

**TOWN AND COUNTRY PLANNING ACT 1990
(AS AMENDED)**

**FULL STATEMENT OF CASE IN SUPPORT OF
SECTION 78 APPEAL**

Installation of vehicular crossover to front

On Behalf of Mr Tom Ford

269 VICTORIA ROAD, RUISLIP, LONDON HA4 9DF

Our ref: YM/Ford/0417/rk

LPA ref: 38872/APP/2017/80

- 1 The LPA's decision notice and case officer report indicate that the LPA found the proposed development to be unacceptable because of its impact on the highway and pedestrian safety, and the health of a street tree. As such, the remainder of this statement focuses on the above main issues.
- 2 The LPA argues that the proposed development would be harmful to the highway and pedestrian safety because the proposal would result in a crossover that is too wide. However, the LPA has failed to explain why such a width would be harmful to the highway and pedestrian safety. The proposed development should not be rendered as unacceptable simply because it does not follow the LPA's guidance, as the guidance documents cannot accommodate for every eventuality.
- 3 The public footway is reasonably wide and straight at the front of the appeal property and for considerable distance in either direction. The appeal property has an open frontage. There is no physical boundary separating the parking area from the footway and ground levels are similar. Therefore, pedestrians using the footway enjoy a good level of visibility in the vicinity of the appeal property. Consequently, they could reasonably be expected to have an advanced warning of any vehicles leaving the appeal property. Similarly, given the levels of visibility available, drivers wishing to leave the appeal property could generally be expected to have an advanced awareness of pedestrians approaching along the footway.
- 4 The proposal would widen the existing crossover by a further 1.5m. Whilst as a consequence the widened crossover might be wider than the LPA's standard crossing dimensions, there would be no other physical changes to the appeal property. Therefore, the proposal would not result in any obvious reduction in the current levels of inter-visibility between pedestrians and drivers using the existing crossover. As a result, there is no firm evidence to suggest that the proposal would represent a significant hazard for pedestrians including the elderly or children.
- 5 Moreover, the proposal would potentially reduce on-road parking in the vicinity of the appeal property. This would give pedestrians more advanced warning of vehicles wishing to enter the appeal property, as

well as increasing the visibility available to drivers using the widened crossover. This could be regarded as a modest improvement in terms of highway safety over the existing situation. Taking all the above matters into account, the proposal would not cause unacceptable harm to the safety of highway users and pedestrians.

- 6 The LPA is also concerned about the fact that the appellant would be able to park 3 cars in the front parking area. However, this is an existing situation and the proposed development would have no impact on the fact that 3 cars can already park in the front garden. If anything, the widened crossover would make the parking of 3 cars safer than the existing situation.
- 7 Consequently, the proposed development would accord with Policy AM7 of the Unitary Development Plan which seeks to ensure that new development does not prejudice conditions of general highway or pedestrian safety. It would also accord with the guidance in the LPA's Residential Extensions SPD as there would not be an unacceptable danger to pedestrians from the widened crossover.
- 8 The LPA argues that the proposed development would be harmful to the health of the street tree located adjacent to the crossover, implying that it would eventually lead to the loss of the tree and this would be harmful to the character and appearance of the area. However, the proposed development would actually be able to preserve the street tree and the appellant has produced an independent tree assessment in Appendix 1 of this statement. As such, the proposed development would not be harmful to the health of the tree and therefore the tree would continue to contribute to the character and appearance of the area. In this context, the proposed development is consistent with the aims and provisions of Policies BE13, BE19 and BE38 of the LPA's Unitary Development Plan which seek to ensure that new development does not have an unacceptable visual impact and protects landscape features.
- 9 The Inspector is respectfully requested to allow the appeal and grant planning permission for the proposed development at the appeal site.

APPENDIX 1

Tree assessment



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Title: MOX_269VR_AIA_001

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1.0 – Summary of Instruction

An Arboricultural Impact Assessment (AIA) in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* was commissioned by our client to be undertaken at the above address.

The AIA and report are required to support an application for planning consent to widen a driveway crossover at the above address and to demonstrate that the extension of the hard standing will not adversely impact on one nearby street tree.

Instructions were to:

- Carry out a tree survey in accordance with the British Standard *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* to:
 - Undertake an Arboricultural Impact Assessment (AIA) to evaluate the potential direct and indirect effects of the proposed crossover widening on nearby trees.
 - Categorise the trees at and adjacent to the site to ascertain their suitability for retention, in accordance with the tree categorisation method detailed within *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*.
 - Provide all relevant tree data including species identification, dimensions, life stage, condition assessments and make preliminary/general management recommendations where necessary.
 - Identify the tree constraints to the proposal to assist with feasibility, conception and design.
 - Highlight the arboricultural implications that the development process may have on the retained trees and provide a method statement to instruct on the necessary controls required to mitigate those identified implications.
 - Produce a written Arboricultural Impact Assessment (AIA) report for submission to the local planning authority.

The British Standard Institute publication *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations* is referred to throughout this report. This is a nationally recognised standard typically used by Local Planning Authorities to assess planning applications. It is frequently referred to in planning conditions to enforce protection or control of works that may be harmful to trees both on and off the site.

This report has been produced in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations* for the sole use of our client (as detailed on the Title Page) **for planning purposes only**. Information provided by third parties used in the preparation of this report is assumed to be correct.

