Doric Crimped Paper Factory
Bowden Park
Chapel-en-le-Frith

Tree Survey Report

nlg ecology ltd
Unit B1.7
Clarence Mill
Clarence Road
Bollington
Macclesfield
SK10 5JZ

Tel: 01625 560789
E-mail: info@nlgecology.com

July 2015

Project No: NLG465

Title: Doric Crimped Paper Factory
Tree Survey Report

Client: Doric Crimped Ltd

Date: July 2015

Status	Date	Prepared by	Reviewed by	Approved by
V1	8th July 2015	Miranda Cowan Senior Ecologist	Laura Kershaw Ecologist	

Summary

NLG Ecology Ltd was commissioned by Doric Crimped Ltd in July 2015 to undertake a tree survey of an area land surrounding Doric Crimped Paper Factory, Bowden Park, Chapel-en-le-Frith, north Derbyshire. The site is centered on Ordnance Survey (OS) grid reference SK 06030 81379. The tree survey is to support a planning application for an extension to the existing factory at the west end of the building, which will form a new warehouse. Additional parking areas are also proposed adjacent to existing provision at the east end of the site.

The tree survey was undertaken in accordance with '*Trees in relation to design, demolition and construction – Recommendations*', BS 5837:2012 and incorporated the proposed development site, as well as trees outside of the proposal boundary which were considered close enough to be potentially affected by the development.

The survey has identified three tree groups (G1-G3) and eleven individual trees (T1-T11), which occur as standalone specimens or are located within a tree group, due their prominent position as a mature tree. The value attributed to the trees relates to arboricultural and landscape reasons; good examples of their type and forming important wooded features within the local landscape. In summary, the value of trees is as follows:

- G1 is valued as A1/2, high quality for arboriculatral and landscape reasons;
- G2 and G3 are valued as B, moderate value for landscape reasons;
- Individual specimens T1,T2 and T3are good examples of their species type (grade A high quality), as they stand prominently to the entrance of Doric Crimped Paper Factory and are visible from the A624.
- Tree T3 is graded as B (moderate quality) due to the presence of decay within the main truck;
- Tree T8 is graded as C (low quality) due to significant canopy die back and trunk impairment.

Category A and B trees / groups are recommended for retention on development sites, with their position identified to help inform the conceptual development design as defined by the Root Protection Zone (RPA). The RPA is an important aspect of the development design to ensure no trees are accidentally damaged during construction operations. Figure 1 shows the RPA for G1-G3 and also for individual trees. Grade C trees are recommended for retention where they will not pose a hazard to the public; they can be retained for nature conservation reasons.

Where trees are identified for retention, progressive sensitive management of these trees can further extend of the life expectancy of the existing trees stock, preserve habitats/wildlife corridors, preserve the current landscape screening function offered by trees and add value to the amenity landscape, providing a sense of well-being to the local community.

1.0 Introduction

1.1 Background

NLG Ecology Ltd was commissioned by Doric Crimped Ltd in July 2015 to undertake a tree survey of an area land surrounding Doric Crimped Paper Factory, Bowden Park, Chapel-en-le-Frith, north Derbyshire (SK 06030 81379). The tree survey has been requested to support a planning application for an extension to the existing factory at the west end of the building, which will form a new warehouse. Additional parking areas are also proposed adjacent to existing provision at the east end of the site. An indicative design of the proposed development is included as Appendix 1.

The tree survey was undertaken in accordance with '*Trees in relation to design, demolition and construction – Recommendations*', BS 5837:2012 and incorporated the proposed development site, as well as trees outside of the proposal boundary which were considered close enough to be potentially affected by the development.

The report provides guidance as to the nature and quality of the existing tree stock and makes recommendations for tree retention, where appropriate. Any subsequent management recommendations in respect of tree protection and view to long-term management of sustainable tree cover are made in accordance with BS3998 Tree Work Recommendations (British Standards Institute, 2010).

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2.0 Methodology

The tree survey was conducted by arboriculturalist Miranda Cowan of NLG Ecology Ltd on the 8th July 2015. In accordance with requirements of BS 5837: 2012, the survey involved collecting dimensional data and observational information. Dimensional data includes using a Diameter Class measuring tape for recording tree girth, use of a Clinometer to determine tree height and use of a standard measuring tape to record the spread of the tree canopy.

