LONDON SCHOOL OF THEOLOGY
GREEN LANE
NORTHWOOD

TREE REPORT

(Including Arboricultural Impact Assessment and Method Statement)

ACD ENVIRONMENTAL

Ecology
Archaeology
Arboriculture
Landscape Architecture

for

WESTCOMBE HOMES LTD

Written By:	T Grayshaw
Checked By:	M Welby
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1. Executive Summary

1.1. This report provides survey information about the trees on the site at London School of Theology, Green Lane, Northwood, in accordance with the recommendations of BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. This is to identify the quality and value of existing trees on site, allowing an arboricultural impact assessment to be made of the proposed development.

1.2. A total of twenty-two individual trees with stem diameters of 75mm and above at 1.5m were surveyed and recorded. In addition, a single hedgerow and four groups were surveyed and recorded.

1.3. The site currently comprises two residential buildings on land to the rear of Aldis Hall, located at 15 Green Lane, Northwood. The proposed development is demolition of the existing buildings and the building of a single residential unit.

1.4. This impact assessment is intended to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.

1.5. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout development in the form of barriers and/or ground protection.

1.6. Two B category trees are proposed for removal. These are T14 and T16, a Sycamore and an Ash tree. Whilst the trees have some value in their current context, both of these trees are consistent with having self seeded within the site as a result of lack of maintenance rather than intentional planting. The removal of these trees is considered satisfactory subject to replacement planting of two trees which can grow to a similar eventual size near H1 on the northern boundary, for which there is ample room.

1.7. The relationship between the building and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants.

1.8. An Arboricultural Method Statement has been compiled in conjunction with a Tree Protection Plan. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

2. Introduction

2.1. ACD were instructed by Westcombe Homes Ltd, in February 2016, to survey and categorize the trees at London School of Theology, Green Lane, Northwood, in accordance with BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. This is to identify the quality and value of existing trees on site, allowing an arboricultural impact assessment to be made of the proposed development.

2.2. An Arboricultural Method Statement has been compiled in conjunction with a Tree Protection Plan. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

2.3. For details of trees to be retained, and locations and types of special protection methods, reference should be made to the latest revision of Tree Protection Plan (ref: WEST20400-03).

2.4. No details have been supplied or sought of any statutory protection which may cover the subject trees.

2.5. The controlling authority is London Borough of Hillingdon Council who can be contacted at: Civic Centre, High Street, Uxbridge, Middlesex UB8 1UW, Tel: 01895 250230.

2.6. The Tree Protection Plan was based on the supplied topographical ground survey by mksurveys, dated August 2015, ref: 21350.

2.7. The Tree Protection Plan was based on the supplied layout plan from Fluent 'Proposed Site Layout' Drawing number SK.01 Rev A dated 14.01.2016.

2.8. Any questions relating to the content of this report should be directed in the first instance to: ACD Arboriculture, Courtyard House, Mill Lane, Godalming, Surrey GU7 1EY, 01483 425 714/07796 832 490, quoting the site address and report reference number.

3. Scope and Method of Survey

3.1. The survey has been carried out in accordance with BS5837:2012 Trees in Relation to design, demolition and construction - Recommendations and the trees are assessed objectively and without reference to any site layout proposals. Categories are based on each tree's health and condition, together with an assessment of its life expectancy if its surroundings were to be unchanged. An explanation of the categories can be found at appendix 1.

3.2. This report is based on the recommendations given in BS5837:2012 and is not a health and safety survey. Detailed tree inspection including decay mapping, aerial inspection, soil analysis, etc. was not undertaken.

3.3. No discussions took place between the surveyor and any other party.

3.4. The reference numbers of surveyed trees and groups of trees are shown on the Tree Reference Plan, which is based on the supplied survey drawing and appended to this report. The prefix G has been used to indicate a group of trees, and H for hedges. Stem locations within groups may be estimated, and indicative of canopy only.

3.5. The tree survey was carried out from ground level only.

3.6. Where trees are located on neighbouring land an estimated appraisal has been made of their quality and dimensions. Where stems or branches are obscured by ivy or other materials a full assessment of those parts will not be possible.

3.7. Tree heights were measured with a clinometer, or estimated in relation to those measured with the clinometer. If individual tree heights are of particular concern, for example in shading calculations, then they are measured using a clinometer.

