

ARBORICULTURAL REPORT

**Proposed development of land
to the rear of
9 Priory Road
Clifton
Bristol
BS8 1TU**

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Wessex Tree Consultancy December 2021	

INTRODUCTION

1.0 Background and brief

- 1.1 I am Nigel de Berker, BA, Hons, ND Arb, F Arbor A - principal of Wessex Tree Consultancy.
- 1.2 Peter Evans of Eastman Estates, has instructed me to provide a BS 5837 survey and arboricultural impact assessment, together with advice on potential tree-related mitigations, as per my fee proposal to him (15th September 2021), in connection with proposed building-development of a small plot of land to the rear of 9 Priory Road, Clifton, BS8 1TU.
- 1.3 Planning guidance for the proposal is being provided by Colin Pemble of Aspect 360, Planning Consultancy, Bristol. The architects are 105 Architects West Ltd, Bristol
- 1.4 There are three trees that may be of concern. These comprise a small tree-form holly on the site, a young Horsechestnut on neighbouring land to rear and a large, pollarded Tulip tree on other neighbouring land. The three trees are individually respectively referred to as T1, T2 and T3 in this report.
- 1.5 I have been provided with a location plan of the site (Dwg 1714(L)02 –A), along with plans showing: the existing site with levels (Dwg 1714(L)02-C), the proposed site and ground floor (Dwg 1714(L)20-D) and the proposed first floor (Dwg 1714(L)21-B).
- 1.6 The Tree Officer¹ has confirmed that the trees considered in this report are within a Conservation Area and that none is currently subject of a Tree Preservation Order.
- 1.7 Trees in a conservation area that are not protected by a Tree Preservation Order (TPO) are protected by the provisions in section 211 of the Town and Country Planning Act 1990. These provisions require people to notify the local planning authority, using a 'section 211 notice', six weeks before carrying out certain work on such trees, unless an approved exception applies. The notice period gives the authority an opportunity to consider whether to place a TPO on the tree(s). The work may go ahead before the end of the six week period if the local planning authority gives consent, or otherwise, after the six week period if the local planning authority does not initiate a TPO before the expiry of the notice period. Anyone who cuts

¹ Matthew Bennett BCC Tree Officer - email 21.12 21

down, uproots, tops, lops, wilfully destroys or wilfully damages a tree that is subject of a Tree Preservation Order or that stands within in a conservation area (if that tree is not already protected by a TPO) - or causes or permits such work - without following stautorily required procedure and as necessary serving appropriate notification and/or gaining appropriate consent from the Local Planning Authority - is guilty of an offence, unless an exception applies.²

2.0 Limitations

The following limitations apply:

- i. Site detail is limited to that shown on the plans that have been provided; only those trees identified in the survey records have been considered.
- ii. Tree survey and assessment records and observations are based on ground-level appraisal of external features at the time of inspection (October 20th 2021). I have undertaken no aerial inspection or excavation. Boundary features, climbing plants foliage and parts of trees may have hidden some tree-features from view. No access has been made to the property of 9 Priory Road.
- iii. Within the tree assessment, I have included consideration of risk of imminent serious harm to people or property from structural tree failure at the time of inspection, but otherwise the assessment is not a tree safety appraisal and should not be considered as such. The owner is advised that safety of trees about the site will require competent future assessment.
- iv. Tree-related shade has not been considered in detail.
- v. The report does not include specialist assessment of soil or ecology
- v. No account has been taken of possible tree-related subsidence, heave, or affects of direct root pressure or of root infiltration that might occur about existing or future built structures, including driveways, paths and drains, caused by, or associated with the removal, pruning or growth of existing trees and other woody vegetation or of future woody plants, including any that might be planted to supplement existing &/or to replace losses due to the development. Impacts from woody vegetation below ground upon current, or future structures may, or may not, be significant. Their consideration has not been included in this Report
- vi. I have assumed throughout that all plans and other information provided by the client and/or the client's agents are adequate and reliable and can be used to scale from with reasonable accuracy. I have relied on this plan material for site dimensions and for defining the positions of trees and other existing and proposed features. Plan material that I provide, and any additions to existing plans that I have made, are to approximate scale, including positions of any trees that are not shown on the site plans, with which I have been provided. All dimensions, proportions, calculations, estimates of age and reference to compass orientation on plan and within text are approximate. Plan dimensions should be checked on site. Unless stated otherwise, distance from tree relates to distance from nominal centre of base of trunk at ground level.
- vii. Guidance and recommendations that I provide within this report and on any accompanying plans have been presented from an arboricultural perspective. The success of treatments, mitigations and precautions advised or otherwise mentioned or implied on plan and in my written comments are not guaranteed; neither is the healthy growth or safe