Observational information includes noting features associated with the physiological condition of trees, including the presence of crown die back, weak/split limbs, the presence of fungal fruit bodies and features associated with past management, such as pruning wounds and cavities.

Based on information collected in the field, trees were assessed in respect of their quality and benefits within the context of the proposed development. This was achieved by categorising trees according to their retention value linked with arboricultural, landscape, cultural and conservation qualities. Appendix 2 details the survey methodology employed for collecting data.

The survey findings are presented on a topographical plan, as supplied by the client.

3.0 Results

The tree survey findings are presented on Figure 1 of Appendix 1, with data collected from the field survey presented in Table 1.

Figure 1 illustrates there to be three tree groups (G1-G3) and eleven individual trees (T1-T11), which occur as standalone specimens or are located within a tree group, due their prominent position as a mature tree. The three tree groups include the following attributes:

- **G1**: is located in the south east corner of the site and supports a mix of semi-mature to mature trees. The mature trees identified as individual specimens (T6-T10) stand prominently above the younger specimens and may constitute remnants of an older established woodland assemblage, that may have extended to a wider area prior to surrounding development. The mature specimens comprises of pedunculate oak (*Quercus robur*), alder (*Alnus gluitinosa*) and sycamore (*Acer psuedoplatanus*). Semi-mature trees are predominantly common ash (*Fraxinus excelsior*), which appear to have naturally established around the mature specimens.

- **G2**: is largely dominated by semi-mature common ash, with occasional wych elm (*Ulmus glabra*) and alder. A number of the tree specimens are multi-stemmed, reflecting past management. The most notable tree within this group is an over-mature sycamore (T11), located on the sites most western boundary, close to Hayfield Road. The sycamore has extensive ivy (*Hedera helix*) growth up the trunk and into the canopy; and,

- **G3:** relates to road verge planting on the A624, running parallel with the sites northern boundary. All trees range from young to semi-mature and also support a number of shrub species. The main species include common ash, sycamore and pedunculate oak.

Tree group G1 is noted to be of value for arboriculture and landscape reasons, thus is valued as A1/2 (high quality). The presence of mature prominent trees (T6-T10) within G1 contributes to the arboriculatral value of G1, as they are typical good examples of their species type.

Grouped trees G2 and G3 hold value for landscape quality (B, moderate value), forming important tree assemblages that screen existing and future development.

Individual trees (T1-T2) are good examples of their species type (grade A high quality), as they stand prominently to the entrance of Doric Crimped Paper Factory and are visible from the A624. Tree T3 is graded as B (moderate quality) due to the presence of decay within the main truck, although progressive decay has not extended to the tree canopy and the tree is currently well balanced with health canopy foliage. T4 reflects a grade A (high quality) prominent standing tree.

Only one tree (T8) is graded as C (low quality) due to significant canopy die back and trunk impairment.

Table 1: Tree survey findings

Tree ref	Species	Height (m)	Stem Diameter (mm)	Crown spread (m)				Crown clearance	Age	Condition	Life expectancy (yrs)	Comments / Preliminary management recommendations	Tree retention category
T1	Pedunculate oak (*Quercus robur*)	12	740	6	7	7	7	4	Mature	Good	40 +	Upright leading main trunk with balanced crown. Minor dead attached small branches present. Retain and monitor condition to potential targets.	A1/2
T2	Pedunculate oak (*Quercus robur*)	14	730	6	6	6	6	4	Mature	Good	40 +	Upright leading main trunk with balanced crown. Minor dead attached small branches present. Retain and monitor condition to potential targets.	A1/2
T3	Common alder (*Alnus glutinosa*)	9	520	4	4	4	4	3	Mature	Fair	20+	Split at base of tree reflects internal decay, callousing of wound. Canopy branches not impaired. Well balanced crown with upright trunk. Retain and monitor condition to potential targets.	B1/2
T4	Pedunculate oak (*Quercus robur*)	9	620	7	6	5	7	1	Mature	Good	40 +	Balanced crown. Minor dead attached small branches present. Retain and monitor condition to potential targets.	A1/2
T5	Birch species (*Betula sp.*)	7	160	3	1	2	3	2	Early mature	Good	40 +	Upright trunk, no obvious defects.	A1
G 1/T6	Common alder (*Alnus glutinosa*)	10	480	7	6	4	5	4	Mature	Good	20-40	Supressed by other trees, minor dead branches within tree canopy. Retain and monitor condition to potential targets.	A2

