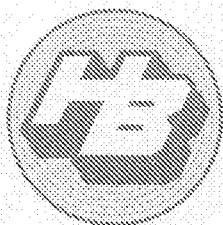


ARBORICULTURAL IMPLICATION STUDY AND TREE PROTECTION STRATEGY

**White Cottage
West Walberton Lane
Walberton
West Sussex**

Produced For: Alistair Wickland
Prepared By: Michael Honey, Dip. Arb. (RFS), F.Arbor.A. BA Hons
Reference: MPH/0865/a/RHB
Date: October 2019



Honey Tree Specialists Ltd

Suite 2, Dominion House Business Centre, Lion Lane, Haslemere, Surrey, GU27 1JL



Prepared for: Alistair Wickland

Site Address: White Cottage, West Walberton Lane, Walberton

Report Prepared By: Michael Honey

Date: October 2019

▪ Instructions

Further to your recent instructions I have pleasure in submitting the following report.

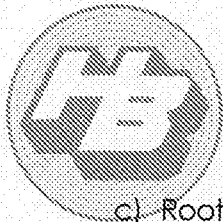
▪ Background

The report concerns the above site which consists of a detached single storey residential property set within its own grounds.

The site is subject to a development proposal which consists of the demolition of the existing building and construction of a new residential dwelling as outlined in the proposal drawing enclosed within Appendix 2.

▪ Scope of Report

- a) The following report assesses all the trees on site in terms of their health and safety, amenity value and future potential. The trees were numbered and plotted on the proposal drawing and Tree Protection Plan included within Appendix 2. The schedule of trees is included in Appendix 1.
- b) The scope of this report is to assess the development proposal for this site with respect to its impact upon existing trees. The report determines which trees should be retained and which should be removed. All interfaces between the development and the trees, their root zones and their crowns are assessed and discussed.



- c) Root Protections Areas for those trees of amenity value graded B/C and above are also listed and with reference to BS5837:2012 'Trees in Relation to Design, Demolition and Construction' Annex D.
- d) The quality and future growth potential of the trees likely to be affected by the development are assessed.
- e) The report details those protective measures that will be necessary for the successful protection of retained trees during the construction process.
- f) Guidance is given with respect to the implementation of protective procedures and measures in relation to specific site sensitive trees and general site organisation and construction logistics.
- g) A Tree Protection Method Statement and Tree Protection Plan has been included within Appendix 2 & 3 to assist the successful logistical implementation of tree protective measures during the construction process.

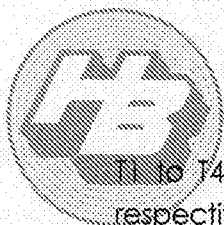
• **Site Description**

The property is located at the outskirts of the village of Walberton and close to the transition from residential to rural land use. The locality is characterised by detached residential properties and their gardens with surrounding paddocks, open land and hedgerows. The area has an established population of trees at significant densities consistent with this semi rural land use.

White Cottage is located at the junction of West Walberton Road with Arundel Road. Residential properties and their gardens are located beyond the southern and eastern boundaries and beyond West Walberton Road to the west. Equestrian paddocks are located beyond Arundel Road to the north.

White Cottage is set back from the West Walberton Road and is located within the south east corner of the plot. The house is approached by informal hardstanding and driveway and the grounds are open and unkempt.

All trees of significance are located at or beyond the boundaries of the plot. This includes an important and prominent linear group of trees located beyond the western boundary and extending along the edge of West Walberton Road within an informal raised highway verge. This includes the Oak trees graded B and B/C.



T1 to T4 the Ash T6 graded B and the Oaks T7, T9 and T10 graded B and B/C respectively.

A corridor or copse of trees also extends along the highway edge beyond the northern boundary consisting largely of Ash and Field Maple of poor quality with a poor quality unmanaged screen of Leyland Cypress extending along the boundary line.

Other trees on site of amenity value include the Sweet chestnut T20 just within the northern boundary and the Birch T23 within the neighbouring property beyond the southern property.

▪ **Design Proposal and Tree Retention**

The proposal for the removal of the existing property and construction of the new dwelling allows for the retention of all the site's trees including all those trees of amenity value and in particular the important linear group of mature trees T1 to T10 extending along the highway edge beyond the western boundary.

The proposed new building, and its foundations will also be outside of all the Root Protection Areas of the trees of amenity value. The Root Protection Areas have been plotted upon the proposal drawing with reference to BS5837:2012. Particular consideration has been given to the Root Protection Areas of the trees T1 to T4 closest to the development and at the highway edge. In recognition of the possible constraints to root development by the highway I assessed on site the likely compensatory development of roots in other directions including within the plot. These highway trees are growing upon an informal uncultivated raised bank which will have provided a corridor of optimum root growth. Less root growth can be anticipated beyond this corridor to the east and the previously cultivated garden and areas of informal but compacted vehicle hardstanding within the garden area.