²See <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#Protecting-trees-in-conservation-areas>

condition of any existing or future trees, including those that may be planted as part of the proposal. Further, appropriate specialist advice should be sought to ensure that any guidance and recommendations that I provide regarding construction, design and materials are practicable and fit for purpose. Detailed specific method statements have not been provided viii. The report and Tree Protection Plan are current as at the time of the tree survey. Survey and assessment data along with other report and plan details and recommendations are liable to change as trees grow and age and as surrounding circumstances alter.

3.0 General Arboricultural Reference Material

3.1 This report takes into consideration my own professional arboricultural and, without exclusive reliance, also draws upon /refers to the following:

BS 3998: 2010 *Tree work – Recommendations* BSI
BS 5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations* BSI
Innes JL 1990 *Assessment of Tree Condition : Field Book 12* Forestry Commission
Lonsdale D 1999 *Principles of Tree Hazard Assessment and Management* Research for Amenity Trees No 7 DETR
National Joint Utilities Guidance Vol. 4. 2007 *Working near tree roots* NJUG Pub
National Tree Safety Group (NTSG) 2011 *Commonsense Risk Management of Trees* Forestry Commission
Roberts J et al 2006 *Tree Roots in the Built Environment* Dept for Communities and Local Government

BS 5837 ARBORICULTURAL SURVEY

4.0 The tree survey- general

- 4.1** A BS 5837 tree survey was undertaken from ground-level on 20th October 2021.
- 4.2** The tree survey records are found in Appendix 1 of this report. Tree positions, Root Protection Areas and approx crown spreads are shown on the *Tree Survey Plan* that accompanies this report. A guide to BS 5837 assessment criteria is set out in Appendix 2 along with further explanation of survey methodology in Appendix 3. Appendix 4 of this presents a Googlemaps satellite view of the area, showing the trees and their close surroundings. Appendix 5 contains a series of Googlemaps street view images showing the pollard history of the roadside Tulip tree (T3) at No 9 Priory Road.
- 4.3** None of the surveyed trees are ancient or veteran specimens; nor do they constitute part of woodland.

5.0 Holly - T1

- 5.1 T1: Species, proportions and age** Tree T1 is a native holly (*Ilex aquifolium*). It is female (bearing berries) and healthy-looking. T1 is a small upright tree, approx. 6m tall with a single main trunk - diameter of 197mm at breast height. Dense, radial lightweight branches form a compact crown with a neat, conic, pyramidal outline (radial spread $\leq 1.5 - 1.8$ m). The crown has been raised in the past to about 1.5m height on the main trunk. I judge that T1 is in its early-mid maturity.
- 5.2 T1: Tree context - current surroundings** T1 stands on the Elmdale Road frontage of the site, at the far S corner of the plot, in a raised bed that runs alongside an old, concrete-surfaced drive. The face of base of trunk is ca 120mm from the near face of an old, tall, stone roadside retaining wall³ and ca 1m from a wooden panel boundary fence that runs along the SE side of the plot, between the plot and the rear garden of 9 Priory Road. The raised bed is approx. 3.5m wide and at its roadside end stands about 1.5m above the concrete

³ Roadside retaining wall height is ca. 1.15m clear above base of T1 and ca. 2.4m above level of pavement; wall thickness at top is ca 450mm

driveway that leads into the plot from Elmdale Road. A small area of T1 lower crown partly overhangs the pavement (SW) and marginally reaches over the panel fence (SE).

5.3 T1: Arboricultural quality: I consider T1 to be of moderate arboricultural quality (BS 5837 'B' quality). I noted no obvious major structural defects or serious old wounds. Bark, foliage and overall tree-form appeared normally healthy. In the long term, given the tree's very close proximity to the tall roadside retaining wall⁴, there is a reasonably high likelihood that over time the wall will experience some disruption from direct pressure exerted by growth expansion of roots and lower stem.

