



Arboricultural Report

51 – 57 FROGMORE LANE
WATERLOOVILLE
HAMPSHIRE
PO8 9QN

NOVEMBER 2017
REVISION 1 In response to revised site layout

16 Manor Close, Wickham, Hampshire, PO17 5BZ
07814 403146
johnstontreeconsultancy@gmail.com

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1.0 INTRODUCTION

- 1.1 This report was instructed by Driftstone Homes Ltd. The report details all trees over 75mm at 1.5m above ground level that are relevant to the siting of the proposed development at 51 – 57 Frogmore Lane, Waterlooville, Hampshire. 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 29th September 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, overcast and still.

3.0 SITE DESCRIPTION

- 3.1 The site is located in the Waterlooville Hampshire within a residential area. It currently comprises part of the rear gardens of four properties. The gardens are mostly laid to lawn with a number of shrub beds, hedges and a few small trees.

4.0 TREE SURVEY DATA

- 4.1 In accordance with British Standard BS 5837 2012: Trees in Relation to Design, Demolition and Construction - Recommendations, the characteristics of trees over 75mm stem diameter measured at 1.5m above ground level (or immediately above root flare if multi-stemmed) have been recorded. The following tree data tables should be read in conjunction with the annotated site plan shown at **Appendix 1** and the legend after 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 Sycamore <i>Acer psuedoplatanus</i>	18	420*	6*	6	6	6	2 4 South	EM	40+ Good	In adjacent garden, limited inspection from over fence. Stem trifurcates at 2m, visible parts of unions appear sound. Form typical of species. Minor Tar Spot (<i>Rhytisma acerinum</i>) infestation on some leaves. Small area of dieback in southwest part of crown.	B2 Retain and protect	81	5.1
T2 Prunus sp. <i>Prunus</i> sp.	12	400*	3*	3	3	3	2.5 4 North	M	20 Fair	In adjacent garden, limited inspection from over fence. Dense Ivy extends from ground level into the canopy. Visible parts of canopy appear vigorous.	B2 Retain and protect	72	4.8
T3 Cherry <i>Prunus</i> sp.	4.5	260	3	3	4	3	0.5 0.5 East	EM	10 – 20 Fair	Sound base and lower stem. Low crown break. Crossed branches. Small patches of die back at some branch tips, possibly Cherry Leaf Scorch (<i>Apiognomonina erythrostoma</i>).	C2 Remove	34	3.3

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			N	S	E	W							
T4 Common Hawthorn	7	400*	4*	4*	4*	4*	2 2 North	OM	10 Fair	Access to base and lower stem not possible, inspected over a fence. Dense Ivy from ground level throughout crown. Stem bifurcates at 2m, branch unions not visible. Minor past management.	C2 Retain and protect	18	2.4
T5 Common Yew <i>Taxus baccata</i>	4	220 @0.2m	2	2	2	2	0 0.3 East	Y	40+ Good	Sound base and lower stem. Stem bifurcates at 0.3m. Low crown. Good vigour.	B2 Remove	23	2.7
T6 Pittosporum <i>Pittosporum</i> sp.	5	240 @ Ground level	3	3	3	3	1 1 East	M	20 Good	Multi-stemmed from 0.2m. Included unions, currently appear sound. Form typical of species.	B2 Remove	28	3.0

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			N	S	E	W							
T7 Cherry <i>Cherry sp.</i>	6	230 @ 0.3	4	2	3	3	1.5 1.5 West	EM	20-40 Good	Large buttress root on west side. Low crown break. Form typical of species.	B2 Remove	23	2.7
T8 Cypress <i>Cupressus sp.</i>	6	230*	1	1	1.5	1	0 0 South	EM	20-40 Good	Access to base and lower stem limited. Good vigour. Form typical of species.	B2 Remove	23	2.7
TG1 Rowan, Common Ash, Contorted Willow <i>Sorbus aucuparia,</i> <i>Fraxinus excelsior, Salix sp.</i>	Up to 7	Up to 200	9		11		0 0.5 East	Y	40 Fair Poor	Dense area overgrown with Bramble. Numerous young Ash saplings. The majority are self-seeded specimens with poor form.	B2/C2 Remove	18	2.4

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	81	5.1
T2	72	4.8
T3	34	3.3
T4	72	4.8
T5	23	2.7
T6	28	3.0
T7	23	2.7
T8	23	2.7
TG1	18	2.4

7.0 LEGAL CONSTRAINTS

- 7.1 Havant Borough Council mapping system shows that the trees are not subjects of a Tree Preservation Order. The site does not fall within a Conservation Area. Prior to any tree work being undertaken this should be confirmed in writing.

