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Arboricultural Report

- Arboricultural impact Assessment
- Arboricultural Method Statement (Heads of Terms)

32 Bath Road
Emsworth
Hampshire
PO10 7ER

Prepared for:

Mr Marcus Boret

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Contents

Details 3
1.1. Client 3
1.2. Site address 3
1.3. Instruction 3
1.4. Scope 3
1.5. Limitations 4
1.6. Document disclosure 4
1.7. Additional background information 4
2. Site Visit & Survey Methodology 5
2.1. Site visit 5
2.2. Site description 5
2.3. Legal protection of trees 5
2.4. Proposed development 6
2.5. Tree survey 6
2.5.2. Categorisation 6
2.5.3. Sub-Categories 6
2.5.4. Retention value 7
2.5.5. Root Protection Area (RPA) 7
2.6. Results 7
2.7. Conclusion 7
3. Arboricultural Impact Assessment 8
3.1. Introduction 8
3.2. Considerations 8
3.3. Tree retention and removal 9
3.3.1. Trees to be retained 9
3.3.2. Trees to be removed 9
3.3.3. Tree pruning works 9
3.4. Effect of new building/buildings on amenity at or near the site. 10
3.5. Proximity of existing trees to structures 10
3.5.1. Direct and indirect impacts of trees 10

3.5.2. Shading and seasonal nuisance 10
3.5.3. Future pressure to remove 10
3.6. Tree protective measures 11
3.6.2. Tree protective barriers and ground protection 11
3.6.3. Tree protective box 11
3.7. Works required in or near Root Protection Areas (RPA's) 12
3.7.1. Demolition 12
3.7.2. Special engineering for foundations within the RPA 12
3.8. Ground level changes 13
3.9. Services and their installation 13
3.10. Conclusion 13
3.11. Recommendations 13
4. Arboricultural Method Statement (Heads of Terms) 14
4.1. Identification of constraints and areas to be protected. 14
4.2. Tree works. 14
4.3. Ground protection. 14
4.4. Tree stem protection. 14
4.5. Specialist foundations. 14
4.6. Construction of new surfacing. 15
4.7. New services. 15
4.8. Removal of Protective measures. 15
4.9. Landscaping. 15
4.10. Further tree related risks. 15
Appendix A 16
Survey Schedule 17
Appendix B 18
Tree Protection Plan 19
5. Qualifications 20
Bibliography 21

Details

1.1. Client

Mr. Marcus Boret

1.2. Site address

32 Bath Road
Emsworth
Hampshire
PO10 7ER

1.3. Instruction

1.3.1. I have been instructed by you to carry out the following works:

1.3.2. Visit the site and record the dimensions, position and any pertinent observations regarding a single Golden Weeping Willow[1] tree located near to the proposed development. Measurements are to be recorded according to the criteria prescribed by British Standards (BS) 5837:2012 *"Trees in relation to design, demolition, and construction – Recommendations."*

1.3.3. Create an Arboricultural Assessment of the proposed development at the site address provided above. This report will examine the likely arboricultural impact and future relationship of the proposed development on the retained tree population contained at and within an influencing distance of the site.

1.3.4. I have also been instructed by you to create an Arboricultural Method Statement (Heads of Terms) for the proposed development. The purpose of this document is to summarise the methods required to guide the proposal through development in a sensitive, conscientious and arboriculturally acceptable manner.

1.4. Scope

1.4.1. This report is only associated with the arboricultural aspects of the site and proposal itself. This report and the assessments and method prescribed or discussed within it have been constructed in accordance with British Standards (BS) 5837:2012 *"Trees in relation to design, demolition, and construction – Recommendations."*

1.4.2. The subject tree has been recorded and categorised using the cascade chart for tree quality assessment[2] prescribed in BS 5837:2012 *"Trees in relation to design, demolition, and construction – Recommendations."* Tree dimensions have been recorded using a range of equipment. A clinometer will be used to record height, Tree canopy spread and height above ground will be measured using a laser measure tool, stem diameter[3] will be measured using a handheld tape and tree position and data collection will be conducted using a handheld GPS device. Measurements will be recorded as accurately as possible, although where access is restricted measurements will be approximate. Approximate measurements will be clearly indicated as such.

