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Arboricultural Impact Assessment:
43 Whitburn Road
Cleadon
SR6 7QP

Prepared for:
Mario Minchella Architects
Unit 4
Witney Way
Hi-Tech Village
Boldon Business Park
Tyne and Wear
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Report ref: MMA_43WhitburnRd_AIA1.3

Report prepared by	**Position**	**Date**
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Report verified 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 MMA Architects. The report was prepared in order to support a planning application for the proposed replacement dwelling at 43 Whitburn Road, Cleadon.

1.2 The site visit was made on the 12th December 2022 by Liam Robson.

1.3 Four trees and one hedgerow were surveyed. Pruning of one tree is recommended to provide suitable clearance during the demolition and construction phases.

1.4 Impacts are predicted from the following activities:

- General construction works in proximity to trees and hedgerow to be retained.

1.5 Mitigation has been recommended as follows:

- The erection of protective fencing.
- New hedgerow planting.

1.6 Overall the proposals are likely to have a positive impact at a site level, due to the planting of new hedgerow. 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 MMA Architects. The scope of the contract was to undertake an arboricultural impact assessment to support a planning application for a proposed replacement of private dwelling at 43 Whitburn Road, Cleadon. The survey 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 demolition of the existing dwelling and the construction of a new dwelling.

2.2 Personnel, Timing & weather conditions

2.2.1 A site visit was made on the 12th December 2022 by Liam Robson. The weather was cool and frosty, with no significant visibility constraints.

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 Four trees and one hedgerow was 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, T3, T4
Low	H1
Unsuitable for retention	None

3.1.2 T4 was located in a neighbouring garden to the east. This tree could therefore not be inspected in detail.

3.2 Limitations

3.2.1 T4 was not identified on the topographical survey, as it was situated within a neighbouring garden. The location of this tree is approximate.

3.2.2 The details specified within this report are valid for a period of two years.

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 To alleviate the potential for collision damage of T1 during the demolition phase, it is recommended that this tree is pruned to provide 2m clearance from the existing dwelling footprint, prior to the commencement of any works.

4.3 Development stage impacts

4.3.1 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 trees and hedgerow to be retained.

4.3.2 The RPA of T1 will not be affected by the proposed driveway, as the existing dwelling to be demolished extends beyond this footprint.

4.3.3 The existing hardstanding within the RPA of T1 will provide suitable ground protection during all phases of the 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, give the new proposed site layout, the potential for such impacts is considered to be low.

