RJ Tree Services Ltd

Arboricultural Survey & Report

The Old Vicarage, Dimble Lane, Alton, ST10 4BL

Produced for:
James Tidy at Tidyco Ltd, Unit 2 Pentagon Island
Nottingham Road, Derby, DE21 6BW

Produced by: Richard A Jones (MICFor, F Arbor A)
For: RJ Tree Services Ltd

Chartered Arboriculturist
Institute of Chartered Foresters Registered Consultant

Date: July 2016 Reference: TheOldvicarage_Alton/01

Ground Floor Unit, 3 Millers Yard, Roman Way, Market Harborough, Leicestershire, LE16 7PW
Tel: 01858 432938 Mob: 07765 792719 Email: richard@rjtreeservices.co.uk

Chartered Arboricultural Consultancy & Advice

www.rjtreeservices.co.uk
Company Number: 9484682

CONTENTS ***Page***

Summary

This survey appraises 9 trees and groups of trees to the standards in BS5837 (2012) 'Trees in Relation to Design, Demolition and Construction-Recommendations'. It finds that the 4 trees and groups group meet the standard for a Moderate (B) Classification and that 4 trees and groups are suitable for a Low (C). 1 Tree is described as (U) Unsuitable for Retention. The heights and predominant species in the hedgerows at the site are recorded in the survey schedule. They are not given a Retention Classification.

Statutory Constraints	Issue Date	Accompanying Plan/s	Agent	Local Planning Authority
Yes-Conservation Area	July 2016	Arboricultural Survey & Constraints Plan: 01	Jeff James Montague Architects Ltd Vernon Street Derby 01332 332661	Staffordshire Moorlands District Council Moorlands House Stockwell Street Leek Staffordshire ST13 6HQ Tel: 0345 605 3013 www.staffsmoorlands.gov.uk

1. Introduction & Brief

1.1 Written instructions from Mr Jeff James of Montague Architects Ltd on behalf of the client on the 23 June 2016 to appraise the trees shown on the accompanying Arboricultural Survey and Constraints Plan 01 at The Old Vicarage, Alton, Staffordshire (the site).

1.2 Qualifications of Author & Indemnity

1.2.1 The survey was completed for RJ Tree Services Ltd by Neil R Edmondson who is a director and principal practice consultant of White Peak Tree Consultancy Ltd, which is an arboricultural consultancy. The practice specialises in arboriculture, forestry and project management throughout the midlands and the north of England. Neil holds a Higher National Diploma in Arboriculture awarded by the University of Central Lancashire and also holds the 'Dick Leigh Cup' awarded to the best practical student. He is a Fellow of the Arboricultural Association. In pursuance of continuing professional development Neil regularly communicates with other professionals in both public and private sector

1.2.2 RJ Tree Services Ltd holds professional indemnity and public liability insurance which is limited to £1000000. Please contact me should you require any more information relating to this matter.

2. Background & Purpose

2.1 A scheme is proposed to acquire planning consent for a residential development at the site. The purpose of this report is therefore:

- To provide an objective arboricultural survey to BS5837 (2012) 'Trees in Relation to Design, Demolition and Construction-Recommendations' as a guide to the site layout

- To provide sufficient data to calculate tree Root Protection Areas

- To provide an arboricultural survey/constraints plan

- To provide guidance in respect of the trees and the proposed development

3. Conditions & Limitations

3.1 Trees should be assessed by a competent and qualified person on a regular basis. It is recommended that the trees discussed in this survey be assessed every one to two years in line with the guidelines in the International Society of Arboriculture Evaluation of Hazard Trees in Urban Areas publication (1994); or more often where stated.

3.2 While every effort has been made to identify defects within the trees inspected, no absolute guarantee can be given or is intended to the safety or otherwise of any tree or trees discussed in this survey or report. Extreme climatic conditions can on occasions cause damage to what appear to be healthy trees.

3.3 On undertaking the recommended works, the arborist/tree surgeon must without delay report any defects that become apparent while climbing or working on the tree/s in question. Those defects must be reported immediately to the project manager, landowner and or the author of this survey to enable the appropriate remedial action.

