



CLADERSTONES MANSION, LIVERPOOL

TREE SURVEY

on behalf of the Reader Organisation

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Document Control

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1 Introduction

- 1.1 A Tree Survey has been carried out Calderstones Mansion, Liverpool on behalf of the Reader Organisation. The Tree Survey has been prepared to inform the design of the outdoor spaces associated with a planning application for works to the property.
- 1.2 The Tree Survey covers the existing vegetation in areas affected by the proposed works and includes trees along the principal façade of the building (south western façade) and one of the side elevations (south eastern elevation).
- 1.3 The Tree Survey is based on the guidance set out in *British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations*. The tree survey describes the nature of the existing vegetation.
- 1.4 The proposed tree works to be carried out to facilitate the development are detailed in separate documentation supporting the planning application.
- 1.5 The Tree Survey has been prepared by Cass Associates.

2 Methodology

- 2.1 The Tree Survey is based on a topographical survey provided by the client. The approximate locations of T6 and G1 were added to the topographical survey following Cass Associates site visits.
- 2.2 Trees within the survey area with a diameter of at least 75mm at 1.5m height have been included in the tree survey. Hedges were also surveyed.
- 2.3 The site work for the tree survey was carried out on 15 and 19 January 2015 in dry sunny winter conditions with occasional cloud cover on the first day and frosty, overcast weather on the second day. The tree surveyor had full access to the trees on the site.
- 2.4 Liverpool City Council was contacted in January 2015 and they advised that there are no tree preservation orders in the area assessed in this tree survey. Liverpool City Council's website shows that the tree survey area is not in a conservation area.
- 2.5 The information collected is set out below.

- **Reference Number**

All the trees surveyed have been given a reference number with a prefix as set out below:

Individual trees	- prefixed with 'T'
Groups of trees	- prefixed with 'G'
Hedges	- prefixed with 'H'

The reference numbers are provided on the drawing and Tree Survey Data Sheets provided in appendix 2.

- **Species**

Common and scientific names are generally provided.

- **Height**

Height is provided in metres.

- **Stem Diameter**

Stem diameter in millimetres at 1.5 metres above adjacent ground level. If there is an irregular swelling or low branching at 1.5 metres height, the diameter is measured at the narrowest point below the swelling or fork. For multi-stemmed trees, the largest and smallest branch at 1.5m height is provided.

- **Branch Spread**

The branch spread to north, east, south and west is recorded.

- **Height of Crown Clearance**

Height above ground level in metres of: first significant branch and direction of growth (e.g. 2.4-N); and height of canopy.

- **Life Stage**

Maturity does not necessarily directly correlate with age as detrimental environmental conditions may induce more rapid aging. Therefore, two trees of the same number of years may be classed into different age class categories due to one tree growing in a sheltered location with good ground conditions while another is in a harsher environment. The tree in the latter environment is likely to age more rapidly.

Key to age class categories:

Young	- 'Y'
Semi mature	- 'SM'
Early mature	- 'EM'
Mature	- 'M'

Over-mature - 'OM'

- **Physiological Condition**

Physiological condition e.g. good, fair, poor, dead.

- **Structural Condition**

Structural condition e.g. the presence of any decay and physical defect.

- **Preliminary Management Recommendations**

Refer to separate documentation submitted with the planning application for proposed tree works.

- **Estimated Remaining Contribution**

Estimated remaining contribution in years e.g. less than 10, 10-20, 20-40, more than 40.

- **Category Grading**

U or A to C category grading (refer to Appendix 1) and summarised below:

Unsuitable for retention - 'U'

High quality - 'A'

Moderate quality - 'B'

Low quality - 'C'

Additionally, three subcategories (1, 2 and 3) are used to assess the arboricultural, landscape and cultural qualities respectively.

3.6 The information gathered on site is presented in the data sheets (Appendix 2) and the accompanying drawing number 1165-721.

3 Findings

Planting bed on main elevation of Calderstones Mansion

- 3.1 The planting bed on the main façade (south-western facade) of Calderstones Mansion contains five ornamental trees and a hedge which have been assessed. A range of ornamental shrubs and ground cover plant species are also found within this planted area.
- 3.2 There is one moderate quality tree (category B, T1) and four low quality trees (category C) in this planting bed. The moderate quality tree is located further away from the mansion building than the other trees.
- 3.3 The hedge (H1) is located toward the rear of the planting area close to the building. The hedge returns away from the building at its north-western end. It is a clipped Common Beech hedge.

Planting to the eastern elevation of Calderstones Mansion

- 3.4 There is a planting bed on the southern corner of Calderstones Mansion which visual reads as a large group of shrubs. It contains two Magnolia trees that have been surveyed individually (T6 and T7), a group of evergreen trees (G1) and shrubs/ground cover including Rhododendron, Spotted Laurel and Chinese Bramble. The trees are all of low quality (category C).
- 3.5 On the northern corner of Calderstones Mansion is a hedge (H2) of clipped *Thuja plicata*.

APPENDIX 1

CASCADE CHART FOR TREE QUALITY ASSESSMENT

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category 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	<ul style="list-style-type: none">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 category U trees (e.g. 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 declineTrees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category 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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

APPENDIX 2
TREE SURVEY DATA SHEETS

CALDERSTONES MANSION, LIVERPOOL

TREE SURVEY DATA SHEETS

REF	SPECIES	HEIGHT (m)	STEM DIA (mm)	BRANCH SPREAD (M)				HEIGHT OF CROWN CLEAR- ANCE - FIRST BRANCH AND CANOPY (m)	LIFE STAGE	PHYSIOLOGICAL CONDITION	STRUCTURAL CONDITION AND GENERAL OBSERVATIONS	PRELIMINARY MANAGEMENT RECOMMEND- ATIONS	ESTIMATED REMAINING CONTRIBUTION (YEARS)	CATE- GORY
				N	E	S	W							
T1	Magnolia, <i>Magnolia</i> spp.	4	248 to 99	3	5	5	4	0.2-W Canopy: 0.8	M	Good	Good; 2 dead branches in lower canopy – one on eastern side and one on southern side.	Refer to separate documentation submitted with the planning application for proposed tree works	>40	B2
T2	Japanese Acer, <i>Acer palmatum</i> 'Eddisbury'	5	175 to 76	2	3	4	1	2.0-S Canopy: 2.2	EA	Good	Fair; multi-stemmed; canopy leaning to south; decay at base of bole on southern side.		>40	C2
T3	Variegated Portugal laurel, <i>Prunus lusitanica</i> 'Variegata'	4	159 to 57	3	2	2	2	0-S Canopy: 0	M	Good	Large shrub; multi-stemmed; canopy is leaning to south.		>40	C2
T4	Deciduous spp.	4	99 to 54	1.5	1.5	1.5	1.5	1.4-S Canopy: 2.2	Y	Good	Good canopy structure; branches have been removed especially on northern side; clear bole.		>40	C2
T5	Deciduous spp.	4	76 to 57	1.5	1.5	1.5	1.5	1.1-S Canopy: 2.0	Y	Good	Good canopy structure; basal growth has been removed; branches have been removed especially on northern side; clear bole.		>40	C2
T6	Magnolia, <i>Magnolia</i> spp.	5	178 to 32	3	0	2	3	0.2-W Canopy: 0.2	M	Good	Lopsided canopy leaning to west.		>40	C2
T7	Magnolia, <i>Magnolia</i> spp.	5	207 to 35	2	4	4	4	0.2-W Canopy: 1.0	MA	Good	Canopy lopsided to south.		>40	C2

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				N	E	S	W							
G1	<i>Prunus lusitanica</i> spp.	5	328 to 45	-	-	-	-	Canopy: 0	M	Good	Multi-stemmed trees/bushes growing together to form a clump.	Refer to separate documentation submitted with the planning application for proposed tree works	20-40	C2
H1	Common Beech, <i>Fagus sylvatica</i>	1.7	-	-	-	-	-	-	-	Good	Clipped into box shape.		>40	-
H2	Western Red Cedar <i>Thuja plicata</i> spp.	1.7	-	-	-	-	-	-	-	Good	Clipped into box shape.		>40	-

APPENDIX 3
SITE PHOTOGRAPHS



Photograph 1

T 1 (left), T2 (centre) and T3 (right) set within area of mixed shrubs and ground cover on main elevation of Calderstones Mansion.



Photograph 2

T4 (right) and T5 (left) set within area of mixed shrubs and ground cover with H1 behind.



Photograph 3

T6 (deciduous) in front of G1 (evergreen) set within area of mixed shrubs and ground cover.



Photograph 4

T7 (deciduous) in front of G1 (evergreen) set within area of mixed shrubs and ground cover.



Photograph 5
G1 set within area of mixed shrubs and ground cover.



Photograph 6
H2 on southeast elevation of Calderstones Mansion.