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[1] *Salix x sepulcralis* var. 'Chrysomcoma'
[2] BS 5837:2012 Section 4.5, Table 1
[3] Measured in accordance with BS 5837:2012

1.4.3. No tags have been used to identify the tree as it is easily identifiable within the landscape. All findings and data has been recorded in an itinerary format and provided in the Survey Schedule section of this report[4]. The data recorded and any observations have been categorised in order of tree condition. This will be calculated using visual assessment, the location of the tree, its condition, life expectancy, and its contribution to the landscape. Only trees which are likely to be directly affected by any proposed construction have been surveyed. Any future development on the site including any excavations of any kind may require further surveying and the installation of protection where applicable. Trees located outside of the development but within 15m of the boundary will be included in the survey. These trees may potentially be influenced by the development, as a result, they require appropriate surveying and their locations plotting. Further protection may also be required for off-site trees.

1.4.4. The plans/drawings provided are constructed in a preliminary format which may be amended where appropriate during the design process.

1.4.5. **The plans/drawings provided are not to be used for the scaling of construction. This survey is not a safety or hazard assessment for insurance purposes and should not be used as such.**

1.5. Limitations

1.5.1. The conclusions, recommendations and discussions presented in this report have been made using the BS 5837:2012 compliant tree survey conducted by myself on the morning of the 16th of December 2016.

1.6. Document disclosure

1.6.1. This report was constructed using the following documents:

- **Architect Drawing No 0225-200 Rev. A**
- **Architect Drawing No 0225-250 Rev. B**
- **Site Location Plan A-P--Site**

1.7. Additional background information

1.7.1. I personally visited the site for the purpose of conducting the survey and gathering appropriate data. This report and its contents were constructed by myself in accordance with BS 5837:2012 *"Trees in relation to design, demolition and construction – Recommendations."* The construction of this report has also made reference to the following sources:

- BS 3998:2010 *"Tree Work – Recommendations."*
- NJUG Volume 4 *"Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees."*
- APN12 *"Through the trees to development."*
- Trees in Hard Landscapes: A Guide for Delivery.

[4] Appendix A, Survey Schedule

2. Site Visit & Survey Methodology

2.1. Site visit

2.1.1. I undertook a site visit on the morning of the 16th of December 2016. The purpose of this visit was to conduct a ground level visual tree assessment survey, recording data, assessing the condition of the single Willow tree in accordance with *BS 5837:2012 Trees in Relation to Design, Demolition, and Construction – Recommendations*. The tree identification numbers used within this report correspond with the tree survey schedule contained within the appendices of this document[5]. The day was clear and sunny which provided good surveying conditions. The weather did not pose a significant constraint on the surveying process, and most parts of the trees above ground structure were visible.

Conditions	Result
Temperature	10°C
Cloud Cover	10%
Precipitation	0%
Humidity	50%
Wind Speed (Beaufort)	F2

2.2. Site description

2.2.1. The proposed development is located in the rear garden of number 32 Bath Road, Emsworth. The property fronts onto Bath Road which runs parallel with a body of water known as Slipper Mill Pond. A long, narrow, linear garden extends from the rear of the garden in a westerly direction. Access to the site is via a gravel access road leading from Waters Edge Gardens which runs in a southerly direction behind the rear gardens of a number of terraced properties. The properties, including the neighbouring properties, have small garages attached to the western end of their gardens which front onto the access road. A number of these garages have been converted into small offices and storage buildings. A single mature Golden Weeping Willow is located on the access road close to the garage of 33 Pond Cottage and near to the existing rear garage of number 32 Bath Road. The tree is a substantial pollard which appears to have been re-pollarded in the last 3 years. The tree has well defined and maintained pollard points, a balanced crown, and normal vitality. The canopy of the tree overhangs the garages of No 33 Pond Cottage and the existing garage of No 32 Bath Road.

2.3. Legal protection of trees

2.3.1. The site is located within the Emsworth Conservation Area and as a result the Willow is afforded statutory legal protection.

[5] Tree Survey Schedule, Appendix A

2.4. Proposed development

2.4.1. The proposed development[6] is to include the demolition of the existing garage and the construction of a new single storey building to provide storage and an ancillary space.