4. Survey Information

4.1 Neil Edmondson undertook a brief visual assessment of the subject trees from ground level on the 28 June 2016 using current tree assessment information and in accordance with the guiding principles of BS5837 (2012). The trees are recorded in the survey sheets in appendix 1. I was unaccompanied when carrying out the survey work. No digging or drilling was undertaken.

4.2 This survey is for planning guidance purposes only and is intended as only a preliminary assessment of the trees. In the case of groups of trees, only a general assessment has been made and the recorded condition and retention categories awarded are on the basis of what is typical of the group.

4.3 The condition ratings and life expectancies are estimated (est) and retention ratings are assumed in the case where the assessment has been restricted by way of the trees being located outside the site, or access being constrained by barbed wire, dense ivy or other plant growth, a build up of debris, soil etc.

4.4 The weather conditions were clear with adequate visibility for surveying trees.

4.5 This survey is based on a Topographical Survey Plan supplied by the client, which I have appended the tree numbers onto to produce the Arboricultural Survey and Constraints Plan 01. The trees are shown on the arboricultural survey plan thus: T1=Tree 1, G1= Group 1 and so on. Additional trees are not plotted to scale. The heights and predominant species in the hedgerows at the site are recorded, where appropriate, in the survey schedule as suggested in the BS5837 (2012). They are not given a Retention Classification.

5. Statutory Protection

5.1 I understand that the site is in a conservation area.

5.2 Anyone proposing to cut down or carry out work on a tree in a conservation area is required to give the Local Planning Authority (LPA) six weeks prior notice to enable the trees to be considered for protection by a TPO. Failure to give the LPA six week's notice of intent may result in prosecution and a substantial fine.

5.3 The six week notice gives the LPA two options as follows: to impose a TPO in respect of those trees or some of those trees subject to the notice. This prevents any works being carried out without the express, written consent of the LPA. The alternative is to allow the works to go ahead.

5.4 A TPO is an order made by a LPA to protect trees when it is expedient in the interests of amenity. Written consent from the LPA must be obtained before any work can take place on protected trees. Failure to acquire written consent from the LPA or damage, deliberate or otherwise, to TPO trees or trees in conservation areas may result in prosecution and a substantial fine.

5.5 ***Exemptions:*** An exemption from the need for an application under the TPO or conservation area applies to the removal of dead limbs or where tree pruning or removal work is necessary to implement a development with full planning permission. This exemption does not apply to outline planning consent.

5.6 It is not necessary to give the LPA six week's notice to work on trees in conservation areas with a stem diameter of less the 75mm.

6. Documents & Additional Information

6.1 Jeff James provided a copy of a Topographical Survey Plan in pdf and dwg format.

7. The Site

7.1 The site (photographs 1 and 2) is situated roughly 0.5km to the south of Alton Village Centre. It is the garden of an existing house, which is in part somewhat overgrown and unkempt. There is a clump of Japanese knotweed at the site.

Photograph 1

Photograph 2

7.2 Established trees are growing primarily growing on the edge of the site, which slopes up a bit towards the road. Access is available by vehicle or on foot via Dimble Lane.

7.3 Generic Recommendations & Observations

7.3.1 ***Plant Growth and Other Debris*****:** In situations where a build up of debris and or plant growth has restricted an adequate assessment taking place; it is my advice that the debris and or plant growth be removed and that a further assessment be undertaken at the soonest opportunity as described in the following tree works schedule. A dash (-) is placed in the structural condition category box and a note recorded in the survey schedule where a general assessment has not been carried out.

7.3.2 ***Tree Works:*** To avoid confusion and on agreement (in writing) with the LPA, I would recommend that any trees selected for removal should be marked on site by the supervising arboriculturist using spray paint.

7.3.3 It is my advice that the tree works recommended in the associated survey schedule should be completed at the soonest opportunity subject to statutory constraints and consent from the appropriate tree/land owner.

7.3.4 ***Trees and Wildlife*****:** Trees are hosts to nesting birds, many of which are protected by law. Investigations should be carried out for signs of bats (all of which are protected by law) and nesting birds and advice sought from appropriate agencies such as Natural England, the Bat Conservation Trust (BCT) or the Royal Society for the Protection of Birds (RSPB) following any positive sightings. Tree works should be planned carefully to avoid disturbing nesting birds and roosting bats. The disturbance of protected species is an offence and could result in prosecution, a criminal record and a substantial fine.

