QUANTIFIED TREE RISK INSPECTION OF TREES AT ST MARYS HALL, STONYHURST COLLEGE, HURST GREEN, CLITHEROE

Client: Mr M Leyland, Grounds manager, Stonyhurst College.

Date of Tree Inspection: 5.10.16

3201700001

Weather conditions: Clear and damp

REMIT

The inspection was carried out as a result of the site manager's concern regarding the condition of Trees within the entrance drives woodlands and play areas of St Marys Hall and the need to determine their duty of care to the pupils staff and general public. We are not aware if the trees have been previously inspected.

The trees were viewed from ground level and were still in leaf.

The trees surveyed have been identified for location purposes as being within area A-G as shown on the attached plan. The trees refered to on the report have been tag numbered and spray marked red, yellow or blue indicating a need for pruning, removal or monitoring at the next inspection date.

The attached schedule lists the trees in location groups. Where this is the case the schedule shows the details of the tree and the recommended works. The attached plan will show the group location of the trees so they can be identified by the Local Authority if required and the contractor for pricing and work purposes.

INVESTIGATION METHODS AND QTRA

- The Trees which have been identified as presenting a risk of harm have been colour spotted on site. Yellow refers to Fell, red to prune or other works and blue to monitor at a subsequent inspection. A further walk through inspection should be carried out in July 2018 when the full treescape should be reinspected..
- The methodology used, is to assess the tree conditions using Visual Tree Assessment (VTA) methods and a sonic hammer and then to proceed to use Digital Microprobe Techniques to identify basal or butt decay if required. All trees have been surveyed from ground level only.
- The urgency of the required work has been rated using the Quantified Tree Risk Assessment System of which we are licensees. The system involves assessing the condition of the tree and the type of possible failure, the use of the site and the proximity of people and buildings and the assessed likelihood of tree failure. In consideration of the risks associated with the trees I have applied the Quantified Tree Risk Assessment methodology (Ellison 2005), details of which can be supplied to you if required.
- Having considered generally perceived levels of acceptable and unacceptable risk reported in various literature, we propose that a risk of significant harm of 1 in 10,000 is a reasonable and broadly acceptable risk of harm that might be imposed upon people who have no control over the source of a risk. Risks identified which are greater than this will be refered to in the report as medium or high risk of harm and will require action on the part of your contractors. In certain instances while risks may be low the required works refer to matters of amenity and long term tree and property maintenance.

RISK ASSESSMENT CONCLUSIONS

1. The target value on the site varies, the highest value targets being traffic on the main access drives and the woodland areas where the younger children have woodland classrooms and play activities with staff supervision. We have noted that the paths through the woodland are used regularly by pupils moving between classes and for this reason we have concluded that all areas have a high target value.
2. The dominant species of mature trees on the site are Sycamore, hornbeam holly, Beech, lime, late mature larch and a considerable number of mature and late mature oak. The area has a high bio-diversity value by virtue of the tree canopy cover.
3. There is evidence of old service lines through some of the woodland groups and old gratings and culverts are still present.
4. The treeworks listed on the schedule require attention, high risk of harm items needing to be dealt with within three months while medium risk should be attended to within six months and low risk depending on the availability of resources. Low risk items if not dealt with ca develop into higher priority items over time
5. The attached photographs will assist with the identification of the trees and the issues.

SUMMARY OF GENERAL FINDINGS

Dead Trees and late mature Larch

- Along the southern boundary of Woodland area D there is a scatter of dead larch and some sycamores which are ranging in height from 15-20m.
- The trees have been standing dead for some time and may have succumbed to waterlogging or root damage when a subsoil and rubble spread was carried out on the edge of the wood perhaps with the intention of raising the overall land levels.
- These trees now all marked with a yellow spot should be felled to ground level and removed.
- A large number of late mature larch are within area D and their removal and replacement is overdue.