3.8. Trunk diameters were measured or, where inaccessible, estimated. Single stemmed trees are measured at 1.5m from ground level. Multiple stemmed trees are measured according to section 4.6 of BS5837:2012. For groups of trees the diameter may be an estimated average or a maximum.

3.9. Tree canopies, where markedly asymmetrical, were measured (or estimated by pacing) in four directions using a laser measure. Symmetrical canopies are measured in one direction only, with dimensions in the remaining directions assumed to be similar. The canopy of tree groups will be indicated by measuring the maximum canopy radius for each compass point (more complicated groups will have further notes taken and an accurate representation will be shown on the plan).

3.10. No soil assessment was carried out at the time of survey. According to the National Soil Resources Institute online mapping service at http://www.landis.org.uk/soilscapes the soil on site is expected to be: Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils.

4. Discussion

4.1. For individual details of the subject trees see the survey at appendix 2.

4.2. The site currently comprises two residential buildings on land to the rear of Aldis Hall, located at 15 Green Lane, Northwood. The proposed development is demolition of the existing buildings and the building of a single residential unit.

Courtesy of Google Earth

4.3. A total of twenty-two individual trees with stem diameters of 75mm and above at 1.5m were surveyed and recorded. In addition, a single hedgerow and four groups were surveyed and recorded.

4.4. Nine individual trees on the site are B category. The B category trees on the site are those trees with moderate individual quality, or trees present in numbers, growing as groups with landscape value, such that they attract a higher collective rating than they might as individuals. B category trees are also those that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and minor storm damage).

4.5. There are twelve individual trees, four groups and one hedgerow on the site which are C category. These are C category either due to their low inherent value due to low overall physiological vigour, or structural faults, or their diameter is less than 150mm at 1.5m above ground level. They are not of any particular arboricultural or visual merit and have therefore been allocated category C.

4.6. There is one individual tree of U category on the site which has a limited life expectancy.

Rear garden of existing property at north G3 trees centre picture

Car park at north east of site. T14 - 16 (left), T12, T13 (right)

Existing driveway T6 on right to be pruned by 1m

5. Arboricultural Impact Assessment

5.1. The site currently comprises two residential buildings on land to the rear of Aldis Hall, located at 15 Green Lane, Northwood. The proposed development is demolition of the existing buildings and the building of a single residential unit.

5.2. This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Any potential tree impacts are identified as per BS5837:2012 section 5.4, and details are given of proposed mitigation.

5.3. Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.

5.4. The development proposals are in accordance with BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’. Adequate protection can be provided to ensure all retained trees are protected throughout the development.

5.5. This assessment is based upon the supplied layout drawing by Fluent: 'Proposed Site Layout' Drawing number SK.01 Rev A dated 14.01.2016.

5.6. Evaluation of impact of proposed tree losses

5.6.1. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference WEST20400-03.

5.6.2. Two B category trees are proposed for removal. These are T14 and T16, a Sycamore and an Ash tree. Whilst the trees have some value in their current context, both of these trees are consistent with having self seeded within the site as a result of lack of maintenance rather than intentional planting. The removal of these trees is considered satisfactory subject to replacement planting of two trees which can grow to a similar eventual size near H1 on the northern boundary, for which there is ample room.

5.6.3. T15 and the G3 group of trees are to be removed as a result of the development proposals. These trees are C category and as such it is judged that they are not of a quality that should present any constraint to development of the site.

5.6.4. In support of the development proposals, BS5837:2012 section 5.1.1 states: The constraints imposed by trees, both above and below ground should inform the site layout design, although it is recognised that the competing needs of development mean that trees are only one factor requiring consideration. Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification. However, care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site

can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

5.6.5. It is therefore deemed acceptable to remove the listed trees and, as part of the detailed landscape design for the scheme, include suitable and sustainable replacements as and where appropriate.

5.7. Trees to be pruned

5.7.1. T6 will require pruning to allow for high sided construction vehicles to enter the site. This represents minimal work to allow higher sided vehicles on to site, and will reduce the likelihood of damage to the crown of the tree. The specification for pruning works is given in the method statement below.

5.7.2. At this time tree surgery works are not anticipated (excluding tree removals). Should any become necessary it should comply with BS3998:2010 Tree Work or more recently accepted arboricultural good practice, and be approved by the LPA and project arboriculturist prior to any commencement.

5.8. Protection for retained trees

BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed (see 6.2.3).' As such, protection for all retained trees is shown on the Tree Protection Plan according to this specification.

