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Johnston Tree Consultancy
Arboricultural & Forestry Solutions

Arboricultural Report

CRANBROOK VILLA
COPSE LANE
HAYLING ISLAND
PO11 0RJ

MARCH 2015

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Arboricultural Report and Arboricultural Implications Assessment

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1.0 INTRODUCTION

- 1.1 This report was instructed by Mr Thorns of Thorns Young Ltd on behalf of their client Mr Hall with regard to the proposed development at Cranbrook Villa, Copse Lane, Hayling Island. The report details all trees over 75mm at 1.5m above ground level that are relevant to the siting of the proposed development. The position of the trees on the site is illustrated at **Appendix 1** on the site plan.
- 1.2 The existing tree stock has been identified and graded in line with the current British Standard BS 5837 2012: Trees in relation to design, demolition and construction - Recommendations to enable informed decisions to be made regarding tree retention. The report also details methods of construction to be implemented to safeguard the retained trees.
- 1.3 This report details the constraints placed on the proposed development from the rooting area of the trees below ground and above ground by their size and position.
- 1.4 This report will therefore inform the planning process for the proposed development to minimise any negative impact on the existing tree stock and ensure that retained trees shall be in harmony with the proposed development enabling their long-term retention.

2.0 SITE VISIT

- 2.1 The site visit was undertaken on 26th May 2014. The trees were surveyed visually, externally and from ground level only. No samples or internal decay detection readings were taken for further analysis. All dimensions have been measured unless stated otherwise. Weather conditions at the time of the survey were dry and overcast.

3.0 SITE DESCRIPTION

- 4.0 The site is located on Hayling Island which is linked to the mainland by the A3020. Hayling is south of the A27 and falls within the Borough of Havant in Hampshire. The site is located within a row of residential properties along Copse Lane which is predominately surrounded by agricultural land. An Ordnance Survey Plan scale 1:500 was made available at the time of survey showing the existing site layout.

5.0 TREE SURVEY DATA

In accordance with BS 5837 2012: Trees in relation to design, demolition and construction – Recommendations, the characteristics of single-stemmed trees over 75mm stem diameter measured at 1.5m above ground level have been recorded and they have been categorised in accordance with Table 1 of BS5837: 2012. The following tree data tables should be read in conjunction with the annotated site plan shown at **Appendix 1** and the legend on the page following the table.



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Tree Number and Species	Height (m)	DBH (mm)	Branch Spread (m)				Existing Height Above Ground Level of Canopy and 1 st Significant Branch (m)	Age Class	Estimated Remaining Contribution (Years) & Physiological Condition	Comments	BS Category & Tree Work Necessary for Development	RPA (m ²)	RPA (m)
			N	S	E	W							
T1 Oak <i>Quercus sp.</i>	14	670	5	8.5	9	5	3 2 East	EM	40 + Good	Boundary tree. On bank. Slight kink in stem. Ivy on lower stem. Previous crown raise north and west. good wound occlusion. Minor deadwood and Squirrel damage. No immediate work required.	B1 Retain and protect Remove lowest limb at 2m east and crown reduce by 2.5-3m on the east side	191	7.9
T2 Field Maple <i>Acer campestre</i>	9	210	4	3	3.5	3	1 2 West	M	< 10 Poor	Boundary tree. On bank. Ivy on lower stem. Stem bifurcates at 0.75m, originally three stems. West stem historically removed. Decay cavity at union, currently appears sound. <i>Crossed branches.</i> Suppressed by T1 and T3. Low canopy on east side. No immediate work required. Advisory: Re-inspect in 3 years	C1 Retain and protect. Crown raise to 3m.	412	11.4



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Tree Number and Species	Height (m)	DBH (mm)	Branch Spread (m)				Existing Height Above Ground Level of Canopy and 1 st Significant Branch (m)	Age Class	Estimated Remaining Contribution (Years) & Physiological Condition	Comments	BS Category & Tree Work Necessary for Development	RPA (m ³)	RPA (m)
			N	S	E	W							
T3 Common Ash <i>Fraxinus excelsior</i>	18	660	4	6	4	3	4 6 North	M	10 – 20 Fair	In adjacent garden. On bank, access limited. Visible of stem appears sound. Low crown break at 2m, stem trifurcates. Limb removed on southern side at 2.5m, good wound occlusion. Previous crown raise good wound occlusion. Minor deadwood and die back. Sparse crown. No immediate work required.	B1 Retain and protect.	197	7.9