I have however included an extended compensatory Root Protection Area upon the proposal drawing for this group of trees.

Even with this adjustment the foundations of the new building will be outside of all the Root Protection Areas on site including the trees T1 to T4, no specific protective measures will be required in this respect.

Although the new driveway will be within the existing informal hardstanding and will not significantly extend into the Root Protection Areas protective measures have



been listed, and within the Method Statement to ensure no impact upon the trees T1 to T4 and the Birch T23.

■ **Protection of Trees During Construction**

General Principles

Existing trees can be easily damaged directly through root severance and inadvertently through soil compaction which disrupts the soil structure causing asphyxiation of roots and subsequent root dysfunction. Spillage of toxic materials can also cause root death. Protection for selected trees for retention is essential to ensure their lasting effect on the proposed scheme which will include a proportion of the tree/soil zone.

It is equally important therefore to ensure the protection of trees both above and below ground. Guidance is provided in British Standard 5837, 2012, 'Trees in Relation to Design, Demolition and Construction' as to the protection of existing trees before, during and after development.

Trenching close to trees can have a serious detrimental effect on tree physiology and stability. It will be necessary to consider alternatives to open trenching near trees in order to avoid damage. Guidance is given in the National Joint Utilities Group publication 'Guidance for the Planning Installation and Maintenance of Utility Services in Proximity to Trees'.

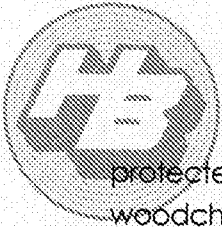
Protective Distances and Fencing

With reference to BS5837, 2012, Annexe D, recommendations for the Root Protection Area for those trees of amenity value has been included within the tree schedule.

These Root Protection Areas should be included on a separate drawing as part of the tree protection plan. The Root Protection Areas where possible and appropriate should be enforced by the use of robust protective fencing as outlined in BS5837, 2012.

In this instance I would recommend fencing 2 metres high consisting of a scaffold framework supporting weldmesh panels (fig. 2 BS5837, 2012, Appendix 4).

Where construction processes are required to within the minimum protective distances the ground between the protective fencing and building should be



protected by geo-textile fabrics beneath boarding and separated by a 100mm woodchip compression layer.

Demolition

Demolition should be undertaken with great care in order not to damage retained trees. Demolition close to the Root Protection Areas of the trees T1 to T4 should be carried out by hand where possible.

All demolition materials should be demolished into the building's existing footprint and moved to the designated storage areas. No demolition material should be stored within the Root Protection Areas of retained trees. Materials should be removed from site by the designated access routes which should include the existing access driveway.

Tree Protection and Utilities

The location and siting of all utilities should if possible be outside of the minimum Root Protection Area as enforced on site. Where utilities need to encroach upon these areas thrust bore excavation techniques should be considered.

I understand in this instance that the existing service runs and utilities to the property including drainage will be utilised with no new excavation required within the Root Protection Area.

Tree Protection and Storage of Materials

All materials for construction purposes should be carefully stored outside of the enforced tree protection areas. All toxic substances such as oils, bitumens and residues from concrete mixing should be retained by effective catchment areas.

Adequate storage areas exist within the proposed driveway area at the southern side of the new dwelling.

Landscaping Works

All landscaping should avoid soil regrading and disturbance within the tree protective areas. This includes cultivations for the preparation of soil for turf, seeding or planting.



All landscaping works within tree protection areas should be carried out by hand where possible.

Site Access for Demolition and Construction Traffic

Demolition and construction traffic can access the site using the existing driveway entrance and formal hardstanding.

Domestic Driveway Construction

The proposed domestic drive will be located marginally within the adjusted Root Protection Area of the Oak T1.

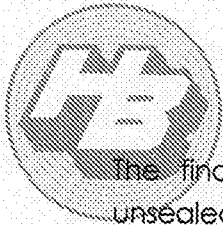
Potential may exist therefore for limited root damage and dysfunction to the trees through soil compaction and minor root severance. The majority of tree roots exist in the top 60 centimetres of soil. Any excavation therefore can be detrimental in this respect.

Particular engineering solutions should be applied therefore to alleviate the possible consequences of driveway construction and use within the identified protective distances at least.

The more robust form of protective fencing should first be erected (2 metre high scaffolding supporting weld mesh panels) at a distance of to within one metre of the driveway edge and to the relevant protective distances of each individual tree as listed in Appendix 1.

Driveway construction for residential use should employ no dig construction techniques as outlined by AAIS APN21 'Through the Trees to Development' and BS5837:2012 clause 7.4 to ensure that root severance is kept to a minimum, soil is not compacted and oxygen is able to diffuse into the soil beneath the surface (see Appendix 5).