8.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT

8.1 Description of Proposed Development

It is proposed to establish four detached bungalows with detached garages on the site with access running between existing properties on Frogmore Lane.

8.2 Drawings Used

A plan showing the proposed site layout was provided scale 1: 100. It has been used to prepare the Tree Quality Assessment Plan (**Appendix 1**), the Root Protection Area Plan (**Appendix 2**) and the Tree Protection Plan (**Appendix 3**).

8.3 Direct Loss of Trees

T3 Cherry, T5 Common Yew, T6 Pittosporum, T7 Cherry, T8 Cypress and TG1 will be removed to facilitate the development. Landscaping after the development is complete will negate their loss.

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 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 for Pedestrian Movement and Scaffolding Support

A layer of 100mm deep woodchip is to be placed onto a geotextile membrane and a single thickness layer of scaffold board or similar to be placed on top. The extent of this is shown at **Appendix 3** Tree Protection Plan.

8.6 Changes in Ground Surface within RPAs

There are no proposed changes of ground surface within the RPAs of any retained tree, with the exception of a small area of footpath that breaches the RPA of T2 Cherry. This area will be no-dig construction completed under arboricultural supervision.

8.7 Changes in Ground Level within the RPA

There are no proposed changes in the existing ground levels within the RPAs of any retained tree, with the exception of some minor excavations for the retaining wall within the RPA of T2 Cherry. These excavations will be carried out by hand under arboricultural supervision. It is proposed that the wall will be constructed from railway sleepers and the footing depth will be minimal.

8.8 Services

No overhead services are proposed.

No underground services are to be installed within the RPAs of any retained tree.

8.10 Foundations within RPAs

See 8.7 above.

8.11 Access for Machinery and Site Storage

Machinery access will be from Frogmore Lane. It and materials will be stored outside of the RPAs of the retained trees.

9.0 CONCLUSIONS

- 9.1 The trees adjacent to the site are predominately of a moderate quality providing a screening/softening role.
- 9.2 The trees being removed to facilitate the development will be replaced once the development is complete.
- 9.3 The establishment of the protective barriers and ground protection 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 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**

Developer	Kevin Smith	Driftstone Developments Ltd. 24 Palmerston Business Park, Fareham, Hampshire, PO14 1DJ 07990 587065 kevin@driftstonehomes.co.uk
Architect	Phil Hamblin	H J Concepts Ltd Suite 100 Fareham Reach, 166 Fareham Road, Gosport, Hampshire, PO13 0FW 01329 288684 phil@hjconcepts.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	Unknown at present	Havant Borough Council Public Service Plaza, Civic Centre Road, Havant, PO9 2AX 02392 44 65 23 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 65 25 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 51 – 57 Frogmore Lane, Waterlooville, 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

Protective Barriers

Tree protection measures to be installed under the supervision of the retained Arboriculturalist for all the trees in accordance with the Tree Protection Plan **Appendix 3**.

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'.

Ground Protection

A layer of 100mm deep woodchip is to be placed onto a geotextile membrane and a single thickness layer of scaffold board or similar to be placed on top. The extent of this is shown at **Appendix 3** Tree Protection Plan.

Materials, Access and Storage

Access for machinery will be via the existing driveway. There is adequate space for storage of materials on site as shown on the Tree Protection Plan at **Appendix 3**.

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.

Supervised Excavation for Retaining Wall Foundation

Where the retaining wall falls within the RPA of T2 Cherry, the footing will be hand excavated under arboricultural supervision to ensure minimal disruption within the rooting area. If any significant roots are located the Tree Officer will be contacted and the footing designed to accommodate these. If not a traditional strip lined with a thick DPM will be used.

Supervised Installation of No-Dig Section of Footpath within the RPA of T2 Cherry (if required)

Where no significant roots are found during excavations for the footings of the retaining wall the footpath will be traditional design with a thick DPM below within the RPA of T2 Cherry.

If no significant roots are found the path in this area will be no-dig construction using 50mm Cell Web on top of a geo-textile membrane with slabs to finish and will be installed under arboricultural supervision.

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
 - Excavation of footing for retaining wall.
 - Supervision of no-dig footpath within RPA of T2 Cherry (if required).
- 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 Insurance cover trading as Johnston Tree Consultancy.