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Key to Terms

- Identification numbers have been used and correspond to the site plan shown at **Appendix 1**.
- Vegetation type has been categorized as one of the following: Tree (T), Hedge (H), Shrub (S), Group (G), Stump (ST)
- Species are listed by common and botanical name where appropriate.
- Where possible, measurements have been made in accordance with the conventions detailed below. Where this was not possible, due to site conditions or the vegetation being in third party ownership, dimensions have been estimated. * Indicates estimated measurement.
- Height has been recorded to the nearest half metre.
- Stem diameter has been measured at 1.5m and recorded in millimetres, except where forking or swelling has meant that this is not possible, stem diameter has then been recorded at the narrowest point below these features. Multi-stemmed trees have had individual stems measured at 1.5m. Where this was not possible the actual height where the diameter was measured is recorded. G.L. = Ground Level.
- Crown spread has been recorded to the nearest half metre. Rounded up for dimensions up to 10m and the nearest whole metre for dimensions over 10m.
- Age class has been recorded as follows:
 - Y** Young recently planted or establishing tree that could be transplanted without specialist equipment, i.e. up to 12-14cms-stem girth.
 - S/M** Semi mature. An established tree but one that has not reached its potential ultimate height and has significant growth potential.
 - E/M** Early mature. A tree reaching its ultimate potential height, whose growth rate is slowing down but will increase in stem diameter and crown spread, and has a safe life expectancy.
 - M** Mature. A mature specimen with limited potential for any significant increase in size but with a reasonable safe life expectancy.
 - O/M** Over mature. A senescent or moribund specimen with a limited safe life expectancy. Possibly also containing significant structural defects with attendant safety and/or duty of care implications.
- Physiological Condition has been recorded as Good, Fair or Poor.
- Recommendations for tree management have been based on current Arboricultural Best Practice as set out by the Arboricultural profession and all relevant publications.



5.0 TREE QUALITY ASSESSMENT

- 5.1 The trees have been categorized according to BS5837: 2012 as a guide to their condition and value in terms of visual amenity.
- 5.2 The trees are coloured on the plan attached at **Appendix 1** and the colours are explained in the key of the plan.

6.0 ROOT PROTECTION AREAS

- 6.1 In accordance with BS5837: 2012, the root protection area (RPA) of the trees has been calculated and shown in the following table and on the plan attached at **Appendix 2**.

Table 2 Root Protection Area

Tree No.	RPA in m ²	Recommended radial distances for RPAs (in metres from the centre of the tree to protective fencing)
T1	191	7.9
T2	412	11.4
T3	197	7.9

7.0 LEGAL CONSTRAINTS

- 7.1 Havant Borough Council has verbally confirmed that the Ash tree T3 is the subject of TPO 5. The site does not fall within a Conservation Area.

8.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT

8.1 Description of Proposed Development

It is proposed to seek planning permission for the development of a detached residential property on the site. The existing property will be demolished.



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8.2 Drawings Used

An Ordnance Survey Plan scale 1:500 was made available at the time of survey showing the existing site layout. This was used to prepare the Tree Protection Plan (Demolition) **Appendix 3a**.

The proposed layout was shown on a separate plan, drawing number 7013.14.2 scale 1: 200 and was used for the Tree Quality assessment Plan **Appendix 1**, the Root Protection Area Plan **Appendix 2** and the Tree Protection Plan (Construction) found at **Appendix 3b**.

8.3 Direct Loss of Trees

The proposal will not require the removal of any of the trees. T1 will require minor remedial work to ensure no damage to the above ground parts during the construction phase.

8.4 Position of Trees in Relation to Proposed Development

It is not considered that the proposal will increase future pressure to fell any trees retained on the site.

8.5 Protective Barriers and Ground Protection

Protective barriers will be established prior to demolition to ensure the RPAs of the trees are protected during this process **Appendix 3a** and then repositioned before development along with the ground protection **Appendix 3b**.