2.5. Tree survey

2.5.1. An arboricultural survey has been undertaken with the aim of determining the status of the tree population inhabiting the site. The survey has been conducted to British Standards 5837:2012 "Trees in relation to design, demolition and construction – Recommendations". BS5837, the British Standards document for trees in relation to construction, gives guidelines for ensuring that trees on development sites are retained or removed according to their future potential to become an asset in harmony with the development or an object of resentment and a potential threat to public safety. The early assessment of a site can ensure that trees to be retained can be afforded adequate protection from the onset of construction right through to completion and long into the future.
All trees and significant vegetation masses above 75mm diameter have been recorded using a GPS device. These positions have then been plotted on the Tree Protection Plan[7]. Any significant vegetation has been surveyed and assessed in the same manner. Surveyed and recorded trees are then assessed using Visual Trees Assessment (VTA) techniques. Tree data is recorded in the form of a schedule detailing: tree number, species, and stem diameter at 1.5m above ground level, tree height, crown spread, and height of the first branch as well as the direction of growth. Where it has not been possible to measure the diameter at 1.5m due to tree physiology it has been conducted according to BS 5837:2012 guidelines. Diameter measurements have been recorded to the nearest 10mm, height to the nearest 0.5m and crown spread and other distance measurements to the nearest 0.3m. Details of the survey data are provided in the Tree Survey Schedule section of this document.

2.5.2. Categorisation

Trees are categorised according to the criterion specified in BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.

- **Category A: Trees of high quality** with an estimated remaining life expectancy of at least 40 years.
- **Category B: Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years.
- **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 150mm.
- **Category U:** Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

2.5.3. Sub-Categories

A, **B** and **C** may qualify for retention through further sub-categories.

1. Mainly arboricultural qualities.
2. Mainly landscape qualities.
3. Mainly cultural values including conservation.

[6] **APP/16/01156**
[7] Appendix B, Tree Protection Plan

2.5.4. Retention value

- **Category A**-trees are trees which are particularly good examples which are essential components of the landscape. Trees, groups or woodlands of particular visual importance or significant conservation value are also considered as a categorisation **A**. Trees of this categorisation should be afforded the highest level of protection and warrant significant amendments to the proposed scheme in the instance of potential conflict.
- **Category B**-trees are those which qualify as moderate quality. These trees may have been downgraded as a result of impaired condition due to a number of potential factors such as defects due to unsympathetic past management. Category **B**-trees should still be afforded a high level of protection with alterations to the proposed scheme being favourable rather than their removal.
- **Category C**-trees are assessed as having a low value and only a transient landscape contribution. This is due to their limited merit or impaired condition. Category **C** trees should not usually impose any constraints on the proposal, however, they should be retained where possible.
- **Category U**-trees are those which are in such poor condition that they cannot be reasonably retained as viable living structures.

2.5.5. Root Protection Area (RPA)

The root protection area for each tree has been calculated for each of the Category **A**, **B,** and **C**-trees. This calculation has been made according to Section 4.6 and Annex D of BS5837:2012. The root protection area is the minimum rooting volume required for a tree to maintain good vitality. Vehicular and pedestrian access should be restricted from these areas by appropriate barriers according to BS5837:2012 Section 6 figures 2 & 3. The shape and position of the RPA can be modified by an Arboriculturalist to meet the constraints posed by individual sites. Details regarding the design of appropriate barriers can be found in Annex B

All tree categories and their locations will be marked and clearly identified on the accompanying Tree Constraints map[8]. Any further recommendations and observations are included in the survey schedule.

2.6. Results

2.6.1. The subject tree highlighted for surveying (T1) has normal vitality, is located in a prominent location, and provides high amenity value to the surrounding properties. A schedule which includes the trees dimensions and a calculated root protection area is included within the tree survey schedule section of this report[9]. The location and tree dimensions have also been overlaid onto a positionally accurate plan, this can be found in Appendix B[10].

2.7. Conclusion

5.7.1. The subject tree has bee categorised as **Category B** in accordance with the criterion specified in the British Standards[11]. As a result, the tree should be retained and afforded a high level of protection throughout the development process.

