and Vehicles. Categorised by their occupation, pedestrian frequency or monetary value, road speed and traffic volume. (Vs5)

Target Range	Structure/ Property- Repair/ Replace (£)	Human (incl Cyclists)	Vehicular Frequency- Generic categories only
<b>1 Very High</b> 1/1 - >1/10	£1,500,000 – >£150,000	Occ: Constant – 2.5hrs/day  Ped: 720/hr – 73/hr	Motorway (26,000-2700 @68mph) Trunk Roads (31 000-3200@56mph) Principal road in a built up area (42,00 – 2700 @ 37mph)
<b>2 High</b> 1/10 - >1/100	£150,000 – >£15,000	Occ: 2.4hrs/day – 15min/day  Ped: 72/hr – 8/hr	Principal roads in non-built up area (3100-320 @56mph) (4200-430 @37mph)
<b>3 Moderate</b> 1/100 - > 1/1K	£ 15,000 - >£1500	Occ: 14min/day – 2min/day  Ped: 7/hr – 2/hr  Occ: 1min/day – 2min/week	Minor roads with moderate use or poor visibility. (280-29 @62mph) (350-36 @43mph) (470-48@ 32mph)
<b>4 Moderately low</b> 1/1K - > 1/10K	£1500 - > £150  £150 - >£15	Ped: 1/hr – 3/day  Occ: 1min/week – 1min/month  Ped: 2/day – 2/week	Minor roads low use and good visibility (28-4 @ 62mph) (35-5 @ 43mph) (47-6 @ 32mph)
<b>5 Low</b> 1/10k – >1/100k	£15 - £1	Occ: <1min/month – 0.5min/ year  Ped: 1/week – 6/year	Minor private roads and tracks (3-1 @ 62mph) (4-1 @ 43mph) (5-1 @ 32mph)
<b>6 Very low</b> 1/100k – 1/1m			None

6.3 The data regarding all surveyed trees can be seen in the Tree Data Table in Appendix 1.

6.4 Trees with risk scores greater than 1:10,000 require works to be carried out as this is an unacceptable level of risk. The Health and Safety Executive (HSE) state that

1:10,000 is the risk a person will take when going about their daily routine and that this is an acceptable level of risk.

6.5 Trees with a risk score of less than 1:10,000 may have works recommended. These are to prolong the safe useful life expectancy of the tree and as part of ongoing management.

6.6 Trees with a risk score of less than 1:100,000 are not required to be recorded as part of this assessment. Trees that are recorded with a risk score of less than 1:100,000 are at the discretion of the surveyor and to aid the long term management of the site.

6.7 Trees that are within the survey area that are not recorded in the report are considered to have an acceptable risk of harm at the time of survey.

6.8 The QTRA risk score is calculated by the assessment of the three primary components of tree failure risk. The input values for these components are set out in broad ranges of Target, Size and Probability of Failure. The QTRA user estimates the values for the three components and inputs them on either the QTRA manual calculator or software application to calculate the Risk of Harm.

6.9 The QTRA risk score is divided into 4 categories Immediate, High, Medium and Low. This in turn informs the priority given to the individual tree. Table 2 below details the tree risk priority.

6.9.1 Table 2, Tree Risk Priority.

Tree Risk Priority	
Priority	QTRA Risk Score
Immediate	0 – 1,000
High	1001 - 10,000
Medium	10,001 - 50,000
Low	50,001 - 100,000

6.10 Data recorded during the survey includes: Tree Location, Species, Age Class, Condition, Risk Score, Defects, Recommendations and Proposed Future Inspection Frequency.

## 7.0 Site and Legal Restrictions

7.1 The site is The Hill, Millom, LA18 5HE.

7.2 The survey area includes the old quarry, surrounding roads, footpaths and trees near services.

7.3 This is the second formal inspection of trees on this site by Lowther Forestry Group Ltd.

7.4 Lowther Forestry Group Ltd have consulted with Copeland Borough Council and they have confirmed that the site is not protected by a Tree Preservation Order (TPO) and the site is not within a Conservation Area.

7.5 Substantial penalties and/or prison sentences can be incurred for contravention of legislation relating to protected species.

7.6 Further legal restrictions can be seen in Appendix 4.

## 8.0 The Survey

8.1 The survey identified and recorded 6 trees. The trees have been divided into the following four categories ranging from Immediate to Low risk of harm. Table 3, below details the trees and their categories.

8.1.1 Table 3.

Tree Priority		
Priority	Tree Tag Numbers	Total
Immediate	0	0
High	0	0
Medium	0	0
Low	2481, 2482, 2483, 2485, 2486, 2487.	6

8.1.2 The site is not showing signs of recent management and for the size of site a large number of trees have been recorded.

