Bowden Hey Mill - Kelsa Trucks

Arboricultural Survey and Constraints Report

February 2011

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Kelsa Truck Products Ltd
Bowden Hey Mill
Bowden lane
Chapel-en-le-Frith
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C O N T E N T S

Chapter 1 **Introduction**

Chapter 2 **Background**

Chapter 3 **Tree Survey**

Chapter 4 **Constraints and Opportunities**

Chapter 5 **Conclusions**

DRAWING(S)

2407/01 **Arboricultural Constraints Plan**

APPENDICES

1 **Spread Sheets**

1.0 INTRODUCTION

1.01 A. C. S. Consulting is instructed by Kelsa Truck Products Ltd, to advise on trees and the constraints on development at Bowden Hey Mill, Chapel-en-le-Frirth, Derbyshire.

1.02 The assessment identifies trees and discusses their suitability to be retained on the site.

The survey identifies:

- Trees that are undesirable to be retained because of structural or other defects.

- Trees that can be retained with an acceptable level of risk and the measures that are required to ensure their long-term retention.

1.03 The site was visited during February 2011 and a survey of the trees was completed recording; *species type, age, height, crown spread, diameter-at-breast-height, and condition*. A Phase 1 bat survey was also undertaken recording features in trees that may be suitable for roosting bats.

1.04 The report contains information regarding the trees and the protection requirements of those trees considered desirable or highly desirable to be retained.

1.05 All the trees have been summarised in the tables in Appendix 1 and are to be read in conjunction with the Arboricultural Constraints Plan No.2407/01.

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2.0 BACKGROUND

The Site

2.01 The site is located on the outskirts of Chapel-en-le-Frith close to the A6 bypass. The area is a mix of residential and industrial uses. The site comprises a number of detached buildings used as offices and light industrial processes. The site has a number of trees, principally as groups located around the site. The site is divided by Black Brook.

Statutory Protection/Planning Policies

2.02 The application is subject to the Planning Policies of High Peak Borough Council. The site is not subject to any Tree Preservation Orders but is located within a Conservation Area.

3.0 TREE SURVEY

3.01 Approximately, forty trees as individuals or in groups were identified. The group classification is intended to identify trees that form cohesive arboricultural features either aerodynamically, visually or culturally. A Constraints Plan (2407/01) has been produced.

3.02 The trees were surveyed for *species type, age, height, crown spread, diameter-at-breast-height, condition,* and their suitability for retention from ground level. Heights were measured with a Nikon Forestry 550 Hypsometer and diameters were taken, where possible, with a diameter tape to give an average stem measurement. Canopy spreads have been measured at the cardinal points or where they significantly extend in other directions.

Each tree has been assessed using the BS 5837 2005 category ratings (a copy can be found in Appendix 1). Consideration has been given to any Supplementary Planning Documents.

3.03 The trees have been summarised in Appendix 1. An indication has been given as to the desirability of each tree or group to be retained. The trees can be divided into three distinct areas. Area 1 adjacent to the site entrance, Area 2 to the rear of the workshop and Area 3 in an area of open space to the south of the site.

Area 1

3.04 Area 1 is a mediocre collection of trees located between Black Brook and the car park. The group comprises alder, ash, birch, cherry and cypress. There is some minor root damage from the car park extension. The trees are located on thin soils. The trees have some visual amenity and make a contribution to the Conservation Area. Overall, they are not considered important to retain.

Area 2

3.05 The trees within Area 2 are located at the rear of the workshop building. They are located on a raised parcel of land. The trees are dominated by a mature poplar. A number of trees have structural defects, though they are not a cause for concern, they do reduce the overall BS rating. The trees, by virtue of their height, have a moderate visual amenity and contribute to the Conservation Area.

Area 3

3.06 Area 3 has the largest concentration of trees occupying the open area from Black Brook to Bowden Lane. Along the southern boundary is a public footpath. The majority of trees are fruit trees – apple and pears with occasional cherry. There is no historical evidence of a formal orchard, but the pear trees, in particular, are in the region of 60 – 80 years of age. One tree of note is a fully mature ash (11). The tree is located in verge, outside the site but nonetheless dominates the surrounding landscape. The tree has evidence of branch loss and the putrefied remnants of fungi on the lower stem.

Phase 1 Bat Survey

3.07 As part of the assessment a Phase 1 Bat survey was undertaken. The object of this survey was to establish, where possible, whether any of the trees are used by or have the potential to be used by bats and, if necessary, recommend further work in order to advise on mitigation measures. Trees have been classified into the three groups: Low Potential, Medium Potential and High Potential.