7.3.5 I did not identify any fungus fruiting bodies at or around the trees at the site other than where described in the survey schedule or above

8. Trees outside the Boundary

8.1 Trees growing outside the site boundary that impact on the development area or vice versa are considered in this survey.

Trees & Development-Advice

1. Calculating Root Protection Areas

1.1 Section 4.6 of the BS5837 (2012) suggests that the Root Protection Area (RPA) for single stemmed trees is calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, one of the two calculation methods below should be used.

- For trees with two to five stems, the combined stem diameter should be calculated as follows:
  (stem diameter 1)^2 + (stem diameter 2)^2 ... + (stem diameter 5)^2
- For trees with more than five stems, the combined stem diameter should be calculated as follows:

  (mean stem diameter)^2 × number of stems

1.2 Multi-stemmed trees are described as such in the survey schedule.

1.3 The unaltered RPA's in m and m² are provided in the survey schedule according to the calculations in Annex D of BS5837 (2012). Representations of the RPA's are described on the Arboricultural Survey Plan 01 by red circles for Moderate B and High A Category trees only to prevent it becoming cluttered. RPA's should be capped at 15m.

1.4 The BS5837 makes the following broad advice:

- Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:
- a) the morphology and disposition of the roots, when influenced by past of existing site conditions (e.g. the presence of roads, structures and underground apparatus);
- b) topography and drainage;
- c) the soil type and structure;
- d) the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

2. The Trees & Development

2.1 ***Underground Constrains:*** Trees over time achieve a balance with their environment and any impact on that equilibrium can be damaging to their health. As a result, BS5837 (2012) recommends that the default position is that development should take place outside the RPA to avert, as far as reasonably possible, harm to their root environment. Injury to tree roots can impact on their physiological health and structure. The British Standard states that A, B and C Category trees should be a material consideration in any site layout plan.

2.2 Each situation should be considered on its merits as development inside RPA's is possible with the use of special foundations such as pile and beam or house deck and hard surfaces using the no dig method. These designs allow for construction to take place inside RPA's as they require only very minimum excavations. Where at all possible, the installation of utilities should take place outside the RPA's of retained trees. Significant changes in levels inside RPA's should be avoided.

2.3 ***Above Ground Constraints:*** New buildings should be located at a distance suitable for the trees and the new structures to co-exist with the minimum of direct or in-direct conflict without, where practically possible, affecting the reasonable enjoyment of the proposed new dwellings. Development should ideally be undertaken outside the crown radius when branches extend significantly beyond the RPA's. Conversely, it may be possible to shorten or remove branches when they overhang a proposed development.

2.4 It is important to bear in mind that the ultimate shape, form, height and density vary between different tree species. Thus, the shade they cast is likely to differ depending on their juxtaposition to the new structure/s. A suitable distance should, therefore, be maintained between any retained trees and new structures.

2.5 BS5837 (2012) gives advice regarding the retention of older trees on development sites. Care is recommended when retaining large trees which become enclosed within a development. Older trees may be less resilient and more likely to die or become potentially unsafe as a result of the pressures associated with development. There are no old/mature trees at the site.

2.6 If the preservation or planting of potentially large trees is proposed then the most sustainable approach would be to retain them in a large garden or open space to enable sufficient room for their protection, maintenance and to avoid potential conflicts with structures.

2.7 ***Tree Retention within the Development:*** In line with the guidelines in the BS5837 (2012), caution should be exercised when retaining trees so as to avoid misguided attempts to keep too many or inappropriate trees on a site, which could lead to conflict and or future pressure to prune or remove.

2.8 It is important to take into account the conflicting requirements of the site layout and the trees. Thus, it is my advice that in this case the low C Category trees should not be retained at the expense of what might otherwise be acceptable development. Consideration may be given to retaining particularly High A and sometimes Moderate B Category trees where desirable and appropriate subject to protection measures; the detail of which would need to be shown on a tree protection plan and in a site specific method statement.