2.0 – Report Limitations – (The scope of this report is restricted by the following limitations)

- Assessments of all trees have been conducted using Stage 1 of the Visual Tree Assessment (VTA) method of inspection. (See Section 2.4).
- All observations of tree conditions were from ground level, a visual assessment of external features only, assisted as required by the use of binoculars, a metal probe and a rubber mallet (used for audible resonance testing) where necessary. Below ground tree roots and buried parts were not inspected.
- A topographical survey of the development site was not provided prior to the tree survey.
- The location of the nearby street tree was included on a hand drawn proposed plan provided by our client and cross checked using measurements recorded at the time of the tree survey as site conditions allowed.
- The proposed plan was used to create the Tree Constraints Plan in Section 8.0.
- All measurements of tree heights, crown spreads and crown clearance from ground level are recorded to the nearest half metre for dimensions up to 10m and to the nearest metre for dimensions over 10m.
- Stem diameters are measured to the nearest 10mm or where inaccessible, estimated based on the visible features and characteristics of the tree in question. Stem diameter measurements are adjusted in accordance with Table D.1 of Annex D in BS 5837:2012 as required.
- Detailed background information is not known concerning the past history of the site, the soil type, geology or hydrology of the environs. No inspection material has been acquired by Tree Sense Arboricultural Consultants for assessment by a laboratory.
- Assessing the potential influence of trees upon load-bearing soils beneath existing and proposed structures, resulting from water abstraction by trees on shrinkable soils, was not included in the contract brief and is not, therefore, considered in any detail in this report. Tree Sense Arboricultural Consultants cannot be held responsible for damage arising from soil shrinkage or heave issues related to the retention or removal of trees on site.
- The recommendations made in this report relate to the assessment of the trees and their surroundings at the time of inspection. Treatment recommendations assume that the client understands that tree management is a continuing process, requiring regular attention and that as part of this process the condition of the trees should be thoroughly reassessed at regular, timely intervals, with hazard checks after periods of likely tree stress, e.g. after periods of severe weather.
- Weather conditions were dry and bright on the day of the survey.
- Where a tree is subject to a Tree Preservation Order (TPO) and/or stands within a designated Conservation Area or on public land, it will be necessary for the tree owner or his/her appointed agent to ensure appropriate compliance with planning requirements, before any recommended, non-urgent treatments can be undertaken. (See Section 12).
- The AIA does not provide any guarantees that the associated Local Planning Authority (LPA) will agree with the opinion of the Consulting Arboriculturist, or grant planning consent based on the content of the AIA report.
- The AIA report is provided to detail impartially the potential tree constraints posed to the proposal as identified at the site and detail the methodologies to be employed, in the interest of safeguarding the short and long term health of significant nearby trees.
- This report is compiled into a single PDF file designed for electronic release. If printing this document, please note that the plan drawings may be a different size or orientation to the standard A4 / portrait of the rest of the report. Some PDF reader software may also automatically adjust the size of drawings included in this report. The Tree Constraints Plan is drawn to the scale indicated in Section 8.1.

2.1 – Time Limits

It should be understood that trees are not static objects, but growing, living organisms; and their condition, size and relationship to buildings and other trees can change significantly and sometimes unpredictably over a period of time. Therefore this report has a validity period of 12 months from the date of publication and is subject to any suggested management recommendations being undertaken within the correct time frames.

2.2 – Severe Weather Limitations

Impacts of severe drought, storm, inundation, land slip or subsidence are not covered by this report.

2.3 – Tree Safety Matters / Tree Risk Assessment

The Arboricultural Impact Assessment (AIA) in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* is carried out in sufficient detail to gather data for and to inform the current project.

Our appraisal of the structural integrity of trees on and adjacent (if applicable) to the site is of a preliminary nature and sufficient only to inform the current project. The tree assessment is carried out from ground level as is appropriate for this type of survey, without invasive investigation. On this basis, the tree assessments made as necessary for inclusion within the AIA report do not represent a comprehensive tree hazard appraisal.

The disclosure of hidden tree defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious visual defects that are significant in relation to the existing and proposed land use. As such, General Management Recommendations (GMR) may be made regarding the assessed trees, in respect of good urban tree management.

2.4 – Visual Tree Assessment (VTA)

The Visual Tree Assessment (VTA) method of inspection is an internationally recognised tree hazard assessment method developed by Prof. Claus Mattheck: *Body Language of Trees – a handbook for failure analysis (HMSO, 1994)*.

The basis of VTA is the identification of (external) symptoms which a tree produces in reaction to a weak spot or area of mechanical stress. These can then be interpreted in terms of potential direct impact hazard features within a tree.

The VTA method of inspection does not allow for opinions to be made concerning the risk of a tree's potential to cause indirect impact on nearby structures. Indirect impact refers to potential problems caused by changes in soil moisture content in shrinkable soils (i.e. those soils with a high clay content); to which trees can be a contributing factor.

The tree inspection survey undertaken at the above site was conducted in accordance with Stage 1 of the VTA process.

3.0 – Background and Process

The proposal to widen the existing driveway crossover at the above property is currently in the initial feasibility and planning stage.

The Arboricultural Impact Assessment (AIA) in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* was commissioned to be undertaken as part of the initial feasibility study at the planning stage of the process.