8.1.3 Works have been recommended to all 6 trees. A summary of the tree works is shown below in Table 4, Tree Work Recommendations.

8.1.4 Table 4, Tree Work Recommendations.

Tree Work Recommendations				
	Tree Number			
Recommendations	High	Medium	Low	Total Trees
No Action				0
Fell / Coppice			2481, 2482, 2483	3
Arboricultural Works			2485, 2486, 2487	3

8.2 No trees have been recorded as Immediate, High or Medium priority on this site.

8.3 There are six trees recorded as Low priority.

8.3.1 The six trees recorded are split into two groups. Trees that requiring felling and trees that are requiring arboricultural works.

8.3.2 The three trees requiring arboricultural works are trees 2485, 2486, 2487. Tree 2485 has sign of decay at the base of a large lateral limb which is expected to reduce its safe useful life expectancy. This tree also has ivy present in the upper crown. Tree 2486 has a large crossing branch at 5m which will have an increased risk of failure as its growth is distorted. Tree 2487 is a large Cherry tree with a cavity at the base of a large limb. The cavity is historic with good reaction wood indicating some structural strength. The cavity has internal decay and predicting when the limb will fail is very difficult. It is recommended that the limb is reduced to 1.5m from the stem to prevent the limb from failing and to retain the cavity for wildlife.

8.3.3 Trees 2481, 2482 and 2483 have been recommended to be coppiced. These trees are all stored pollards that are showing signs of decay either in their base or at the point of pollard. All of these trees are located on steep slopes and are likely to reach the road or the telephone line should they fail. Honey Fungus, *Armillaria mellea* was noted at the base of tree 2481 and therefore basal decay is expected and re-pollarding is no longer an option.

8.4 Details of works can be found in Appendix 1 Tree Data Table.

## **9.0 Discussion and Recommendations**

9.1 The majority of defects found on this site affect the Sycamore. Sycamore is an invasive species that will out compete the other species. When coppicing Sycamore on this site it is advisable to kill a percentage of the trees to maintain species diversity and to allow other species to develop. It is advised to kill trees that are located in awkward positions that cannot be cut without the assistance of tree surgeons.

9.1.1 The Sycamore trees that have been pollarded are now at a stage where they can be either re-pollarded or coppiced. It is recommended that the trees are coppiced as this will be easier to maintain in the long term and will not require the assistance of tree surgeons.

9.1.2 The size of site means it can be easily split into three or four areas that can be coppiced on a 5 to 10 year cycle. If the total volume of timber cut per calendar quarter is less than 5m<sup>3</sup> then the works would not require a felling licence. This would include the phased removal of large Sycamore and the protection of native low grown trees that will benefit the local wildlife.

9.2 Many of the trees on site are covered by ivy. Ivy will eventually smother a tree blocking light to the leaves restricting the trees ability to grow. The ivy will also increase

wind loading on the stem and branches increasing the risk of wind-blow or wind-snap. It is recommended that where the ivy has reached the middle or upper crown that it is severed. Where the ivy is not interfering with the crown it can remain as it provides many wildlife benefits.

9.3 There is a tree marked on the plan as 01. This is a healthy Sycamore and its ownership has not been confirmed. The tree would be recommended for coppicing if it is within the Parish Council property. The tree would be recorded as low priority at this time however its removal will only increase in cost as the tree develops.

9.4 All works listed in the tree data table are recommended to be carried out during 2017.

9.5 Contractors are to consider nesting birds and other European Protected Species prior to any felling and arboricultural works.

9.6 Tree locations can be seen in Appendix 5, Tree Location & Survey Area Plan.

9.7 Details of hazard works can be found in Appendix 1, Tree Data Table.

## **10.0 Summary**

10.1 Lowther Forestry Group Ltd has been commissioned by Millom without Parish Council Ltd to carry out an arboricultural hazard survey of trees within their property at The Hill.

10.2 Carry out a visual inspection of all trees within falling distance of the survey area identified by Millom without Parish Council.

10.3 The survey identified and recorded 6 trees. The trees have been divided into the following four categories.

- Immediate Priority - 0
- High Priority – 0
- Medium Priority – 0
- Low Priority – 6

10.4 Works have been recommended to all 6 trees.


10.5 The site is recommended to be re-inspected in 1.5 years or 3 years if all works recommended in the report are carried out.


