



ARBORICULTURAL SURVEY & IMPACTS ASSESSMENT

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7th December 2017

SITE ADDRESS

Clegg Street
Liverpool
L5 3SP

PREPARED FOR:

Caro Developments

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1 BACKGROUND

1.1 Brief

This arboricultural report has been produced in conjunction with DEP Landscape Architecture Ltd.

It has been commissioned by;

Caro Developments

It is required to assist in a planning application for re-development of the site located on:

**Clegg Street
Liverpool
L5 3SP**

1.2 Documents provided

To assist in the production of this report I have been provided with a copy of the topographical survey ref: 10057-T:200:1:1 produced by Formby Surveys and the proposed site plan produced by Falconer Chester Hall.

1.3 Tree Status

Prior to any work being carried out on site the status of the trees should be established and the appropriate permissions sought if any Tree Preservation Orders apply to the site.

2 SURVEY DETAILS

2.1 Site Visit

2.1.1 Surveyor

Georgina Tearne MSc. H.N.D. Arboriculture. F.Arbor.A.

2.1.2 Dates of Survey

27th September 2017

2.1.3 Other Persons Present

N/A.

2.1.4 Weather Conditions

During the survey, it was fine although hazy with a temperature of approximately 16 degrees.

2.2 Inspection Methods

A visual tree inspection was carried out from ground level of a number of individual trees and groups of vegetation within and directly adjacent to the site.

Data collection of the trees surveyed has been carried out to BS5837:2012 and full details of the methods used are provided in Appendix 1.

An overview of the items is presented in the following section while notes in the form of a schedule are presented in a spreadsheet at Appendix 2. The location of the trees and groups are identified on the accompanying plans ref: 3767.01 & 3767.02.

The positions of the trees within the site are based on the topographical survey provided. However, one tree was omitted and as such the drawing accompanying this report should not be assumed to be accurate and all measurements should be checked on site.

3 SITE OVERVIEW

3.1 Site Description

- 3.1.1 The proposed development site is a collection of storage units within a predominantly industrial area although to the north of the site is Everton park with Millstead School directly adjacent. The site includes a single storey building with Clegg Street accessing the site from the south. Currently this access is closed due to re-development of the adjacent site to the east of Clegg Street.
- 3.1.2 The boundaries to the site are formed with Great Homer Street to the west and Everton Park to the north. Clegg Street forms the limit to the site to the east although it does continue to Iliad Street in the northern section.
- 3.1.3 The topography of the site is quite level with only a slope noted in the adjacent park towards the north, away from the trees. However, in all cases consideration should be given to the root systems of all trees to be retained where there are any proposed level changes.

3.2 Tree Population

- 3.2.1 The tree population is concentrated along the back of the building towards Great Homer Street and towards and within the grounds of the park to the north. The surveyed population which includes grey alder, Italian alder, false acacia, hazel and elder. Some buddleja and a large expanse of viburnum were also noted.
- 3.2.2 The trees surveyed total 27 items of vegetation including 23 individual trees and 4 groups. Nine individuals have been classified as 'B'. One individual has been identified as an 'U'. All the remaining groups and individuals are classified as 'C' in accordance with BS5837:2012.
- 3.2.3 Collectively the tree population has a moderate to high amenity value which is due mainly to the large, mature trees within the adjacent park.

4 TREE CONSTRAINTS

4.1 Root Protection Areas

- 4.1.1 The accompanying drawings (Ref: 3767.01 & 3767.02) show the positions of the trees included within the survey. In the case of individual trees four-point canopy spreads and the root protection areas are also shown. The RPAs are calculated from the tree stem diameters following the guidance of BS5837:2012. Although the RPA attempts to identify an area of the tree's root system which should be protected the simplistic circle (or square) does not take account of constraints such as buildings, land form and walls etc. which may have restricted or influenced root development. In this particular instance circular RPAs are considered to provide a reasonable guide to the extent of the rooting areas which should ideally be protected. In the case of some groups the extents of the canopy spread shown has been considered to be a suitable guide for the RPA requirements.