The elements of the AIA at this stage in the process were to undertake the tree survey, categorise the trees and identify the tree constraints posed, with a view to assisting with the feasibility of the driveway widening proposal.

Following the identification of tree constraints, the AIA evaluates the identified direct and indirect effects of the proposal in relation to nearby significant trees. The assessment will consider the effect of any tree loss or damaging activities proposed in the vicinity of retained trees. Activities such as:

- *The location and dimensions of all proposed excavations or alterations in ground levels.*
- *Construction of new structures above ground level.*
- *Removal of existing structures or hard surfacing.*
- *Installation of new hard surfacing.*

In addition to the permanent works, account should be taken to the buildability of the scheme in terms of access, plant machinery use, adequate operational space and provision for the storage of materials including topsoil, without inflicting damage to the retained trees. Post development pressure on nearby trees must also be closely considered and assessed.

As well as an evaluation of the extent of the impact on existing trees, the AIA includes and details within this document:

- a) *The tree survey;*
- b) *Trees selected for retention, clearly identified (e.g. by number) and marked on a plan with a continuous outline;*
- c) *Trees to be removed, also clearly identified (e.g. by number) and marked on a plan with a dashed outline or similar;*
- d) *Trees to be pruned, including any access facilitation pruning, also clearly identified and labelled or detailed as appropriate;*
- e) *Areas designated for structural landscaping that need to be protected from construction operations in order to prevent the soil structure being damaged;*
- f) *Evaluation of impact of proposed tree losses (if applicable);*
- g) *Evaluation of tree constraints;*
- h) *Issues to be addressed by an arboricultural method statement where necessary in conjunction with input from other specialists associated with the project.*

4.0 – General Observations

The property at 269 Victoria Road features an existing driveway crossover on the south side of the property. The crossover leads onto an existing driveway which is entirely block paved.

To the north of the crossover, one young *Sorbus.sp* (Whitebeam) tree is present in a small grass verge adjacent to the pavement and carriageway. The tree is growing on public land.

Currently, access on and off of the driveway via the existing crossover by vehicles has caused compaction of the soil on the verge to the south of the tree.

Appendix A provides supporting photographs taken at the time of the survey.

The Arboricultural Impact Assessment (AIA) has been undertaken to consider the potential impact the crossover widening may have on the short and long term health of the tree.

All trees considered in the *BS 5837:2012* study are shown on the Tree Constraints Plan in Section 8.1.

Details of the tree(s) surveyed for inclusion can be found in the Individual Tree Data Table in Section 5.0 below, with further comments provided in Section 5.1.

5.0 – Individual Tree Survey Data

Tree No.	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m)	First Significant Branch Height and Direction of Growth (m)	Canopy Height (m)	Life Stage	General Comments Inc. Physiological and Structural Condition	Preliminary Management Recommendations	Estimated Remaining Contribution (Years)	Category
1	<i>Whitebeam (Sorbus.sp)</i>	8	165	N – 2 E – 2 S – 2 W – 2	2 – W	2	Y	Physiological Condition – Good Structural Condition – Good Small area of compacted soil on the grass verge to the south of the tree caused by vehicle transit on and of the property driveway. Street tree, outside of the management control of the applicant.	–	20+	B 1

Key to Table 5.0

- 1) Height describes the height of the tree from ground level in metres.
- 2) Stem Diameter is the diameter of the trunk in millimetres measured at 1.5m from ground level. For multi stemmed trees, a single stem diameter equivalent (SE) is calculated and is indicated beneath the measurements of each separate stem. (Est.) indicates the stem diameter was estimated due to the tree being obscured and/or inaccessible to measure.
- 3) Branch Spread is the length of branch spread from the centre of the tree in the direction of each cardinal point in metres.
- 4) First Significant Branch Height and Direction – Clearance height from the ground of the first major structural branch of the trees' crown and its direction of growth.
- 5) Canopy Height is the distance between the lowest visible canopy branches and ground level in metres.
- 6) Life Stage is represented as: Y= young (*in first third of life expectancy*), SM = Semi Mature (*in second third of life expectancy*), M= Mature (*final one third of life expectancy*). Trees considered to be beyond their likely life expectancy are normally classed as OM = Over Mature or V = Veteran.
- 7) Physiological Condition relates to the vitality of the tree, Structural Condition relates to the presence of structural defects. (*i.e. dead branches, cavities, splits, included bark etc.*)
- 8) Estimated Remaining Contribution is an indication of the minimum useful contribution the tree will provide.
- 9) Preliminary Management Recommendations detail any initial arboricultural practices to be undertaken before construction activity begins.
- 10) Category grading is based on tree categorization guidelines provided within The British Standard 5837:2012 Trees In relation to design, demolition and construction - Recommendations (See 6.0 below).

Major deadwood = over 25mm diameter, Minor deadwood = under 25mm diameter.

GMR = General Management Recommendation.

GMR ADVISORY = General Management Recommendation Advisory to tree owners, if tree is outside of the management control of the applicant.

5.1 – Tree Data Notes

The tree(s) detailed in Table 5.0 above are those to be considered as potentially affected by the proposal.

General Management Recommendations – (GMR) for tree surgery works may have been made in the interest of good tree management and are not necessarily required in relation to the proposed development project.