5.9. Demolition

To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected prior to ANY plant machinery entering site whatsoever. This should be subject to a pre-commencement site meeting between the developer, their project arboriculturist and a representative from the Local Authority. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

5.10. New Hard Surfaces within RPAs

It is confirmed that no new hard surfaces are proposed within the RPAs of retained trees.

5.11. Construction within RPAs

It is confirmed that there is no construction proposed within the RPAs of retained trees.

5.12. Shade and future pressure to prune

The site layout has been assessed in terms of shading and future pressure to prune. Given the orientation of the site, and the relationship between the proposed buildings and the retained trees, the juxtaposition is viable for long-term tree retention, and it is considered that shading by trees is unlikely to be a concern to future residents. As a result, it is considered unlikely that there would be any undue pressure to remove trees, or excessively prune from any future occupants.

5.13. Services

It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Details of services have not been provided at the time of writing. The Tree Protection Plan, showing the constraints posed by retained trees will be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict. As per BS5837:2012 Figure 1, once further details become available as part of the detailed/technical design for the site, the TPP and AMS will be revised to incorporate these details for services for inclusion in the Tender documentation.

5.14. Levels and Landscaping

Full details of any changes in ground levels on site remain to be finalised. Any alterations to levels close to trees may damage roots and affect tree health and stability. Unless no-dig methodology is proposed for installation of surfaces within RPAs the original levels in these areas must be noted, retained, and integrated into the engineering design of the site. Landscaping operations within the RPAs of retained trees must be carried out in a sensitive manner and be subject to a detailed method statement and arboricultural supervision.

5.15. Boundaries

All plot boundaries will need to be designed, positioned and installed to avoid damage to retained trees. When within RPAs, this will include hand excavation of all post holes, and the lining of any post holes with a non porous membrane to stop leachates from the concrete damaging tree roots.

6. Arboricultural Method Statement

TO BE READ IN CONJUNCTION WITH THE APPENDED TREE PROTECTION PLAN REFERENCE: WEST20400-03

6.1. Phasing of operations for tree protection

6.1.1. Implementation of tree protection measures on the site must be carried out in the following order

1) Tree removals and access facilitation pruning
2) Accurate erection of tree protection measures
3) Site accessible to construction/demolition traffic
4) Demolition/site clearance
5) Construction
6) Removal of tree protection fencing; as plots are completed and ready for sale.
7) Remedial tree surgery

6.1.2. The above phasing must not be changed without approval from the project arboriculturist and agreement with the Council.

6.2. Restrictions within tree protection areas

6.2.1. Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No hand digging without a written method statement having first been approved by the project arboriculturist.
- No lowering of levels for any purpose (except removal of grass sward using hand tools)
- No storage of plant or materials
- No storage or handling of any chemical including cement washings
- No vehicular access
- No fire lighting

6.2.2. In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees
- No fire shall be lit such that flames come within 5m of tree foliage.

6.3. Avoiding damage to stems and branches

6.3.1. Care shall be taken when planning site operations in proximity of retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights, can operate without coming into contact with retained trees. Such contact can result in serious injury to them and might make their safe retention impossible.

6.3.2. Consequently, any transit or traverse of plant in proximity of trees shall be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is at all times maintained. In some circumstances, it may be impossible to achieve this without pruning works known as ‘access facilitation pruning’.

6.3.3. Access facilitation pruning shall be kept to the barest minimum necessary to facilitate development and shall be carried out in strict accordance with the guidance below (Tree Surgery). Under no circumstances shall construction personnel undertake any tree pruning operations.

6.4. Tree protection fencing

6.4.1. The Tree Protection Plan (see the latest revision of: WEST20400-03) shows the alignment of Tree Protection Fencing (TPF),which is to be installed prior to any of the following taking place:

- Demolition
- Plant and material delivery
- Soil stripping
- Utility installation
- Construction works
- Landscaping

6.4.2. Stages for installation of TPF:

1) Hand clearance of any vegetation to allow clear working access.
2) Setting out of fencing points
3) Fencing erected
4) Site accessible to demolition/construction traffic

6.4.3. To ensure accuracy and avoid future costly adjustments, the Tree Protection Fence must be set out by a surveyor with all node points being marked clearly on site for the fencing contractor to work to.

6.4.4. Once erected, all TPF will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority.

6.4.5. The typical TPF construction is suitable for areas of high intensity development, and shall comprise of interlocking weld-mesh panels, well braced to resist impacts by attachment to a scaffold framework that is set firmly into the ground. A detailed specification can be found on the TPP.