4.2 Tree Retention

- 4.2.1 Following the guidance of BS5837:2012 proposals for the site should aim to incorporate those trees which are identified as 'A' and 'B'. This includes nine individual trees, 6 of which are in the neighbouring park. The trees along the edge of the site with Great Homer Street (T3-T11) are also valuable as a group and should be retained if possible. It may be that the shrubs beneath (G2) should be removed to open views into the site leaving a line of individual trees.
- 4.2.2 In the case of the 'B' category trees, but also all those off-site, consideration must be given to both the RPAs and their canopy spreads when designing the layout of the new development. The presence of existing hard surfacing and the building beneath some of these trees will give scope to encroach towards them where it can be shown that the proposals will not impact negatively on their health and value.
- 4.2.3 Trees to be retained should also be considered in terms of potential shading to any proposed buildings and useable outside space. This relates to both their current and potential canopy spreads.

4.3 Tree Canopies

- 4.3.1 Four-point canopy spreads for each tree are indicated on the accompanying drawings. Generally the canopy spread of a tree constitutes a constraint in terms of its physical presence and its shading potential. Consideration will be given to both the current and potential canopy spreads in relation to the proposals for the site in the following impact assessment.

4.4 Services

- 4.4.1 A further consideration in the design of the layout of the site is in relation to the positions of the proposed services that may be required. New service trenches, to include sewers, drains and utility supplies must not extend into any areas defined by the RPAs of trees to be retained.

5 IMPACT ASSESSMENT

5.1 Site Proposals

- 5.1.1 The proposals for the site are to demolish the existing buildings on site and to construct a large, multi-storey residential building with associated access, parking and landscaping.

5.2 Statutory Tree Protection

- 5.2.1 The status of the trees should be established prior to any works being carried out. It is however, worthy of note that any work identified within a planning approval will override any existing legislative protection.

5.3 Tree Appraisal

- 5.3.1 In order to accommodate the current proposals it is suggested that a number of trees will need to be removed. Some trees are physically too close to the proposals while the retention of others would restrict the ability to construct the proposals. It is therefore suggested that trees and groups T1-G16 inclusive be removed. Although this does include 3 category 'B' trees all the others are 'C' or 'U'.
- 5.3.2 Although these trees, which are mainly along the boundary with Great Homer Street, will be removed it is recommended that the ground should be protected so that new planting can be established in the same location following completion of the building. It is suggested that fastigate trees can be replanted at intervals so as not to obscure the position of windows in the proposed building.
- 5.3.3 All of the off-site trees within the neighbouring park will be retained and mostly can be completely protected by the installation of protective fencing or hoarding along the edge of the site boundary adjacent to the existing public footpath. In the case of T18, T20 and T21 there is some encroachment of their RPAs in to the site and the canopy of T18 also overhangs the boundary line. However, the extent of the encroachment is considered to be minor and not of particular concern. Except for possible minor pruning of the overhanging limbs it is felt that off-site trees require no further consideration.

5.4 Services and Other Considerations

- 5.4.1 The positions of the proposed services were not known at the time of this report. However, services must not extend into any areas protected by protective fencing. It is felt that this should be achievable although further advice can be provided in this respect should it be required.

6 CONCLUSIONS

- 6.1 The proposed development site includes a single storey industrial unit adjacent to the access road, Clegg Street, and hard surfacing. Landscaping in the form of a shrub bed with trees is located behind the building fronting on to Great Homer Street.
- 6.2 The surveyed tree population is generally concentrated along the boundary with Great Homer Street and to the north adjacent to and within Everton Park. The tree population is of moderate to high amenity value overall.
- 6.3 Nine individual trees are classified as 'B' although 6 of these are in the adjacent park.
- 6.4 Items T1 to G16 inclusive will be removed in order to accommodate the proposals. However, there will be scope to plant new trees along the boundary with Great Homer Street to go some way to compensate for the loss of the original planting.
- 6.5 All but one of the off-site trees will be left untouched with only minor pruning required to T18.
- 6.6 Any services should avoid the areas protected by fencing and the RPAs of trees to be retained.
- 6.7 Protective barriers as shown on the accompanying drawing should be installed to protect trees off-site and the landscaping strip fronting Great Homer Street to avoid compaction of the ground (for new tree planting).