Tree ref	Species	Height (m)	Stem Diameter (mm)	Crown spread (m)				Crown clearance	Age	Condition	Life expectancy (yrs)	Comments / Preliminary management recommendations	Tree retention category
G 1/T7	Sycamore (*Acer pseudoplatanus*)	9	640	9	8	7	6	5	Mature	Good	20-40	Upright leading trunk and balanced crown. Retain and monitor condition to potential targets.	A2
G 1/T8	Peduncualte oak (*Quercus robur*)	9	490	9	4	6	5	7	Mature	Poor	10	Significant crown die back, wind Brocken leading stem. Retain if not posing threat to targets, or crown lift for retain of dead wood resource.	C3
G 1/T9	Peduncualte oak (*Quercus robur*)	12	670	9	5	6	4	5	Mature	Good	40+	Upright leading main trunk with balanced crown. Minor dead attached small branches present. Retain and monitor condition to potential targets.	A1/2
G 1/T10	Common Alder (*Alnus glutinosa*)	9	510	4	5	4	4	4	Mature	Good	20-40	Prominent tree within group, part supressed by surrounding trees. Retain within group, monitor condition.	A1/2
G 2/T11	Sycamore (*Acer pseudoplatanus*)	13	800	7	7	8	4	5	Over mature	Fair	20-40	Ivy covered from base of stem & leading into canopy, some die back within canopy. Retain and monitor condition to potential targets.	B2
G3		5	250	NA				NA	Semi-mature	Good	40+	Prominent tree within local landscape context, monitor and sympathetically manage in respect of potential targets.	B2

- (a) Indicates average measurement taken from more than one leading trunks or as part of a tree group (i.e. woodland).
  See Appendix 2 for definitions of table headings. T1 = Individual tree reference. G1 = grouped trees. NA = Not Applicable

4.0 Conclusion and Recommendations

The survey has identified three tree groups (G1-G3) and eleven individual trees (T1-T11), which occur as standalone specimens or are located within a tree group, due their prominent position as a mature tree. The value attributed to the trees relates to arboricultural and landscape reasons; the tree being good examples of their type and forming important screening features within the local landscape. In summary, the value of trees is as follows:

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Category A and B trees / groups are recommended for retention on development sites, with their position identified to help inform the conceptual development design as defined by the Root Protection Zone (RPA). The RPA is an important aspect of the development design to ensure no trees are accidentally damaged during construction operations. Figure 1 shows the RPA for G1-G3 and also for individual trees. Grade C trees are recommended for retention where they will not pose a hazard to the public; they can be retained for nature conservation reasons.

The RPA defines the approximate underground area occupied by the tree roots based on a calculation relating to the girth of the tree and point above ground at which the trunk begins to branch out. The RPA is an important material consideration when considering site constraints and planning development activities, with works ideally taking place outside the RPA. This is because development operations have the potential to damage or kill a tree.

Where trees are identified for retention, progressive sensitive management of these trees can offer the following benefits to a development and immediate locality:

- Further extension of the life expectancy of the existing trees stock.
- Preservation of habitats/wildlife corridors.
- Potential reduction of risk of damage to targets from failing trunks/limbs within mature tree specimens.
- Preservation and continuation of the current landscape screening function offered by trees.

- Added value to the amenity landscape, providing a sense of well-being to the local community.

All tree works must only be carried out by suitably qualified and experienced contractors, and should conform to guidelines set out in British Standard 3998:2010 'Tree work – Recommendations'.

Management recommendations would also need to be subject to any protection status afforded to the existing tree stock (e.g. Tree Preservation Orders) and also in respect of protected species issues, such as potential bat roosts and breeding birds.