> ***Low Potential:*** *Trees that have limited features suitable for roosting. No physical evidence of bats using the trees. This includes immature trees or trees with smooth bark or isolated specimens.*
> ***Medium Potential:*** *Trees that have a number of features suitable for bats. Limited or ambiguous features observed giving rise to roosting potential.*
> ***High Potential:*** *Significant specimens containing many features suitable for bat roosting or direct physical evidence of use by bats*

3.08 All the trees were assessed as part of the survey. Many features that give rise to concerns about tree safety are suitable for bats – cavities, cracks and splits in stems and branches, loose bark with some attachment and ivy to some degree. The majority of the trees were considered to be of low potential. Where trees have medium or high potential they have been identified in the tree tables. Only one tree is considered to have any potential for bat roosting. Ash (11) is classified as unknown potential. There is a small cavity on one of the limbs on the northern canopy. The tree does not appear to be in the ownership of Kelsa Trucks. The survey was a Phase 1 Survey and therefore has number of limitations. Before any work is undertaken they should be re-inspected for the presence of bats. The appointed contractor should also be aware and provide an appropriate Risk Assessment as part of the works.

4.0 CONSTRAINTS and OPPORTUNITIES

4.01 The application site is an irregular shaped parcel of land located in a mixed industrial and residential area of Chapel-en-le-Frith. The site is located in a Conservation Area. An Arboricultural Constraints Plan (2407/01) has been produced.

Constraints

4.02 The Constraints Plan identifies tree condition and the corresponding Root Protection Area (RPA) for those trees that are considered suitable to be retained. The RPA's are based on a multiple (12) of the stem diameter usually measured at 1.5 metres from ground level, but where this is not possible, it is taken at a lower level and multiplied by a factor of 10. BS 5837 (5.2.3) sets out that the RPA may be represented as a square as well as a circle centred on the trunk. The square will be the same area as the circle but, unlike the circle, where the distance from the tree remains constant, the distance of the sides from the centre vary from a minimum that is less than the radius to a centre to corner distance that is greater than the radius. A number of the trees have restricted root spreads due to the location of hard surfaces, retaining walls and building foundations.
The trees are located within a Conservation Area and therefore benefit from protection. Whilst the majority of the trees are mediocre, as a group feature from some public vantage points, they do act as a screen to the existing buildings.

Consideration should be given to issues of shade and dominance caused by trees. To this end, the use of the 45° Rule of Thumb can assist in the layout of high light demanding rooms and private amenity space.

> ***45º 'Rule of Thumb'***
> *The sun is 45º or more above the horizon from mid-April to mid-August, between approximately 11.00am and 3.00pm (British Summer Time).*
> *If a tree is no closer to a property than its ultimate mature height, the sun will be above the tree's canopy during those periods, and that property will receive reasonable levels of sunlight and daylight*

Opportunities

4.03 Whilst it is acknowledged that *all* trees within the planning process are a material consideration, it is generally accepted that those trees rated as C or R are excluded from consideration regarding development implications, retained only where they pose no constraint on development. Development should seek to retain those trees identified as Highly-Desirable (Green) and Desirable (Blue). Development should not breach the RPA areas marked on the plan.

The Constraints Plan identifies a number of opportunities to develop the site. These can be increased slightly by the removal of C category trees. The site's southern area is dominated by an off-site ash (11).

5.0 CONCLUSIONS

Summary

5.01 The application site is an irregular shaped parcel of land located in a mixed industrial and residential area of Chapel-en-le-Frith. The site is located in a Conservation Area. An Arboricultural Constraints Plan (2407/01) has been produced.

Conclusions

5.02 The trees, due to their location have a moderate visual amenity. The trees can be divided into three areas. The trees within Areas 1 and 2, whilst having some amenity, are not as significant as those in Area 3. Whilst a number of trees within Area 3 are mediocre and could be removed to allow development, the site is dominated by an off-site ash (11). The tree has a significant RPA which dominates the southern area. Any development should be so located that it does not breach the tree protection zones noted on the plan. As discussed in Section 4.02, the RPA may be modified as a square giving the same area but allowing the location of the fence to be slightly closer. Where trees are retained, consideration needs to be given to issues of shade and dominance. To this aim, the use of the 45° Rule of Thumb can assist.

5.03 Appropriately worded planning conditions should specify the requirement for detailed method statements associated with the following issues: earth works, fencing, site storage/compounds/site cabins, tree works, special engineering works, monitoring and reporting.

ACS Consulting
February 2011

Appendix 1

CONTENTS

Key

BS5837: 2005

Tree Tables

KEY

Age	Y – Young: Out-planted trees that have not yet established SM – Semi-mature: Established trees up to 1/3 of expected height and crown EM – Early mature: Between 1/3 and 2/3 of expected height and crown M – Mature: Between 2/3 and full expected height and crown FM – Fully mature: Full expected height and crown OM – Over mature: Crown beginning to break-up and decrease in size S – Senescent: Crown in advanced stage of break-up
Physiological Condition	Good – Very few defects a reasonable long life expectancy depending on age class Adequate – Some defects giving the tree a shortened life expectancy Poor – Limited life with major problems
Structural Condition	Good – Very few defects Adequate – Some defects rectifiable with minor tree surgery Poor – Significant defects only rectifiable with major tree surgery or felling