[8] Appendix B
[9] Appendix A, Tree Survey Schedule
[10] Tree Protection Plan
[11] Bs 5837:2012

3. Arboricultural Impact Assessment

3.1. Introduction

3.1.1. The purpose of this assessment is to examine the relationship between the proposal and its likely impact on the retained tree population, both at and within an influencing distance of the site. This assessment will also determine whether the proposed works can be conducted without adversely affecting the retained trees in the short and long term. Recommendations and mitigation will be suggested in order to reduce or remove the potential impact on the retained tree population and assist in the implementation of the proposal in the most arboriculturally acceptable manner.

3.2. Considerations

3.2.1. Trees are complex living organisms which may be damaged by the activities involved in construction and demolition. This damage can be through direct damage (machinery striking a tree) or Indirect (contaminants entering the soil). Trees do not heal from inflicted injuries and will carry the scars for the remainder of their life. Wounds act as colonising areas for fungal spores and other pathogens to enter a tree. Once colonised the decay process can begin and the tree may begin to decline or die.

3.2.2. The majority of tree roots proliferate in the first 600mm of soil, development works such as excavation, contamination or soil compaction will result in detrimental effects to trees in close proximity. Age, species, and condition are all factors which affect the level of tolerance trees have to disturbance of their rooting system. The protection measures prescribed within this document have been made in accordance with BS 5837:2012 "Trees in relation to design, demolition and construction – Recommendations."

3.2.3. The root protection zone areas are marked as a grey hatched circle around the stem of each tree and identified on the on the Tree Protection Plan (TCP)[12].

3.2.4. This assessment will address the following items:

- Potential damage arising from mechanical activities such as excavations and demolition.
- The installation of services and any trenching required facilitating this.
- Changes in soil height and the installation of new surfaces.
- Sunlight and shading of buildings and amenity areas i.e. patios, conservatories, gardens, play areas etc.
- The location of new access, welfare facilities and parking.
- Future tree growth
- Potential future pressure on the retained tree population.
- Health, Safety and seasonal nuisance.
- The storage of materials.

[12] Appendix B, Tree Protection Plan

3.3. Tree retention and removal

3.3.1. Trees to be retained

Tree categories	A Grade	B Grade	C Grade	U Grade
Tree No's to be retained	N/A	T1	N/A	N/A

3.3.1.1. As indicated above, the subject tree (T1) is to be retained throughout the development process.

3.3.2. Trees to be removed

Tree categories	A Grade	B Grade	C Grade	U Grade
Tree No's to be removed	N/A	N/A	N/A	N/A

3.3.2.1. No trees are required to be removed in order to facilitate the proposal.

3.3.3. Tree pruning works

Pruning works required	A Grade	B Grade	C Grade	U Grade
Tree No's to be pruned	N/A	T1	N/A	N/A
Works Required	N/A	The low canopy of the tree shall be raised to a height not exceeding 2.4m or the first significant branch projecting toward the North.	N/A	N/A

3.3.3.1. Some pruning works are required to safeguard the canopy of the retained tree (T1) and to facilitate the demolition/construction process of the proposal.

3.3.3.2. The canopy of the subject tree consists of long weeping shoots characteristic of this species of tree. In order to avoid any potential mechanical damage, these shoots should be pruned back to their pollard points. These pruning works are to be confined to the area immediately over the proposal only. As a result, the pruning works will not cause a significant reduction in the trees amenity value or biological condition.

3.3.3.3. The prescribed Tree Pruning Works although minimal will require written consent from the Local Planning Authority prior to their undertaking.

3.3.3.4. All prescribed tree works can be viewed in the Tree Survey Schedule located in Appendix A.

3.3.3.5. All tree works should be conducted by a fully qualified and insured arboricultural contractor conforming to BS 3998: 2010 "Tree Work – Recommendations." The contractor should prepare and

fill out all necessary Risk Assessments appropriate for the task/tasks and adhere to current health and safety standards. A list of Arboricultural Association approved contractors can be found on their website www.trees.org.uk.