2.9 ***Conclusion:*** It is apparent that there are no trees of quality at the site. Thus, it is reasonable to take the view that there are no realistic reasons in arboricultural terms for development not to go ahead at the Old Vicarage.

3. Trees, Soils & Foundations

3.1 No data is available relating to soil type at the site. Nonetheless, consideration should be given to the implications of tree removal, planting and retention in terms of foundation type. A suitably qualified structural engineer should be consulted in terms of foundation design.

Generic Method Statement

1. Tree Retention & Protection during Construction

1.1 Barriers should be placed around the RPA's of the retained trees in direct proximity to the proposed building works in line with the following figure 1.

1.2 The position of the protection barriers inside the site in relation to the building works and the retained trees and hedgerows should be shown on an arboricultural protection plan by a red line on agreeing a site layout.

1.3 The area inside the protective barriers must remain undisturbed during the development process; it is a **"construction exclusion zone".** No change in levels, fires, storage of materials, and use of fuels, chemicals, equipment or vehicles are permitted in the construction exclusion zone. Adequate provision for storage, office accommodation, access for construction traffic and parking is available outside the construction exclusion zone. The construction exclusion zone is shown on the protection plan by red hatching.

1.4 The barriers must be in place before building work commences and must be fit for purpose. It is recommended that an appropriately qualified arboriculturist in conjunction with the LPA tree/arboricultural officer should approve the fencing and supervise any amendments. The barriers should not be removed until work is completed on site.

1.5 Contaminating materials such as concrete washings should be disposed of at a minimum of 10m from the retained trees in a position where, if spilt, could not run towards the trees. Notice boards, service/utility cables etc must not be attached to any part of the protected tree.