Preliminary Management Recommendations – (PMR) may have been made where *further investigation into tree health and condition is required before a decision can be made concerning the safe retention of a tree.

**Further investigation normally refers to (but is not restricted to):*

- *Stage 2/3 of the Visual Tree Assessment (VTA) process, which involves semi invasive testing with Tomography, Resistograph and Fractometer equipment on areas of the tree where a significant internal structural defect is suspected following the Stage 1 VTA. Stage 2/3 VTA can determine in much greater detail the extent and severity of suspected internal wood decay and/or structural defects and also determine the strength of supporting wood tissue.*
- *Recommendations for a climbed inspection to be undertaken, to assess the upper sections of the tree stem or crown, where a significant structural defect is suspected but could not be quantified during the Stage 1 VTA undertaken from ground level.*

Any tree surgery work recommended must be undertaken following the correct procedures relating to trees protected by Tree Preservation Orders or which are growing within a designated Conservation Area where applicable. (See Section 12.0).

Any *General Management Recommendation (GMR)* which may have been made to remove hazardous deadwood from the crowns or removal of invasive climbing vegetation (such as Ivy) from TPO or Conservation Area trees which are under the management control of the applicant, does not require permission from the local authority before actioning. However, it is considered good practice to inform the local authority of the intended deadwood and Ivy removal works.

All recommended tree work must be undertaken in accordance with guidelines set out in *BS 3998:2010 Tree work – Recommendations*. (See Section 10.0).

The following sections provide information regarding the categorisation of the surveyed trees and the tree constraints which have been identified at the site.

6.0 – Tree Categorisation

The purpose of Tree Categorisation as detailed in *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*, is to identify the quality and value of existing tree stock, allowing informed decisions to be made concerning which tree(s) should be retained or removed should development occur. This process is the starting point of the tree survey, following a land survey and should, ideally, be undertaken before any site design or layout is proposed.

Trees are given a category grading based on individual tree assessment, in line with the categorisation methodology as detailed in Table 1 of *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*. Table 1 is reproduced as an informative below:

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	- 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 decline - Trees 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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			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

To easily identify the category grading for each tree assessed for inclusion in the AIA, all tree identification numbers on the Tree Constraints Plan(s) and Tree Protection Plan(s) are shown in a colour which represents the tree's category grading. Table 2 below, again reproduced from *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*, details the identification colours to be used for each category grade:

Table 2 Identification of tree categories

Category (from Table 1)	Colour ^{A)}	RGB code ^{A)}
U	Dark red	127-000-000
A	Light green	000-255-000
B	Mid blue	000-000-255
C	Grey	091-091-091

^{A)} Colours verified against <http://safecolours.rigdenage.com/palettefiles.html#files> [viewed 2012-03-26].

Once it has been established which trees can and are suitable to remain and are worthy of retention, necessary measures to protect them throughout the course of the development project must be undertaken.

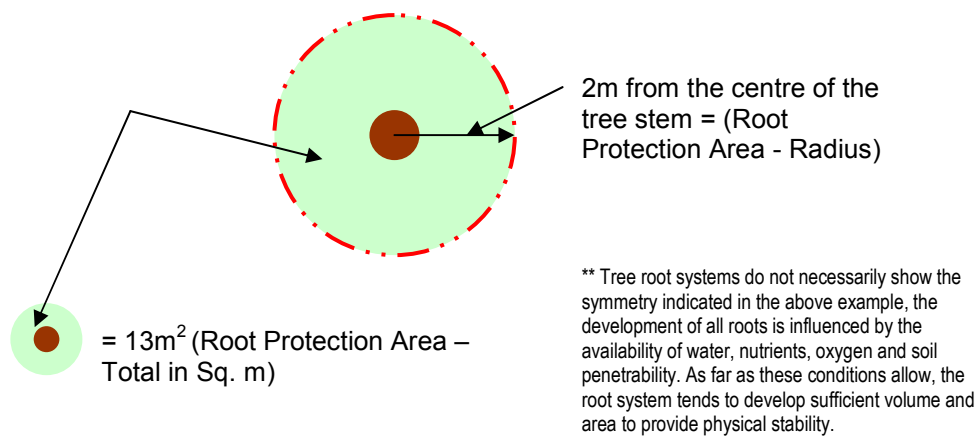
The following sections relate to the protection of the trees categorised for retention, during the construction process at the development site, and to trees which are growing adjacent to the development site. The first of these sections identifies the tree constraints to the development, which is required to assist with the design proposal and ensure the correct levels of tree protection measures are applied.

7.0 - Tree Constraints

The tree constraints are the influences the trees will have below and above ground level in relation to the development area. The below ground constraints are represented by the trees Root Protection Area (RPA), the above ground constraints are represented by the trees size and position, including shading patterns caused by crown density and spread which may affect light into newly developed buildings.

7.1 - RPA (Root Protection Area) – (Below Ground Constraints)

The RPA radius is taken from the centre of the tree stem, encircling the tree to give the RPA Area (example based on T1 shown below) **:



The following table indicates the Root Protection Areas (RPA) for the trees which were assessed as part of the Arboricultural Impact Assessment (AIA).

The RPA's for all assessed trees have been calculated using stem diameter measurements taken at 1.5m above ground level, collected at the time of the survey.