3.4. Effect of new building/buildings on amenity at or near the site.

3.4.1. The proposed development is to demolish and replace an existing building, albeit, with a slightly larger one. The footprint of the proposed building is covered by an existing structure with an adjacent concrete hard standing. No trees are required to be removed to facilitate this and only minor tree pruning work is required. In my professional opinion, this will not result in any substantial detriment to the surrounding landscape or tree population character.

3.5. Proximity of existing trees to structures

3.5.1. Direct and indirect impacts of trees

3.5.1.1. The existing structure to be demolished and the proposed construction of the new building is within the Root Protection Area of the subject tree. As a result, a sensitive method of demolition and construction which will incorporate specialist foundation design is required to facilitate the proposal in an arboriculturally acceptable manner. The likelihood of roots near to structure in the future is very high. Any new construction at the site will be required to be constructed with this in mind[13]. Roots do not have the ability to directly damage heavily loaded structures, however lightly loaded structures such as paths, small garden walls, and driveway surfaces may be disrupted by incremental root growth.

3.5.2. Shading and seasonal nuisance

3.5.2.1. The canopy of the subject tree already overhangs a significant portion of the existing building and hard standing area. The proposed new building will be located in the same location. As a result, the relationship between the tree and the proposal is not perceived to have changed. Therefore, shading is not considered to be a constraint on the proposal. The fenestration of the proposed structure is orientated to the front of the structure facing up the garden towards the house in an easterly direction. This will allow sufficient light into the structure further mitigating potential shading issues. No other windows are proposed in the design of the structure. The leaf fall across the site is not perceived to change dramatically as a result of the proposal, therefore, seasonal nuisance is not perceived to be a constraint on the design. Due to its close proximity to the subject tree, it is prudent to install gutter guards in the gutters of the structure to help alleviate leaf build up. The structure has a flat low roof which will allow easy access via a ladder for the purpose of removing any build-up of leaves and detritus.

3.5.3. Future pressure to remove

3.5.3.1. The subject tree is a pollard which is under a regular pruning regime which is conducted on a 3-4 year cycle. This sound arboricultural management practice significantly reduces the potential future pressure to fell or prune the tree. The subject tree is also located within a Conservation Area which provides further protection and control of its management. There is little evidence to suggest that large numbers of trees are being lost through future pressure to fell or prune from property owners. Considering the points discussed in this section, the design of the proposed new building and its

[13] NHBC Part 4 Foundations, Chapter 4.2 Buildings near trees.

location, I do not perceive there to be significant pressure to fell or prune the subject tree outside of its regular management regime.

3.6. Tree protective measures

3.6.1. As previously discussed, the methods of demolition and construction may have a detrimental impact on the biological function of the subject tree. With this in mind, thorough Tree Protective measures are required to provide adequate protection to the tree and avoid potential harmful incidents. Protective measures have been prescribed to protect both the above and below ground portions of the tree. The locations of which can be viewed on the Tree Protection Plan provided in Appendix B[14].

3.6.2. Tree protective barriers and ground protection

3.6.2.1. All tree protective barriers (fencing) and ground protection is to be erected or installed as specified in BS 5837:2012 (section 6.2) in the locations specified by the Tree Protection Plan contained in Appendix B. This must be carried out prior to the arrival of any materials to the site, demolition, development or any other non-arboricultural works occurring at the site. Due to the location of the tree and the fact that the access road in which the tree stands is in constant use by property owners, it is not appropriate to erect Construction Exclusion Zone barriers in this instance. Such barriers would restrict access to the remaining properties to such a degree that it would not be practicable.

3.6.2.2. In order to provide the tree with appropriate protection throughout the development process, its rooting zone will require the installation of temporary ground protection. This should be installed in the locations specified in the Tree Protection Plan contained within Appendix B of this document. The purpose of this ground protection is to provide safe passage of traffic across the Root Protection Area of the tree without distorting or causing compaction of the underlying soil horizons. In this instance ground protection conforming to the specification made in BS 5837:2012, section 6.2.3.3 has been specified: *"for pedestrian operated plant up to a gross weight of 2t, proprietary, inter-linked ground protection boards placed on top of a compression resistant layer* (*e.g. 150mm depth of woodchip*)*, laid onto geotextile membrane"*.

