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Arboricultural Impact Assessment:
39 Parkshiel
South Shields

Prepared for:
Gary Craig Architectural Services
10 Fulmar Walk
Sunderland
Tyne & Wear
SR6 7BW

Report ref: GCA_39Parkshiel_AIA1.1

Report prepared by	Position	Date
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Appended documents

Appendix 1 – Tree protection plan.

1.0 EXECUTIVE SUMMARY

1.1 Dendra Consulting Ltd was commissioned to undertake this impact assessment by Gary Craig Architectural Services. The report was prepared in order to support a planning application for a proposed development at 39 Parkshiel, South Shields. The proposals involve the extension of the existing property to the rear.

1.2 The site survey was undertaken on 19th July 2018 by Liam Robson.

1.3 Two individual trees and one hedgerow were surveyed. No trees require removal. Minor pruning of one tree is required to facilitate development.

1.4 Impacts are predicted from the following activities:

- General construction works in proximity to trees being retained.

1.5 Mitigation has been recommended as follows:

- The erection of protective fencing.

1.6 Overall the proposals are likely to have a neutral impact. A detailed summary table of the impacts before and after mitigation is provided in section 6.0.

2.0 INTRODUCTION

2.1 Background & Scope

2.1.1 Dendra Consulting Ltd was commissioned to undertake this survey and report by Gary Craig Architectural Services. The scope of the contract was to undertake an arboricultural impact assessment for a proposed development at 39 Parkshiel, South Shields. The survey and assessment was carried out in line with BS 5837 – Trees in Relation to Design, Demolition and Construction-Recommendations, 2012 (BSI 2012).

2.1.2 The proposals involve the extension of the existing property to the rear.

2.2 Personnel, Timing & weather conditions

2.2.1 The site visit was made on the 19th July 2018 by Liam Robson. The weather was fine and dry.

2.3 Survey methodology

2.3.1 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.

2.3.2 A tree quality assessment is made for each tree or group of trees as recommended in BS 5837. A cascade chart based on the standard is provided as figure 1.

Figure 1 – Chart for tree quality assessment. Adapted from BS 5837.

Category	Criteria		
Category U **Trees unsuitable for retention.** Trees in such a condition that they cannot be realistically retained for longer than 10 years	• 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

2.4 Root protection

2.4.1 The Root Protection Area (RPA) is represented by an area in m^2 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.

3.0 REPORT FINDINGS

3.1 Survey summary

3.1.1 Two individual trees and one hedgerow were surveyed. The full results of the survey are provided in section 8.0. 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 are summarised in figure 2 below.

Figure 2 – Summary of tree quality assessment

Category	Tree/Group numbers
High	None
Moderate	T1, T2
Low	H1
Unsuitable for retention	None

3.2 Limitations

3.2.1 T1 and T2 were both situated within the rear garden of a neighbouring property. These trees were not inspected in detail.

4.0 IMPACT ASSESSMENT

4.1 Assessment process

4.1.1 This section of the report identifies and evaluates impacts in the absence of any mitigation. Mitigation is then detailed in section 5.0 of the report. Impacts are categorised into pre-development, development stage and post-development phases.

4.2 Pre-development impacts

4.2.1 The proposals do not require the removal of any trees.

4.2.2 Minor pruning of T1 and T2 will be required to facilitate development. The north canopy of these trees should be pruned by 0.5m - 1m away from the proposed extension area. Providing this is undertaken by a competent arborist, no significant impacts are predicted.

4.3 Development stage impacts

4.3.1 The proposed extension breaches the RPA of T1. However, this is a very minor intrusion. Given this level of breach, no significant impacts are predicted.

4.3.2 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 trees to be retained. This could result in the decline and death of the trees in the years post-development.

4.4 Post development impacts

4.4.1 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, two large trees are

situated to the south are likely to require frequent pruning away from the extension. Shading will also be probable given their location. However, mature trees are a prominent feature of most gardens within the locality, so this is unlikely to be considered an issue. The impacts are therefore considered to be low.