Protective barriers in accordance with Figure 2 of BS 5837: 2012 **Appendix 4** should be erected around the trees to be retained. The fencing is to be supported with an appropriate stabilizing system **Appendix 5**. Where possible, the positions of these fences should be based on a distance equivalent to the radius of each tree's RPA. All site personnel shall be made aware of the importance of root protection areas and shall ensure that they are properly maintained at all times. Once established the fencing will define the boundary of the Construction Exclusion Zone (CEZ).

Once erected all weather signage should be displayed stating 'Construction Exclusion Zone'.

No development works shall commence within the CEZ until written confirmation has been obtained from the Local Planning Authority. The project Arboriculturalist shall supervise all work within the RPAs.

Ground protection suitable for pedestrian movement will be established where access is required within the RPA of T2 Field Maple.

8.6 Changes in Ground Surface within RPAs

There is no proposed change to ground surface within the RPA of any retained tree, with the exception of part of the footprint of the proposed property. This is a very minor breach approximately 14m² of T2 Field Maple which is significantly less than 10% of the RPA area. It is considered that this will not be detrimental to the health or longevity of the tree.

8.7 Changes in Ground Level within the RPA

There is no proposed change to ground level within the RPA of any retained tree.

8.8 Foundations within the RPA of T1 Oak

The proposed foundation line marginally breaches the RPA of T2 Field Maple. It is considered that this will not be detrimental to the tree if site investigations are undertaken in this area to determine the rooting pattern of the tree. It is proposed that this small area of the proposed foundation line is excavated by hand under arboricultural supervision and if any significant roots are found details will be submitted to the Tree Officer with a proposed foundation design.

8.9 Services

No overhead services are proposed.

At the time of writing this report there are no details that underground services are to be installed within the RPAs of any retained tree. If this changes this report will be revised to detail their installation and methodology.

8.10 Access for Contractors, Plant Machinery and Storage of Materials.

There is an existing access driveway that serves the property so no vehicular access will be required within the RPAs and all materials can be stored outside of the RPAs

9.0 CONCLUSIONS

9.1 The trees on the site are predominately of a moderate/high quality providing a screening/softening role.

9.2 No trees are to be removed to facilitate the proposal although the Oak T1 will require some remedial work to prevent damage to the tree during the construction process and reduce future pressure for remedial work.



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- 9.3 The protective barriers, ground protection and supervised site investigations will ensure the RPAs of trees are protected.
- 9.4 The establishment of the protective barriers should be supervised by the Project Arboriculturalist and confirmation of adherence with the Arboricultural Method Statement and Tree Protection Plan should be made to the Local Authority Tree Officer before any development starts.
- 9.5 Given these conclusions the following section 'Arboricultural Method Statement' details the recommendations/methodology for the construction of the proposed works in terms of the effect on trees on the site.

Details within this AIA are considered correct at the time of writing but modifications may need to be made as more information becomes available.

Important Notes

The comments made with regard to the health and stability of the trees within this report were correct at the time of inspection. It should be recognized that trees are dynamic structures that can never be completely predictable and may become unstable or partially unstable even in average weather conditions. Changes can occur not only to environmental triggers but also in response to biological or mechanical events.

Inspection Caveats

The inspection was carried out from ground level. Binoculars were used to observe features higher in the canopies.

Foliage, extension growth and/or bud proliferation were assessed visually.

No soil or tissue samples were taken during this inspection.

No invasive diagnostic equipment was used to detect decay.

A nylon hammer was used to test for possible decay and dead or loose bark around the lower stems and bases of the trees.

Ivy has been removed during the inspection process only where reasonable and practicable. Where this has not been possible it has been noted as a recommendation to be removed to allow detailed re-inspection.

No tree is ever absolutely safe due to the unpredictable laws and forces of nature.