This is achieved by the use of a geo-textile fabric and geo-web cellular confinement system, to encapsulate no fines aggregate in the formation of a mattress system of sub-base. Edge retention is also of a no dig construction with the use of pegged boarding or similar. The sub-base is therefore able to sit on top of the soil surface, with the minimum of soil excavation and dissipating loading to avoid soil compaction.



The final driveway surface should preferably be pavements dry bedded and unsealed.

Grade Changes

There are to be no grade change alterations within the Root Protection Areas of any trees.

Direct Damage to Roots and Foundation Design

The foundation of the new property will be outside of all the Root Protection Areas on site including the adjusted Root Protection Areas of the Oaks T1 to T4 as outlined upon the proposal drawing. No specific protective measures will therefore be required in this respect.

Protection From Construction Processes

The Oak T1 will require light construction processes including pedestrian activity and possibly scaffolding within the trees adjusted Root Protection Area. The more robust form of protective fencing specified (2 metre high scaffolding supporting weld mesh) should first be erected approximately 1 metre from the proposed line of foundations to facilitate the construction process. Ground between the protective fencing and building should be protected by geotextile fabrics beneath boarding and separated by a 100mm woodchip compression layer.

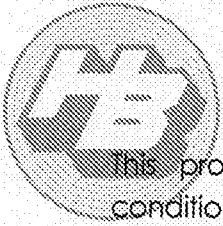
Other Trees

All other trees on site to be retained should be adequately protected by the enforced protective measures outlined and no further special requirements will be needed.

▪ **Tree Protection Method Statement**

A Method Statement and has been included within Appendix 3 and a Tree Protection Plan Appendix 2.

to ensure that all the above protective measures are enforced and which outlines a logical framework and a reasonable sequence of events and supervisory procedures.



This protective method statement scheme can be endorsed by planning conditions, agreement or obligations as any appropriate arrangement between the developer and planning authority. Further discussion between these relevant parties might therefore be necessary in order to finalise this document.

Summary

The property White Cottage is situated within its own open grounds with all the site's trees located at or beyond the boundaries. This includes the important linear group of Oak and one Ash beyond the western boundary and within the uncultivated highway verge, T1 to T10.

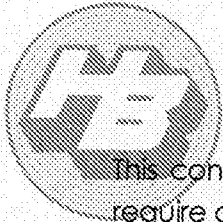
The proposal allows the retention of all the site's trees including those of amenity value and in particular the highway edge trees T1 to T10.

The proposed new house and its foundations will also be outside of all the Root Protection Areas of the trees of amenity value. In particular an assessment was made on site of the likely rooting spread of the highway edge trees T1 to T4 closest to the development and in recognition of the highways constraint to root development. The uncultivated raised highway verge is likely to present a corridor most hospitable to root growth with less root progression anticipated to within the garden beyond which is occupied by informal but compacted vehicle hardstanding.

An adjusted compensatory Root Protection Area for the trees T1 to T4 has however been outlined upon the proposal drawing and which indicates that construction processes including foundation construction will have no significant impact upon those trees and no specific protective measures are therefore required in this respect.

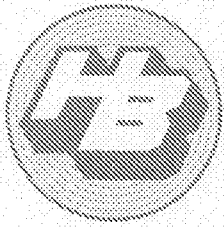
Driveway construction will encroach marginally upon the adjusted Root Protection Area of the Oak T1 and protective measures including No dig Driveway Construction have been listed within the report and Method Statement Appendix 3.

Providing these specific and the general protective measures listed within this report and method Statement are carefully implemented therefore the proposal will have no impact upon the site's trees of amenity value and their continued contribution to the local landscape.



This concludes my report but if I can be of any further assistance, or should you require any further information, please do not hesitate to contact me.

Michael Honey
HONEY TREE SPECIALISTS



APPENDIX

Appendix 1

Tree Schedule

Appendix 2

Proposal Drawing and
Tree Protection Plan

Appendix 3

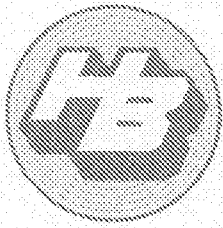
Method Statement

Appendix 4

Protective Fencing

Appendix 5

No Dig Driveway Construction



Appendix 1

Tree Schedule

TREE SCHEDULE

Inspection date: October 2019
Client: Alistair Wickland
Site: White Cottage, West Walberton Lane, Walberton, West Sussex