5.0 MITIGATION

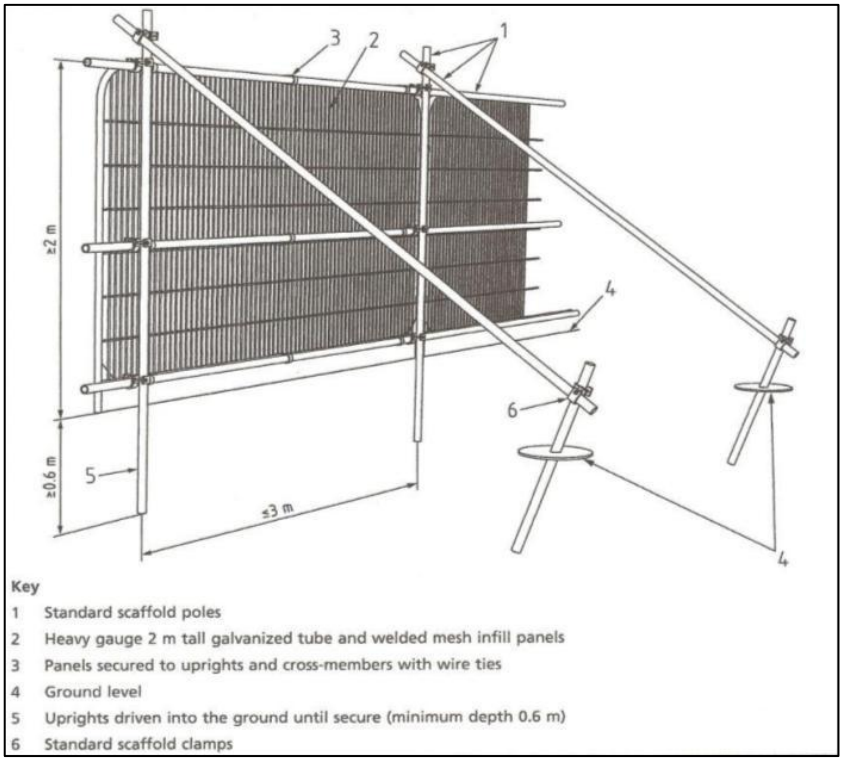
5.1 Pre development impacts

5.1.1 None required.

5.2 Development stage impacts

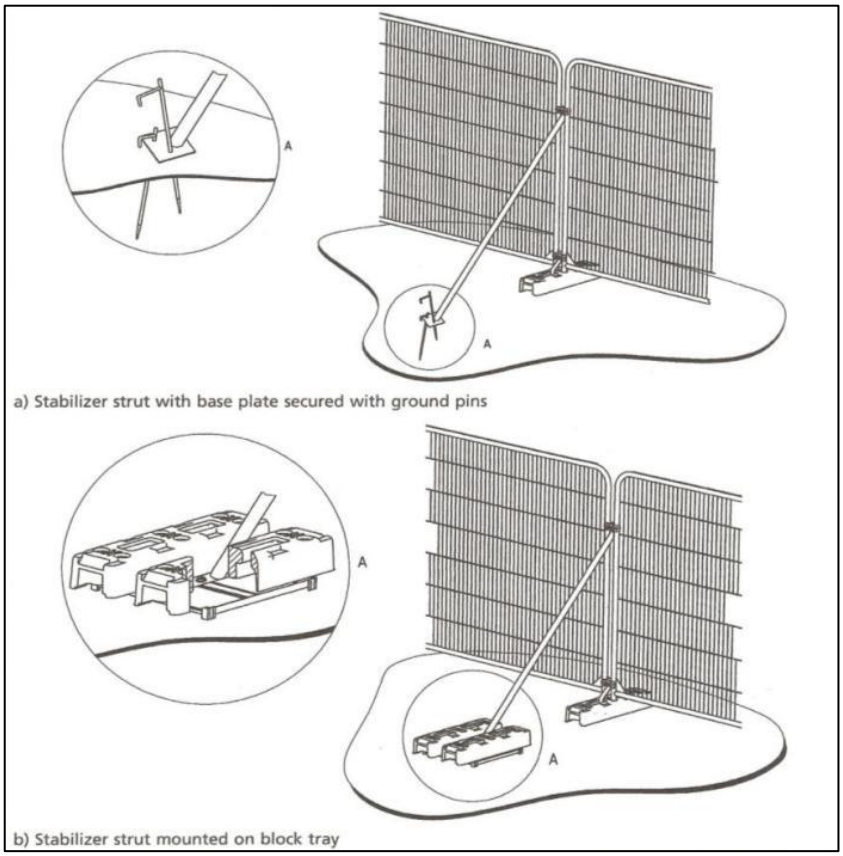
5.2.1 Protective fencing of the type specified in figures 3 or 4 below will be installed as shown on the tree protection plan. The fencing will be erected after all the pre-development tree works have been completed but prior to the start of construction. Signs will be attached to the fencing to state that it is a protected area and that it should not be moved.

Figure 3 – Default protective fencing for trees on development sites.



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 4 – Alternative protective fencing for trees on development sites.



[Figures 3 & 4 reproduced with the permission of the British Standards Institute].

6.0 SUMMARY OF IMPACTS AND MITIGATION

6.1 The impacts and mitigation criteria shown in figure 5 below have been used to assess the impacts of the proposed development, which is summarised in figure 6.

Figure 5 – Impact assessment parameters and predictions

Assessment parameters	Measure of impacts
Nature and Magnitude of impact	Major negative Negative Minor negative Neutral / Negligible Minor positive Positive Major Positive
Extent of impact	Site level Street level Local level District level County level National level
Probability that impact will occur	Certain / Highly likely Likely Possible Extremely unlikely

Figure 6 – Site impacts before and after mitigation.

Proposed activity	Predicted impact without mitigation	Assessment of impact without mitigation	Proposed Mitigation	Assessment of impact with mitigation
General construction works in proximity to trees being retained	Damage to stems, branches and roots of tree being retained. Possible decline of trees	Negative Street level Likely	Protective fencing to be erected	Neutral Highly likely

7.0 REFERENCES

BSI (2012) *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.* British Standards Institution. London.