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ARBORICULTURAL METHOD STATEMENT

1.0 CONTACT DETAILS

Developer	Unknown at Present	
Architect	Brian Thorns	Thorns-Young Architectural Ltd 232 London Road, North End, Portsmouth, Hampshire PO2 9JQ 03392 672883 b.thorns@thornsyoun.co.uk
Arboricultural Consultant	Sarah Johnston M.Arbor.A. B.Sc. (Hons.) Arboriculture	Johnston Tree Consultancy 16 Manor Close, Wickham, Hampshire, PO17 5BZ 07814 403146 johnstontreeconsultancy@gmail.com
Local Authority Case Officer	Not known	Havant Borough Council Public Service Plaza, Civic Centre Road, Havant, PO9 2AX 02392 44 60 19 planning.development@havant.gov.uk
Local Authority Tree Officer	Jamie Gargett	Havant Borough Council Public Service Plaza, Civic Centre Road, Havant, PO9 2AX 02392 44 60 19 jamie.gargett@havant.gov.uk



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2.0 INTRODUCTION

- 2.1 This Arboricultural Method Statement (AMS) has been produced in line with BS 5837 2012: Trees in relation to design, demolition and construction-Recommendations to aid the successful retention of trees on and adjacent to the proposed development at Cranbrook Villa, Copse Lane, Hayling Island. No development shall take place on the site until this document has been submitted to and approved in writing by Havant Borough Council.
- 2.2 This document sets out the methodology for all proposed works that affect trees on and adjacent to the site. Compliance with this method statement will be a requirement of all relevant contracts associated with the development proposals. Copies of this document will be available on site for inspection.
- 2.3 For details of trees to be retained and location and types of special protection methods, reference should be made to the Tree Protection Plan (TPP). A copy of which should be displayed prominently on site.

3.0 PHASING OF DEVELOPMENT

3.1 Phase 1 – Pre Development Phase

Tree Work

Tree work will be undertaken prior to any demolition or construction taking place. It will be carried out by qualified, insured Tree Surgeons in line with BS 3998 2010.

Tree	Schedule of Work
T1 Oak	Retain and protect Remove lowest limb at 2m east and crown reduce by 2.5-3m on the east side

Site Excavations

Hand dug exploratory trenches will be excavated under supervision along the proposed foundation line; the width of the proposed foundation and to a depth of 600mm to determine the rooting pattern of the tree T2 Field Maple. If significant roots are found these will be recorded and details sent to the Tree Officer with the Arboriculturalist comments on the proposed course of action regarding foundation design. The results will be submitted as part of the planning application or in response to a planning condition.



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Protective Barriers and Ground Protection

Tree protection measures to be installed under the supervision of the retained Arboriculturalist for all the trees.

The protective barriers erected will be in accordance with Figures 2 and 3 of BS 5837:2012 (**Appendix 4 and 5**) and will form the boundary of the construction exclusion zone (CEZ). Where feasible, the positions of the fencing will be based on a distance equivalent to the radius of each tree's RPA. Once erected all weather signage should be displayed stating 'Tree Protection Area Keep Out'.

The ground protection will ensure the rooting area of T2 Field Maple is protected from compaction by pedestrians and scaffolding. A geo-textile membrane is to be placed on the ground and 100mm of woodchip will be placed on top with a surface layer of scaffold boards.

Storage Area

Materials and machinery are to be stored on the driveway/access area outside of the RPA of any retained tree.

3.2 Phase 2 – Construction Phase

Protective Barriers

Once established the protective barriers are not to be moved without written consent from Havant Borough Council.

4.0 GENERAL ARBORICULTURAL CONSIDERATIONS

- 4.1 Protective barriers must be regarded as sacrosanct, and must only be moved under direct supervision of the LPA or named Arboriculturalist to enable the undertaking of works within the RPAs of trees, as set out in this AMS, and approved in writing by the LPA. It is of paramount importance the fencing is repositioned correctly after any agreed operations.
- 4.2 No materials, chemicals, machinery or vehicles must be stored within the RPAs as defined on the TPP and identified on site by protective fencing and aboveground root protection.
- 4.3 Ground protection must not be lifted or removed without prior consultation with the LPA or named Arboriculturalist.
- 4.4 Damage caused to protective fencing or ground protection must be reported to the site supervisor and the named Arboriculturalist to ensure appropriate repair.

- 4.5 Any damage to retained trees must be reported without delay to the site supervisor, the LPA and the named Arboriculturalist so appropriate remedial work can take place without delay.
- 4.6 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 5 metres of the trunk of the retained trees or any other trees on the site.
- 4.7 No fires will be lit on site.
- 4.8 Notice boards, telephone cables or any other signage or services are not to be attached to any part of the retained trees.