7 GENERAL GUIDELINES, TERMS & CONDITIONS

- 7.1 All tree work should be carried out by qualified Arboricultural Contractors with at least £1 Million Public Liability Insurance cover.
- 7.2 Tree work must be carried out to BS3998 which specifies recommendations for tree work.
- 7.3 The acceptance of this report constitutes an agreement with the terms and guidelines listed within this report.
- 7.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations within this report are carried out under his supervision. Nor shall the consultant be responsible for events which happen after the time of the survey due to factors which were not evident at the time.
- 7.5 Relationships between trees and other objects such as buildings are rarely static and can at times change quite unpredictably. It should therefore be understood that the inspection and monitoring of the condition of trees is a continuing requirement which, in this instance, is recommended on an annual basis.

I trust that this report provides all the necessary information although if further advice is needed please do not hesitate to contact me.

Signed

10/12/2017

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APPENDICES

APPENDIX 1 - SURVEY METHODOLOGY

A visual assessment of each tree was made from ground level in accordance with BS 5837:2012 Trees in relation to construction - Recommendations.

The following information has been collected for each tree and is presented in the spreadsheet at Appendix 1.

1. **Height** - measured in metres using a clinometer.
2. **Stem Diameter** - measured in millimetres at 1.5m above adjacent ground level. Stems of multi-stemmed trees are measured just above the buttress flare while where multiple stems emanate from ground level each stem is measured and the data is inputted into the calculation within the standard.
3. **Spread** - the measurement of the branch spread from the stem of the tree to the extent of the canopy in the direction of north, south, east and west.
4. **Crown Clearance** - measured from the highest point of the adjacent ground level in metres.
5. **Age Class** - described as young (Y), semi-mature (SM), early mature (EM), mature (M), over-mature (OM), veteran (V).
6. **Physiological Condition** - classed as good, fair, poor, or dead.
7. **Structural Condition** - details of any physical defects and the presence of any decay etc.
8. **Preliminary Management Recommendations** - detail of works required including details of further investigations recommended where suspected defects require more detailed assessment and where there is the potential for wildlife habitat.
9. **Estimated Remaining Contribution** - expressed in years as; less than 10, 10-20, 20-40 and more than 40.

10. **Category Grading** – trees are categorised, in accordance with the cascade chart for tree quality assessment, into one of the following categories;

Trees for Removal

Category U

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 to be Considered for Retention

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).

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).

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 below 150 mm.

In addition there are three subcategories which should also be applied identifying the form taken by the value of each tree;

- 1 Mainly arboricultural values
- 2 Mainly landscape values
- 3 Mainly cultural values, including conservation

170927 Appendix 2: Clegg Street, Liverpool, L5 3SP.

No.	Species	Height (m)	Stem Diameter (mm)	Spread (m)				Age Class	Height of Crown Clearance (m)	Ht of 1st Sig Limb/ Direction	Physiological Condition	Structural Condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading
				N	S	E	W								
T1	Alder	8	400 est.	4	1	1	4	EM	N/A	N/A	Dead	Single stemmed. Dead. Limited branch structure. Decaying. Not worthy of retention.	Fell.	0	U
G2	Alder, Viburnum, Buddleja, Elder	<3.5	<100	See Plan				EM	0	0	Fair	Overgrown shrub bed. Under trees 2-3.5m between. No major visible defects.	At present no action.	20+	C2
T3	Grey Alder	9	320	3	4	2	4.5	EM	2	3W	Fair	Single stemmed. In G2. Slightly one-sided. Reasonable shape and form. Minor crossing branches. No major visible defects.	At present no action.	20+	C1
T4	Grey Alder	10	360	3	4	3	4	EM	2	2S	Good	Single stemmed. In G2. Large limb from 2m towards south. Not pruned to any extent. No major visible defects.	At present no action.	20+	C1
T5	Grey Alder	11	260	2	3	3	4	EM	3	4+	Fair	Single stemmed producing twin-stemmed and upright crown. Crown lifted in the past. Slightly one-sided. Not pruned to any extent. No major visible defects.	No action.	20+	C1
T6	Italian Alder	13	430	3.5	3.5	4	4	M	2	6+	Good	Single stemmed. Good shape and form. Slightly biased over site. Dense. Not pruned to any extent. No major visible defects.	Crown lift over footpath.	20+	B1
T7	Grey Alder	9	210	3	2	4	3	EM	4	4	Fair	Single stemmed. Sparse and slightly one-sided crown. Minor deadwood. Limited individual value.	At present no action.	20+	C1