3.6.3. Tree protective box

3.6.3.1. In order to safeguard the main stem of the tree throughout the construction process, a suitably designed box shall be constructed. This box will protect the stem from physical impacts and should be installed at the same time as the ground protection prior to the commencement of any works at the site. The box shall be of timber construction or formed of ply board overlaid onto a scaffold framework. The project arboriculturist shall be consulted regarding its design and installation. The box will be securely affixed to the ground and extend from ground height to the bottom of the trees first major branch, this will then remain in situ throughout the development process. The location of the box is identified on the accompanying Tree protection Plan[15]. As long as the protection methods discussed within this report are adhered to, I do not anticipate any long-term negative impacts upon retained tree located at the site.

[14] Tree Protection Plan
[15] Appendix B.

3.7. Works required in or near Root Protection Areas (RPA's)

3.7.1. Demolition

3.7.1.1. Damage to the rooting system of a tree can have a significant detrimental effect on a trees biological function. Processes such as mechanical excavations and resultant compaction can lead to loss of root system, anaerobic soil conditions and tree instability. The vast majority of a tree's major roots are within the first 3m of the trees stem base, after this point, the tree root system is heavily branching and of a significantly smaller diameter.

3.7.1.2. Due to the location of the existing garage and in light of the proposed development, working within the Root Protection Area is unavoidable. In order to facilitate the safe removal of the existing structure, it must be demolished in a particular manner. This method of demolition is known as a "top-down pull back" and is conducted from the inside of the structure. The existing structure has a modular design being formed of sectional pre-cast concrete wall panels and roof sheets. Given the small size of the structure to be demolished, in this instance, the structure will be deconstructed by hand without the use of heavy machinery. The concrete raft foundation on which the existing structure shall be left in situ until all of the remaining above ground structure is removed. This can then be removed using appropriate hand-held tools or a small excavator working backward and whilst on the concrete which is being removed. The exposed sub-base underlying the slab, if present, shall be left in situ rather than removed as this may potentially cause harm or expose tree roots. All demolition materials should be removed from the site and disposed of accordingly.

3.7.2. Special engineering for foundations within the RPA

3.7.2.1. The construction of the proposal is located over the existing garage once it has been removed. This places the new structure within the Root Protection Area of T1. The slab of the new structure will be 100mm higher than the existing building slab foundation. The new structure will be constructed of lightweight timber frame and it is considered that the new load superimposed will be no greater than the existing. Traditional foundation designs such as strip foundations can result in excessive root loss and damage which has serious health and stability implications for the trees affected by it. The use of Short Bored Pile and Ground Beam foundations allows the construction of building foundations to be implemented with minimal damage to the root system and soil resource area of trees. In this instance, Short Bored Pile and Ground Beam foundations are specified to reduce the potential impacts associated with the construction of the proposed new building. Small piles are drilled into the ground in locations specified by the engineer and arboriculturist. The size of bored pile and depth will first be agreed by Building Control. Test pits can be dug using air displacement technology[16] to inspect the soil horizons and avoid any significant roots. Ground beams are then laid onto the piles at the existing ground level, the structure can then be constructed on top of these beams and piles negating the requirement for significant excavation. In order for this method to be successful, it is essential that the soil area defined by the RPA is subject to minimal disturbance, including compaction, excavation or contamination. Suitable ground protection as specified will be required to be installed on the surface of the site as specified in the Tree Protection Plan[17]. The locations of each pile should be specified by a Structural engineer and designed with enough tolerance so that any significant roots can be avoided during the inspection phase. Substantial roots will need to be avoided by moving piles and cantilevering ground beams across them.

[16] BS 5837:2012, 7.5.2
[17] Appendix B

3.7.2.2. The subject tree has normal vitality and is under a regular maintenance regime. This species of tree is also known for having a vigorous nature, in my experience, Willow trees are more tolerant of disturbance than other species of tree. As a result, I consider it unlikely that the process required to develop the proposal will have any long-term detrimental effect on the subject tree.

3.7.2.3. Further mitigation of potential impact on the retained tree can be achieved through the formulation of a detailed Arboricultural Method Statement. All works within the Root Protection Area including the erection/formation of tree protective measures, demolition, the installation of specialist foundations, and construction should be subject to arboricultural supervision and/or a regular arboricultural inspection regime. As long as the prescribed measures are adhered to, I perceive there be very little detriment to the retained tree.