5.0 SUPERVISION AND MONITORING

- 5.1 The project Arboriculturalist shall be responsible for monitoring/supervising the following works.
 - Supervision of exploratory trenches
 - Establishment of protective barriers to form the CEZ.
- 5.2 The project Arboricultural Consultant will be responsible for periodical monitoring and will inspect the protective fencing to ensure the CEZ is intact and monitor any works necessary within the exclusion zone. A record of site visits will be maintained for inspection on site and copies forwarded to the agent and planning authority when requested.

Please note this AMS is not a contract. The retention and services of a project Arboriculturalist for supervision and monitoring must be agreed prior to commencement of construction operations.



CREDENTIALS OF THE AUTHOR

Sarah Johnston M. Arbor. A., B.Sc. Arboriculture has worked in the Arboricultural profession for thirteen years. Her experience has been gained from undertaking practical tree work as well as working as an Arboricultural Surveyor and Tree Officer for Eastleigh and Havant Borough Councils respectively. In addition Sarah worked as a consultant for Marishal Thompson for two years from 2005 when she became self-employed. Sarah is a Professional Member of the Arboricultural Association and holds both Professional Indemnity and Public Liability insurance cover trading as Johnston Tree Consultancy.



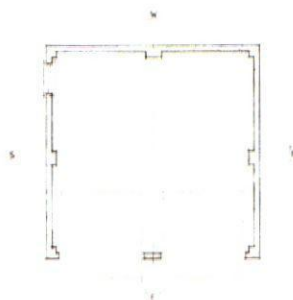
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APPENDIX 1 - TREE QUALITY ASSESSMENT PLAN, CRANBROOK VILLA

- Tree of moderate quality
- Tree of low quality



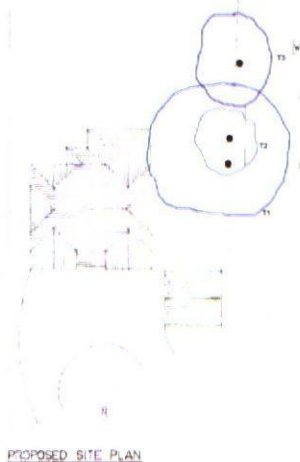
PROPOSED EAST, NORTH, WEST & SOUTH FACING ELEVATIONS



PROPOSED GARAGE PLAN



SECTION AA



PROPOSED SITE PLAN

X		Date	Revised
B. Thorns-Young			
THORNS-YOUNG ARCHITECTS			
THORNS-YOUNG LTD 14 BARNARD ROAD, LONDON E16 3JF Tel: 020 7461 2877 Fax: 020 7461 2877 Email: info@thorns-young.co.uk			
Client			
KEVIN HALL			
Job No.			
CRANBROOK VILLA COPE LAKE HAYLING ISLAND			
Drawing Title			
PROPOSED SITE PLAN & GARAGE			
Scale	1:200, 1:100	Sheet	
Date		Drawn by	
JAN 2015		SA	
Job No.	7013 14 2	Rev	