170927 Appendix 2: Clegg Street, Liverpool, L5 3SP.

No.	Species	Height (m)	Stem Diameter (mm)	Spread (m)				Age Class	Height of Crown Clearance (m)	Ht of 1st Sig Limb/ Direction	Physiological Condition	Structural Condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading
				N	S	E	W								
T8	Grey Alder	9	250	2	2	1	3	EM	2	2	Fair	Single stemmed. In G2. Forked crown. Slightly one-sided. Reasonable shape and form. Not pruned to any extent. No major visible defects.	No action.	20+	C1
T9	Grey Alder	10	400	4.5	2	3	4	EM	3	3N	Fair	In G2. Single stemmed producing and twin-stemmed crown with a tight union. Reasonable shape and form. Not pruned to any extent. No major visible defects.	No action.	20+	C1+
T10	Grey Alder	9	230, 140	0	4	2	3.5	EM	2	3+	Fair	One main stem with a poorly formed secondary stem with poor union crossing towards the south. One-sided due to T11. Minor deadwood and stubs.	At present no action.	20+	C1
T11	Italian Alder	16	600	5	3.5	5	5	M	1.5	6E, 3S	Good	Thick single stemmed. Forked at 3m. Good shape and form. Not pruned to any extent. High crown over existing building. Minor deadwood and stubs. No major visible defects.	No action.	20+	B1
T12	Grey Alder	14	300	2.5	4	2	2.5	EM	4	3S	Fair	Single stemmed with lean to east then forked with 2 main and corrected leaders. Minor stubs and tight union at fork. Narrow form. Limited individual value. Easily replaced.	No action.	10+	C1+
T13	False Acacia	18	390	3.5	6	2	4	EM	5	6S	Fair	Single stemmed with decaying old branch collar wound at 1m with thickened woundwood. Forked at 3m. Some deadwood and stubs. One-sided towards the south.	Remove deadwood.	10+	C1+

170927 Appendix 2: Clegg Street, Liverpool, L5 3SP.

No.	Species	Height (m)	Stem Diameter (mm)	Spread (m)				Age Class	Height of Crown Clearance (m)	Ht of 1st Sig Limb/ Direction	Physiological Condition	Structural Condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading
				N	S	E	W								
T14	False Acacia	18	520	1.5	7	7	5	M	3	6S	Fair	Thick single stem forked at 4m. One-sided towards the east and south. Deadwood and stubs throughout but this is typical of False Acacia. Some canker noted on stem making some potentially weak unions.	Remove deadwood and monitor branch unions.	20+	B1
T15	Grey Alder	6	300	1.5	4	3	2	EM	2	4+	Good	Single stemmed. Reasonable shape and form. Slightly one-sided. No major visible defects. Easily replaced.	No action.	20+	C1
G16	Hazel, Viburnum, False Acacia	<3	N/A	See Plan				EM	0+	0	Fair	Scrappy group. Limited individual value. Easily replaced.	No action.	20+	C2
T17	Grey Alder	10	320	4	3.5	1	3	EM	4	3S	Poor	Single stemmed. Slight lean to east. Forked at 3m. Deadwood and stubs and sparse crown. Dieback.	Owners to remove deadwood.	10+	C1
T18	False Acacia	16	500	6.5	6.5	5.5	6.5	M	3	4+	Fair	Thick single stem. Forked at 2.5m with tight unions. Deadwood and stubs throughout. One-sided.	Owners to remove deadwood.	20+	B1
T19	False Acacia	16	380	4	1	8	3.5	EM	5	6+	Fair	Single stemmed. Forked crown with tight unions. One limb weighted down on telephone cable. Deadwood and stubs.	Clear telephone cable and owner to remove deadwood.	20+	B1
T20	Italian Alder	19	620	5.5	4.5	6	5	M	3	6+	Good	Single stemmed. Good shape and form. Even canopy. No major visible defects.	No action.	20+	B1
T21	Italian Alder	16	620	7.5	2	9.5	1	M	2.5	4S	Good	Single stemmed. One-sided due to T19 but reasonable shape and form. Not pruned to any extent.	No action.	20+	B1