6.4.6. Should any alternative method of barrier construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.

6.4.7. Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence.

6.4.8. All weather notices should be erected on the barriers (for example see figure below).

Figure 1: Tree Protection Sign (digital copies available for download at: www.acdenv.co.uk)

6.5. Site storage, parking, welfare facilities

6.5.1. The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop of points, etc.

6.5.2. No details of these provisions are available at the time of writing of this report.

6.5.3. None of the above provisions will be sited within RPAs of retained trees without the input or the project arboriculturist and the consent of the Local Authority.

6.6. Tree surgery and removal

6.6.1. T6 will require pruning to allow for high sided construction vehicles to enter the site. The canopy of the tree should be reduced by 1m on the east side, over the existing driveway. Cuts should preferably be made to suitable growth points.

6.6.2. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference WEST20400-03.

6.6.3. If any further surgery works are proposed, it will be submitted to, and approved by the council before being carried out.

6.6.4. All work will be carried out in accordance with BS 3998:2010 Recommendations for Tree Work, industry best practice and in line with any works already agreed with the Council.

6.6.5. The tree surgery contractor is responsible for carrying out any relevant health and safety risk assessment, and insurance, prior to any work being carried out.

6.6.6. The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way Act will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.

6.6.7. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either; cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out.

6.6.8. All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

6.7. Soft landscaping within RPA

6.7.1. All landscaping and associated ground preparation within exclusion zones will be carried out sensitively to ensure root damage is mitigated as much as is practicable. At no time is any heavy plant to be used within any protected area. Removal of existing vegetation will be carried out by hand, turf may be removed using a mechanical turf stripper or by hand.

Turfing

6.7.2. Stages for turfing gardens and open spaces:

No plant machinery[1] to be used in the area for whatever reason

1) Remove TPF to allow access to area.
2) Do not reduce any high spots or excavate in any way.
3) Existing poor quality turf may be removed with a turf stripper.
4) Use good quality top-soil to level any low-lying areas and hollows, and provide a fine tilth to lay turf on. This imported soil must not result in a level increase of more than 100mm in any area.
5) Import turves by hand in wheelbarrow
6) Lay turves

Planting

6.7.3. Should the soil be compacted or have a poor structure which may hinder the development of any new planting, soil decompaction techniques may be used upon consultation with the project arboriculturist.

6.7.4. Stages for planting within tree protection areas:

No plant machinery to be used in the area for whatever reason

1) Remove TPF to allow access to area.
2) Remove existing vegetation by hand, turf may be removed using a mechanical turf stripper.
3) Do not reduce any high spots or excavate in any way.
4) Import good quality top-soil by hand (with wheelbarrow) into area.
5) Level to a depth of no more than 100mm with hand tools
6) Dig individual planting pits for each plant by hand (including hedging which must not be trench planted)
7) Any mulch should also be imported and spread by hand.

6.7.5. No works will be carried out within any protected areas if the soil moisture is of a level likely to allow compaction to occur.

6.8. Installation of underground services

[1] Including rotovators

6.8.1. If for whatever reason installation within RPAs is required the project arboriculturist and local authority must be notified prior to any tree protection barrier removal and the following details adhered to.

6.8.2. Stages for installing services within tree protection areas:

<u>No plant machinery to be used in the area for whatever reason</u>

1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work
2) Remove just enough tree protection fencing to allow access to area and facilitate trenching
3) Remove any surface vegetation or existing hard surfaces using hand tools
4) Excavate the trench using hand tools only, keeping to minimum dimensions required.
5) If roots over 10mm diameter are encountered they will be retained, and kept damp by covering with hessian (re-wetted as required)
6) Feed in services
7) Back fill trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported top-soil (to BS3882:2015), firming down with heels
8) Repeat step 7 until trench is filled.
9) Re-erect tree protection fencing as per approved plan

6.8.3. The method of excavation above, for trenching within RPA's, is using an 'air-pick' or similar. This tool utilises compressed air to remove soil from around tree roots causing minimal damage and can be run of a typical site compressor. ACD can provide details of contractors supplying Air-pick services if required.

6.8.4. Alternatively trenchless technology, such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will be located within the RPAs of the subject trees, the need for arboricultural supervision is limited.

6.8.5. Reference can be made to National Joint Utilities Group publication Volume 4 (NJUG Vol4) for guidance, but any approach must be approved by the project arboriculturist and brought to the attention of the local authority tree officer.