MDP0070006 001/001 2

Appendix 4 – Default Specification for Protective Fencing

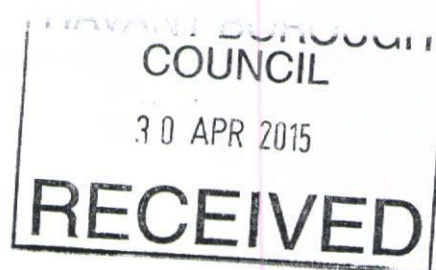
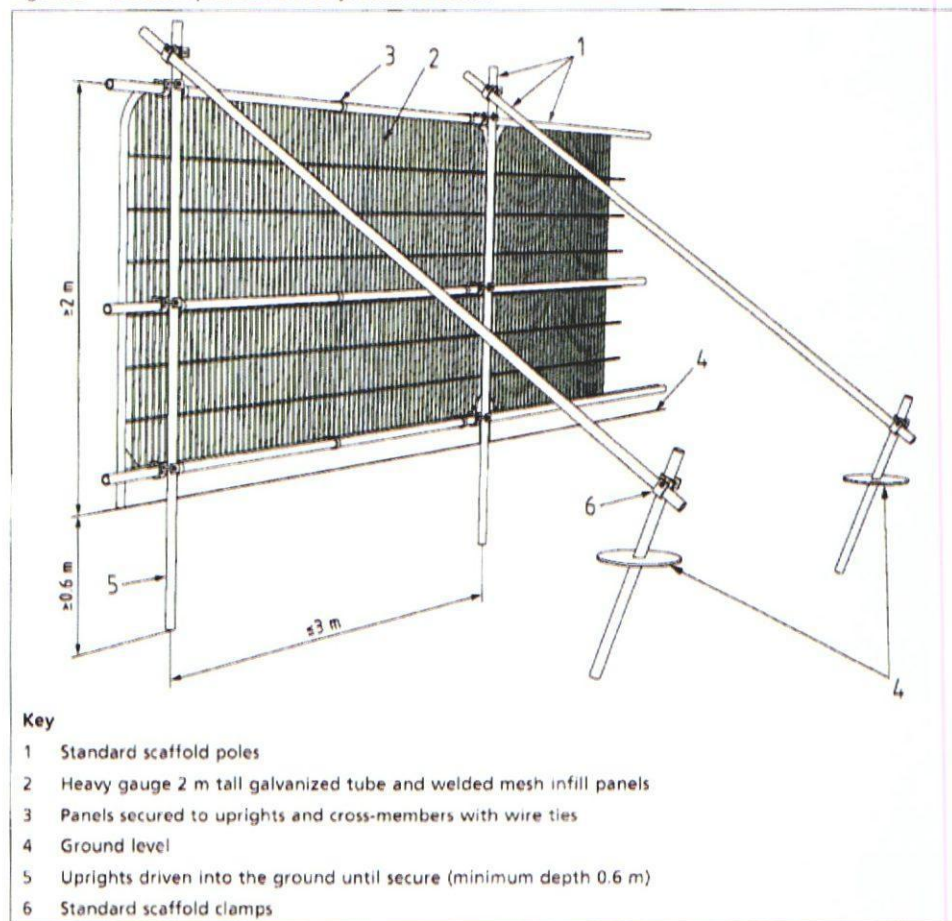
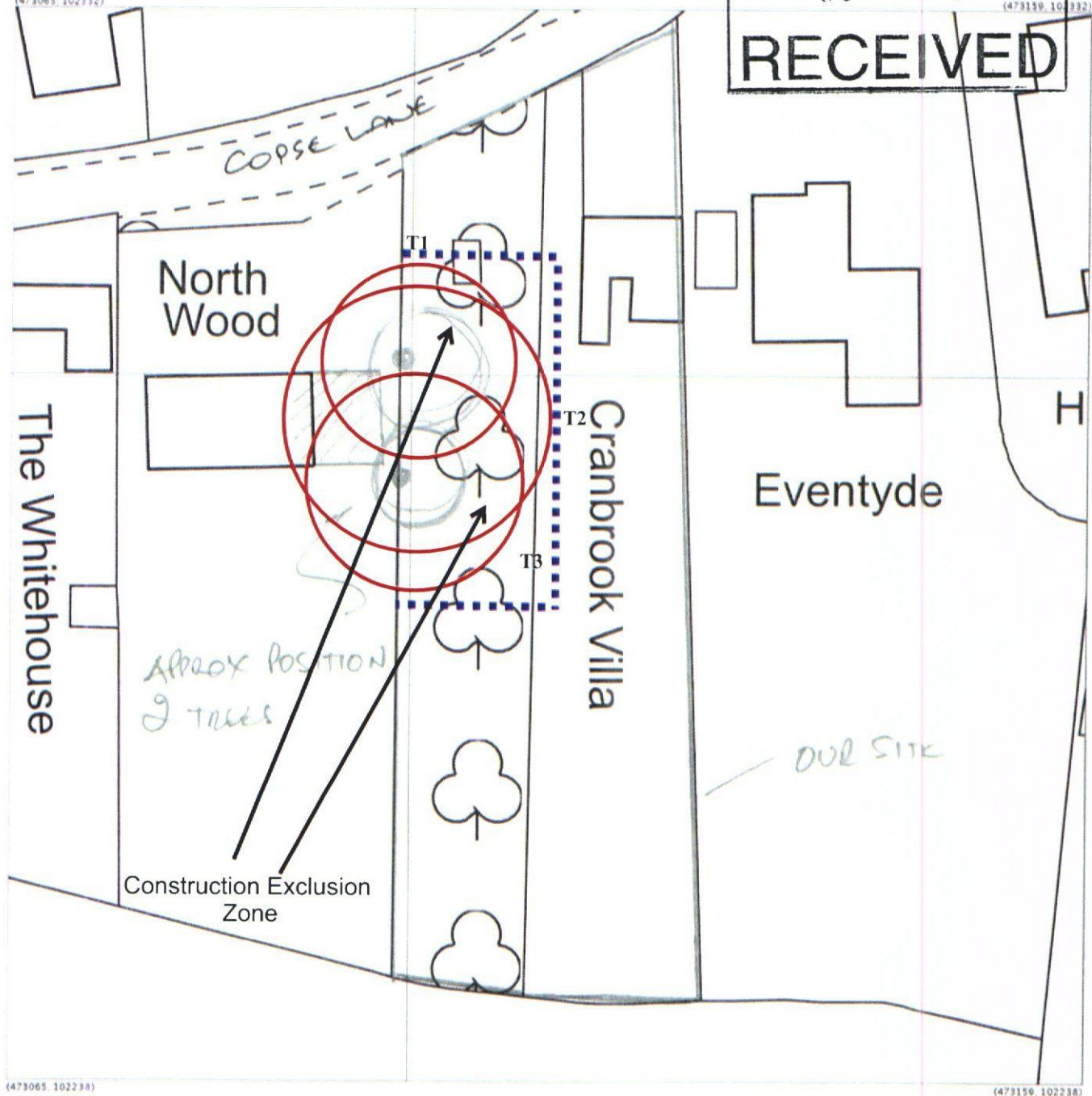