5.4 T1: Landscape Contribution: T1 is a small evergreen tree. It is visually prominent from nearby along Elmdale Road and from closely neighbouring properties. Beyond its immediate surroundings, T1 makes negligible amenity contribution to the Conservation Area. Overall, I judge T1's landscape contribution to be moderate.

5.5 T1: Cultural value including conservation I know of no special cultural or historical value attached to the tree. I observed no specific features of current, high conservation/habitat value about T1. However, the tree is evergreen and bears berries upon which birds will feed; it is also within an urban setting. Notwithstanding its small size, overall, I consider that T1 has BS 5837 'B' conservation quality.

5.6 T1: BS 5837 Root Protection Area (RPA) If calculated as a circular area about the tree, the RPA of T1 would have a radius of 2.4m, measured from centre of base of trunk. However, given the tree's proximity to the roadside retaining wall and the abrupt drop in levels to the pavement, root development is likely to be asymmetrically biased away from the road to other aspects, where ground is more conducive to normal root growth.

6.0 Horse chestnut – T2

6.1 T2: Species, proportions and age T2 is a horse chestnut (*Aesculus hippocastanum*). It is a small, juvenile tree (height approx. 6m: trunk diameter at breast height 150mm). The tree leans slightly to south. Branching is lightweight (≤ 50 mm diam) and present on the main stem from about 1.5m ht. The crown radius is 1.5 – 2.3m. I estimate T2 to be about 10 years old.

⁴ Face of T1 base of trunk is 120mm from near face of base of wall

6.2 T2: Current context T2 stands outside the site, alongside the plot's rear(NE) boundary retaining wall, near its N corner, on neighbouring land at the rear of 10 Priory Road. It is growing within a slightly raised, corner shrub bed and looks to be a planted specimen. Base of trunk is 1.2m from the near face of the site boundary wall; top of the wall is est. approx 1.5m above adjacent groundlevel on No. 10 side and est. approx 2m above adjacent groundlevel of the plot. Above ground, the wall looks to be approx 450mm thick. Light outer lower canopy tips from T2 extend approx 150mm beyond the boundary wall, marginally above the end of the site.

6.3 T2: Arboricultural quality: T2 is a healthy young tree. Currently T2 is of unexceptional arboricultural quality (BS 5837 'C' quality) on account of its juvenile state and small size.

6.4 T2: Landscape Contribution: T2 current contribution to the landscape of the Conservation Area is unexceptional (BS 5837 'C' quality).

6.5 T2: Cultural value including conservation I know of no special cultural or historical value attached to T2. I observed no specific features of current, special conservation/habitat value about the tree. I consider it's present cultural value, including conservation, to be of BS 5837 'C' quality.

6.6 T2: BS 5837 Root Protection Area (RPA) The RPA of T2 has a radius of 1.8m, measured from centre of base of trunk. The tree is a young specimen. Root development is likely to be concentrated about the tree within the shrub bed at No 10.

7.0 Tulip tree – T3

7.1 T3: Species, proportions and age T3 is a Tulip tree (*Liriodendron tulipifera*). The lower main trunk is elliptical with a mean breast height diameter of approximately 900mm. The tree is a fully mature specimen. Using a Forestry Commission system for estimating tree age⁵, T3 looks to be 90 – 150 years old, based on trunk diameter and depending upon the quality of growing conditions over the tree's life. Without detailed background information, I consider an estimate of 120 years' age is reasonable, mid-way between these figures.

⁵ White J. 1998. *Estimating the age of large and veteran trees in Britain*. Forestry Commission Information Note No 12

7.2 T3: Current context T3 stands outside the site, on the Elmdale Road frontage of the rear garden of 9 Priory Road. Base of tree and lower trunk occupies a bespoke narrow gap in the tall roadside boundary wall. Base of tree on the roadside aspect is at pavement level. Closely beyond the tree, the rear garden lawn at No 9 looks to rise by approx 1m to match the level of the open ground of the site alongside the fence boundary. Centre of base of trunk of T3 is an estimated 3m from the near corner of the large dwelling at No. 9 and approx. 7.7m from the site boundary.

7.3 T3: Arboricultural quality: T3 is a large vigorous tree. Base and lower trunk are ivy-covered. Until a few years ago T3 had a considerably larger crown than it does now. In recent years, the tree has been severely high pollarded to approx half height leaving a simple crown framework of a few shortly truncated principal branches⁶. Judging from Googlemap street view images (see Appendix 5), the tree had a more or less natural crown form up to 2017-2018, when the initial pollard cut took place; regrowth was then removed in 2019-20. By the time of my inspection (October 2021) the tree had produced a new complement of regrowth. I consider that currently the arboricultural quality of T3 is moderate (BS 5837 'B' quality).

