



Arboricultural Report

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TILEASY HOUSE
WATERBERRY DRIVE
WATERLOOVILLE
HAMPSHIRE
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APP/17/00763

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1.0 INTRODUCTION

- 1.1 This report was instructed by Mr. Briggs of Thomas Sanderson Ltd with regard to the proposed development at Tileasy House, Waterberry Drive, Waterlooville, Hampshire. 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 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 1st August 2017. 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, still and overcast.

3.0 SITE DESCRIPTION

- 3.1 The site is within an industrial park and comprises of a large factory building a grassed area to the front of the site, car parking at the front, side and rear with a goods in/out area on the other side. The land to the rear is predominately farmland.

4.0 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 tables.

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 Cherry <i>Prunus</i> sp.	7	350 @ 0.5m	5	5	5	5	1 0.65m North	M	20 Good	Buttress and surface root northeast, minor mechanical damage. Sound base and lower stem. Low crown break at 0.6m. No past management. Minor Squirrel damage. Small crossed branches. Not visible from outside of the site.	B1 Remove	55	4.2
T2 Common Ash <i>Fraxinus excelsior</i>	13	430*	6	7	6	5*	3 4 South	EM	10 – 20 Fair	On west side of drainage ditch, ownership unclear. Dense Bramble. No access possible. Cracked bark on north of stem 2m-3m. Lost limb at crown break northeast. Storm damage. Minor deadwood throughout canopy. No immediate work required. Advisory: Undertake crown clean	C2 Retain and protect	81	5.1
T3 Common Ash <i>Fraxinus excelsior</i>	10	400*	5*	5*	5*	5*	2 2 Southwest	EM	40 Good	On west side of drainage ditch, ownership unclear. Dense Bramble. No access possible. Visible parts appear sound. Foliage size, colour and density normal. Good vigour. No immediate work required.	B2 Retain and protect	72	4.8

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							
T4 Oak <i>Quercus</i> sp.	14	860	5	7	6	6*	1 2 South	M	40+ Good	On bank of drainage ditch, access to west base not possible. Ivy extends from ground level to crown break. Stem trifurcates at 2m, branch unions not visible. Old pruning stubs at 2m and 4m northeast. Minor Squirrel damage throughout crown. Minor deadwood. No immediate work required. Advisory: Sever and remove Ivy, crown clean. Re-inspect.	A2 Retain and protect	327	10.2
T5 Oak <i>Quercus</i> sp.	14	500*	7*	7*	7*	7*	1 4 South	M	40+ Good	On west side of drainage ditch, ownership unclear. Dense Bramble. No access possible. Ivy extends into scaffold limbs. Stem bifurcates at about 4m, branch union not visible. Good vigour. Good form. No immediate work required.	B2 Retain and protect	113	6.0

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							
T6 Poplar <i>Poplar sp.</i>	20	1250+	7	9	12	4*	1 3 East	M	20 Fair	On west side of drainage ditch, ownership unclear. Dense Bramble. No access possible. Limited inspection. Ivy from ground level extends onto scaffold limbs. 45 degree lean east from ground level. 4 main scaffold limbs from crown break at 1m, branch unions not visible. One limb bifurcates at 2.5m. Scaffold limbs very heavy and overhanging working area and proposed car park. Moderate vigour. Minor dead wood at bottom of crown. Advisory: Establish ownership. Sever and remove Ivy and Bramble around base. Undertake detailed inspection of branch unions and annual inspections of branch unions as on-going monitoring.	B2 Retain and protect Crown raise all stems to a height of 4.5m removing material 150mm diameter or less.	707	15
TG1 Rowan and Norway Maple <i>Sorbus and Acer sp.</i>	Up to 7.5	250 Max.	8		9		2 2 North	Y EM	10 – 40+ Good Poor	Norway Maple sound base and lower stem, minor past management. Westernmost Rowan minor mechanical damage to lower stem. Easternmost Rowan Crown break at 1m, poor past management, die back throughout crown.	B2 Retain and protect	28	3.0

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							
TG2 Common Ash <i>Fraxinus excelsior</i>	Up to 16	500* Max.	12*		12*		2 6 Northwest	EM M	Up to 40 Good Poor	On west side of drainage ditch, ownership unclear. Dense Bramble. No access possible. Limited inspection. Middle tree has 70% dieback. Remaining trees appear sound with good vigour. Minor Squirrel damage and dead wood. Southernmost tree has hanging limb in southwest of canopy. Ivy extends into crown on northernmost tree. Advisory: Remove middle tree. Remove hanging limb from southernmost tree and sever and remove Ivy from northernmost tree and re-inspect.	B2 Retain and protect	113	6.0

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	55	4.2
T2	81	5.1
T3	72	4.8
T4	327	10.2
T5	113	6.0
T6	707	15
TG1	28	3.0
TG2	113	6.0

7.0 LEGAL CONSTRAINTS

- 7.1 Havant Borough Council has advised verbally that there is one Oak along the western boundary which is the subject of TPO 1671. This could be T4 or T5 and should be confirmed in writing before undertaking any remedial work recommended in this report.