5.0 MITIGATION

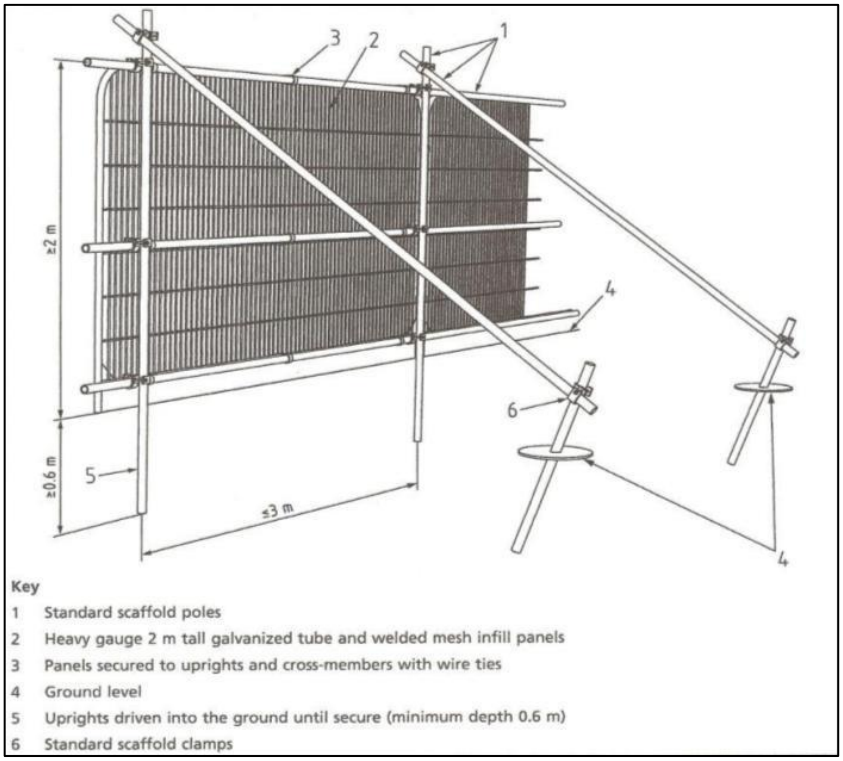
5.1 Pre development impacts

5.1.1 New boundary hedgerow plantings are proposed. This will provide a positive arboricultural impact on the site.

5.2 Development stage impacts

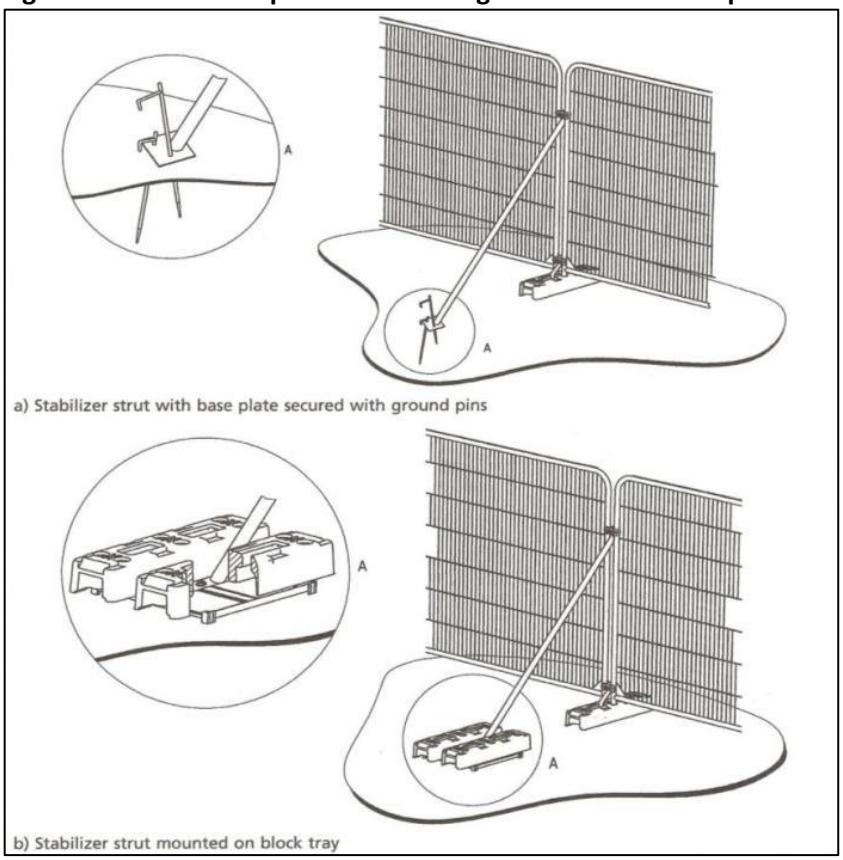
5.2.1 Protective fencing of the type specified in figures 3 or 4 below should be installed as shown on the tree protection plan. The fencing should be erected prior to the start of the demolition works and should remain in place for the entire project, including the construction phase. Signs should be attached to the fencing to state that it is a protected area and that it should not be moved during the construction phase.

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 and hedgerow to be retained	Damage to stem, branches and roots of trees and hedgerow to be retained	Negative Street level Possible	Protective fencing to be erected	Neutral Highly likely
New hedgerow planting	-	-	-	Positive Site level Highly likely
Overall assessment – Positive impact				