7.4 T3: Landscape Contribution: T3 is a large roadside specimen. Pollard treatment has reduced the tree's physical scale and lessened its visual amenity. Overall, I consider that T3's contribution to the landscape of the Conservation Area is moderate (BS 5837 'B' quality).

7.5 T3: Cultural value including conservation I know of no special cultural or historical value attached to T3. I observed no specific features of current, special conservation/ habitat value about the tree. However, the tree is a large mature specimen within an urban setting. It has value as a sizeable carbon sequestration sink. Overall, I consider that T3 has moderate conservation quality. (BS 5837 'B' quality).

7.6 T3: BS 5837 Root Protection Area (RPA) Based on trunk diameter size the RPA of T3 has a radius of 10.8m, measured from centre of base of trunk. Management of the tree as a pollard with a much reduced crown size, should diminish annual growth increment of the tree and lessen demands upon the root system.
There is no guidance within BS 5837 as to whether, or how, the

⁶ Ref Matthew Bennett BCC Tree Officer (email 21.12.21) the tulip tree is understood to have been pollarded as part of a response to a building subsidence claim

RPA might reasonably be modified in cases, where a maiden tree is subjected to severe pollard management, when in the mature life stage. In my opinion, I consider that, with regards T3, given the severity of the pollard treatment, it would be reasonable to apply a degree (\leq ca.15%) of overall RPA shrinkage, and that this should be taken into account when considering possible impacts from the proposal.

8.0 Brief preliminary notes on soil and ground conditions

- 8.1** The British Geological Survey on-line viewer for Great Britain at 1:50 000 scale shows the area about the site lies over Mercia Mudstone Group Conglomerate, Sedimentary Bedrock. No information is provided on the on-line viewer at this level of enquiry, regarding superficial deposits. Mercia Mudstone (previously known as *Keuper Marl*) may be characterised as being a heavily aggregated, over-consolidated clay soil, in which a proportion of clay minerals have aggregated into mainly silt-sized units.⁷ Depending upon their state, Keuper Marls may be prone to shrinkage or swell, subject to moisture content⁸. The effects upon soil hydrology from growth or removal of trees and other woody vegetation may exacerbate such tendencies and may influence below-ground stresses bearing upon embedded and overlying structures.
- 8.2** Records on the BGS website from borehole investigations down to approx 6m depth at two positions near the site (approx 100m – 150m to N and NW off Tyndalls Park Road) show generally stiff reddish silty clay down to about 2m-3m, giving way to occasional gravel and increasingly to weathered sandstone and siltstone to end of test.
- 8.3** Soil survey map information for Britain at 1:250,000 scale (Cranfield University: *Soilscapes*) indicates that ground about the site is characterised by loamy and clayey soils with slightly impeded drainage (Soilscapes: Soil-type 8).
- 8.4** The above is a preliminary and limited desk-top review. Further investigation is advised to inform the proposal.

⁷ Davis, A., 1968. *The structure of Keuper Marl* Quarterly Jour of Engineering Geology & Hydrogeology 1 (3): 145–153.

⁸ Kolbuszewski J et al 1965 *Keuper Marl Research* Online Library of the International Society for Soil Mechanics and Geotechnical Engineering

ARBORICULTURAL IMPACT ASSESSMENT (AIA)