Table 1 – Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	**Criteria**			**Identification on Plan**
Category R Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.	• 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 R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. • Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality. NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of a bat box in nearby tree).			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	**Criteria – Subcategories**			**Identification on Plan**
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation.**	
Category A **Those of high quality and value:** in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dormant and/or principal trees within an avenue)	Trees, groups or woodlands that provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B **Those of moderate quality and value:** those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remedial defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C **Those of low quality and value:** currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter of below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

Kelsa Trucks, Chapel

Tree Ref No.	Species	Height M	Stem Diameter MM	Branch Spread M	Height of Crown Clearance M	Age Class	Physiological Condition	Structural Condition	Preliminary Management Recommendations/ Comments	Estimated Remaining Contribution Years	Category Grading
1	Group	<12	120 to 375	N 3 E 2 S 3 W 3	0	EM	Good	Adequate	Linear group of ash, birch, cherry, alder, sorbus and cypress. Located on stream bank. Minor damage from kerb that has been installed. Overall mediocre. Retainable.	10 - 20	C1/2
2	Group	<8	310 to 710 (x10)	N <10 E 3 S 3 W 5	<1	EM/M	Adequate	Adequate/ Poor	Group of 7 trees. 2 poplar the remainder sycamore and maple. Located on a gently sloping bank with restricted rooting area to the south. A number of trees are multi-stemmed with defective stem unions and defective branch unions. Mediocre specimens. Minor squirrel damage. The poplar has minor storm damage and dead wood due to natural branch suppression. Reasonable specimens. Prominent in the landscape due to height Retainable.	20	C1/2
3	Maple	14	600	N 3 E 0 S 1 W 4	0	M	Good	Adequate/ Poor	Multi-stemmed. Defective stem unions. Squirrel damage. Slight lean. Restricted root development to the south. May have broken retaining wall to stream. Mediocre specimen. Retainable.	10 - 20	C1/2
4	Ash	12	300	N 2 E 4 S 1 W 3	1	EM/M	Poor	Poor	Growing out of the side of the stream retaining wall. Squirrel damage. Canker. Leans. Poor. Fell.	<10	R

5	Group	<12	260, 350 and 300	N 4 E 2 S 4 W 4	2	EM	Adequate	Adequate/ Poor	3 trees as one visual unit. Prunus, willow and maple. Multi-stemmed. Defective stem unions. Cherry has been topped. Lack of apical dominance. Crown asymmetry. Moderate to low visual amenity. Mediocre specimens. Retainable.	10 - 20	C1/2
6	Group	<12	280 to 540	N 3 E 3 S 3 W 3	2	M	Adequate	Adequate/ Poor	Possible remnants of a former orchard area. Apple, cherry and pear. Large fully mature examples of pear. Putrefied fruit within the grounds indicating that the trees no longer bear fruit or the crop is poor. No pears, a few apples and no cherries. Reasonably prominent in the landscape due to their location adjacent to the residential properties. Retainable.	10	C1/2
7	Norway Spruce	9	220	N 2 E 2 S 2 W 2	0	SM/EM	Good	Good	Well formed tree. Retainable.	20 - 40	B1/2
H1	Hawthorn	2	<100	N <1 E <1 S <1 W <	0	M	Adequate	Adequate	Hawthorn hedge. Recently topped for management. Multiple attachment of re-growth. Retainable.	10	C1/2
8	Sorbus	6	240	N 1 E 2 S 3 W 2	2	EM/M	Good	Good	Crown asymmetry due to the position of the pear. Restricted root development to the south. Mediocre specimen. Retainable.	10 - 20	C1/2

9	Sorbus ?	6	265 (x10)	N 2 E 2 S 3 W 2	3	EM	Adequate	Adequate	Slight lean to the south. Crown asymmetry. Retainable.	10 - 20	C1/2
10	Thorn	4	200 (x10)	N <1 E <1 S <1 W <1	1	EM	Adequate	Adequate	Multi-stemmed at ground level. Retainable.	10 - 20	C1/2
11	Ash	21	1,500	N 5 E 6 S 6 W 6	5	FM	Good	Adequate	Twin stemmed. Located on a bank adjacent to the road with a natural relationship. Dead wood due to natural branch suppression. Minor storm damage with good callusing around the wounds. Significant, visually prominent tree in the local landscape. On the eastern side of the northern stem at 10/12m is a cavity which is potentially suitable for a bat roost – unknown potential. There are putrefied remains of fungi in a small cavity on the eastern side at 0.5m. There is some dysfunction. Confirm tree ownership.	10 - 20	C1/2
12	Apple	5	600 (x10)	N 3 E 3 S 3 W 3	2	M	Adequate	Adequate/ Poor	Multi-stemmed at ground level. Defective stem unions. Mediocre specimen. Retainable.	10	C1/2
13	Pear	11	740	N 5 E 4 S 4 W 8	2	OM	Adequate	Adequate	Prominent in the landscape. Little evidence of remains of fruit. Retainable.	10	C1/2

14	Ash	5	M/S	N 2 E 2 S 2 W 2	0	SM/EM	Good	Poor	Multi-stemmed at ground level. Defective stem unions. Poor. Fell.	<10	R

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