3.8. Ground level changes

3.8.1. The topography of the site is predominantly level and no significant ground level changes are planned at the site. The proposed new slab level is to be elevated by 100mm above the existing slab once removed. Specialist foundations are to be implemented which negate the requirement for significant excavations at the site. As a result, this is not perceived to be a constraint at the site.

3.9. Services and their installation

1.1.1. No new service runs are planned or anticipated within or close to any of the root protection areas of any of the retained trees at the site. All service runs and other utilities shall be orientated away from trees and their RPA's. All works should be conducted in accordance with the principles set out in NJUG Volume 4 – Guidelines for the planning, installation and maintenance of utility services in proximity to trees (National Joint Utilities Group 2007). Where possible existing service runs will be re-used, any alterations made will first require consultation of the appointed Arboricultural Consultant and the notification of the LPA.

3.10. Conclusion

3.10.1. The arboricultural impact of the proposal on the retained trees and character of the landscape is perceived to be low. Appropriate protection and an arboriculturally sensitive manner can be adopted and implemented across the site during the demolition/construction process. Specialist foundations have been specified to mitigate and avoid any potentially detrimental effects of the proposal on the retained tree. As long as the methodologies discussed within this assessment are adhered to, the development can be carried out with little detrimental effect to any of the retained trees, and in an arboriculturally acceptable manner.

3.11. Recommendations

3.11.1. I recommend that the site is supervised by a suitably qualified and experienced Arboricultural Consultant with a minimum Level 4 qualification in arboriculture in to ensure that all tree protection matters and mitigation relating to the scheme are adhered to and recorded throughout the development process.

4. Arboricultural Method Statement (Heads of Terms)

This section of the report provides a summary of the heads of terms used to inform further detail to be provided for the formation of a detailed method statement at the planning consent stage. This is formed in conjunction with the recommendation on delivery into the planning process found in table B.1 of BS 5837:2012.

4.1. Identification of constraints and areas to be protected.

4.1.1. In order to ensure that the potential impact of the proposal is minimised certain areas have been identified for special protection. This can be viewed on the Tree Protection Plan[18] contained within Appendix B of this document. Further areas requiring specialist protection will be highlighted and identified as such.

4.2. Tree works.

4.2.1. The tree survey schedule provided details the works required to implement the construction of the proposal. Although not individually tagged, the tree is easily identifiable within the landscape. All tree works should be carried out prior to the commencement of the implementation of the proposal. All tree works should be carried out by a fully qualified and fully insured arboricultural contractor preferably found on the Arboricultural Associations approved contractors list[19]

4.3. Ground protection.

4.3.1. The ground protection will be installed in the locations specified in the Tree Protection Plan[20], identified as a solid yellow area. The ground protective measures should be installed as per the guidance described in BS 5837:2012, Section 6.2.3.3 Once installed the ground protection is to be treated as sacrosanct and must not be moved or altered in any way, without prior consultation with the arboricultural consultant and LPA. The setting out of the ground protection requires the supervision of an arboriculturist using the tree schedule and tree protection plan as guidance.

4.4. Tree stem protection.

4.4.1. A bespoke stem protection box is to be constructed around the main stem of the tree for the purpose of guarding it against mechanical damage. The design and installation of the box are to be confirmed with the appointed arboriculturist prior to its installation. A scaffolding frame with ply board covering shall form the basis for this design.

4.5. Specialist foundations.

4.5.1. The prescribed specialist foundations shall first be approved by Building Control. A series of test pits will first be excavated using soil displacement technology (Airspade), the pits shall be excavated to a minimum depth of 600mm to ascertain the presence of significant tree roots. The Short Bore Piles shall be inserted in locations which reflect any discovered roots and so as to avoid them. The machine used for the installation of the piles shall be the smallest practicable for the job and only operate from the pre-installed ground protection. Some ground protection boards will require moving during this process to allow for the insertion of piles, the ground protection shall be

[18] Appendix B, Tree Protection Plan
[19] http://www.trees.org.uk/ARB-Approved-Contractor-Directory
[20] Appendix B, Tree Protection Plan

reinstated immediately after the insertion of each pile. Once all of the Piles have been inserted ground beams may be placed in situ and the normal process of construction may resume.