9.0 Impact of the proposal upon existing trees

- 9.1** The site proposal shown on the plan provided (Dwg 1714(L)20-D) will involve loss of Holly (T1).
- 9.2** The RPA of the juvenile Horse chestnut (T2) extends approx. 150mm beyond the existing site boundary wall, within a small arc, into the site. I understand that the existing stone boundary wall is to be retained and that the outer wall of the dwelling is to be installed alongside, on the site aspect. I consider that the likely extent of T2 RPA disturbance is minor and provided the procedures set out in the Arboricultural Method Statement of this report are observed, there is a low risk of T2 being seriously harmed by the proposal.
- 9.3** Based on stem diameter, the RPA radius of Tulip tree (T3) is 10.8m and total RPA area is 366sqm. The site boundary lies 7.7m and beyond from the tree. Please see comments above (Item 7.6) re influence of pollard treatment upon RPA.
- 9.4** Part of the outer reaches of the unmodified RPA of Tulip tree (T3) encroaches into the SW corner of the site by approx 9sqm, representing approx 2.5% of the unmodified total RPA. The portion of the site involved is due to be dug-out for a new drive, and a retaining wall is to be introduced alongside the boundary.
- 9.5** I consider that, irrespective of whether, or not, the RPA of T3 is modified, as discussed above (Item 7.6), the extent of anticipated RPA encroachment is not excessive. If an allowance for modification of the RPA is made due to pollard management of the tree, impacts should be further reduced. In either case, I consider that provided that the procedures set out in the Arboricultural Method Statement of this report are observed, the impacts should be tolerable and that overall there should be a low risk of T3 being seriously harmed by the proposal.

10.0 Impacts of existing trees upon the proposal

10.1 Shade

- 10.1.1** The juvenile Horse chestnut (T2) stands to NE of the proposed new dwelling. Its shadow pattern will largely be away from the site, clear of the new dwelling and its outside area
- 10.1.2** The pollarded Tulip tree(T3) stands ca. 7.7m to south of the roadside end of the site. The tree is ca. 9m tall with a severely reduced crown framework. I doubt that the shadow pattern of T3 will significantly impact the proposal

10.2 Overhanging growth and safety

- 10.2.1** Currently, only a few outer canopy tips from T2 reach about 150mm over the site. These can be pruned back to the boundary without harm to the tree. Over the next few years light canopy from T2 is likely to extend above the new dwelling. Residents are likely to wish to have overhanging canopy raised clear of the roof and its reach over the building controlled from time to time. Providing the work is competently executed, pruning back of overhanging growth should not be damaging to the tree. Looking further to the future, if T2 reaches large mature size, its close proximity to the dwelling may provoke safety concerns.
- 10.2.2** The Tulip tree (T3) stands well clear of the site; no growth overhangs the site, or appears likely to do so in the future. As far as I can determine from the current level of my assessment, the tree will pose a low risk of reasonably foreseeable serious harm from falling parts to the proposed new development.

10.3 Root influence

- 10.3.1** Consideration of possible root influence from existing and/or future trees and other woody vegetation is beyond the remit of this report. Taking into account site circumstances, including the nature of underlying ground, proper allowance should be made in proposal design for possible below-ground direct and/or indirect influences, from the growth or removal of trees and other woody vegetation, not excluding any new plantings, upon existing and/or proposed structures, including buildings, walls, hard surfaces, drains, soakaways and other below-ground features. Appropriate design measures will need to be followed to take account of potential future tree root influence. It should be borne in mind that tree root influence commonly exceeds the range of the RPA and that over time root spread

and influence of some trees may expand. NHBC Standards (NHBC Standard Chapter 4.2: Building near Trees) and a range of BRE Digests provide useful information. Some guidance is also given in BS 5837: 2012 [BS 5837: 2012 Table A1].

TREE REPLACEMENT

11.0 Tree Replacement Obligations

11.1 In instances where existing trees of BS 5837: 2012 'C' quality and above are to be removed to make way for development, Bristol CC require replacement tree planting to be made on site at a rate that is calculated on a basis relative to the trunk size of the removed trees. [See *Bristol City Council Planning Obligations – Supplementary Planning Document (SPD)*, effective from January 1st 2013 (pp 20-21)]⁹. Where the level of replacement planting calculated by these means is not practicable on a site, BCC require a financial contribution to be made by the developer to the Local Authority to help support BCC tree planting elsewhere. The contribution rate per replacement tree is set out in the SPD.

11.2 Holly T1 is due to be removed as part of the proposed development scheme. T1 is considered to be a BS 5837 'B' quality tree. Its stem diameter at breast height is 197mm¹⁰ (see Appendix 1). In line with the BCC SPD (Item 11.1 above), removal of a tree of the size and quality of Holly T1 triggers an obligation for a single replacement unit. Within the proposal, I can see no scope for tree planting on the site with reasonable likelihood of long term success. In such case, according to the terms of the SPD, BCC will require a contribution of **£765.21** from the developer, as part of planning arrangements, to help fund tree planting and establishment care at a site of the Council's choosing, on land elsewhere away from the site, where growing conditions are more favourable and tree survival is more reasonably assured.