5.0 References

BS 5837 (2012). Trees in Relation to Design, demolition and Construction – Recommendations. British Standards Institute

BS3998 (2010). Tree Work Recommendations. British Standards Institute

Appendices

Appendix 1: Figures

- Indicative Site Plan
- Figure 1: Tree Survey Findings

Rev.	By	Date	Notes :-	Checked
A	AM	25.06.15	Materials Noted	

FERODO LINK ROAD

A64

BOWDEN LANE

FORESTERS WAY

BOWDEN LANE

BURNSIDE AVENUE

BROOK FOLD

Bowden Park

Black Brook

Trees

Path (um)

Post & Rail Timber Fence

Stile

Proposed low-level shrub planting

Proposed Trees to mask Extension

Proposed Trees Line to mask Extension

Proposed low-level shrub planting

Stone Boundary Wall

NEW WAREHOUSE
GIA = 10,000 ft²

EXISTING FACTORY

WORKSHOP

OFFICES

ENTRANCE

2 ADDITIONAL SPACES

14 Existing Car Parking Spaces

Existing Sub Station

LOADING BAY

COMPACTOR

Concrete Slab

1 Additional Parking Space

12 Existing Car Parking Spaces

Refuse Store

PARKING 15 SPACES

Lorry Turning Space

PARKING 5 SPACES

LB Low Level Bollard Lights

Existing Foul Manhole for new foul water connection from extension

2500

1600

A

B

C

1

11

17

1

2

7

8 to 13

Def

Site Finishes Key:

- Proposed extension to existing parking areas Permeable block paving - Charcoal Grey
- Access Pathway around perimeter of new building - Black maccadam finish
- Extension to Service Yard Delivery Area Black maccadam finish
- LB Low Level Bollard Lights
- Approximate route of Peak Forest Tramway
- Proposed Shrub Planting
- Proposed New Trees
- Existing Tree Positions inside the Site Boundary
- Estimated Location / Size of existing Trees outside the Site