Stem diameter measurements are recorded in Table 5.0. RPA's are calculated using the appropriate formulae detailed in *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* – Section 4.6 and Table D.1.

Tree No.	RPA Radius (m)	RPA Area (m ²)
1	2	13

7.2 – Above Ground Constraints

The above ground constraints caused by tree heights and the spread of branches can pose constraints to the development project in respect of demolition work, new building design, position and operational space requirements.

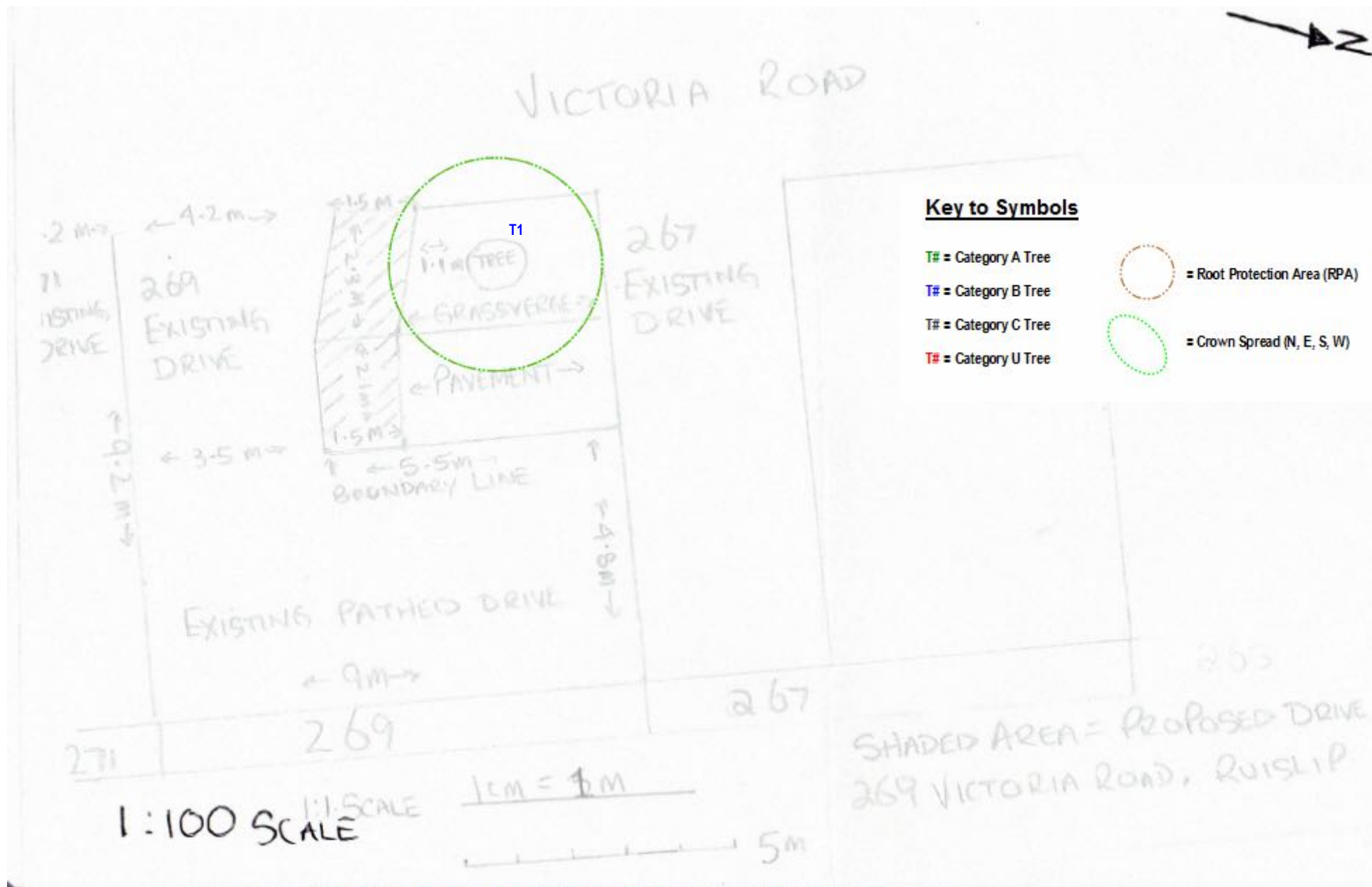
For example, if the lateral branch spread of a tree extends into areas where development activity is likely, there is a risk of potential direct impact from site machinery and construction activity on the tree crowns which may cause damage to branches. Tree stems and exposed buttress roots are also above ground constraints which need to be considered in respect of possible impact damage to them. Post development pressure is also of material consideration in respect of future tree pruning requirements and frequency following completion of the development.

Shading issues should also be considered in respect of tree size, form and position in relation to the proposed new structure. Species characteristics such as density of foliage and whether trees are deciduous or evergreen are important factors to consider in respect of shading issues which may affect light levels into the proposed dwelling.

Any proposals for above ground service installations such as telecommunication cables should also be considered with close reference to the above ground constraints posed by the trees at the development site, their location and their crown spreads.

The Tree Constraints Plan (TCP) in Section 8.0 below indicates the above and below ground constraints of all relevant trees at and adjacent to the site, with comments relating to the identified constraints in Sections 8.1 and 8.2.