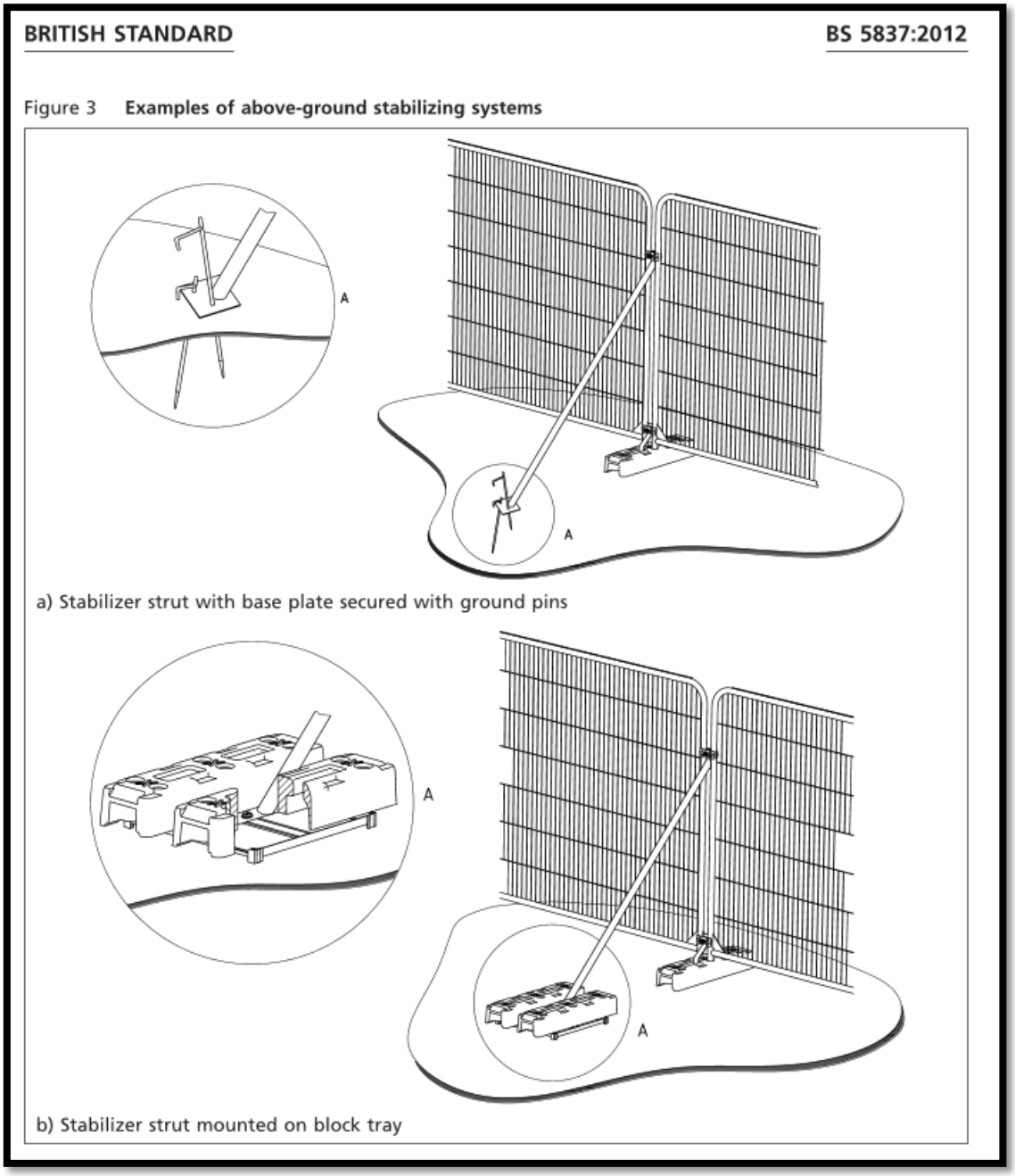

Figure 1 BS5837 (2012)

2. Timing/Phasing of Tree Works

- The proposed tree works should be carried out and protective barriers installed prior to starting work on site.

- Works should not progress to the next stage without the agreement of the appointed arboriculturist and or the project manager.

2.1 It is my recommendation that an arboriculturist be retained during the building works to oversee the tree protection, pruning and removal works. It is the responsibility of the site manager and main contractor to ensure that any tree protection or other relevant planning conditions are adhered to. A breach of a planning condition may result in enforcement action by the LPA.

3. Tree Work Standards

3.1 Where appropriate and possible, any bough agreed to be removed or shortened shall be cut back to a suitable point such as the branch collar or suitably positioned secondary branch. The branch collar shall be left intact. Climbing irons or 'spikes' shall not be used.

3.2 The safety of operatives and the public should be paramount. The integrity of the remaining trees is also important. Machinery should be used in a safe manner. Power saws, wood chipping machines etc should be maintained and fuelled outside the site to prevent damage by spillages.

3.3 The appropriate signage should be used and footpaths, roads etc closed and or managed in line with current guidelines for best practice and the law.

3.4 It is my advice that contracting companies employed to carry out the recommended works be appropriately trained, insured and qualified. Certificates should be requested where there is uncertainty.

3.5 All tree pruning works should be carried out to the BS3998 (2010) Tree Works-Recommendations guidelines for best practice.

Biography

British Standards 5837 (2012), Trees in Relation to Design, demolition and Construction-Recommendations, British Standard Institute

British Standards 3998 (2010), Tree Work-Recommendations, British Standard Institute

Appendix 1

Arboricultural Survey Schedule

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
T1	Common cherry *(Prunus avium)*	EM	>10	8		4	4	4	5	3	275 300 *406	B	C	C3	Deadwood throughout crown Severed ivy stems clinging to stem and lower branches Relatively sparse foliage Crown encroaching onto utility pole, overhead electricity conductors and street light Crown overhanging drive and encroaching towards highway **Recommendations:** Ideally fell to accommodate proposed development **RPA:** 4.8m radius, 72m² area
T2	Goat willow *(Salix caprea)*	OM	<10	10		6	4	3	5	2-3	475	C	C	U	Adjacent to ancillary building Crown encroaching onto ancillary building Previously topped Poor crown form Basal suckers Profuse epicormic shoots Deadwood and crossing branches Overhead electricity conductors strung through crown **Recommendations:** Fell irrespective of proposed development **RPA:** 5.7m radius, 102m² area