⁹ <https://www.bristol.gov.uk/documents/20182/34520/SPD%20Final%20Doc%20Dec2012.pdf/daf75908-50fd-4138-afed-770310a6a431>

¹⁰ Calculated from T1 stem girth of 620mm, measured at 1.3m height above ground, shortly below lowest radial branches

11.3 Other planting: Whilst I consider there is no scope for tree planting on site, there is scope within the proposed narrow bed along the SE side of the new drive for planting herbaceous species, along with shrubs (a selection of e.g. *Lavendula*, *Hebe*, *Potentilla*, *Salvia*, *Hypericum*, *Fuchsia*, *Cistus*, *Euonymus* etc.). A small number of climbing plants (a selection of e.g. *Clematis*, *Hedera*, *Hydrangea*, *Jasminum*, *Vitis*, *Wisteria* etc) could also be planted at intervals in the bed and trained along the retaining wall. If required, additional height could be given to climbing plants by training them up trellis, set on/alongside the SE boundary fence.

ARBORICULTURAL METHOD STATEMENT (AMS)

12.0 Tree protection

12.1 Existing site boundary features to be maintained

The existing 2m tall, stone boundary wall along the rear (NE) limit of the site shall be retained throughout site activity and shall provide protection for the young horse chestnut (T2) that stands nearby on neighbouring land at No. 10 Priory Road. Along the SE boundary of the site, the existing 1.8m tall, wooden panel fencing, or closely similar replacement shall be maintained in place throughout construction activity, to clearly define the limit of the site on this aspect.

12.2 No off-site activity with RPAs

No activity connected with the proposal shall take place off-site within the RPAs of retained trees T2 and T3

13.0 Excavation within the RPA of Tulip tree (T3)

13.1 As referred to in the Impact Assessment (Section 9.0) and shown on the Tree Protection Plan, the proposal involves excavation about the S corner of the site, within an outer sector of the RPA of Tulip tree (T3). Here the existing raised bed between the current drive and the SE boundary of the site shall be dug out, down to approximately pavement level, to allow for the introduction of a repositioned, new drive. A new retaining wall shall be installed alongside the site's SE boundary.

- 13.2** The area of RPA incursion (Item 13.1) shall be marked-out on site, by a competent arboriculturalist, in advance of any excavation.
- 13.3** The full length of the RPA incursion shall then be trenched, by hand, along the line of the SE profile of the proposed new retaining wall (est. ca.5.2m length), alongside the existing boundary fence.
- 13.4** The work shall be overseen by a competent arboriculturist, unless/until he/she determines that such oversight is not required.
- 13.5** The trench shall be dug by hand down to at least 600mm depth, unless other depth is determined by a competent arboriculturalist on site at the time.
- 13.6** Manual digging practices within the RPA shall follow the recommendations and guidance, as bullet-pointed below, (ref BS 5837: 2012 Section 7.2 and NJUG Vol.4: 2007 Section 4):
- Live roots shall be retained and carefully worked around, wherever practicable.
 - No root greater than 25mm diam., or large concentrations of fine roots, shall be cut without confirmation from a competent arboricultural supervisor.
 - Where it is essential, to sever roots they shall be cleanly cut, using an appropriate, sharp bladed hand-tool.
 - If in the course of operations, roots, that are to be retained, are unearthed, they shall not be left unduly exposed, but shall be shrouded with hessian, or similar covering, to protect from desiccation.
 - If damage occurs to a root greater than 25mm diam., advice shall be sought from a competent arboricultural supervisor to determine and oversee best treatment.
- 13.7** Once the trench has been dug to the satisfaction of the overseeing arboriculturalist, and the latter determines that further hand digging is not required, the remaining area of T3 RPA within the site (i.e. the section of RPA on the site-aspect of the trench) may be excavated by machine, following the precautions, set out below in Item 13.8.
- 13.8** Any machine digging within the RPA shall be supervised by a competent arboriculturist, other than where the latter determines that there is an acceptably low risk of causing serious tree harm.

When digging within or directly alongside the RPA, the smallest-sized machinery that is reasonably practicable shall be used to accomplish the required operation. The machinery shall be stationed within the site and wherever safely practicable, outside the RPA, reaching in to operate. Machine digging shall be undertaken in shallow increments and provision shall be made for adequate pauses in machine operations to allow the arboricultural supervisor to check for presence of roots and to require manual working to intervene as he/she determines. Care shall be taken to ensure that, if significant roots are encountered, they are dealt with manually, as detailed previously above (AMS Item 13.6) and are not ripped back by machine.