8.0 – Tree Constraints Plan (TCP)



8.1 - Tree Constraints Plan (TCP) Notes:

The Tree Constraints Plan (TCP) in Section 8.0 is provided for illustrative purposes only, and is shown to approximate 1:100 scale based on the proposed plan provided by our client. Measurements were cross checked at the time of the tree assessment survey.

The TCP is provided only to indicate the position, category and numbering of the surveyed trees and provide an indication of the tree constraints by showing a graphic of the calculated Root Protection Areas (RPA) and the relevant tree crown spreads.

RPA measurements can be found in the RPA table in section 7.1, crown spread measurements can be found in table 5.0 above.

Using the formula described in *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* (Section 4.6 of the standard), the calculated RPA should be shown as a nominal circle on the Tree Constraints Plan with a radius based on 12 times the stem diameter for a single stem tree.

8.2 – Tree Constraints Assessment & Findings

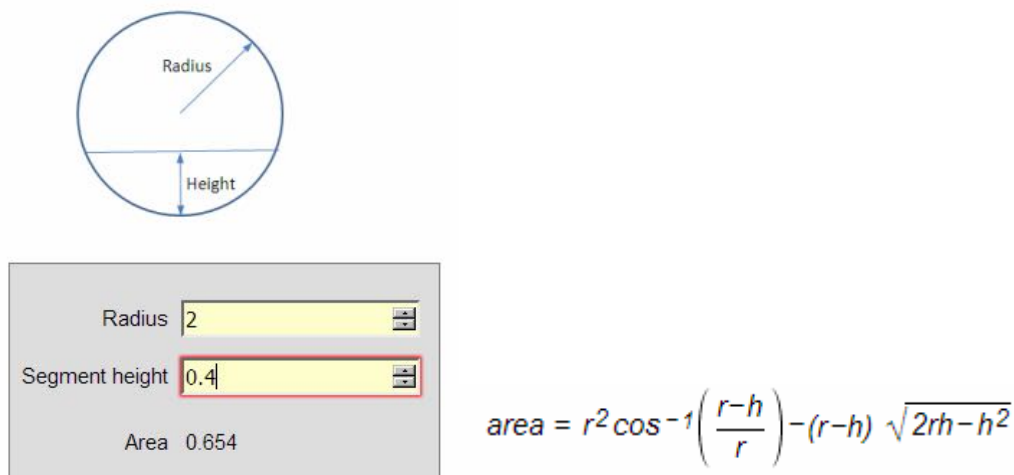
The identified constraints shown on the Tree Constraints Plan (TCP) in Section 8.0 were established following the tree survey, using data collected at that time.

The tree constraints are to be used to assess the feasibility of the proposal, in respect of assessing the potential impact on the nearby street tree (T1).

In terms of constraints to the driveway crossover extension, based on the current proposal, a minor incursion inside the calculated Root Protection Area (RPA) has been identified. The extended crossover would take up a small area of the existing grass verge, which has already suffered heavy soil compaction from vehicle transit on and of the driveway over time.

The proposal to extend the crossover by 1.5m as desired would result in new hard surfacing being installed over a small section of the existing grass verge. This area however, is already compacted and the actual incursion equates to only 0.65m², which is only 5% of the total RPA area calculated for T1 (13m²).

The calculated segment of the nominal RPA circle shown to be affected is based on the following calculation:



New, non permeable hard standings up to 20% of any existing unmade ground within an RPA are acceptable under BS 5837:2012 guidelines and in this particular case, the incursion is much less at only 5% of the total RPA of 13m² calculated for T1.

Additionally, the area of incursion is already heavily compacted soil and ephemeral roots which regenerate seasonally will be unlikely to reproduce and/or survive in this compacted soil environment. The compacted nature of the soil environment prevents aqueous and gaseous exchange in the soil which is vital for root development, survival and function.

The excavations required to construct the extension of the crossover to this degree inside the nominal RPA for T1 would not adversely impact on the physiological health of the tree, as short lived ephemeral feeder roots are unlikely to be encountered at this extremity of the RPA, particularly due to the compacted nature of the soil. Major, woody roots which give the tree its anchorage and stability should not be encountered at this extremity of the calculated RPA.

As a precautionary measure, any excavations required to install the new hard standing must be undertaken using hand tools only and be dug under arboricultural supervision.

8.2 – Tree Constraints Assessment & Findings (Cont'd)

In terms of feasibility of the proposal from an arboricultural standpoint, it is concluded in the Arboricultural Impact Assessment (AIA), that the proposed crossover extension is acceptable, with due consideration to all of the factors explored and detailed above.

Additionally, once the new surface is installed it will also be of benefit to the tree in the longer term, as the compaction of soil within the grass verge will be far less likely, as transit of vehicles on and off of the driveway will be via the extended hard standing of the crossover.

A second option is also available, which would involve the crossover widening to be reduced from 1.5m to 1.2m. This reduction would result in all excavations and new surfacing being fully outside of the calculated nominal RPA of T1.

All of the relevant arboricultural implications are addressed in Section 9.0 below. The Arboricultural Method Statement (AMS) in Section 9.1 provides details of the control measures to be employed.