N

SCALE : 0 5 10 15 20.M
0.M 20.M

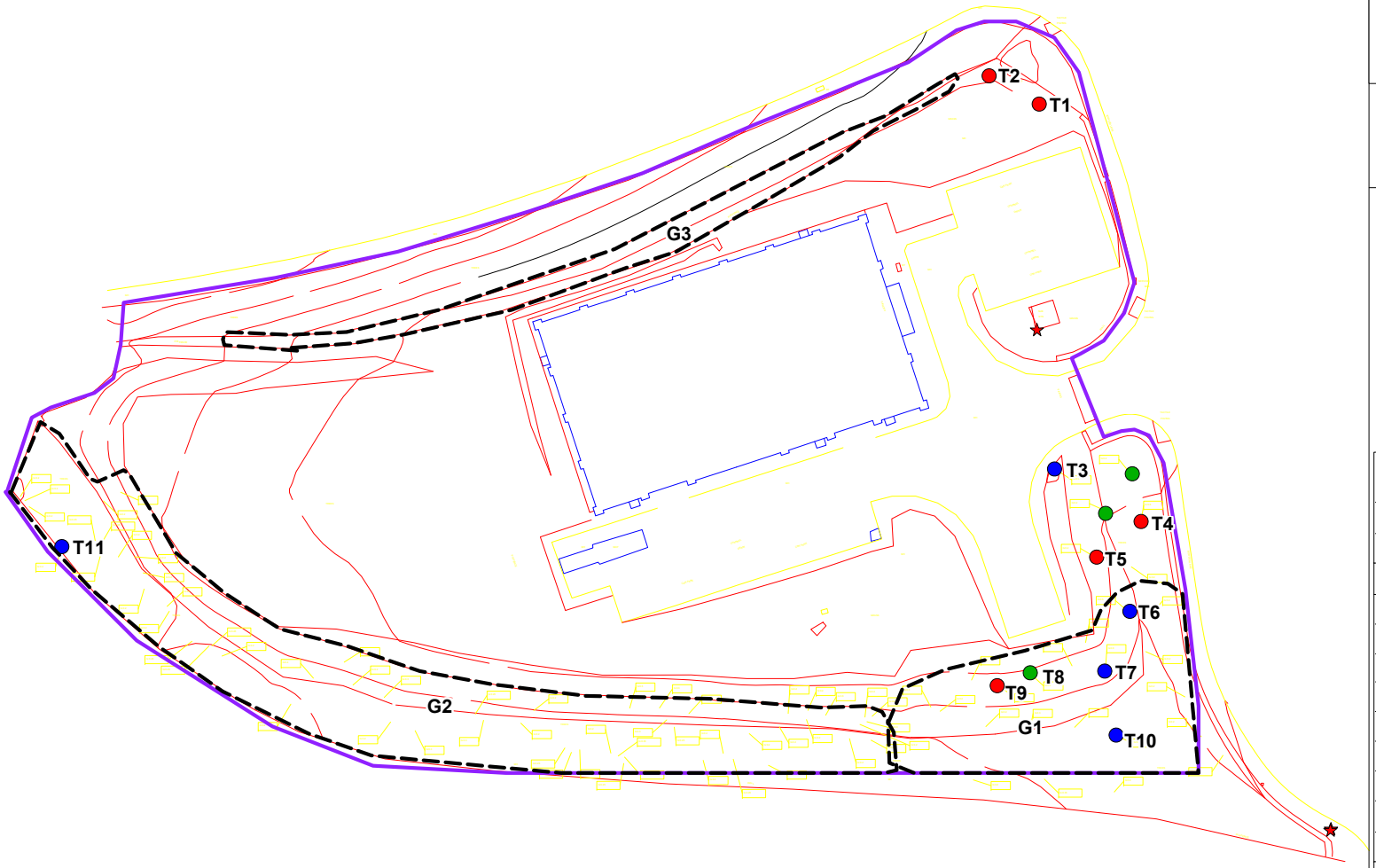
Client Name :- DORIC CRIMPED LIMITED

Project Name :- DORIC CRIMPED - PROPOSED WAREHOUSE EXTENSION

Drwg Title :- PROPOSED SITE PLAN - BLOCK PLAN- SCALE 1:200@A1

NBDA
Northern Building Design Associates Limited
Architects · Interior Design · Planning
The Old Church Palmerston Street Bollington Cheshire. SK10 5PW
Telephone : 01625 575550 Fax : 01625 576606
Email : design@nbda-architects.co.uk

Drawn :- C.T	Date :- 15.03.15	Drwg No :- 1424\DC-019	Rev :- A
Checked :-	Scale :- 1:200@A0		



nlg ecology ltd

Doric Crimped Paper Factory

Tree Survey Findings
(Showing RPA Protection)

- Application site
- Catagory A trees (High quality)
- Catagory B trees (Moderate quality)
- Catagory C trees (Low quality)
- T1 Tree number
- G1 Grouped trees

Tree Ref	Species	RPAm²	Circle Radius (m)	Tree Retention Catagory
T1	English oak	247.8	8.9	A1/2
T2	English oak	241.1	8.8	A1/2
T3	Common alder	122.3	6.2	B1/2
T4	English oak	173.9	7.4	A1/2
T5	Betula sp	11.6	1.9	A1
T6	Common alder	104.2	5.8	A2
T7	Sycamore	185.3	7.7	A2
T8	English oak	108.6	5.9	C3
T9	English oak	203.1	8.0	A1/2
T10	Common alder	117.7	6.1	A1/2
T11	Sycamore	289.6	9.6	B2
G1	——	58.6	4.3	A1/2
G2	——	55.4	4.2	B2
G3	——	28.3	3.0	B2

NGR	SCALE	REVISION
406252 381413	NTS	A
DRAWN BY LK / CHECKED BY MC	DATE 14/07/15	
DRAWING NUMBER		

Appendix 2: Tree survey criteria (BS 5837: 2012)

Tree ref	Corresponding number on plan – T=Tree/H=Hedge/G=Group
Species	Common name followed by botanical name shown in *italics*
Height	A measure of the height of the tree using a clinometer.
Stem Diameter	Diameter measured in centimetres at approximately 1.5 m above ground level, depending on topography and tree structure. A specified tape measure is used for this. (MS = Multi-stem tree with diameter measured at base/above root flare)
Crown spread	Taken as a minimum at the four cardinal points, to derive an accurate representation of the crown
Crown clearance	existing height above ground level of: 1) first significant branch and direction of growth (e.g. 2.4-N); 2) canopy, to inform on ground clearance, crown/stem ratio and shading;
Age	Young (Y) Semi-Mature (SM) Early mature (EM) Mature (M) Over Mature (OM) Classification is given in relation to the life expectancy of the specific species.
Physiological condition	G = Good F = Fair P = Poor D = Dead
General Observations	general observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations;
Life expectancy	estimated remaining contribution, in years (<10, 10+, 20+, 40+);
Retention Category	1=Arboricultural value 2=Landscape value 3=Cultural value
	U: Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years **A**: Trees of high quality with an estimated remaining life expectancy of at least 40 years **B**: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years, or make little visual contribution to the wider landscape **C**: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm
Preliminary management recommendations	Summary of management advice to consider as part of the design planning process.