14.0 Works to existing trees as part of the development

14.1 Holly (T1) shall be removed

14.2 The crown profile of Horse chestnut (T2) on its site aspect, shall be carefully pruned back to the site-boundary. The work involved is of a minor character - there is little risk of it being harmful to the tree.

14.3 No tree work, that is not specified in the AMS shall be undertaken without further prior LA consent and/or without following other appropriate normal planning process.

14.4 Any tree work that is undertaken as part of the development proposal is to be carried out by proficient and suitably experienced tree operators, under competent supervision, working to BS 3998: 2010 *Tree Work – Recommendations* (BSI).

14.5 Under the terms of the Wildlife and Countryside Act (1981) and the Habitats Regulations (2010) it is an offence to disturb or harm any protected species, or to damage or disturb their habitat or resting place. Of particular relevance to work affecting trees and hedges, is the protection afforded to birds and bats, especially when roosting or nesting. Planning permission does not override statutory protections. The applicant is advised to seek timely advice from a suitably qualified and experienced ecologist, with regard to the possible implications for wildlife from work operations about the site and how best to manage any such concerns. *Natural England* will be able to advise further.

15.0 Planning of operations on site, arboricultural supervision and records

- 15.1** Site layout, access, storage, parking and operational process and sequencing of construction and other site activity and the general planning and management of the development site and the development process shall take account of the need to avoid unacceptable harm to retained trees.
- 15.2** At start of works the developer shall appoint a competent arboriculturist to provide guidance and, where necessary, on-site supervision with regard to tree-related issues (Items 15.3 and 15.4 below).
- 15.3** Before start of development, a pre-commencement site meeting shall be held and attended by the appointed arboricultural advisor and the developer's designated site manager to clearly identify the tree that is to be removed and to go through the AMS to ensure understanding of its content.
- 15.4** Following the pre-commencement meeting, and until the completion of site work, the appointed arboricultural advisor shall carry out site visits, as agreed with the parties involved to provide tree-related guidance throughout when issues of tree safeguarding arise and particularly at the following points:
- Marking out the section of RPA of T3 that encroaches within the site
 - Manual digging and machine digging within the RPA of T3
- 15.5** Brief notes from site visits shall be recorded by the Arboricultural advisor and submitted to the applicant, as requested.

Appendix 1

BS 5837 Arboricultural Survey

Survey undertaken 20th October 2021

**Nigel de Berker BA Hons, NDArb FARbor A
Wessex Tree Consultancy**

R e f	Species	Ht m	Trunk Diam at 1.5m ht mm	a .Crown Spread m. b Canopy fringe ht m. c. 1 st sig. side- branch ht m /diam mm.	Maturity	Vitality	ERC	Notes	BS 5837 Cats.
T1	Holly	5	197 (stem girth : 620mm)	N a)1.8 b)1.7 c)2/60 S a)1.5 b)1.7 c)1.5/50 W a)1.7 b)1.7 c)1.5/50 E a)1.6 b) 1.7 c)1.8/25	MM	High	≥40	See main text Section 5.0	B1 - B3
T1 RPA : Radius: 2.4m Area 18sqm									
T2	Horse chestnut	5	150	N a) 2.3 b)2 c)1.5/50 S a)1.5 b)2 c)1.5/60 W a)1.8 b)2 c)1.7/50 E a)2.3 b)3 c)2/50	JUV	High	<20	See main text Section 6.0	C1 C2 C3
T2 RPA : Radius 1.8m Area 10sqm									
T3	Tulip tree	9 (Ht of pollard framework =approx 8m)	900 (elliptical)	N a)3 b)3.5 c)3/200 S a)3 b)4 c)2/400 W a)3 b)4 c)4/300 E a)2 b)3.5 c)6/150	FM	High	≤40	See main text Section 7.0	B1 - B3
T3 RPA : Radius 10.8m Area 366sqm									

Appendix 2 BS 5837: 2012 Cascade chart for assessment of tree quality

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
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	<ul style="list-style-type: none">Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)Trees that are dead or are showing signs of significant, immediate, and irreversible overall declineTrees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
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 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Appendix 3