6.9. Hard surface removal

6.9.1. Stages for hard surface removal within tree protection areas:

<u>No plant machinery to be sited on any exposed rooting area</u>

1) Dismantle fencing as required to access area
2) Plant machinery to run only on existing hard surfaces with consent from arboriculturist
3) Plant may be used to carefully peal up existing tarmac and concrete
4) Other surfaces are to be removed by hand (paving etc.)
5) Where any sub base is not likely to contain roots, and only on approval from project arboriculturist, it may also be carefully removed.
6) Underlying ground levels to be retained. No excavation to occur
7) Any exposed roots[2] and surrounding newly exposed areas to be covered with up to 100mm of topsoil, from elsewhere on site, or imported top-soil (to BS3882:1984). Soil may be placed in area by plant but must be spread by hand.
8) Tree protection fencing to be erected in final position as shown on plan

6.9.2. If the area around the retained trees is to be left following the removal of the existing hard surface, before a new hard surface is laid or soft landscaping implemented, then the line of protective fencing MUST be correctly re-established immediately the hard surface removal work has been completed.

6.9.3. If, for whatever reason there is a delay before the area is left exposed prior to awaiting a new surface, then a temporary surface must be implemented or the area fenced off.

[2]Should any roots over 25mm diameter, have grown above the final soil level and be a hindrance to any new surface installation, their removal will only be carried out under arboricultural supervision and with the approval of the LPA.

6.10. **Installation of boundary fencing within protected areas**

6.10.1. Stages for installing wooden fence posts:

<u>No plant machinery to be used in the area for whatever reason</u>

1) Remove TPF to allow access to area.
2) Dig post holes using hand tools, avoiding damage to the protective bark covering larger roots. Roots smaller than 25mm diameter may be pruned back using either secateurs or a hand saw, leaving a clean cut.
3) Damage or severance of roots above 25mm diameter must be avoided. If roots of this size are discovered, the hole should be relocated. If there are a large number of such roots it may be necessary to relocate the hole by half a fence panels length and adjust the fence panels accordingly.
4) Line hole with non porous lining, for example durable polythene bag.
5) Insert post and fill post hole with concrete to ground level.
6) Trim polythene to ground level

Tom Grayshaw BA (Hons) Tech ArborA
Associate Director
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Appendix 1: Summary of Categories BS5837:2012

BS5837:2012 Table 1 -**Cascade chart for tree quality assessment**			
Category and definition	**Criteria (including subcategories where appropriate)**		
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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7.***		
	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)
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
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	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

Appendix 2: Tree Survey Schedule

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N	E	S	W	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T1	Leyland Cypress (X Cupressocyparis leylandii)	8 (1)	270 (1)	2	1.5	1.5	1.5	EM	10+	Sparse crown for age and species.	C2
T2	Leyland Cypress (X Cupressocyparis leylandii)	8 (1)	240 (1)	2	1.5	1.5	1.5	EM	10+	Sparse crown for age and species.	C2
T3	Leyland Cypress (X Cupressocyparis leylandii)	8 (1)	280 (1)	2	1.5	1.5	1.5	EM	10+	Sparse crown for age and species.	C2
T4	Ash (Fraxinus excelsior)	9 (3)	220 (1)	4	4	4	4	SM	40+	Self seeded tree on boundary.	C2
T5	Yew (Taxus baccata)	6 (0)	180 (1)	3	2.5	2.5	2.5	SM	40+	Landscape value as part of boundary screening.	C2
T6	Yew (Taxus baccata)	8 (2)	250,200 (2)	4	4	4	4	EM	40+	Twin stem from ground level otherwise fair tree.	B2
T7	Bay (Laurus nobilis)	8 (2)	75 (20)	4	3.5	3.5	3.5	M	10+	Multi stem clump stem diameter estimated. Part of boundary vegetation.	C2
T8	Sycamore (Acer pseudoplatanus)	10 (2)	220,220 (2)	4	4	4	4	SM	40+	Consistent with being self seeded but fair tree in terms of future potential. Twin stem from ground level.	B2
T9	Silver Birch (Betula pendula)	11 (2)	280 (1)	4	4	4	5	SM	20+	Stem position estimated as not indicated on topographical survey. Diameter estimated as located offsite. Fair tree in terms of future potential. Twin stem from ground level.	B2
T10	Common Oak (Quercus robur)	9 (1)	270 (1)	4	3.5	3.5	3.5	SM	40+		B2