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
T3	Goat willow *(Salix caprea)*	OM	>10	11		3	6	4	5	2-5	425	B	C	C2	Close to ancillary building Crown encroaching onto ancillary building Single stem High crown Closed wound on stem Epicormic shoots on stem Deadwood and crossing branches Slight lean Overhead electricity conductors strung through crown **Recommendations:** Fell to accommodate proposed development **RPA:** 5.1m radius, 81m² area

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
G4	Sycamore *(Acer pseudoplatanus)* with Common holly *(Ilex aquifolium)* and Common elder *(Sambucus nigra)*	EM	>20	12-14		6	-	-	6	2-5	(i) 400 375 multi *548 (ii) 400 275 175 multi *515 (iii) 500 (iv) 400	B	B	B2	Sycamores prominent on site frontage Crowns overhanging highway Deadwood throughout crowns Multiple stems diverging at ground level on specimens at (i) and (ii) Basal suckers Live ivy growing up stems and into the crowns Holly and elder emerging as understory amongst basal suckers **Recommendations:** Remove significant deadwood Raise canopy to provide clearance of 5m over development plot Raise canopy to provide clearance of 5m for adjacent highway **RPA:** 6.6m radius, 137m² area Maximum

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
T5	Common yew *(Taxus baccata)*	Yng	>20	5		2	2	2	3	2	125 100 multi *160	B	A	B3	Insignificant specimen in context of the site Adjacent to boundary Previously pruned Poor pruning stubs **Recommendations:** Correct poor pruning stubs **RPA:** 2.1m radius, 14m² area

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
T6	Lawson cypress *(Chamaecyparis lawsoniana)*	Mat	>10	17		3	3	5	4	3-4	450 425 Multi *618	D	B	C or U	Significant specimen Co-dominant stems diverge at weak included fork at around 1m from ground level Reaction tissues (bulges) and superficial bark cracks on either side of fork Whitebeam seedling emerging from crack between stems Upswept lateral branch with poor stem attachment emerging to the southwest Overhead electricity conductors strung through crown **Recommendations:** Fell irrespective of proposed development **RPA:** 7.2m radius, 163m² area

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
T7	Common elder *(Sambucus nigra)*	SM	>10	6		2	2	2	3	2	100	C	B	C	Insignificant specimen in context of the site Adjacent to boundary Basal suckers Suppressed by Tree 6 **Recommendations:** No work required or fell **RPA:** 1.2m radius, 5m² area

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
G8	Common ash *(Fraxinus excelsior)* and Scots pine *(Pinus sylvestris)* with Common holly *(Ilex aquifolium)*	Mat	>20	16-18		4	6	7	6	3-6 over site	(v) 575 (vi) 400	B	B	B2	Prominent at western extremity of plot Deadwood throughout crowns Basal suckers Live ivy growing up stems and into the crowns Remnants of dead ivy Located in slight hollow or dry ditch Holly and elder emerging as understory amongst basal suckers **Recommendations:** Remove significant deadwood Raise canopy to provide clearance of 5m over development plot **RPA:** 6.9m radius, 150m² area

Abbreviations:
Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Tree no	Species	Age	Min life exp (est)	Height (est) m	Mat H't (max) m	Crown Spread m (est max)				Cr'n Height (est max) m	Stem Diam mm	Con Cat est	Phys Cat est	Ret Cat	Comments & Recommendations
						N	E	S	W						
G9	Common beech *(Fagus sylvatica)*	SM	>20	11		4	5	5	5	4-5 over drive	(vii) 400 (viii) 425	B	A	B2	Not within development plot With raised shrub bed Crowns encroaching over drive and adjacent property Minor deadwood **Recommendations:** Raise canopy to provide clearance of 3m over drive and adjacent property **RPA:** 5.1m radius, 81m² area max

Abbreviations:

Yng- Young tree/s of less than 1/3 life expectancy, SM- Semi-mature tree/s between young & middle aged, EM- Early-mature tree/s of 1/3-2/3 life expectancy
Mat- Mature tree/s of more or less full height, but with potential to increase in girth, O/M- Over Mature tree/s declining in health & stature
Vet- Veteran tree/s of significant & identifiable historical, ecological & conservation value. * = Calculation from section 4.6a of BS5837 (2012)
Con Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Phys Cat= Condition Category- A= Good. B= Fair. C= Poor, D= Dead, Ret Cat = Retention Category- A= High. B= Moderate. C= Low. U= Unsuitable for Retention. > = Greater than. <= Less than. est = Estimate. max = Maximum. H't = Height. C'n = Crown. CV = Cultivar. GL=Ground level, exp=Expectancy, RPA = Root Protection Area.
TPO=Tree Preservation Order, **Con Area**=Conservation Area