Tree Survey and Assessment method - Explanatory Notes

1. External features of the specified trees (T1 – T3) have been inspected from ground level and data have been recorded.
2. The Root Protection Area (RPA) figures (standard radius and area for circular configuration) for individual trees have been calculated in accordance with BS 5837: 2012 criteria (BS 5837:2012 Item 4.6) and are included within the tree assessment record. RPA radius is measured from centre of base of the trunk, at ground level. Root Protection Areas provided within the report and on accompanying plans are based on calculations from trunk dbh as measured at the time of inspection..
3. The recorded tree assessment data comprise:
 - a. *Species*
Common English name is given
 - b. *Tree Height*
Approximate tree height in metres, estimated by eye
 - c. *Trunk Diameter at 1.5m height*
Trunk diameter at 1.5m ht (also referred to as Trunk diameter at Breast Height (DBH)) is a mean figure calculated from accurate measurement of trunk girth at 1.5m height above ground at base of tree; measured according to established tree-measuring conventions. Where trees are multi-stemmed from below 1.5m height, the cross sectional area of the stems at approx. 1.5m ht is amassed and a notional stem diameter is calculated from this aggregated total. Root Protection Areas (RPAs) are current, based on calculations from trunk dbh as measured, or estimated, at the time of inspection.
 - d(i) *Radial Crown Spread*
The approximate spread of the crown from trunk to canopy drip-line is recorded to approx N, S, W and E.
 - d (ii) *Canopy fringe height*
The approximate height (assessed by eye) above ground of the lower outer fringe of the crown of the tree, recorded to approx N, S, W and E. d(iii)and
 - d(iv) *Lowest branch height and diameter*
Approximate height and orientation of lowest significant branch and respective approximate branch diameter near union with trunk /parent stem
 - e. *Maturity*
Tree maturity is banded as Juvenile, Early Mature, Mid-mature, Fully mature Late mature and Ancient; abbreviated respectively as JUV, EM, MM, FM, LM, Ancient . Trees showing significant veteran features are also recorded as Veterans (VET).
 - f. *Vitality*
Tree vitality is visually assessed according to commonly used outward indicators, including the quality of foliage and young shoots, canopy density, bark condition, and incidence of disease, dead wood and die-back.
Vitality is banded as High, Moderate-high, Moderate, Moderate-low, Low; respectively abbreviated to H, MH, M, ML and L.
A tree may also be classed as Moribund or Dead.

g. Estimated Remaining Contribution (ERC) or Useful Life Expectancy (ULE)

This is intended as a very broad guide to indicate - in bands of years (e.g. 0, < 5, <10, <20, >20, >40 yrs) – the approximate likely period, that the tree might be expected to make a ‘useful’ contribution to its current surroundings, based on the present impression of tree health and its existing situation. It assumes reasonable tree management will take place and takes into account the maturity of the individual tree and the typical life expectancy of the species, along with other species’ characteristics. ERC and ULE are not precisely defined terms and their inclusion in the assessment is emphatically not a substitute for a competent tree safety assessment.

h. Notes

A brief account of the inspection notes regarding salient features of the trees. This is not intended to provide a thorough account of tree condition or a safety assessment and is not a substitute for such. With regard to tree safety issues, only presently and clearly obvious risks of imminent structural tree failure that might result in serious harm to people or property in the current site context at time of inspection are noted and, as judged appropriate, recommendations are made for their treatment. Unless stated otherwise, here and elsewhere in the main Report, distance from tree relates to distance from estimated centre of base of trunk at ground level.

i. Tree Quality Categorisation

Tree quality categorization is intended to help inform decisions in the planning stages of a development proposal, with regard to the treatment of existing trees within a scheme. It is not definitive and is bound by the criteria provided within the BS 5837 guidance. Quality categorisation is current as at the time of inspection and liable to change with time and circumstance. Quality categorisation is not intended as a safety assessment and is not a substitute for such. Definitions, categories and criteria for quality categorisation are reproduced from BS 5837: 2012 (see Appendix 2 above)

Appendix 4 Googlemaps Satellite image

Land to rear of 9 Priory Road

Googlemaps Satellite image dated 2021, annotated to show T1-T3 approx crown outlines and nearby features





Appendix 5 : Googlemaps Streeview Images of Tulip tree reflecting pollard history : March 2017 – August 2021

End of Report