7.0 REFERENCES

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

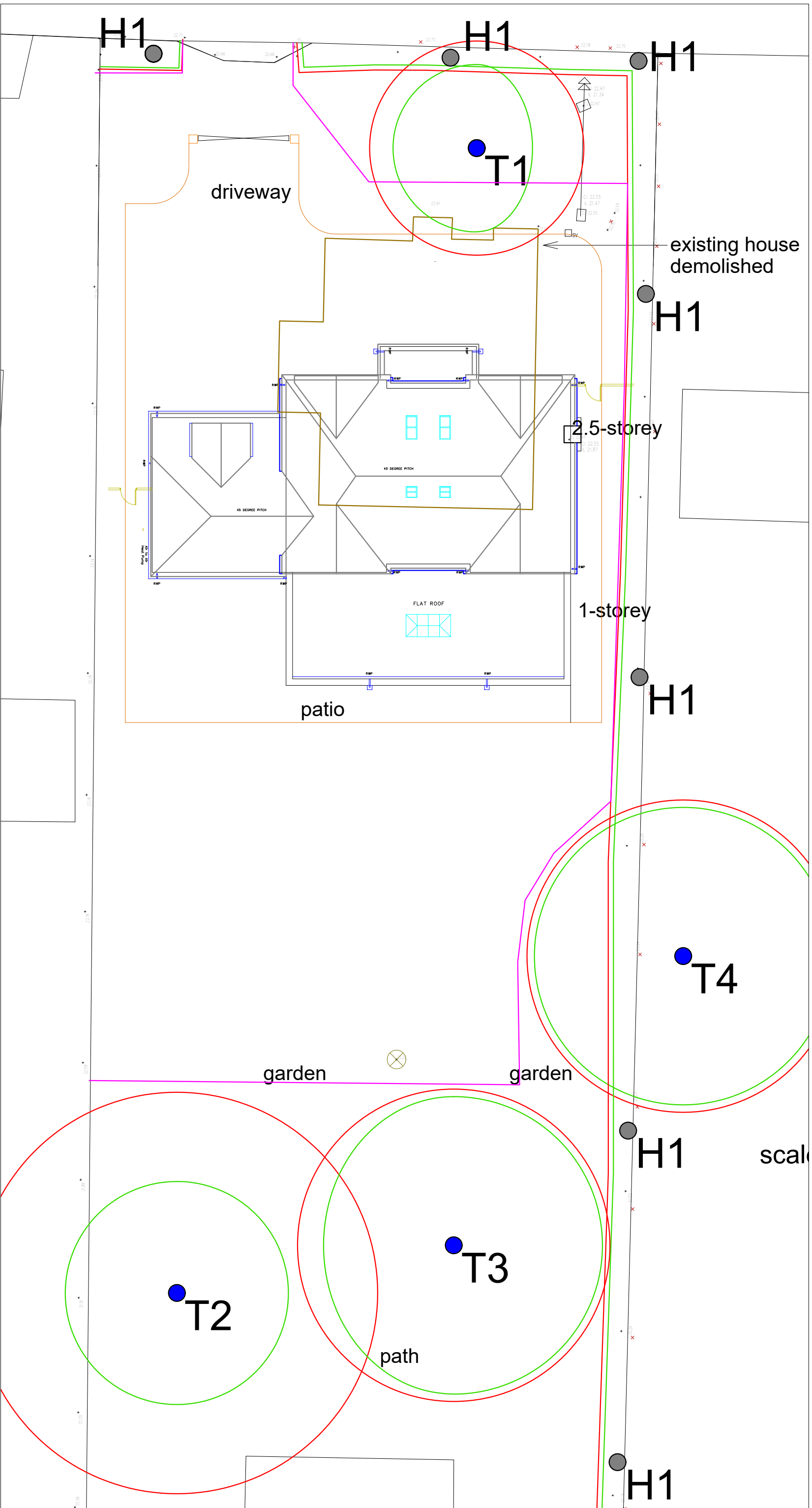
8.0 SCHEDULE OF TREES

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										
T1	Cherry	6.0	480	4.5	3.0	4.5	4.5	2.5	NR	NR	M	40+	Dense ivy on stem and in crown. Branches growing close to dwelling	Prune to clear existing dwelling by 2m Sever ivy	B1	104	5.8
T2	Horse chestnut	12.0	900	6.0	6.0	6.0	6.0	4.0	NR	NR	M	20+	Stem decay on north east flank of lower stem. Bark loss to stem. Minor deadwood	Monitor biennially	B1	366	10.8
T3	Willow	18.0	700	8.0	8.0	8.0	7.0	1.0	NR	NR	M	40+	Deadwood in crown. Ivy on stem	Remove deadwood	B1	222	8.4
T4	Willow	16.0	700	8.0	8.0	8.0	8.0	4.0	NR	NR	M	40+	Located in neighbouring garden. Not inspected in detail	No action required at the present time	B1	222	8.4

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	Privet	2.0	50	NR	NR	NR	NR	0.1	NR	NR	M	40+	No major defects	No action required at the present time	C2	1	0.6



N

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: 1:200 @ A3

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

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