10.6 Tree work recommendations can be seen on page 5, Table 3.

10.7 The tree locations can be seen in Appendix 5, Tree Location & Survey Area Plan.

10.8 Information regarding individual trees can be seen in Appendix 1 Tree Data Table.

## Appendix 1 – Tree Data Table

Arboricultural Survey														
Client - Millom Without Parish Council				Location - The Hill						Inspector - Andy Whitworth				
Site - The Hill				Date - 21.04.2017						Weather - Overcast				
Tree No.	Botanical Name	Common Name	Ht (m)	Crown Spread	DBH (cm)	Age class	SULE	Target	Size of Part	PoF	Priority	Comments and Defects	Recommendations / further works	Next Inspection
2481	<i>Acer pseudoplatanus</i>	Sycamore	10	9	30	M	10	5	2	4	L	Multi stemmed tree that has been pollarded previously. There are three stems with signs of decay on the west side of the tree. Decay is likely to extend through the individual stems. There are signs of the wood decay fungi Honey Fungus around the base of the tree.	Coppice all stems to bring under management.	1.5 Years
2482	<i>Acer pseudoplatanus</i>	Sycamore	11	10	15	M	20	4	3	4	L	Multi stemmed tree that has been pollarded previously. New growth on the tree indicates good vitality. There are 9 stems forming this tree that have all been pollarded. Decay is present at the point of pollard. Multiple crossing branches are present as a result of the pollarding works.	Coppice all stems to aid future management.	1.5 Years
2483	<i>Fraxinus excelsior</i>	Ash	11	6	35	M	20	4	3	4	L	Mature tree previously pollarded at 1m. Decay evident at the point of pollard. Tree is not within falling distance of the road.	Coppice.	1.5 Years
2485	<i>Acer pseudoplatanus</i>	Sycamore	14	15	50	M	40	4	1	4	L	Large tree located on steep ground. Historically a large limb has failed on the south side of the stem. There is a large lateral limb on the west side of the tree with minor signs of decay at its base. Two of the main stems have included bark branch unions below 1.5m which is a potential point of failure in the long term. The main stem is covered by ivy into the upper crown.	Remove large lateral limb. Sever ivy.  In the long term this site would benefit from the tree being coppiced.	1.5 Years

Arboricultural Survey													 <b>LOWTHER</b>	
Client - Millom Without Parish Council				Location - The Hill				Inspector - Andy Whitworth						
Site - The Hill				Date - 21.04.2017				Weather - Overcast						
Tree No.	Botanical Name	Common Name	Ht (m)	Crown Spread	DBH (cm)	Age class	SULE	Target	Size of Part	PoF	Priority	Comments and Defects	Recommendations / further works	Next Inspection
2486	<i>Acer pseudoplatanus</i>	Sycamore	18	11	50	M	20	4	1	4	L	Healthy tree with three main stems. The tree is stored coppice. Two of the stems have included bark between them which will be a potential point of failure in the long term. There is a large crossing branch at 5m that is causing damage to one of the stems.	Remove the crossing branch.  Long term this tree can be re-coppiced.	1.5 Years
2487	<i>Prunus Avium</i>	Cherry	19	16	100	M	20	4	1	3	L	Large tree with a healthy crown. The first limb on the south side of the stem has a large wound at 1.5m. This wound is historic with good reaction wood. Decay can be seen inside the cavity. Ivy is present on the stem into the upper crown.	Reduce the limb with the cavity to 1.5m from the stem to retain wildlife habitat and reduce the risk of failure. Sever ivy.	1.5 Years
1	<i>Acer pseudoplatanus</i>	Sycamore										Tree of reasonable health possibly located on private property. Multi stemmed stored coppice. The tree is weighted towards the road.	Confirm ownership of the tree. The tree is recommended for coppicing if owned by the Parish Council.	1.5 Years

<b>Key:-</b>	
Tree No:-	Number given to the individual tree or group (trees with single digit numbers have not been tagged due to small diameter stems).
Height:-	Height in meters from ground level to the top of the crown.
Crown spreads:-	The distance in meters from edge of the canopy to the other.
DBH:-	Diameter of the trunk at 1.3 m above adjacent ground level. (cm)
Age Class:-	Y = Young, recently planted with no viable seed production. SM = Semi mature, apical dominance with growth to normal crown dimensions for species and height. M = Mature, normal life expectancy with normal crown size for species and type and maximum seed production. OM = Over-Mature, past normal life expectancy and in natural decline. V = Veteran and A = Ancient, both are as defined by Natural England.
SULE:-	Safe useful Life Expectancy
Target:-	Person or property likely to be struck by part or all of a falling tree.
Size of Part:-	The diameter of the size of tree or part of tree most likely to fail.
PoF:-	Probability of Failure.
Priority:-	I = Immediate (as soon as possible), H = High (within 1 month), M = Medium (within 6 months), L = Low (within 1 year).
Deadwood:-	Major = > 100 mm, Medium = 50 to 100 mm, Small = < 50 mm.
Date of Next Inspection:-	Date in which the next inspection should be carried out if no recommended works are completed.