Appendix 1

Arboricultural Survey Data Collection Methodology

The trees are identified by their common and botanical names. The identification is based on visual observations and the common name is listed first, with the botanical name in brackets. In some instances it may be difficult to identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, a sp is shown after the genus. The species shown for groups represents the main constituent and there may be other minor species not listed. Common names are sometimes regional and may therefore vary in terms of the locality.

BS5837 (2012) suggests the following **age classifications** which have been supplemented to assist the reader:

Yng- *Young tree/s of less than 1/3 life expectancy*

SM- *Semi-mature tree/s between young & middle aged*

EM- *Early-mature tree/s of 1/3-2/3 life expectancy*

Mat- *Mature tree/s of more or less full height, but with potential to increase in girth*

O/M- *Over Mature tree/s declining in health & stature*

Vet- *Veteran tree/s of significant & identifiable historical, ecological & conservation value*

Appendix 1

A **retention category** (Ret Cat) is given as follows to correspond with table 1 of BS5837 (2012)-See appendix 4:

Ret Cat

A- *Trees of a high quality and value with greater than 40 years estimated life expectancy*-shown as light green on plan
(sub category 1: mainly arboricultural qualities, 2: mainly collective landscape qualities, 3: mainly conservation & or cultural values)

B- *Trees of moderate quality and value with 20 to 40 years estimated life expectancy* -shown as mid blue on plan
(sub category 1: mainly arboricultural qualities, 2: mainly collective landscape qualities, 3: mainly conservation & or cultural values)

C- *Trees of low quality and value with 10 to 20 years estimated life expectancy* -shown as grey on plan
Trees below 150mm diameter, which may be considered for transplanting
(sub category 1: mainly arboricultural qualities, 2: mainly collective landscape qualities, 3: Mainly conservation & or cultural values)

U- *Trees 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*-shown as red on plan

The trees are given a supplementary **structural condition** (Con Cat) and **physiological condition category** (Phys Cat) thus:

Con Cat

A- *Trees that appear to be in a good condition without any obvious defects*

B- *Trees that appear to be in a moderate to good condition and/or with only minor defects that can be addressed by pruning and/or trees with an unbalanced shape or form*

C- *Trees that are of a poor quality that are in decline and or with one or more obvious structural defect that can be addressed by major surgery*

D- *Trees that are of a very poor quality with one or more significant structural defects and or that are in an irreversible state of decline with a very limited safe life expectancy, Dead trees*

Appendix 1

Phys Cat

A- *Trees that appear to be in a good physiological condition*

B- *Trees that appear to be in a moderate physiological condition*

C- *Trees that are in a poor physiological condition*

D- *Trees that are in a very poor physiological condition or dead*

Trunk diameters are recorded in millimetres at 1.5m from ground level and at the narrowest point below any out of the ordinary swelling as recommended in BS5837 (2012).

Trunk diameters are measured on the up-slope side of the tree base on sloping-ground as recommended in BS5837 (2012). A current maximum stem diameter is given to trees considered as a group.

Tree heights are estimated in metres and a mature height is given according to the guidelines shown in the NHBC Standards April 2006 Chapter 4.2, Table 12. A current maximum height is given to trees considered as a group.

As recommended in BS5837 (2012) **Crown radii** (Spread) are measured at the four cardinal points in meters: *N-North, E-East, S-South, W-West* and a lowest crown clearance from ground level is given at the lowest of the four cardinal points or all four when the crown clearance is roughly level. The crown radius and level measurements are as accurate as possible, but in some instances are estimated (est) due to difficult ground conditions or restricted access. In the case of groups, the maximum peripheral spread is given.

Brief comments are made on the overall health and condition of the trees in question and recommendations are given for any management works considered appropriate on the date of inspection in relation to the current site conditions.