REF: MPH/0865/RHB
Surveyor: Michael Honey

Tree No	English Name	Height m	DBH cm	Spread m	Vigour	Age	BS Cat 2012	BS RPA 2012 (Radius)	Comments
T1	Oak	18	58	3N 7S 7W 7E	N	Middle aged	B	6.9m	One of group of roadside trees forming combined canopy of some prominence, dense undergrowth prevented inspection of base, remove undergrowth and reinspect.
T2	Oak	18	46	2N 7S 6W 4E	N	Middle aged	B	5.4m	One of group of roadside trees forming combined canopy of some prominence, dense undergrowth prevented inspection of base, remove undergrowth and reinspect.
T3	Oak	17	55	4N 6S 6W 4E	N	Middle aged	B	6.6m	One of group of roadside trees forming combined canopy of some prominence, dense undergrowth prevented inspection of base, remove undergrowth and reinspect.
T4	Oak	16	54	5N 5S 8W 5E	N	Middle aged	B/C	6.6m	One of prominent group but unbalanced one-sided crown. Future corrective pruning to balance advised. Dense undergrowth prevented inspection of base. Remove undergrowth and reinspect.
T5	Oak	16	48	6N 6S 6W 2E	N/L	Middle aged	C		Unbalanced upper crown with dieback, some damage to bark and cambium at base, undergrowth prevented inspection. Remove undergrowth and reinspect.
T6	Ash	18	45	6	N	M	B	5.4m	Tall prominent tree, no clear evidence of Ash dieback disease.

Notes:

As per BS5837, 'Trees in Relation to Design Demolition on Construction', 2012.

- Height describes the height of the tree from ground level.
- DBH is the diameter of the trunk at 1.5m from ground level or as defined in the text.
- Spread refers to the crown radius from the trunk centre and is expressed as an average or NSEW aspect, as appropriate.
- Age range is represented as Y-young, SM-Semi mature, M-mature, OM-over mature.
- Vigour is described as N-Normal, L-Low or D-Dead and refers to the general condition of the tree.
- BS Cat. refers to BS 5837, 2012 retention category table 1, where A category retention most desirable (life expectancy 40 yrs +) B retention desirable (20 yrs +) C could be retained (min. 10 yrs) and U (remove).
- Colours: - A=LIGHT GREEN B=MID BLUE C=GREY U=DARK RED where indicated on plans.
- BS RPA is BS5837, 2012 recommended Root Protection Area given as the radius of a circle equal to that area. The final RPA may not be represented by a circle within tree protection drawings.

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REF: MPH/0865/RHB

Surveyor: Michael Honey

Tree No	English Name	Height m	DBH cm	Spread m	Vigour	Age	BS Cat 2012	BS RPA 2012 (Radius)	Comments
T7	Oak pair	18	35 & 50	7	N	Middle aged	B	6m	Pair of trees forming single canopy and member of prominent roadside group.
T8	Beech	16	30	3	N	Y	C		Suppressed tree of moderate form and potential.
T9	Oak	17	36	3N 2S 8W 3E	N	Y/M	B/C	4.2m	Member of prominent group but unbalanced leaning form with small pocket of decay at base with <i>Fistulina</i> decay fungus at base. Reinspect next year.
T10	Oak	18	38	5	N	Middle aged	B	4.5m	Reasonable member of prominent group.
T11	Beech	18	Twin 50 & 45	8W 4S 8W 3E	N	Middle aged	C		Twin stem from tight included basal union which appears sound, old wounds to both stems with decay at 3 metres. Reinspect with sonic decay detector within 2 years.
T12	Sweet chestnut	18	45	5	N/L	Middle aged	B/C	5.4m	One of prominent group, slightly sparse crown. Reinspect within 2 years.
T13	Linear group of Leyland Cypress and one Holly	14	15 to 20	2	N	Y	C		Unmanaged boundary screen.

Notes:

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Tree No	English Name	Height m	DBH cm	Spread m	Vigour	Age	BS Cat 2012	BS RPA 2012 (Radius)	Comments
T14	Row of Leyland Cypress	16	25 to 35	3	N	M	C		Row of hedging of screening trees allowed to grow on unmanaged to inappropriate height.
T15	Roadside groups of coppiced Ash	15	Multi	5	N/L	Y/M	C		Trees of poor form with Ash dieback evident in some. Reinspect next year..
T16	Field Maple	15	30 to 35	5	N	M	C/U		Extensive decay to base of both trees presenting moderate hazard to highway. Schedule for future removal.
T17	Ash	17	33	5	N	Y/M	B/C	3.9m	Tree with pronounced natural lean.
T18	Row of Leyland Cypress	16	30 to 45	3	N	M	C		Row of hedging of screening trees allowed to grow on unmanaged to inappropriate height.
T19	Pair of Field Maple	15	30	3	N	M	C		Some dieback and decay to base. Reinspect within 2 years.
T19A	Field Maple	15	Twin 20 & 25	3	N	M	B/C	3.2m	Reasonable member of copse. Some possible decay to base, reinspect in 2 years.

Notes:

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