170927 Appendix 2: Clegg Street, Liverpool, L5 3SP.

No.	Species	Height (m)	Stem Diameter (mm)	Spread (m)				Age Class	Height of Crown Clearance (m)	Ht of 1st Sig Limb/ Direction	Physiological Condition	Structural Condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading
				N	S	E	W								
G22	2x Grey Alder	<10	230 & 180	See Plan				SM	2	N/A	Poor	2 x single stemmed trees. One badly formed due to competition with T20. Other dying back of limited value and not worthy of retention.	Owners to consider removal.	10+	C1
T23	Grey Alder	13	530	2.5	5	6	4	M	2	1.5E	Fair	Unusual form. Forked at 1.5m producing partially fastigate form. Signs of Bacterial Canker on stem. Some crossing branches.	At present no action.	10+	C1+
T24	Grey Alder	14	410	3	4.5	3.5	1	EM	2	6+ over site	Fair	Single stemmed. Narrow form. Some kinked limbs towards east and south. Minor stubs. Low crown over site but easily crown lifted.	No action.	20+	B1
T25	Grey Alder	13	350	2.5	3.5	2.5	3	EM	2	6+ over site	Fair	Single stemmed with significant limb at 2m to southeast but upright after 1m. Minor crossing branches. No major visible defects.	No action.	20+	C1+
T26	Italian Alder	17	550	6	6	6	5	M	1.5	5+	Fair	Single stemmed. Topped in distant past at 5.5m producing a dense, multi-stemmed and upright crown. Tight unions.	No action.	20+	B1
G27	Italian Alder	<15	<200	See Plan				SM	0+	3	Good	A collection of stems with bramble around base. Some multi-stemmed and other single stemmed trees all of limited individual value and easily replaced. No major visible defects.	At present no action.	20+	C2

170927: Work Schedule

No.	Species	Height (m)	Stem Diameter (mm)	Recommendations
T1	Alder	8	400 est.	Fell.
G2	Alder, Viburnum, Buddleja, Elder	<3.5	<100	Remove.
T3	Grey Alder	9	320	Fell.
T4	Grey Alder	10	360	Fell.
T5	Grey Alder	11	260	Fell.
T6	Italian Alder	13	430	Fell.
T7	Grey Alder	9	210	Fell.
T8	Grey Alder	9	250	Fell.
T9	Grey Alder	10	400	Fell.
T10	Grey Alder	9	230, 140	Fell.
T11	Italian Alder	16	600	Fell.
T12	Grey Alder	14	300	Fell.
T13	False Acacia	18	390	Fell.
T14	False Acacia	18	520	Fell.
T15	Grey Alder	6	300	Fell.
G16	Hazel, Viburnum, False Acacia	<3	N/A	Remove.
T17	Grey Alder	10	320	Owners to remove deadwood.
T18	False Acacia	16	500	Cut back overhanging limbs. Owners to remove deadwood.
T19	False Acacia	16	380	Clear telephone cable and owner to remove deadwood.
T20	Italian Alder	19	620	No action.
T21	Italian Alder	16	620	No action.
G22	2x Grey Alder	<10	230 & 180	Owners to consider removal.
T23	Grey Alder	13	530	At present no action.
T24	Grey Alder	14	410	No action.
T25	Grey Alder	13	350	No action.
T26	Italian Alder	17	550	No action.
G27	Italian Alder	<15	<200	At present no action.