Ivy Infestation

- Many of the mature oak and several sycamores have been heavily infested with Ivy.
- Ivy is not poisonous to trees but their effect is to give the trees a greater wind drag in winter when canopies are usually clear of leaves, restrict an inspectors view of the stems and branches necessary to make an judgement regarding safety and condition and can also (especially on sycamore) cover branch stomata and hence restrict tree growth and vigour.
- The ivy should be severed at Ground level and 1000mm above ground. The stems will die back within a year and eventually fall out of the tree in 3 to 4 years.
- Trees requiring this attention are listed on the schedule of each Area A-G
- This work could be carried out by properly equipt ground staff

Deadwood

- Many of the mature and late mature oak and some sycamore have 50+mm small branches of deadwood which need to be removed before they fall (usually in windy conditions)
- Deadwood build up in oaks is very common and removal every 10-15 years is appropriate if people or children are using the ground below.
- Trees requiring this attention are listed on the schedule of each Area A-G

TREE LOCATIONS SURVEY REPORT SCHEDULES

AREA A

This comprises two islands of mature trees and young and early mature regrowth surrounded by internal site access roads and some car parking. The trees requiring attention have been red or yellow spot marked and the numbers and work list is listed below. The urgency of the work is rated as medium, to be completed within six months but not within the March to August birds nesting season. Most of the work relates to deadwood removal but two trees require felling because of wind throw risk.

Number	Species	Remove Deadwood and sever Ivy	Fell to ground level	Other
170	Oak	X		
171	Oak	X		
173	Lime	X		
515	Oak	X		
180	Oak	X		
198	Oak	X		
201	Oak	X		
214	Oak	X		
216	Beech		X	
219	Sycamore		X	
239	Oak	X		

AREA B

This comprises a small woodland bisected by a stoned path and located to the east of the Sports Hall. The woodland is regularly visited by parties of smaller children and walked through by other staff and pupils.

The trees requiring attention have been red or Blue spot marked and the numbers and work list is listed below. The urgency of the work is rated as medium, to be completed within six months but not within the March to August birds nesting season. Most of the work relates to deadwood removal but two trees requires aerial inspection.

Number	Species	Remove Deadwood And sever ivy	Fell to ground level	Other
243	Oak	X		
244	Beech	X		
245	Beech	X		
246	Oak	X		
249	Oak	X		
251	Oak	X		Aerial inspection
256	Oak	X		
264	Oak	X		
269	Oak	X		
284	Oak	X		Grifola Frondosa Fb at base. Aerial Inspection and report. Monitor 2017.
285	Oak	X		

Oak 284

AREA C

This comprises a long section of woodland with a paved access way along the north and south boundaries. The woodland is regularly visited by parties of smaller children and walked past by other staff and pupils.

The trees requiring attention have been red or yellow spot marked and the numbers and work list is listed below. The urgency of the work is rated as medium, to be completed within six months but not within the March to August birds nesting season. Most of the work relates to deadwood removal but two trees requires aerial inspection/reduction .

Number	Species	Remove Deadwood	sever ivy	Fell to ground level	Other
300	*Oak*	*X*	*X*		
303	*Alder*	*X*	*X*		*Remove epicormic growth*
316	*Hornbeam*				*Fell to 8m nature stump (past limb failures)*
323	*Oak*	*X*			
337	*Goat Willow*			*X Root plate lift*	
338	*Oak*	*X*			
353	*Oak*	*X*			
356	*Oak*	*X*			*Monitor condition*
364	*Oak*	*X*			
366	*Oak*	*X*			*Reduce canopy by 3m. Beware Bat root possible Monitor*
367	*Oak*	*X*			
390	*Oak*	*X*			
391	*Sycamore*	*X*			*Aerial inspection of upper canopy unions*
392	*Oak*	*X*			
296	*Oak*	*X*			
298	*Oak*	*X*			
400	*Sycamore*	*X*			
403	*Sycamore*	*X*			

The woodland is also pitted with past drainage and service excavations as shown below:

AREA D

This comprises a long section of woodland with a paved access way along the north boundary and ground and root damage to trees on the southern boundary with play pitches. The woodland is regularly walked past by staff and pupils.

The trees requiring attention have been red or yellow spot marked and the numbers and work list is listed below. The urgency of the work is rated as medium, to be completed within six months but not within the March to August birds nesting season. Most of the work relates to deadwood removal but two trees requires aerial inspection.

In addition to the trees refered to below 11 standing dead trees, mainly larch have been yellow spot marked and should be removed. See Photo previous.

Many of the live larch remaining are late mature with the start of basal decay and a pronounced lean to the west of 7-15 degrees.