4.6. Construction of new surfacing.

4.6.1. No new surfacing near to any of the retained trees is planned at this stage.

4.7. New services.

4.7.1. New services should where appropriate use existing service runs hence negating the requirement for further excavations. Where this is not appropriate, new services should be excavated following the guidance set out in *NJUG Volume 4 – Guidelines for the planning, installation and maintenance of utility services in proximity to trees (National Joint Utilities Group 2007).*Where these works are in close proximity to the root protection areas of retained trees, they should be conducted under the supervision of the appointed arboricultural consultant.

4.8. Removal of Protective measures.

4.8.1. The protective measures must only be removed after all potentially harmful activities have ceased at the site. These shall be removed by hand working backward away from the furthest point of installed protection. The removal of all protective measures should be subject to arboricultural supervision.

4.9. Landscaping.

4.9.1. No new landscaping is proposed at the site.

4.10. Further tree related risks.

4.10.1. Numerous development processes can lead to tree-related damage. Large loads, chemical pollution, cranes and site lifts must be assessed and control measures instigated to reduce the potential risk associated with them.

Appendix A

Survey Schedule

BS5837:2012 Tree Survey

Client: Marcus Boret
Project: 32 Bath Road
Survey Date: 16/12/2016
Surveyor: Oliver Lower

Christopher Hoare Tree Servic

The Estate Office,
Exbury Gardens
Exbury
Hampshire
SO45 1AZ
Phone: 02380897933

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
T1 N/A											
Weeping Willow *Salix chrysocoma*	11.6	1	670	N 6.4 E 4.5 S 5 W 5	2 2 2 2	M	A: 203.1 R: 8.04	Good	C: Good S: Fair B: Good	Raise low canopy :: To 2.5m *The long weeping shoots of the Willow tree require pruning back to the pollard points over the proposal to reduce the chance of mechanical damage. Works to be confined to the area immediatly over the proposal only.* Protection :: Construct ground protection Protection :: Erect protection barriers A prominent tree. Salix chrysocoma x sepulcralis. Raise low canopy overhanging proposal to provide suffucient room for demolition/construction.	**B.2** 20 to 40 yrs

Age Classifications:					Condition:			Stems:		
	N	Newly planted	EM	Early Mature		C	Crown		Ø	Diameter
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature		B	Basal area			

Report selection criteria.

Projects.

32 Bath Road

Date Range.

Any Date

Work types.

----> Protection :: Construct ground protection
----> Protection :: Erect protection barriers
----> Raise low canopy :: To 2.5m

Latest Survey.

All surveys for the selected trees.
---> Last survey for each selected tree.

Work Completed.

---> Work Completed
---> Work Not Completed

Number of trees in selected Project(s)	**1**
Number of trees in Report selection	**1**

Age Classifications:	N	Newly planted	EM	Early Mature	**Condition:**	C	Crown	**Stems:**	Ø	Diameter
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature		B	Basal area			

Appendix B

Tree Protection Plan

02380 897933
info@chtstrees.co.uk
www.chtstrees.co.uk

The Estate Office
Exbury Gardens
Summer Lane
Southampton
Hampshire
SO45 1AZ

Christopher Hoare Tree Services Ltd
Arboricultural Contracting & Consultancy
Limited Company No: 04766544 VAT Registration: 750117661

32 Bath Road
Tree Protection Plan

SCALE : 1 : 100 @ A2	DATE : 21/12/2016	N
MAP FILENAME : Q12072/TPP/2016/_V1		

Map data shown may contain Ordnance Survey ® products supplied by
Pear Technology Services Ltd; Email: info@peartechnology.co.uk
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5.Qualifications

This report was constructed and written by

Oliver Lower Dip Arb L4 Senior Arboricultural Consultant

I have 15yrs experience in the Arboricultural industry and have attained the following accreditations.

National Diploma Arboriculture Lv3

Level 4 Diploma Arboriculture (ABC)

Professional Tree Inspection (LANTRA)

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National Joint Utilities Group "Guidelines for the planning, installation and maintenance of utility services in proximity to trees, 1995."