9.0 – Arboricultural Implications

The potential direct and indirect impacts on trees which may arise from the proposed development and related construction activity, (identified following the tree constraints assessment are as follows:

- **Root severance caused by:**
 - Excavations for the construction of the surface sub base for the extended crossover.
- **Restriction of aqueous and gaseous exchange in the soil caused by:**
 - New non permeable hard surface installation inside tree Root Protection Areas (RPA).

Site specific controls relating to mitigation measures to be implemented in respect of these implications can be found in the Arboricultural Method Statement 9.1 below.

9.1 – Arboricultural Method Statement (AMS)

The table below indicates the potential Arboricultural Implications at the site during the construction phases and details the appropriate control measures to be employed. Control measures must be implemented as detailed below to safeguard all assessed trees above and below ground level against the potentially detrimental effects of construction site activity.

Implication	Control
• Root severance <i>Root severance caused by excavations or by the removal of hard standings inside Root Protection Areas (RPA) can result in the loss of abundant fibrous root networks. This loss of roots can greatly reduce a trees ability to perform its physiological life processes. The loss of major woody roots can also compromise a tree's anchorage and greatly increase the risk of trees being wind thrown.</i>	• All excavations required in the grass verge and inside the calculated RPA for T1 are to be undertaken using hand tools only and under arboricultural supervision. • Any roots encountered which are over 25mm in diameter are not to be cut without prior consultation with the supervising Arboriculturist. • Excavations must not occur within 1.6m from the stem of T1. • Any tree roots which may become exposed during the course of any phase of excavation works will be immediately wrapped or covered to prevent desiccation and protect from temperature changes (if to be exposed for any lengthy period of time) and advised to the supervising Arboriculturist immediately.
• Restriction of aqueous and gaseous exchange in the soil <i>The installation of new, non permeable hard standings over tree Root Protection Areas (RPA) can restrict water and oxygen from entering the underlying soil. Tree roots depend heavily on goods availability of water, nutrients and the exchange of Oxygen, Nitrogen and Carbon Dioxide in the soil to survive.</i>	• The new hard surfacing to be installed to achieve the widening of the driveway crossover must not extend within 1.6m of the stem of T1. • Ideally (if available), a non permeable surface finish should be used.

10.0 - Tree Work Standards

Any recommendations for tree surgery works made within this report have been done so in the interests of sound arboricultural management and to ensure tree surgery works are performed to a professional standard in accordance with *BS 3998:2010 Tree work - Recommendations* (As updated).

All remedial tree surgery work which may be suggested in this report must be undertaken to conform to standards and procedures set out in *BS 3998:2010 Tree work – Recommendations* (As updated).

- Tree Sense Arboricultural Consultants are happy to recommend a trusted tree surgery contractor if required, to ensure that all recommended tree surgery work is performed to a high standard.
- Tree Sense Arboricultural Consultants only recommend contractors who are approved by The Arboricultural Association to ensure that the highest standards of tree surgery work are met at all times.

11.0 - Report Summary

This Arboricultural Impact Assessment (AIA) report has been produced following a tree survey conducted in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

The information produced within this report follows an initial tree survey conducted on the 10th May 2017. The report provides an assessment of the trees associated with the crossover widening proposal.

Based on information supplied by our client and observations recorded at the time of the survey and following a considered assessment of the short and long term impact on T1, it is concluded that the crossover extension proposal is feasible from an arboricultural standpoint, based on the findings and recommendations detailed within the AIA report.

If any design changes are made to any aspect of the proposal due to the identified tree constraints, operational restrictions, geotechnical concerns or otherwise, revisions or additions to tree protection, damage mitigation measures and site layouts will need to be made and a revised report produced.

This is a Development Control, not a Building Control focused document. In regard to the latter, this deals with foundation depth and design in relation to trees using NHBC/Zurich national guidance. For advice, consult with the local council Building Control Officer or an approved NHBC inspector in order to gain Full Plans Approval or a Completion Certificate. The latter are governed by the Building Act 1984 and Building Regulations 2010. As such, the above Building Control issues are outside the remit of a Consulting Arborist.

Further detailed information regarding the site setup, plant use, waste management and construction methodology was not available at the time of writing and should be requested directly from the client if required.

12.0 – Legal and Planning Consents

- Appropriate legal and planning consent should be gained before undertaking any tree work; for example if the tree(s) are subject to a Tree Preservation Order (TPO), permission must first be obtained from the Local Authority. Permission is not required for emergency tree work on dead, dying or dangerous TPO trees; however the Local Authority should be advised.
- Six weeks notice is required to be given to the local authority via a Section 211 Notice for any proposed tree surgery work on trees situated within a designated Conservation Area. Permission is not required for emergency tree work on dead, dying or dangerous trees situated within a Conservation Area; however the Local Authority should be advised.
- Tree owners have a responsibility as a common law duty of care, as well as responsibilities under statutory law, to ensure that trees growing within the boundaries of their property are maintained to reduce to an acceptable level the risk of potential harm befalling other people or property.
- In the course of undertaking any tree work, the client is advised to ensure that operational assessments and procedures are in place, and to take due consideration of the legal requirements.
- Key legislation includes (but is not restricted to):
 - The Wildlife and Countryside Act (1981)
 - Occupiers Liability Act (1957/84)
 - Highways Act (1980/86)
 - Town and Country Planning Act (1990/Regulations 1999/Amendment 2008/09)
 - Anti-Social Behaviour Act (2003) – Part 8 (High Hedges)
 - The Countryside Rights of Way Act (2000)
 - The Conservation (Natural Habitats etc.) Regulations (1994)
 - The Badgers Act (1992)

13.0 - Publications

- Other publications which are relevant to the development proposal to which further reference is advised includes but is not restricted to:
 - National House Building Council (N.H.B.C) Chapter 4.2 – (Building near trees);
 - National Joint Utilities Group (NJUG) Volume 4 – (Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees).