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage: Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.).| **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.| **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N	E	S	W	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T11	Ash (Fraxinus excelsior)	11 (3)	170,150 (2)	4	3.5	3.5	3.5	SM	40+	Consistent with self seeding. Fair tree in terms of future potential.	B2
T12	Norway Maple (Acer platanoides)	10 (3)	210,220,190,190 (4)	0	4	4	4	SM	20+	Multi stem from ground level. One sided crown shape due to competition with adjacent tree.	C2
T13	Sycamore (Acer pseudoplatanus)	9 (2)	340 (1)	4	5	5	5.5	EM	10+	One sided crown shape. Missing bark on main stem from 4m to 6m. 10cm wide with visible decayed heartwood. Not ideal structurally in the long term.	C2
T14	Sycamore (Acer pseudoplatanus)	12 (2)	260,350,340 (3)	5	6	3	3.5	EM	20+	Triple stem from ground level. Two stems ivy infested throughout crown. Self seeded tree.	B1
T15	Apple (Malus)	2.5 (0.5)	120 (1)	2	2	2	2	SM	10+		C1
T16	Ash (Fraxinus excelsior)	12 (4)	440 (1)	3	5	4	2.5	EM	40+	Ivy on main stem. Uneven crown shape due to competition with previously present trees. Consistent with self seeding.	B1
T17	Cherry Laurel (Prunus laurocerasus)	3 (0)	150 (MS)	3	3	3	3	EM	10+		C2
T18	Ash (Fraxinus excelsior)	15 (4)	590 (1)	2	7	7	3	M	20+	On main stem removed on north side. Uneven crown shape as a result. Scope to reshape crown by reducing south and east sides.	B2
T19	Ash (Fraxinus excelsior)	15 (5)	360,350 (2)	8	8	8	8	EM	20+	Twin stem from 0.5m.	B2
T20	Ash (Fraxinus excelsior)	12 (3)	310 (1)	6	2.5	1	2.5	EM	10+	Bend in main stem where a side branch has also broken off. Not ideal structurally in the long term.	C2
T21	Ash (Fraxinus excelsior)	10 (4)	130,130 (2)	3	2.5	2.5	2.5	Y	40+	Slender twin stem from ground level.	C2

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage: Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.).| **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.| **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N | E | S | W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T22	White Mulberry (Morus alba)	8 (1)	230,210 (2)	5	4	0	2	OM	<10	Twin stem from ground level. One stem dead and decaying. Other stem leans at 15 degrees. Dieback evident in crown. Limited life expectancy.	U
G1	Ash (Fraxinus excelsior)	10 (3)	150 (1)	4	3.5	3.5	3.5	SM	40+	Self seeded trees on boundary.	C2
G2	Leyland Cypress (X Cupressocyparis leylandii)	10 (2)	250 (1)	3	2.5	2.5	2.5	EM	20+	5 trees planted as hedge. Low individual quality but landscape value as boundary screening.	C2
G3	Ash, Hornbeam (Fraxinus excelsior, Carpinus betulus)	6 (0.5)	150 (1)	1	1	1	1	Y	10+	Self seeded trees grown up from hedgerow group.	C2
G4	Ash (Fraxinus excelsior)	10 (4)	140 (8)	1	3.5	3.5	3.5	Y	40+	Slender multi stem from ground level group.	C2
H1	Leyland Cypress (X Cupressocyparis leylandii Castlewellan Gold)	2 (0)	75 (1)	1	0.5	0.5	0.5	SM	10+	Formal boundary screening.	C2

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage: Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.).| **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.| **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

Appendix 3: Tree Protection Plan
(WEST20400-03)

Rodbourne Rail Business Centre
Grange Lane
Malmesbury
SN16 0ES
Tel: 01666 825646

Courtyard House
Mill Lane
Godalming
GU7 1EY
Tel: 01483 425714

Suite 6
Crescent House
Yonge Close
Eastleigh
SO50 9SX
Tel: 02382 026 300

Email: mail@acdenv.co.uk
Website: www.acdenvironmental.co.uk

ECOLOGY * ARBORICULTURE
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LANDSCAPE & VISUAL IMPACT ASSESSMENT * LANDSCAPE DESIGN & PLANNING
LANDSCAPE MANAGEMENT
LANDSCAPE AUDIT * PROJECT MANAGEMENT * EXPERT WITNESS