8.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT

8.1 Description of Proposed Development

It is proposed to seek planning permission for car park alterations on site, to increase the number of spaces.

8.2 Drawings Used

A site plan, scale 1: 200 showing the existing and proposed layouts has been used to prepare the Tree Quality Assessment Plan **Appendix 1**, the Root Protection Area Plan **Appendix 2** and the Tree Protection Plan found at **Appendix 3**.

8.3 Direct Loss of Trees

T1 Cherry will be removed to facilitate the proposal and T6 Poplar will require minor remedial work.

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

Protective barriers will be established prior to any construction work being carried out. The location of the barriers is shown on the Tree Protection Plans at **Appendix 3**.

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. No work will be undertaken in the RPAs of any trees without arboricultural advice.

8.6 Changes in Ground Surface within RPAs

Parking bays within the RPAs will result in a change of surface but this will be permeable allowing for gaseous exchange and water percolation as well as preventing soil compaction within the RPAs.

There is currently a wooden shed within the RPA of T6 Poplar, this will be dismantled and if there is a concrete base this will be removed using hand tools only.

8.7 Changes in Ground Level within the RPA

There is no proposed change in ground level within the RPAs of any of the retained trees with the exception of T3 Ash and T4 Oak. There is a small ornamental mound and it will be removed using hand tools only. The ground will then be back to its original level. This is not considered to be detrimental to the trees health or longevity.

8.8 Services

No overhead or subterranean services are proposed.

8.9 Access for Contractors and Storage of Materials.

There is ample space on the site outside of the RPAs of the trees for contractor parking and storage of materials.

9.0 CONCLUSIONS

- 9.1 The trees are predominately of a moderate quality.
- 9.2 One tree will be removed and another will have minor remedial work to facilitate the development.
- 9.3 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.
- 9.4 No dig construction will be used in the establishment of the new parking spaces within the RPAs of retained trees. Installation will be supervised to ensure no minimal disruption to the roots of these trees.

- 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.

ARBORICULTURAL METHOD STATEMENT

1.0 CONTACT DETAILS

Architect	Bernard Harding	B.H. Architecture Ltd. Heath Cottage, Newlands Lane, Purbrook, Waterlooville, Hampshire, PO7 5SQ 02392 232 322 bernard@bernardharding.com
Arboricultural Consultant	Sarah Johnston	Johnston Tree Consultancy 16 Manor Close, Wickham, Hampshire, PO17 5BZ 07814 403 146 johnstontreeconsultancy@gmail.com
Local Authority Case Officer	Unknown at present	Havant Borough Council Public Service Plaza, Civic Centre Road, Havant, PO9 2AX 02392 44 60 19 developmentcontrol@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

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 Thomas Sanderson Ltd, Tileasy House, Waterberry Drive, Waterloooville, Hampshire. 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 carried out by professional tree surgeons in line with BS 3998: 2012 Tree Work – Recommendations

Tree	Work required
T1 Cherry	Remove
T6 Poplar	Crown raise to 4m removing material 150mm diameter or less.

Protective Barriers

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'.

Removal of Existing Shed within RPA of T6 Poplar

The shed will be dismantled by hand. If there is a concrete base this will be removed using hand tools only.

Area for Mixing Materials and Storage

Materials and machinery are to be stored on site outside the construction exclusion zones, mixing of materials will also take place there.

3.2 Phase 2 – Construction Phase

Parking Spaces and Access within RPAs of Retained Trees

The parking and access is within the RPAs of several retained trees. The methodology for its establishment is to be as follows:

Establishment of the access driveway within the RPAs must incorporate a 3D cellular confinement system and no-fines aggregate sub-base.

Ground preparation will ensure that the surface is as level as possible using hand tools only. Sharp sand or no fines aggregate will be used where it is necessary to infill larger areas. A non-woven geo-textile membrane overlapped by 300mm at joints; such as Treetex T300 is to be secured in place with pins.

Placement of the cellular confinement system Cell Web 100mm will be stretched into position and pinned into place by reinforced steel pins. Sections will be stapled together to create a continuous mattress.

The web is to be filled with 20/40 clean angular granite based aggregate raked into place. Note; as soon as the Web has been filled it can be used without causing damage to the rooting area below.

Roll out techniques should be used to ensure machinery is above the sub-base layer at all times. Edging is to be comprised of sleepers pinned in place or gabions or other non-invasive ground contact structures.

Final surface is to be gravel, grass or permeable blocks.

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.
 - Establishment of protective barriers
 - Establishment of parking bays within the RPAs of retained trees.
 - Excavation of proposed parking bay adjacent to TG1
- 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 Arboriculturist 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 Professional Indemnity.