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Tree Sense Arboricultural Consultants

Appendix A – Supporting Photographs

The following photographs were taken at the time of the tree assessment survey and are provided to highlight and support the findings of the Arboricultural Impact Assessment (AIA).



T1 is a young Sorbus.sp street tree which features within a small grass verge in front of the property at 269 Victoria Road.

The property features a block paved driveway at the front for off street parking for 2 cars, which is currently accessed via a crossover on the south side of the tree.



Appendix A – Supporting Photographs – Cont'd

The following photographs were taken at the time of the tree assessment survey and are provided to highlight and support the findings of the Arboricultural Impact Assessment (AIA).



Currently, the transit of vehicles on and off of the driveway has caused the soil in the grass verge to become heavily compacted. The proposal to widen the crossover will encroach into the grass verge and concerns have been raised by the Local Authority that the installation of new hard surfacing to widen the crossover will be detrimental to the health and safety of the tree.



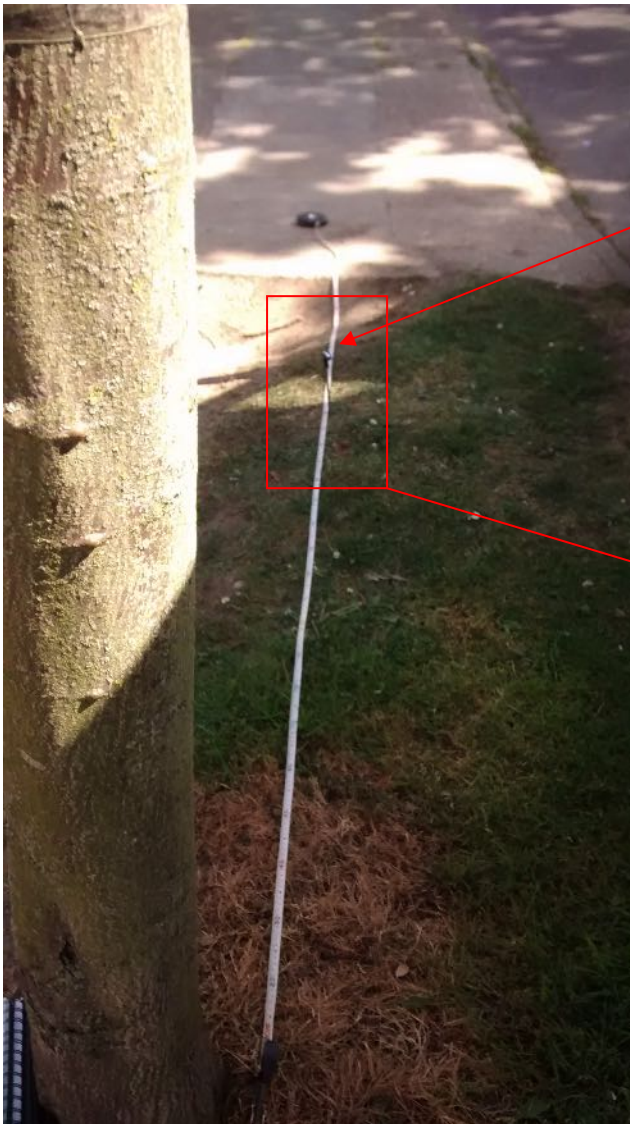
The effects of vehicle transit on and off the driveway over time can be clearly seen to have compacted the soil on the south side of the verge, where the grass has worn away and a distinctive dip has been created.

Compaction of the soil creates unfavourable conditions for root development, survival and function and is also considered as detrimental to the long term health of the tree.



Appendix A – Supporting Photographs – Cont'd

The following photographs were taken at the time of the tree assessment survey and are provided to highlight and support the findings of the Arboricultural Impact Assessment (AIA).



The Root Protection Area (RPA) of T1 has been calculated to have a radius of 2m and an RPA total area of 13m².

The RPA radius of 2m from the centre of the tree stem is indicated by the marker peg shown.



The proposed widening of the crossover by 1.5m will encroach into the grass verge area by 400mm. This incursion equates to just 0.65m², which is only 5% of the total calculated RPA area (13m²). (See Tree Constraints Plan and Tree Constraints Assessment in Sections 8.0 and 8.2 respectively).

In terms of impact on the health and safety of T1, this minor incursion at the extremity of the calculated nominal RPA circle will not adversely impact on the physiological health of the tree. Any ephemeral feeder roots which seasonally regenerate would normally be found at this extremity. However, feeder roots are unlikely to be encountered in this case, due to the compacted nature of the soil environment.

Major, woody roots which give the tree anchorage and stability travel only a short distance from the stem base and are also unlikely to be encountered at the extremity of the RPA.

Precautionary measures are advised to reduce any potential for root damage or disturbance during the process. (See Sections 9.0 and 9.1).