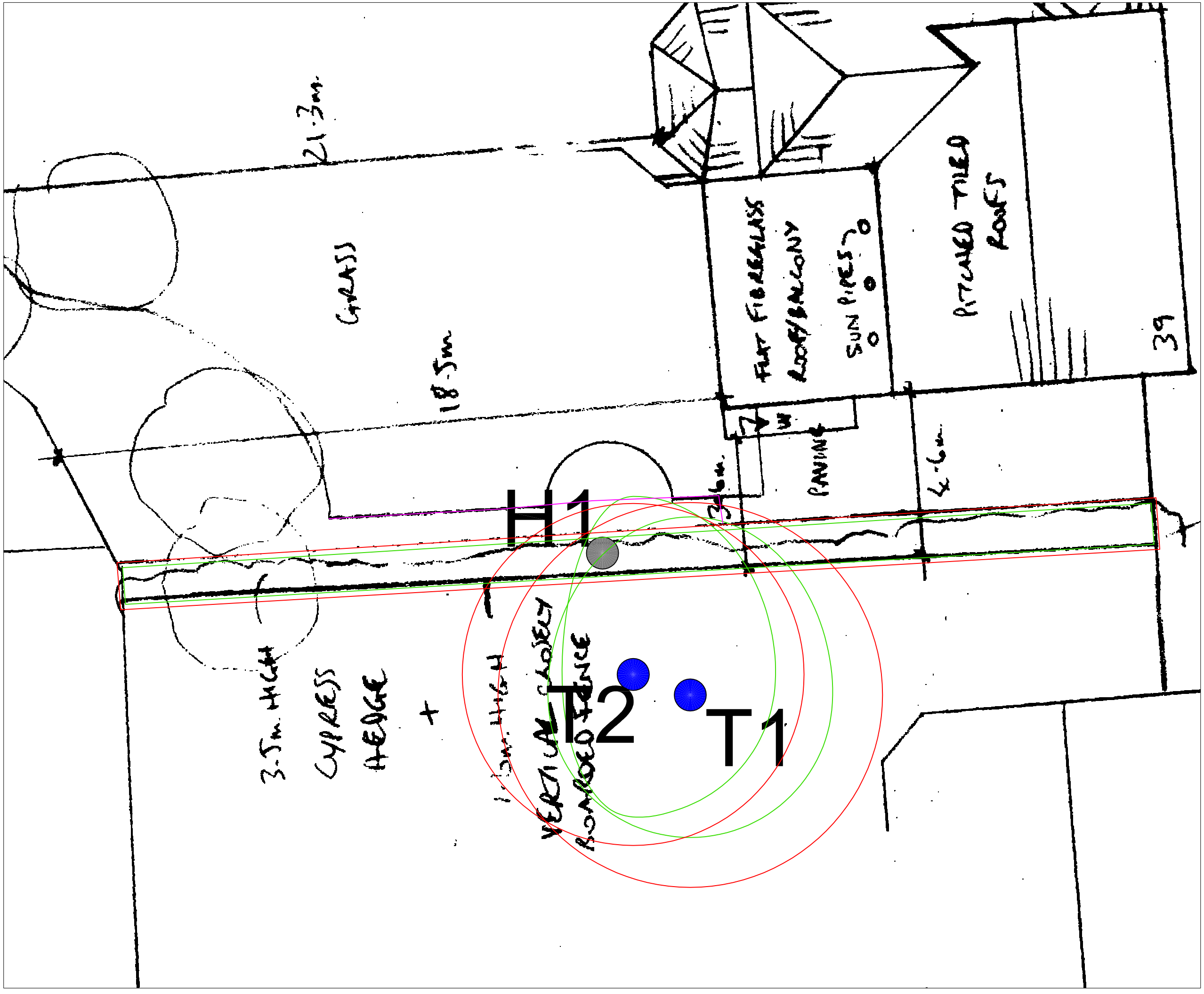
8.0 SCHEDULE OF TREES

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	E	S	W										
H1	Cypress	3.5	100	NR	NR	NR	NR	0.1	NR	NR	SM	40+	No major defects	No action required at the present time	C2	5	1.2
T1	Swedish Whitebeam	12.0	450	5.0	4.0	4.0	4.0	3.0	NR	NR	EM	40+	Located in neighbouring property. Not inspected in detail	No action required at the present time	B1	92	5.4
T2	Swedish Whitebeam	12.0	400	5.0	4.0	4.0	2.0	3.0	NR	NR	EM	40+	Located in neighbouring property. Not inspected in detail	No action required at the present time	B1	72	4.8

REPORT END



Appendix 1
Tree Protection Plan

KEY

Tree retention category

- Category A
- Category B
- Category C
- Category U

Tree Constraints

- Crown Spread
- Root Protection Area

Tree Protection

- Protective fencing

Scale: 1:100 @ A3

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

Project Details
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