Figure 2 Default specification for protective barrier



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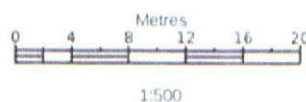
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APPENDIX 3A TREE PROTECTION PLAN (DEMOLITION)

○ RPA in metres radially from centre of stem

■■■■ Protective barriers

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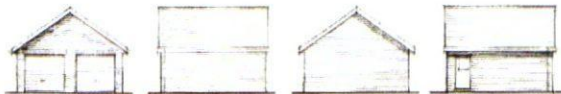
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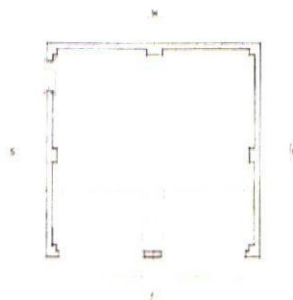
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APPENDIX 2 - ROOT PROTECTION AREA PLAN, CRANBROOK VILLA

○ RPA is defined radially from the centre of the stem



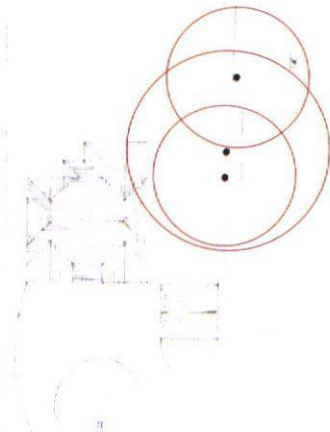
PROPOSED EAST, NORTH, WEST & SOUTH FACING ELEVATIONS



PROPOSED GARAGE PLAN



SECTION AA



PROPOSED SITE PLAN

Client	THORNS-YOUNG ARCHITECTURAL
Project Name	CRANBROOK VILLA CORSE LANE HAYLING ISLAND
Drawing Title	PROPOSED SITE PLAN & GARAGE
Scale	1:200, 1:100
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File No	7013 14 2

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APPENDIX 5 – Examples of Above-Ground Stabilizing Systems

BRITISH STANDARD

BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems

