

Arboricultural Impact Assessment:

Salcombe Avenue
Jarrow

Prepared for:

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CONTENTS

1.0	Introduction	Page 3
1.1	Background and scope	
1.2	Personnel, timing and weather conditions	
1.3	Survey methodology	
1.4	Root protection	
2.0	Report findings	Page 5
3.0	Impact assessment	Page 6
3.1	Assessment criteria	
3.2	Pre-development impacts	
3.3	Development stage impacts	
3.4	Post development impacts	
4.0	Mitigation	Page 8
4.1	Pre-development impacts	
4.2	Development stage impacts	
5.0	Summary of impacts and mitigation	Page 9
6.0	Schedule of trees	Page 10

Appended documents

Appendix 1 – Tree protection plan.

1.0 INTRODUCTION

1.1 Background & Scope

1.1.1 Dendra Consulting Ltd was commissioned by Dunelm Geotechnical and Environmental to undertake this survey and report. The scope of the contract was to undertake an arboricultural impact assessment (AIA) to accompany a planning application for proposed development of land on Salcombe Avenue, Jarrow. The survey was carried out to BS 5837 – Trees in Relation to Design, Demolition and Construction- Recommendations, 2012.

1.2 Personnel, Timing & weather conditions

1.2.1 The survey was undertaken on the 8th February 2017 by Liam Robson. The weather was fine and dry, with no significant visibility constraints.

1.3 Survey methodology

1.3.1 All observations were from ground level. Height was measured, where possible, using a clinometer and is expressed in metres. Crown spread is also expressed in metres. In dense tree cover height and crown spread may have been estimated. Stem Diameter at 1.5 metres was measured using calibrated DBH tape and is expressed in millimetres.

1.3.2 A tree quality assessment is made for each tree or group of trees as recommended in British Standard 5837 (2012). The resulting categories for the trees are as follows: U = Unsuitable for retention, C = Low value, B = Moderate value, A = High value. The associated number represents the assessment criteria; 1 = mainly arboricultural qualities, 2 = mainly landscape qualities, 3 = mainly cultural and conservation qualities. A cascade chart based on the recommendations in BS5837 is provided as figure 1.

Figure 1 – Chart for tree quality assessment. Adapted from BS5837 (2012).

Category	Criteria		
Category U Trees unsuitable for retention. Trees in such a condition that they cannot be realistically retained for longer than 10 years	<ul style="list-style-type: none"> • Dead, dying or dangerous trees • Trees with serious structural defects • Trees with serious physiological defects 		
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural & conservation values
Category A Tree of high quality with an estimated remaining life expectancy of at least 40 years.	Trees that are particularly good examples of their species. Particularly of rare or unusual species. Trees forming essential parts of a group	Trees, groups or woodlands of particular visual importance.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value.
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that might be categorised in the higher category but are downgraded because of impaired condition.	Trees present in numbers such that they attract a higher collective rating than they would as individuals.	Trees with material conservation or other cultural value.
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 15cms.	Trees not qualifying in higher categories	Trees present in groups or woodlands that do not possess significant landscape values.	Trees with no material conservation or cultural value

1.4 Root protection

1.4.1 The Root Protection Area (RPA) is represented by an area in m² around a tree which acts as a protective zone. In our schedule of trees it is expressed both as the RPA and as the Root Protection Radius (RPR). The RPR is a figure given in metres used to identify the radius of a circle around a tree which serves to act as the RPA. In certain circumstances the shape of the RPA may be altered to suit site specific factors such as the presence of buildings, roads, other trees etc.

2.0 REPORT FINDINGS

2.1 Two groups of trees were included in the survey. The full results of the survey are provided in section 6.0. The trees were examined for physiological and structural defects. Remedial works for such defects have been provided where appropriate, and this has been recommended regardless of development. **Please note that some of this work may be superseded by recommendations required for development purposes.** The results of the tree quality assessment is summarised in figure 2 below.

Figure 2 – The results of the tree quality assessment

Category	Tree/Group numbers
High	None
Moderate	G2
Low	G1
Unsuitable for retention	None

3.0 IMPACT ASSESSMENT

3.1 Assessment criteria

3.1.1 Potential impacts are identified and evaluated using the criteria illustrated in figure 3. This is done without consideration for any mitigation which is then considered in section 4.0.