It is our view that harvesting this group of trees may cover the cost of felling and reduce the likelihood of collateral tree damage in the event of windthrow. A replant of oak could then be carried out. In total there are 28 larch in this category and are numbered on the schedule but not spot marked on site.

Number	Species	Remove Deadwood	sever ivy	Fell to ground level	Other
407	Cypress				Monitor Incl. Bark Union
409	Scots Pine				Monitor
411	Cypress				Monitor Incl. Bark Union
412	Scots Pine		X		
877	Sycamore			X Basal Decay	
418	Larch			X	
420	Larch			X	
422	Larch			X	
423	Larch			X	
425	Larch			X	
427	Larch			X	
429	Larch			X	
430	Cedar	X			
431	Larch			X	
432	Larch			X	
433	Larch			X	
436	Larch			X	
440	Larch			X	
441	Larch			X	
442	Larch			X	
444	Larch			X	
445	Larch			X	
453	Sycamore	X			
455	Larch			X	
458	Larch			X	
459	Larch			X	
461	Sycamore				Monitor 2017 Poor canopy
463	Sycamore	X			
466	Larch			X	
467	Larch			X	
469	Larch			X	
473	Larch			X	
474	Larch			X	
483	Cherry			X	
485	Cherry	X			
488	Beech		X		Rear of A frame house
492	Cherry		X		
495	Ash	X			Aerial Inspection
496	Cypress				Monitor IBU 2017
499	Larch		X		
503	Larch		X		
508	Larch		X		
509	Larch		X		
511	Sycamore		X		50% bark loss
515	Oak	X			Inspect damaged limb at 12m

As a temporary cost saving alternative the area could be fenced off with ranch fencing against the northern and eastern boundary with St Marys Hall and placed out of bounds with signage until the felling and replanting is completed late in 2017

AREA E

This comprises the trees comprising the old front landscape to St Marys Hall which is now a children's play area and looks to the Rugby Pitches to the south. The trees are largely open grown and have experienced wind exposure for many years. The root plates have also been exposed to compaction from years as a playground.

The trees requiring attention have been red spot marked and the numbers and work list is listed below. The urgency of the work is rated as medium, to be completed within six months but not within the March to August birds nesting season. The work relates to deadwood removal some pruning and some aerial inspection.

Number	Species	Remove Deadwood	sever ivy	Fell to ground level	Other
380	*Oak*	*X*			*Prune back low limb towards adjacent Cypress See Photo below*
381	*Oak*	*X*			*Inspect canopy to check on integrity of conjoined branches. See Photo*

380 Oak

381 oak encroaching on cypress to left

AREAS F and G

This comprises the trees around the northern carparks of St Marys Hall where there is regular traffic delivering and collecting pupils and supplies. Recent improvements to pavements and roads and services have likely caused root zone damage to several trees the evidence of which will appear in the future

The trees requiring attention have been red or yellow spot marked and the numbers and work is listed below. The urgency of the work is rated as medium, to be completed within six months but not within the March to August birds nesting season. Most of the work relates to deadwood removal and removal of trees overly close to buildings and suffering from being suppressed by larger trees.

Number	Species	Remove Deadwood	sever ivy	Fell to ground level	Other
365	*Lime*				*Becoming stag headed. Monitor*
366	*Cherry*				*Close to bin store Foundations and sewage treatment plant. Fell and stump poison*
367	*Oak*				*Recent root plate lift to west. See Photo. Reduce canopy by 4m at appropriate unions on Western side. Monitor*
368	*Oak*				*Past pavement and recent trenching damage. See Photo. Remove deadwood and reduce canopy by 2m in process.*
369	*Cherry*			*X*	*Root plate close to path and wall. Tree Suppressed by oak.*
370	*Oak*				*Reduce canopy spread by 2m at appropriate unions*
Yellow spotted close to road hedge	*3 Small yellow spotted suppressed oaks*			*X*	
Within road hedge line.	*4 Limes Red spot marked*		*X*		

Root plate lift on 367 Oak

Oak 368

RECOMMENDED ACTION

1. Take action as required on tree schedule list within the report. Note the option of fencing off and delaying work in Area D

2. Discuss and determine what action should be taken in the event of Met Office notification of high winds over 50mph. This should include advice not to walk through wooded areas and the use of temporary signage warning of high winds. The plan should also specify who is to make decisions regarding warnings and standing down.

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