## Appendix 2 – Glossary of Arboricultural Terms

<u>Term</u>	<u>Description</u>
Tree Number	Reference number
Botanical Name	Scientific name
Common Name	
Height	Height in metres
Crown Clearance	Height in metres of crown clearance above adjacent ground level (to inform on ground clearance, crown stem ratio and shading)
Crown Spread	Distance from stem to crown edge. Usually specified as a single average distance or as four separate measurements for north, south, east and west
Stem Diameter	(Diameter at breast height) Stem diameter in millimetres at 1.5m above adjacent ground level (on sloping ground to be taken on the upslope side of the tree base) or immediately above the root flare for multi-stemmed trees
Physiological Condition	e.g. good, fair, poor, dead
Structural Condition	e.g. collapsing, the presence of any decay and physical defect
SULE	Safe useful life expectancy
BS5837 grading	U or A to C category grading
Hazards	Defects present on a tree
Bat Potential	The potential for the tree to be used by bats
Recommendations	Preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat

## Appendix 3 – Surveyor Qualifications

### LOWTHER FORESTRY GROUP LTD

#### PROFESSIONAL CURRICULUM VITAE

<b>Name</b>	Andrew Whitworth
<b>Position in Company</b>	Arboricultural Manager
<b>Professional Qualifications</b>	NC Countryside related studies
	HNC Wildlife Game and Rural Leisure Management
	HND Forest Management
	BSc Forest Management
	Royal Forestry Society Certificate, Arboriculture
	AA Professional Tree Inspection. November 08
<b>Professional Experience</b>	1 year felling Macclesfield Forest
	1 year placement Blenheim Palace (forestry team)
	4 Years Tree Surgery Foreman
	2 Years Tree Inspector, Derbyshire County Council
	Present Position commenced 2007
<b>Other Qualifications</b>	Arboriculture and Bats 1 day course, Lantra
	Quantified Tree Risk Assessment Licensed User.
	PA 1 and PA 6 NPTC Pesticides
	AO 1 Brushwood chippers
	Chain saw units 30,31a,31b,36,37,38 and 39
	"Safety at street works and road works" a code of practice

## Appendix 4 – Legal Restriction

4.1 Trees in any location may be protected by legislation. Where development is proposed, additional legal protection may be appropriate and can be enforced by the local authority. Attention is drawn to legal controls and liabilities under common law for consideration at the earliest stages of potential site development.

4.2 The Town and Country Planning Act 1990 requires that, except in certain circumstances, “no work shall be carried out which will affect trees over a certain size which are situated in Conservation Areas”. Six weeks’ notice of intent has to be given to the local authority before the work is carried out. This provides an opportunity for the local authority to make a Tree Preservation Order (TPO) under this Act to protect the trees.

4.3 Tree Preservation Orders allow for trees to be protected either as individuals, groups, areas or woodlands. The orders have the effect of preventing the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees, except in certain circumstances, other than with consent of the local authority.

4.4 Even when no specific legal protection exists, it may be necessary to obtain a felling licence. These apply if the volume of timber exceeds specified amounts; site clearance, even of small areas, before detailed planning permission has been granted could exceed the felling licence quota. The Forestry Commission, under the Forestry Act 1967, administers felling licences.

4.5 Before carrying out any arboricultural or forestry operations, consideration should be given to the following legislation for protected species of flora and fauna: The Wildlife and Countryside Act 1981 (as amended), the Conservation (Natural Habitats & c.) Regulations 1994 (as amended), and the Countryside Rights of Way Act 2000 protected species of flora and fauna. This will prevent any harm or damage to protected species.

4.6 Substantial penalties and or prison sentences can be incurred for contravention of legislation relating to protected species.

4.7 Lowther Forestry Group has not been requested to make any checks for protected species on this site.

## Appendix 5 – Tree Location Plan & Survey Area

# Tree Location & Survey Area Plan

## Legend

- Tree Location
- Survey Area 2017

Plan 01 - Overview

Client:- Millom Without Parish Council

Project:- **The Hill**

Drawing Number:- LSF/305.24/D01

Scale:- 1 : 550 @ A3

Survey Date:- 21st April 2017

**Lowther Forestry Group Ltd**

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