Figure 3 – Impact assessment parameters and predictions

Assessment parameters	Measure of impacts
<p style="text-align: center;">Timing When impact is likely to occur</p>	<p style="text-align: center;">Pre-development Development stage Post-development</p>
<p style="text-align: center;">Nature and Magnitude of impact</p>	<p style="text-align: center;">Major negative Negative Minor negative Neutral / Negligible Minor positive Positive Major Positive</p>
<p style="text-align: center;">Extent of impact</p>	<p style="text-align: center;">Site level Street level Local level District level County level National level</p>
<p style="text-align: center;">Probability that impact will occur</p>	<p style="text-align: center;">Certain / Highly likely Likely Possible Extremely unlikely</p>

3.2 Pre-development impacts

3.2.1 The proposals will require the removal of areas within G1 and G2. A small area of G1 will need to be removed to accommodate plot 1. A narrow strip will need to be cut through G2 to allow for the creation of a new water pipe from a proposed SUDS. The impacts of the removals will be minor negative at a site level only.

3.3 Development stage impacts

3.3.1 Generic development works on the site, such as operation of machinery, storage of materials, etc, could result in damage to the crowns, stems and root systems of any trees to be retained. This could result in the decline and death of the trees in the years post-development. This has the potential to affect the trees being retained around the development area and the impacts could potentially be major negative at a street level.

3.4 Post development impacts

3.4.1 Potential post development tree/resident conflicts such as encroachment, shading, leaf fall, honeydew, etc usually arise from the erection of residential properties close to large trees. Such problems are subjective and depend entirely on different attitudes to trees. Consequently the impacts are difficult to predict with any degree of accuracy. In this instance, it is considered that the trees to be retained, including G2, are situated a suitable distance away from the proposed buildings. Therefore no impacts of this nature are predicted.

4.0 MITIGATION

4.1 Pre development impacts

- 4.1.1 A number of new plantings are proposed within the soft landscaping scheme. These will mitigate for the small losses from G1 and G2.

4.2 Development stage impacts

- 4.2.1 Protective fencing of the type specified in figures 4 or 5 below will be installed as shown on the tree protection plan. The fencing will be erected after all the pre-development tree works have been completed but prior to the start of construction. Signs will be attached to the fencing to state that it is a protected area and that it should not be moved.

5.0 SUMMARY OF IMPACTS AND MITIGATION

Proposed activity	Characteristic of impact without mitigation	Nature, Magnitude, Extent and Probability of impact without mitigation	Proposed Mitigation	Nature, Magnitude, Extent and Probability of impact with mitigation
Tree removal to facilitate development	Loss of small number of trees	Negative impact at site level – Certain	New plantings in soft landscaping scheme	Neutral impact – Likely
General construction works in proximity to trees being retained	Damage to stems, branches and roots of trees being retained. Decline and death of trees in the years after completion of works	Major negative impact at street level – Highly likely	Protective fencing to be erected	Neutral impact – Likely

6.0 SCHEDULE OF TREES

KEY

NR: Not recorded

Age: Y = Young, SM = Semi mature, EM = Early mature, M = Mature, OM = Over mature

Estimated Remaining Contribution: Expressed in years

Recommendations for health and safety reasons are not highlighted. Recommendations for development purposes are highlighted in **RED**

No.	Species	Height (m)	Stem diam. (mm)	Crown Spread (m)				Height of main canopy (m)	Height of first significant branch (m)	Direction of first significant branch	Age class	Estimated remaining contribution	Comments	Recommendations	Tree quality Assessment	RPA (m ²)	RPR (m)
				N	S	E	W										
G1	Mixed	6.0	250	3.0	3.0	3.0	3.0	0.1	NR	NR	SM	40+	Small group located at north boundary of site. Species includes Cypress, Hawthorn and Swedish Whitebeam	Remove small section to accommodate plot 1	C1	28	3.0
G2	Mixed	10.0	300	3.0	3.0	3.0	3.0	0.1	NR	NR	SM	40+	Shelterbelt woodland located along west boundary of site. Species includes Alder, Apple, Ash, Beech, Cherry, Crack Willow, Oak, Scots Pine, Silver Birch and Swedish Whitebeam	Remove strip to allow construction of new pipe	B1	41	3.6

Report end

KEY

Retention category	
Category A	●
Category B	●
Category C	●
Category U	●
Tree Constraints	
Crown Spread	○
Root Protection Area	○
Tree Removal	○
Trees to be removed	○
Tree Protection	○
Protective fencing	

Scale: 1:1000 @ A3

The original of this plan was produced in colour - a monochrome copy should not be relied upon

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